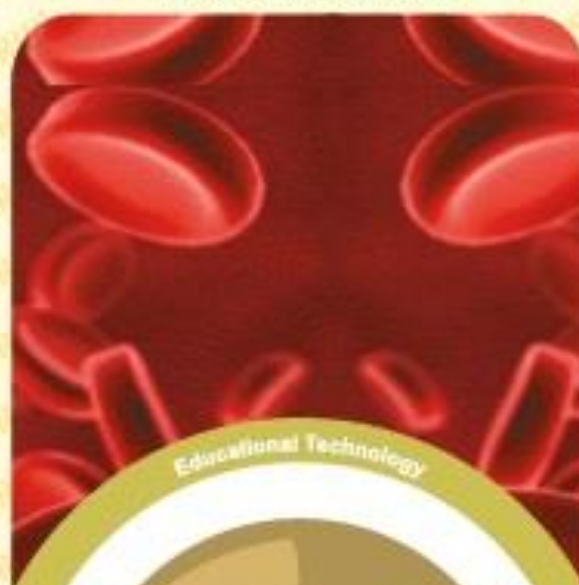
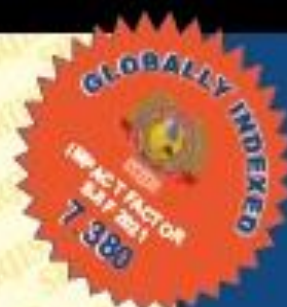




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**Kumadvathi College of Education, Shikaripura**

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INTERDISCIPLINARY STUDIES**

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**EDITORIAL**



## EDITORIAL

In the present scenario, the teaching and learning process needs new technologies to bring change in the existing system for the fulfilment of predetermined educational objectives. Earlier, books were only the source of instruction for individualized learning and teaching. Today the type of instructions have expanded to different modes. Technology has played a major role in society over the past two decades and has naturally integrated into the education sector, and in 2024 it's more futuristic than ever. The growth of technological capabilities means that a variety of media and learning-support tools now exist to help students receive a high-quality education online. This education trend presents a number of benefits and drawbacks for teachers and institutions who want to continue to offer their students the rigorous education they need to thrive.

The online nature of these courses may also enhance the ability of teachers to offer accommodations for different styles of learning. Advanced students may receive additional learning resources and challenges to encourage them to go deeper into the material without interrupting the flow of the rest of the class. Many teachers notice immediately the greater flexibility they can offer in their learning schedule. Platforms may offer opportunities for students to watch lectures live or recorded versions later. Teachers can appreciate this benefit for students. Institutions can also use EdTech to create customized learning programs for different categories of students, including those with learning difficulties. There is a need to remain relevant in the coming years, there is no way we can afford to miss these top emerging trends in educational technology.

A new paradigm of teaching and learning is needed to increase the pupil's active participation in the present situation, App Innovation, Gamification, Digital Library, Self-directed professional development and collaborative learning. Etc., the transfer of textual learning contents through online learning involving Artificial Intelligence, Virtual Reality and Augmented reality content. This transition is more effective for the students and teachers involved in remote learning. Emerging trends in educational technology are set to revolutionize the field of education in 2023 and the years to come. Educational technology makes learning accessible to a larger section of society and makes education more engaging for students.

Educators from different countries like Sydney Australia, Kenya, Mexico, Chili, Sri Lanka, Bangladesh, Nepal, and different parts of the country have contributed their papers on the following sub themes viz, Emerging trends & Approaches in Education, Emerging Technology & Education, Pedagogical Methods & Innovations, Inclusive Learning & Special Education and Emerging trends in Research.

### *Emerging trends & Approaches in Education*

The emerging trends in education technology for 2023 include mobile learning and digital content platforms, AI-powered learning environments, augmented reality (AR) and virtual reality (VR), gamification of learning, automated assessments, adaptive learning, and mobile learning.

### *Emerging Technology & Education*

One of the most important emerging trends in educational technology is AI-powered tutoring systems. However, the scale of their usage is expected to increase manifold soon. AI-powered systems are computer-based learning systems that employ AI to simulate human educators and can provide effective lessons without a human teacher. AI-powered systems can create personalized learning experiences for students, complete with on-demand instruction and feedback to learners.

### *Pedagogical Methods & Innovations*

In order to promote equitable learning and to improve the academic outcomes, the new teaching strategies to be implemented in the teaching learning process. The strategies are used to inspire creativity and success in the classroom. Innovative teaching strategies don't always mean introducing



the latest and greatest technology into the classroom. Instead, innovative teaching is the process of proactively introducing new teaching strategies and methods into the classroom.

*Inclusive Learning & Special Education*

The field of inclusive education is constantly evolving, propelled by advancements in technology, pedagogical research, and societal changes.

Rooted in a profound belief that every student deserves equal opportunities for learning and personal development, Inclusive Education embodies the fundamental principles of empathy, respect, and fairness. Inclusive education is an educational approach that aims to ensure all students, regardless of any perceived differences or abilities, have an equal opportunity for academic and social achievement.

*Emerging trends in Research*

Future in Educational Research (FER) *focuses on new trends, theories, methods, and policies in the field of education.*

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## EMERGING TRENDS AND CHALLENGES IN SCHOOL AND TEACHER EDUCATION

**Prof. C. G. Venkatesha Murthy**

*Professor & Dean of Instruction, Regional Institute of Education (NCERT), Mysuru.*

1. **NEP 2020: Aspirations and Challenges**
2. **ITEP aspirations and challenges**
3. **Making Schools and classrooms inclusive**
4. **Educational Research Issues**

### **I NEP 2020: Aspirations and Challenge:**

**Preparing teachers for foundational level:** It's a wonderful opportunity for School education functionaries that the government of India has thought of making changes in the school structure where it has introduced foundational stage comprising 3 years of Anganvadi/ Pre School/ Balvatika from the Ages 3 to 6; and 2 years of classes 1 and 2 for the ages of 6 to 8 children. Hitherto it was grossly neglected. Aspiring the new changes is one thing and implementing it effectively is another thing. One may recall that the position paper on Early Childhood Education during 2005, recommended that the Early Childhood Education should also cover the formal stage of school education and now NEP 2020 has been able to bring that into action.

Now it has implications for preparing teachers at the foundational stage. Indeed, the National Council for Teacher Education has been able to develop the ITEP, the Integrated Teacher Education Program for different levels, and one for the foundation level too. But the biggest question remains that the Teacher Educators who have the orientation at the elementary level are at DIET level, and are not proficient in the pre primary level skills and vice versa. But, the foundational Stage has a responsibility of preparing teachers with both the preschool and the elementary orientations. Therefore, the teacher educators have to be identified such that though they are training elementary teachers, they need to join educators who are capable of training pre primary teachers. Or alternatively, the educators at pre primary level have to be trained to train teachers at classes 1 & 2. The DIET faculty who are already training elementary teachers may not prefer to focus on pre primary and only classes 1 & 2. This is likely to create a huge challenge. While, the educators located at pre primary are not available within the framework of standard teacher training institutions as pre primary education is getting its due position and preference for it regulated status only now. Consequently, the availability of Teacher Educators for Foundational Level is going to be a big issue. The initial years of ITEP at Foundational stage is likely to witness resource crunch. Once, it stabilizes, there should not be any problem.

The ITEP at Preparatory stage is not expected to have any problem, because the existing DIET faculty with requisite qualifications will be able to do a good job. Similarly, the ITEP planned for Middle level also is not likely to face resource crunch as the already available DIET faculty with requisite qualification can do a good job.

But, the ITEP at Secondary level is also likely to face a different type of challenges. The present Colleges of Teacher Education (CTEs) has the responsibility of preparing teachers at secondary level, while they are not prepared to train teachers for 11<sup>th</sup> and 12 standards. Institutions preparing PGTs are very few in the country like RIES of NCERT. Creating/ upgrading the skills and competencies of existing teacher educators at secondary level for senior secondary level is going to pose challenges. The challenges at this stage will not be perhaps as intense as that of foundational stage.

But, the designation of PGT will vanish away as there is not going to be any distinction between TGT and PGT. In fact, all teachers will have to be addressed as TGTs with a suffix attached as TGT, Foundational/ Preparatory/Middle or Secondary.

**b. Language Issues:** NEP 2020 talks of many issues related to languages.

(i) High quality bilingual textbooks: (Home language/ mother tongue and English): It is not easy to prepare bilingual textbooks. The bulk of the books also will be an issue. As per 2011 census, there are about 1369 mother tongues. Preparing books in so many languages is almost impossible. This is going to be a big challenge. It is high time states started thinking about making school text books compatible with the Universal Designs of Learning, so that these text books will be relevant too learners.

(ii) Classical languages: There are different classical languages, like Tamil, Telugu, Kannada, Malayalam, and Odiya. Added to this Pali, Persian and Prakrit also need to be preserved. NEP also wishes to introduce Sanskrit at all levels. The strategies to implement it will pose enormous challenges. Introducing classical languages in interesting ways is by no means an easy one.

(iii) Indian Sign Language (ISL): It is a very happy recommendation of NEP 2020 that the Indian Sign Language will be standardized and introduced for hearing impaired children. In fact, going a step further, Indian Sign Language will have to taught to all children, not only to hearing impaired children. This is one more step towards creating an inclusive society. Children learn quickly. A country like India, with multiple languages spoken ISL can be a bridging language. Ideally, Indian Sign Language is also to be included as one of the languages with the languages of the 8<sup>th</sup> schedule.

**(c) Support for gifted students:** NEP 2020 recommends, (i) B.Ed for Education of the Gifted children, (ii) promotion of various activity circles.

**Challenges:**

- (i) Our B.Eds do not get adequate clarity on Giftedness.
- (ii) Our internships do not cater to the needs of Gifted children.
- (iii) Our schools are completely silent on Gifted children.
- (iv) Dr. Kiran's, work on Giftedness: Though teachers in JNVs and KVs recognize gifted students, there are no differentiated activities for them.
- (v) Identification and nurturance of the gifted learners in schools in the country is a big challenge.
- (vi) Implications for teacher education institutions on the concern of Giftedness are serious.
- (vii) Promotion of researchers in the area of Giftedness is to happen in big way.
- (viii) Enormous funding for gifted education needs urgent attention.

**Currently:** NIAS Bangalore, Jnanaprabodhini Institute of Psychology, Poona, Meerambika in Delhi are working. It needs to expand in many folds.

**(d) School Complex:** The NEP 2020 has recommended the creation of School Complex consisting of one secondary school together with all other schools offering lower grades in its neighborhood including anganwadis, in a radius of 5 to 10 km. This suggestion, NEP 2020 recognizes that, it was first made by the Education Commission in 1964-66 but it was left un implemented. NEP 2020 strongly endorses the idea of the school complex/ cluster wherever possible. The aim of the school Complex/cluster will be greater resource efficiency, and more effective functioning, coordination, leadership, Governance and management of schools in the cluster. This intent of the NEP 2020 is indeed a very pragmatic. In fact the Andhra Pradesh government has already put this in place but with a different emphasis in the recent past. Other states have to spring into action to make this functional with which maximization of resources available in the cluster could be used for the betterment of the cluster. But for the attitudinal challenges of the functionaries, this is something which can be implemented relatively easily.

**II ITEP aspirations and challenges:** NCTEs initiative of Integrated Teacher Education Program, is still in its experimental phase. NCTE has brought out ITEP Curriculum Framework and detailed curriculum also, which are made available based on the request of the institutions. Around 57 Teacher Education Institutions are identified and permitted to run ITEP from 2023-24.

The big picture missing is the absence of position papers on ITEP concerns, which it rightly deserved. Position papers on various issues could have facilitated in commencement and closure of

curriculum framework. Some of the important themes on which there could have been position papers include,

- (a) Multiple entry and multiple exits: Their implications
- (b) ITEP and Outcomes based education
- (c) Curriculum Organization issues for different stages: Content and pedagogy

Consequently, the curriculum framework suffers certain disadvantages.

### ITEP Concerns:

- (1) **Multiple Entries and Multiple exits** in a professional program looks like an oxymoron. Ideally, this issue and a position paper could/should have been the epicenter of Curriculum development. What are going to be the graduate attributes that are non-negotiable should have been the starting point. That is missing.

What happens to people who exit at different points? After one year, one gets a certificate. Certificate in what? After 2 years, one gets a diploma. Diploma in what? After 3 years, one gets a degree. Degree in what? In a teacher preparation program, if there is a scope of lateral exit, that also should be able to develop certain, skills and competencies which can help one to lead a meaningful life, connected to education. Otherwise, what is the logic of making a provision for multiple exits?

- (2) **ITEP and Outcomes-based education:** OBE is the contribution of William Spady (1988). Ideally the syntax of the OBE in my perspective is as follows.

- (i) **Graduate attributes:** Which need to be **broad dispositions** at the end of the program. This is available in elaborate manner in pages 13 to 20.
- (ii) **Learning Outcomes:** Which need to be stated as **aspirations** of the program. This is missing under this caption in the document.
- (iii) **Curricular Goals:** Which need to be given as **road map**, which is also articulated well. This is missing in the framework document.
- (iv) **Competency-based teaching learning:** Since school education has already moved away from content mastery to competency based teaching learning as learning outcomes, teacher preparation has to sync with the aspirations of school education and take the route of competency-based teaching learning at teacher-preparation level too.
- (v) **Competencies:** Eventually, the products have to be development of competencies, which have to be visible and are the take away.

- (3) **Curriculum Organization issues:** The framework looks as though there is a linear arrangement of courses suggested without any solid philosophy behind. Perhaps, making 1<sup>st</sup> and 3<sup>rd</sup> years content intensive and making 2<sup>nd</sup> and 4<sup>th</sup> years as pedagogy intensive can give sufficient scope for content developers to plan accordingly. The content components are completely left to the institutions and only the pedagogy aspects are given by ITEP. Underlying assumptions need to be questioned and regulated by NCTE.

- (4) **Non-inclusion of Action Research/Reflective Practice:** The ITEP Curriculum Framework has not included theoretical inputs on Action Research, while, Action research is included in school based activities. This imbalance is hopefully going to be corrected. Of late teacher education programs seem to ignore micro-teaching skills and action research.

- (5) **Institutions offering ITEP with varying levels of understanding of pedagogy issues.** The institutions that are permitted to run ITEP vary in terms of their understanding on the issues of pedagogy. Should this concern us????

### III Making Schools and classrooms Inclusive:

Some of the important concerns related to inclusive education relates to understanding the bandwidth of an inclusive classroom. The bandwidth of the inclusive classroom includes socially disadvantaged learners, disabled learners, so called average learners, and on the other side of the

distribution, we will have children belonging to the talented, gifted and creative learners. The ability to understand the Classroom Composition Mapping becomes important in being relevant to all the learners of a classroom. This is indeed not a simple thing. A teacher who is not specialized in any area of understanding learners with diversity may not be able to handle a divergent class with such diversity. Therefore, it is important that the teacher preparation program must be able to address these issues and enable all the teachers both in the pre- service and in-service programs to understand and appreciate the bandwidth of a possible inclusive classroom. Not only understanding the bandwidth is sufficient, but it is also important to provide equitable learning opportunities to all the learners by design which is an important challenge before any teacher. This has a serious implication on pre-service and in-service programs.

The pre-service and the in-service teacher education programs must be sensitive to providing inputs and training people to handle the entire bandwidth of an inclusive classroom. Further this should also be made an essential component in all teacher education programs. Even though some of these concerns are being done at a superficial level, this needs to be made more deeper in the teacher preparation program. Further, it is also important that in the in- service teacher training programs, inclusive concerns have to be made amply clear.

The schools must be able move towards understanding the significance of equity pedagogy possible. It would be appropriate if we can make equity as the process of teaching and learning and peace within as a product of inclusive education concerns. Ideally all classrooms are inclusive classrooms only. Since inclusive education is a *vishwaroopa* originated from special education, it is now moving away towards the intrinsic inclusion where **ALL** learners have to be included in a teaching learning context. Perhaps this is a very big challenge before all of us. We need to articulate clearly about the essence of equity pedagogy and prepare teachers to be relevant to all learners in a classroom.

Added to the above, it is also important that we need to make needed changes in schools for being relevant to all the learners which includes physical changes, in terms of making schools a barrier free; changes in human resources by way of bringing about desirable attitudinal changes and developing skills; materials by way of making available all the equipments for mobility and adaptations; and time that is to be made available as much as needed by learners. This is another important challenge before all of us. We have no alternative but to move in this direction. In this direction the government needs to move towards equipping the teaching community.

**IV Educational Research Issues:** Perhaps, It may not be in- appropriate if one reflects upon the health of educational researches which is grossly neglected. Currently, the foundations that are laid for educational research is only at the M.Ed level which is also at the superficial level. The Course work that we do as a part of the doctoral work also works as a formality and the annual progress reports that the research scholar is expected to submit every year also has become a formality. There is a need for a definitive direction in making the monitoring and adjudication processes of educational research concerns serious.

The topics that are selected by the research scholars also are much to be desired. The intrinsic intent of where the research must begin appears to be very fragile. There is a need for rejuvenating the research component in the teacher preparation programs. It looks like only a very small segment of teachers get into research and therefore it has got the least priority in the teacher education program.

We have not even made action research an important concern for all practitioners. All teacher education programs need to focus on making reflective practices and action Research an essential ingredient. The in-service teacher education program is completely lacking any focus on issues related to research and action research. This segment needs to be strengthened.

There is another major segment which is bothering the education researchers in education. In all those researches, where the intact groups are taken for experiments, and where there is no possibility of randomisation of the subjects to different treatment groups, they end up calling it quasi-

experimental design. Indeed randomisation may not be possible in all experimental settings as intact groups are used but the treatment of the data can be handled differently which is not happening. Perhaps the solution to this situation could be, **“Post intervention experimental-control matched groups design”** by eliminating unmatched sampling units. This will help the researchers in trimming those pairs which do not match and yet can make inferences with more robust evidences.

I am personally convinced that in many such researches where using the above design is helping us to come out with more accurate and more dependable results to study the effect of the independent variable on the dependent variable in an experimental condition. These kinds of insights and innovations in educational research would help strengthen the discipline of education.

Further, the kinds of educational research that are being developed in education are neither capable of influencing policy makers nor educational practitioners. Therefore, it is important for a researcher to see how relevantly and meaningfully research can be done and it can also be disseminated to the stakeholders concerned. The research works at the doctoral level are remaining on the shelves of the libraries and they are a great cause of concern. There is a need for initiatives to be taken up by the national and state agencies to disseminate the essence of researches for different practitioners and policy makers. Indeed there are such efforts at the NCERT level where these researchers are used for developing thematic trend reports in their Surveys of Educational Research, which becomes an intellectual activity at the national level and it does not reach the practitioners at the grassroots level at all. In the past, there were initiatives by the Navodaya Vidyalaya Samiti to bring out what research says to practitioners. It is discontinued now. Efforts are needed to promote the dissemination of research findings. This could be done by education departments at the National level Institutes, University levels and the institutional levels.

The other related issues which bother include the missing rigor of an adjudication process of doctoral research and inability of the doctoral degree holders to independently plan and carry out research activities subsequently. Ideally, the award of a doctoral degree should be a criterion or an indicator that the researchers are now capable of planning and undertaking research works independently and the degree should be the starting point for undertaking independent research. Paradoxically, the award of a doctoral degree is being construed as the zenith of one's academic glory. This tendency also need to vanish and the doctoral degree holders who need to undertake research activities as a part of their teaching profession and contribution by all the teacher educators only can provide a big corpus of new insights into making education more progressive and relevant.

Can we hope that we will be able to find solutions to the issues raised and we will be able to implement the NEP 2020 in its true spirit.

Thank you.

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## **TECHNICAL SESSION**



## C-4 SYNAPTIC LINKAGE INSTRUCTIONAL MODEL LEARNING: ORGANIC - PHYSIOLOGICAL – SUSTAINABLE (C4-SLIM)

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### Introduction

Teaching is a complex human endeavor that requires passion, dedication, compassion, creativity and scholarship. One is not born a great teacher, but becomes one through these nurtured tendencies. Good teaching links information with the daily existence of the student and teacher. The challenge of effective teaching, as measured by student learning, is to find connections that foster motivation, knowledge building, thinking and integration of old and new information, and bridge the real and academic worlds of both students and teachers.

In the context of constructivism, as it is immensely advocated in NCF 2005 and NEP 2020, there is a need to make classroom interactions more productive in terms of both students and teachers enjoying their differential roles as teachers being facilitators and students, active self-constructors of new knowledge.

The educational landscape includes many types of connections. In this context teachers need to be more sensitized with regard to understanding the dynamics of classroom management and facilitating learners with meaningful learning, employing constructive teaching approaches. This, by and large, relies on how well teacher brings about **Synaptic Connectivity** in classroom among him/herself-Content-Learners-Learning contexts-Curriculum-Classroom environment-Community - Life and such other pivotal factors. Synaptic connectivity involves designing connectivity structures or fostering learning linkage components to promote active teaching and Learning partnerships among students and teachers, both being the stakeholders – students with high learning attainment and teachers with effective classroom management. As educators, we need to use a spectrum of pedagogies and technologies for learning and adapt to an ever-changing educational landscape.

### Synaptic Connectivity

A Synapse is a structural basis of communication that permits a neuron or nerve cell to pass an electrical or chemical signal to another neuron. It is the junction between two neurons. It is a functional connection between nerve cells and even other cells for communication. It is also a physiological continuity in the nerve network.

### Connectivity as a Functional Strategy

A **connection strategy** is a plan for how your teaching is going to stay connected throughout the class or academic year with students.

**Connectivity** is the ability to make connections among the different stakeholders of education as a whole. Among many components and parameters of the dynamics of education, Teacher, Subject, Student and Community constitute prime-pivotal and integral dimensions of education. In simple terms, connectivity needs to be established between Self-Subject, Self-Student, Student-Subject and Subject-Community / Life. However, the most important Connectivity is **Connecting Good Teaching to Student Learning**. “Bad teachers distance themselves from the subject they are teaching - and in the process from their students. (Parker Palmer, *‘The Courage to Teach’*) Good teachers connect Self and Subject and Students in the fabric of Education for Life.” It is difficult to precisely prescribe what constitutes good teaching that results in increased learning, since each course, class, student and teacher is different. Good teaching includes attitude, presence, accessibility to students, learning spaces, relevant content, engaging pedagogies, effective use of technology, appropriate assessments and transparent standards.

1. Teacher to Subject

2. Teacher to Student
3. Student to Subject
4. Subject to Life

### 1. Self - Subject

Connectivity between the teacher and his or her subject of teaching pivots on his/her beliefs on, knowledge of, emotions on, and commitment to the subject. The teacher has cognitive, affective and even Psycho-motor relationship with subject of teaching

These relationships involve teachers becoming more aware of their practices, their student's learning, and the connection between their practices and their student's learning. In other words, the teacher is trying to ensure fit between student understanding and curriculum.

***The connectivity of a teacher to the subject is reflected in,***

Content Competence - Knowledge, Skills and Attitude towards subject

Love and concerns towards the subject

The joy/pleasure derived out of teaching the subject

Pedagogical research conducted on the subject of teaching

Helping students apply the knowledge and skills related to the subject in life

Creating interest, ignite inquisitiveness and kindling enthusiasm of students in learning the subject

Mastery over the dynamics of students learning of the subject

Sound knowledge of connecting subject to students' life

Facilitating students joyous learning of the subject

Use of Innovative approaches and Pedagogical strategies

### 2. Self - Student

When teachers connect with their students, they build rapport in the classroom and foster student engagement in the learning process. The relationship between a teacher and his students is a key element and one of the most influential factors in a learning environment. This has a high impact on students' progress, learning engagement in school and academic achievement.

Positive teacher-student relationships lead to better teaching and learning. Positive teacher-student relationships help students meet there all types of needs – academic, social, emotional and psychological. Teachers offer give feedback to students to support their feelings of competence related to gaining of Knowledge, Skills and Attitude. Teachers who know their students' interests and preferences, and show regard and respect for these individual differences, boost up students' feelings of autonomy.

Teachers shall create an environment that incorporates mutual respect There is a lot to be gained through strong relationships between students and teachers. Students are motivated to work hard when they have positive relationships with their teachers because they feel that someone is paying attention to them.

Positive teacher-student relationships promote student academic achievement, such as better grades and test scores, but a new study at the University of Missouri found positive teacher-student relationships lead to better teaching as well. The findings prove the importance of teachers demonstrating 'soft' skills, or pro-social behaviors, in the classroom - such as showing kindness, compassion and caring for others – and not the other way round where teaching students the conventional 'hard' skills of reading, writing and arithmetic.

One reason for that is students tend to be more motivated to learn and be engaged in the classroom when their teacher likes and cares about them. Positive teacher-student relationships change student behavior, and in this study, we found building those positive relationships actually leads to better teaching, too. It changes teacher behavior. High-impact teaching practices linked with students' achievement are often difficult to execute as they consume lot of time and resources. One way to activate high-impact teaching practices is to promote caring teacher-student relationships.

Its revealed in many research studies that, Pro-Social behavior of teachers leads to all kinds of positive school and life outcomes, including better grades and test scores, happier relationships, being liked more by peers and feeling more accepted at school,”

Arrive early for class and stay a bit later to chat with students and address any questions they may have. Learn students' names. Ask students questions about their experiences related to course content. Be available and encourage students to meet with you, either during office hours or after class.

A healthy and positive relationship between students and teachers can be enormously favorable at all stages of an educational institution, inside the classroom and across the whole school environment. It promotes academic Success, helps to develop self-worth, and enhances the professional growth-of teachers. To build a positive relationship with students, teachers shall, provide structure; teach with enthusiasm and passion, display a positive attitude make learning fun and treat students with admiration. Teachers who foster positive relationships with their students create classroom environments more conducive to learning and meet students' developmental, emotional and academic needs.

### **3. Student - Subject**

How to connect student to the subject or vice versa? Every individual student is unique in terms of many personality components that would determine differential learning potentials. They would differ mainly with regard to attitude and interest towards subject, motivation, span of attention, degree of ease or difficulty, presumptions etc. It's really a challenge for the teacher to understand the dynamics of handling these parameters so as to enable student to get connected to the subject of learning which sometime may be beyond teachers' competence. However it shall not be forgotten that students shall connect to subject physiologically with the support system suitably designed keeping in view the physical, psychological and social needs of students. Following are a few very important means and ways of creating more interest, positive attitude and achievement motivation related to learning of a subject.

1. Specifying the need and importance of learning the subject
2. Connecting the Subject to students life and enabling him solve the problems applying the knowledge
3. Make him feel the subject easy and interesting
4. Reflect the expectations with regard to interest, inquisitiveness and enthusiasm of students in learning a subject
5. Be at your best in making students feel the subject, not just mechanically learn with passivity prevailing, inside and outside of the student
6. Make learning more enjoyable with interaction using thought provoking questions-especially how and why questions
7. Make learning most realistic with multiple sensory perception.
8. Make it challenging and competitive, but ensure that there is a support system for the kids who cannot compete effectively.
9. Practice mindfulness in students with regard to listening, analysis and interpretation of content and reflect
10. Help students cope with stress and setbacks through empathetic ways
11. Celebrate with students for their micro and macro successes in the subject.

While learning in the class

### **4. Student - Life**

“Without application in the world the value of knowledge is greatly diminished”

Why it is important to apply the gained knowledge?

- The application of knowledge is necessary to achieve desired results throughout various aspects of life.



- Proper application of knowledge gives us more practical experiences/ provides learning in a better way.
- Finally, it leads to critical thinking which is the key ingredient for innovation in teaching and learning..

Research shows that it is important for children to apply skills learned in school, outside of a classroom setting; the more they apply knowledge in everyday life situations, the more they will remember and understand. It's often during real-world scenarios that children learn the most!

Applying skills and abilities in actual-world circumstances can help children to better comprehend how to utilize them. It also may provide them with a clearer picture of what they want to do in the future

It refers to the process to employ knowledge to products, services, and process of the organization with the intention to enhance the effectiveness of knowledge which is created, validated, and distributed.

Knowledge application refers to an organization's timely response to technological change by utilizing the knowledge and technology generated into new products and processes. Knowledge promotes the ability of reasoning for problem-solving. A strong base of knowledge helps brains function more smoothly and effectively. Children become smarter with the power of knowledge and solve problems more easily by applying their gain knowledge.

Transfer of knowledge is the primary purpose of schooling. Students should be able to apply their gained knowledge and skills for solving problems inside and outside of school — the goal of teaching or learning Languages is not to have students pass the exam, but to be competent and critical life-long writers and readers; the goal of studying history is not to memorize the dates of major battles, but to develop a broad historical perspective that they can apply to understanding the world around them today and in the future. “Transfer of learning” is the term used to describe applying what one has learned in a particular situation to another in a different context. This kind of extension could take place during the same academic year within an individual class, to different and future classes, to home situations, and to a workplace situation in future too. Teachers shall prioritize and create ample opportunities to reinforcing the practice of knowledge transfer and application.

How can teachers encourage students to become more conscious of, and interested in, “transferring their learning” to more challenging and higher order thinking contexts

There are a number of kinds of “transfer,” most notably ones categorized in a continuum as “near” and “far” (it's also been called “nearer” and “farther”). *Near transfer* tends to be focused on procedures or a routine where learned skills in one area are more easily applied consistently to a somewhat similar situation. These kinds of near transfers are easier to encourage and have a higher likelihood of success than what's at the other side of the continuum — *far transfer*, where students use their judgment about applying their skills and knowledge from one context to a substantially different one.

Many teachers operate under the assumption that transfer happens automatically and, in a number of cases, it does, however, studies show that many students have difficulties in applying knowledge they learned in one class to another and to outside situations. Transfer will not happen magically.

Some actions teachers can take on a regular basis to increase the chances of both near and far transfer occurring: could be, *maximizing the initial learning experience for transfer; activate prior knowledge; deliberate practice; explain In their own words; simulations; group learning; analogies and metaphors.*

## ROLE OF ARTIFICIAL INTELLIGENCE (AI) AND AUGMENTED REALITY TECHNOLOGY (ART) IN HIGHER EDUCATION

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### Abstract

*The present conceptual research focused on the study is to discuss the Artificial Intelligence (AI) in Higher Education. Artificial intelligence (AI) is gaining significance in all the sectors of the economy and hence in higher education too. From last few years, this concept of "Artificial Intelligence (AI) in Higher Education has experienced significant developments. This study attempted to discuss the concept of Artificial Intelligence (AI) can be applied in teaching and learning in higher education and importance of using AI in Higher Education. AI is a study of how human brain think, learn, decide, and work, when it tries to solve problems. And finally, this study outputs intelligent software systems. The aim of AI is to improve computer functions which are related to human knowledge, for example, reasoning, learning, and problem-solving. AI gives opportunities to higher education services to become easily accessible at an extraordinary speed, not only inside the class but also outside the classroom. This report attempts to figure out the how AI can become an integral part of universities and tried to access it's immediate and future implications on different areas of higher education. The present paper focused on the study of Artificial Intelligence (AI) in Higher Education with prime objectives are (i) To understand the concept of Artificial Intelligence (AI). (ii) To analyses the role of technologies related Artificial Intelligence (AI) in Higher Education. (iii) To discuss the importance of Artificial Intelligence (AI) in Higher Education.*

*The methodology of the research is a different type involving an interpretative, conversation, observation and study secondary sources, like books, articles, journals, thesis, university news, expert opinion, and websites, etc.*

*Key Words: AI, Higher Education*

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### Introduction

Recently there are numerous kinds of technology booming up such as robotics, virtual reality, 3D printing or networks, Blockchain, 5G, Autonomous Vehicles, Quantum Computing, Edge Computing, Microchips, and Cryptocurrency Technology. Apart from all these new technologies Artificial Intelligence (AI) is one of the most valuable and smart technology recently coming in this era. There is continuous upgradation and advancements are being taking place in digital technologies and computer sciences which leads human society towards a techno-savvy society where consistently machines are designed, upgraded, and developing progressively to meet human needs while simultaneously becoming smarter. Artificial Intelligence (AI) is booming up technology in each aspect and becomes a one part of human lives. If we see around everywhere. It might not be wrong that we are surrounded by the technology world, digital world. If you observe recent 21<sup>st</sup> technologies are automated ones, such as automated vehicles, automatic machines in which smart sensors are adopted, hence their efficiency will increase and it will get good market value. Human life is transforming to digital life.

In education Artificial Intelligence is being adopted in the teaching-learning process, hence traditional teaching methods are transforming drastically. In this 21<sup>st</sup> century era the academic world is becoming more and more personalized and thus the way of learning is transforming to traditional to App's based education system. In the pandemic outbreak numerous learning management systems came forth to assist students to learn in online mode such as: WAC, WebEx, Zoom, Microsoft team, and Google Meet. Hence students have no need to attend the class physically.

In AI, a system substantial magnitude of label training data Ingested then data is analysed and correlated with patterns ingested in a system. Because of its future prognostications will be made.

*There is not a certain universal definition of AI, describes the integration of artificial (not a natural process, but one induced by machines) and intelligence (skills of learning, to extract concepts from data and to handle uncertainty in complex situations). Curugullo.*

*Finally, the author concludes that AI is “an artifact able to acquire information on the surrounding environment and make sense of it, to act rationally and autonomously even in uncertain situations.*

### **Augmented Reality Technology (ART)**

Augmented reality technology (ART) has become increasingly popular in recent years, emerging as one of the new tech trends that is spreading rapidly. This technology allows for an interactive visualization of real-life experiences or environments by combining elements from the digital and virtual world.

In simple terms, augmented reality technology (ART) enhances the objects and elements that exist in the real world by overlaying computer-generated perceptual information. This information can be anything from graphics and text to audio and video, and it is seamlessly integrated into the user's perception of reality.

Thus, augmented reality is defined as

*An altered form of reality in which computer-generated content is superimposed on the user's real-world views, allowing digital assets to be added to their physical environment.*

*Augmented reality technology (ART) can be defined as a system that incorporates three basic features: a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects. (Retrieved <https://softtek.eu/en/tech-maga> on 17/09/2022)*

*Augmented reality (AR) is the real-time use of information in the form of text, graphics, audio, and other virtual enhancements integrated with real-world objects. It is this "real world" element that differentiates AR from virtual reality. (Retrieved from Gartner Glossary on 17/09/2022)*

### **Objectives of the Study:**

Researcher finalised the following objectives as per the topic concern-

- (i) To understand the concept of Artificial Intelligence (AI) and Augmented reality (AR).
- (ii) To discuss the importance of Artificial Intelligence (AI) and Augmented reality (AR) in Higher Education.

### **Concept of Artificial Intelligence (AI):**

Artificial intelligence (AI) is the impersonation of human knowledge procedures, for example, discourse and visual acknowledgment, interpretation of the dialects and virtual decision making by machines and robots. The capacity of machine to think and act like people, has given AI an extraordinary place in all fields. Artificial intelligence is available wherever in different parts of our lives beginning from smart sensors to individual associates.

Recent developments in AI have gotten numerous enormous changes in the higher education field. “Artificial intelligence helps students and teachers to make their educational experience wonderful”.

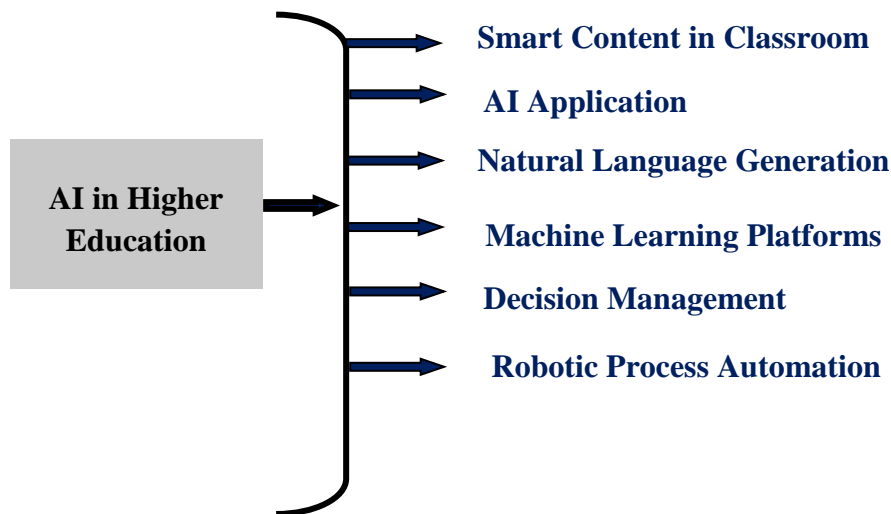
- An intelligent entity created by humans.
- Capable of performing tasks intelligently without being explicitly instructed.
- Capable of thinking and acting rationally and humanely.

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

### **Artificial Intelligence (AI) in Higher Education:**

AI may be adopted in administrative duties in higher education, Universities, and educational institutions. Academicians spend a lot of time and effort on grading the examination, accessing homework, and making available valuable suggestions and guidance to their students. In accordance with this automated grading system may be applied with the help of Artificial Intelligence (AI), academicians have no need to spend a long time in evaluation and assessment which may be saved and utilized for some other important tasks. Recently numerous software companies are coming up with

their Learning Management System (LMS) to provide better ways of grading written answers and essays.



### Smart Content in Classroom:

A Content which can changes dynamically according to the viewers' requirement since previous search results, content changes are based on the interests or past behaviour of the viewer is termed "smart content." It also referred as dynamic content.

Technologies and Education go hand in hand from last some of the decades. Educator must ensure that, does Artificial Technology fulfils the learners need? Does it attain academic excellence?

Smart content is very interesting topic of 21<sup>st</sup> century



### Elements of Smart Content

**Targeted:** It understands the customers' preferences and interests

**Optimised:** Smart content is meant to catch eyeballs and is high on visual elements

**Relevant:** Smart content stays up-to-date and is current

**Platform-agnostic:** It can be integrated across devices. The convergence is also seamless

**Profitable:** Since smart content is more personalized, it fetches more customers and as a result, more leads and conversion

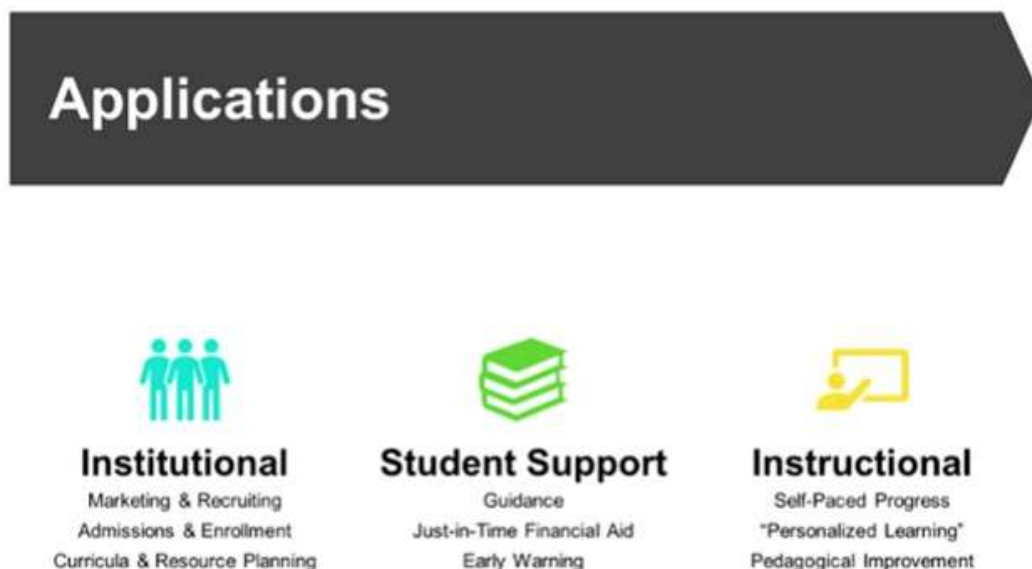
### Smart Content:

AI and education go hand in hand and the new techniques could be all that is required to ensure that all students attain their ultimate academic success. Smart content is a very hot subject matter today. Robots can produce digital content of similar quality as what different AU essay writing services can create. This technology has already reached a classroom setting. Smart content also includes virtual content

like video conferencing, video lectures. As you can imagine, textbooks are taking a new turn. AI systems are using traditional syllabuses to create customized textbooks for certain subjects. As a result, textbooks are being digitized, and new learning interfaces are being created to help students of all academic grades and ages. An example of such mechanisms is the Cram101 which uses AI to make textbook contents more comprehensible and it is easy to navigate with summaries of the chapters, flashcards, and practical tests. The other useful AI interface is the Netex Learning which enables professors to create electronic curriculums and educative information across a myriad of devices. Netex includes online assistance programs, audios, and illustrative videos.

### **AI Application:**

*student support*, which is a growing use in higher education institutions. Schools utilize machine learning in student guidance. Some applications help students automatically schedule their course load. Others recommend courses, majors, and career paths—as is traditionally done by guidance counsellors or career services offices. These tools make recommendations based on how students with similar data profiles performed in the past. For example, for students who are struggling with chemistry, the tools may steer them away from a pre-med major, or they may suggest data visualization to a visual artist.



Another area for AI use in student support is just-in-time financial aid. Higher education institutions can use data about students to give them microloans or advances at the last minute if they need the money to, for example, get to the end of the semester and not drop out. Finally, one of the most prominent ways that predictive analytics is being used in student support is for early warning systems, analysing a wide array of data—academic, non-academic, operational—to identify students who are at risk of failing or dropping out or having mental health issues. This particular use shows some of the real advantages of artificial intelligence—big data can give educators more holistic insight into students' status. Traditionally, an institution might use a couple of blunt factors—for example, GPA or attendance—to assess whether a student is at risk. AI software systems can use much more granular *patterns* of information and student behaviour for real-time, up-to-the-minute assessment of student risk. Some even incorporate information such as when a student stop going to the cafeteria for lunch. They can include data on whether students visit the library or a gym and when they use school services. Yet while these systems may help streamline success, they also raise important concerns about student privacy and autonomy, as I discuss below.



Lastly, colleges and universities can apply artificial intelligence in *instruction*. This involves creating systems that respond to individual users' pace and progress. Educational software assesses students' progress and recommends, or automatically delivers, specific parts of a course for students to review or additional resources to consult. There are often called "personalized learning" platforms. I put this phrase in quotation marks because it has been sucked into the hype machine, with minimal consensus about what personalized learning means. Here I'm using the phrase to talk about the different ways that instructional platforms, typically those used in a flipped or online or blended environment, can automatically help users tailor different pathways or provide them with feedback according to the error they make. Learning science researchers can put this information to long-term use by observing what pedagogical approaches, curricula, or interventions work best for which types of students.

Finally, to be successful, anyone considering an AI implementation within higher education should ask six essential questions:

- a) What functions does the data perform? You can't just see a red, green, and yellow light about student success and take that at face value, at least not if you are the one implementing the systems and you want to do so responsibly.
- b) What decisions don't we see? These are decisions not just about the computer processing but also about the categorization and the visualization.
- c) Who controls the content? Is it you, or is it the technology provider? How comfortable are you with that? How comfortable are your professors with that?
- d) How do we check outcomes in terms of efficacy, in terms of distribution, and in terms of positive and negative outcomes?
- e) What gets lost with datafication? I use this word to describe doing these things based on data as opposed to on interpersonal or bureaucratic systems.
- f) What—and whose—interests do we prioritize?

There are no easy answers but asking these questions will give you a template for considering the less obvious aspects of these systems.

### **Natural Language Generation:**

Even for humans to communicate efficiently and clearly can be tricky. Similarly, for machines to process information is an entirely different process than the human brain. And it can be extremely tricky and complex. Natural Language Generation is a sub discipline of AI that converts text into data and helps the systems to communicate ideas and thoughts as clearly as possible. It is used in educational institute, customer service, widely, to create reports and market summaries.

### **Machine Learning Platforms**

Machine Learning is a sub discipline of computer science as well as an important branch of Artificial Intelligence. Its objective is to develop new techniques enabling computers to learn and hence become more intelligent. With the help of algorithms, APIs (application programming interface), development, training tools, big data and applications, machine learning platforms are becoming more popular. They are widely used for the purpose of categorization and prediction.

### **Decision Management:**

Artificially Intelligent machines have the capability of introducing logic to AI systems in order to gear them up to be used for training, maintenance and tuning. In order to add value to the business and profitable, decision management is already being used by organizations by incorporating it into their applications to propel and execute automated decision.

### **Robotic Process Automation:**

Robotic Process Automation refers to the functioning of corporate processes due to the mimicking human tasks and automate them. In this particular sphere, it is important to bear in mind that AI is not meant to replace humans, but to support and complement their skills and talent. Companies like Pega systems, Automation Anywhere, Blue Prism, UiPath and Work Fusion focus on this process.



### Importance of AI in Higher Education:

AI has the potential to automate and democratize personalized adaptive learning for students. It will help to mitigate the learning gaps and generate learning interests among students, increase learning ability, language affinity and improve learning pace.

**Student Success:** Attract students, drive student outcomes, and connect with students in lifelong relationships.

**Teaching & Learning:** Build an environment that empowers academics to do their best work with personalized learning systems and collaborative spaces that empower students to reach their full potential.

**Academic Research:** Empower all researchers with a powerful and flexible computing environment to perform their research without constraints from the underlying infrastructure and collaborate with other researchers across the world.

**Secure & Connected Campus:** Reimagine how to configure, optimize and manage campus resources by connecting the physical infrastructure with digital technology to deliver a seamless and modern campus experience.

### Conclusion:

In conclusion, implementation of AI in Higher Education is late in comparison to the corporate sector, many educational institutions that have already adopted Artificial Intelligence (AI) and are continuing to invest more into AI applications will surely remain ahead of their competitors. Higher Education institutes that incorporate AI into all of its programs remain leaders in their field and are already reaping the benefits associated with it. At the end from all the discussion and analysis done in the paper we can now say that AI is impacting higher education institutes in a significant way. AI expansion is forcing many jobs to become obsolete and thus an entire new skill sets will be required. Higher education institutes are required to train and develop their students to upgrade them to face the challenge of the AI revolution and fight successfully in the AI age.

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## NEP 2020 AND EMERGING TRENDS IN TEACHER EDUCATION

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### **Abstract**

*The present conceptual paper focused on the discuss the key aspect of NEP 2020 and innovative trends in Teacher Education in India. NEP focused on a quality teacher education program is rational and streamlined to address specific pedagogical issues. It elucidates the ideas about what constitutes good teaching and the content and scope of course work and practical experiences. Teacher education courses are very much connected to practice as well as theory. High quality teacher training programs have students studying to be teachers (preservice teachers) and working continuously with expert master teachers. Teacher education programs focus to build teacher proficiency and competence; candidates are able to face new challenges in educating students. In today's world, after the CORONA pandemic demands on teachers are increasing. They must be able to create understanding with investigative minds; assimilating the required transformation and accommodating and responding to universal needs. The purpose of this paper is discuss significant changes that have incurred in teacher education in India and also provide how these national trends relate to global trends, reforms and innovations in teacher education. The need for teacher education programs to be innovative and encompass various approaches and practices is also discussed. It is recognized that teacher education programs should be structured and modified so that teacher candidates learn to respond dynamically to new problems and challenges in the field of education. With this knowledge and skills, future teachers can lead and guide the development of the country. The present paper focused on the study of discuss the NEP 2020 and innovative trends in Teacher Education in India with prime objectives are (i) To understand the basic features of NEP 2020 on innovative trends of Teacher Education in India. (ii) To analyses the role of Educational Research with relation to Teacher Education. (iii) To discuss the innovative trends among Teacher Education. The methodology of the research is a different type involving an interpretative, conversation, observation and study secondary sources, like books, articles, journals, thesis, university news, expert opinion, and websites, etc.*

**Key Words:** *Emerging Trends, Teacher Education*

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### **Introduction:**

Education lays emphasis on the personality development of individualities to shape their future and attack delicate situations with ease. There have been changes in the comprehensions of education in recent times; and this has been incompletely due to the new overflows of information and schoolteacher coffers which can be set up in the form of the Internet. Because of India's brittle fiscal situation and challenges which remain in our society, there have been debates regarding whether or not tutoring should be professionalized and whether or not this investment is a worthwhile value. Those who speak in the world of education now believe that further is demanded to develop effective preceptors. simply having the knowledge and skill to educate assignments is no longer enough as preceptors now are anticipated to fete and respond to fresh circumstances including a depressive or negative personality in scholars or indeed signs of abuse in some severe circumstances. Being open and personable from time to time adds to a schoolteacher's professionalism.

The National Education Policy 2020 envisions an Indian-centered education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all.

This National Education Policy 2020 provides for reforms to higher education and It focuses on:-

- Research and Innovation in Higher Education
- Multilinguistic Approach for Quality Enhancement
- Strengthen Teacher Education
- Restructure the education regulatory framework.

**Meaning of Teacher Education:**

Teacher Education, any of the formal programs that have been established for the preparation of teachers at the elementary- and secondary-school levels.

The National Council for Teacher Education has defined teacher education as – A programme of education, research and training of persons to teach from pre-primary to higher education level.

According to Goods Dictionary of Education Teacher education means, —all the formal and non-formal activities and experiences that help to qualify a person to assume responsibilities of a member of the educational profession or to discharge his responsibilities more effectively.

**The Objectives of Teacher Education:** Teacher Education would therefore be to,

- ✓ Provide opportunities to observe and engage with children, communicate with and relate to children
- ✓ Provide opportunities for self-learning, reflection, assimilation and articulation of new ideas; developing capacities for self-directed learning and the ability to think, be self-critical and to work in groups.
- ✓ Provide opportunities for understanding self and others (including one's beliefs, assumptions and emotions); developing the ability for self-analysis, self-evaluation, adaptability, flexibility, creativity and innovation.
- ✓ Provide opportunities to enhance understanding, knowledge and examine disciplinary knowledge and social realities, relate subject matter with the social milieu and develop critical thinking.
- ✓ Provide opportunities to develop professional skills in pedagogy, observation, documentation, analysis, drama, craft, story-telling and reflective inquiry.

**Objectives of the Study:**

- (i) To understand the basic features of NEP 2020 on innovative trends of Teacher Education in India.
- (ii) To analyse the role of Educational Research with relation to Teacher Education.
- (iii) To discuss the innovative trends among Teacher Education.

**National Policies and Teacher Education :**

India has made considerable progress in school education since independence with reference to overall literacy, infrastructure and universal access and enrolment in schools. Two major developments in the recent years form the background to the present reform in teacher education-

**The political recognition of Universalization of Elementary Education that led to the Right to Education Bill, 2008 and The National Curriculum Framework for school education, 2005.**

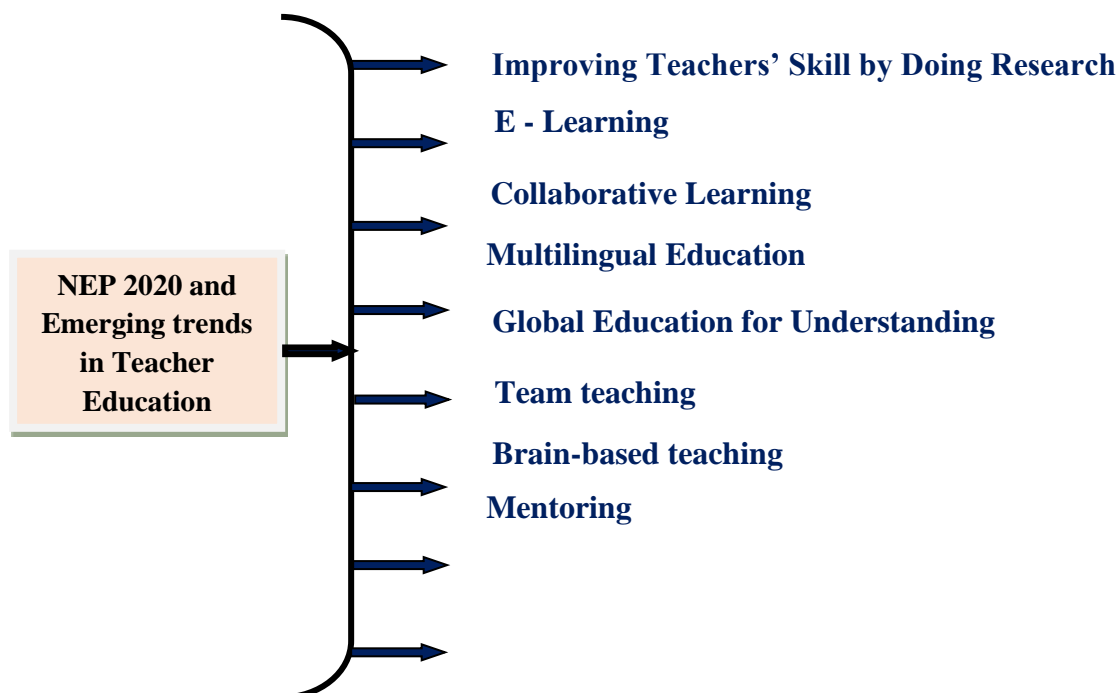
The Bill has been passed by the Parliament and the Right to Education Act has come into being making it mandatory for the state to provide free and compulsory education to almost 20 crore children in the 6-14 age group till class 8. The Act mandates a schedule for the functioning of schools which includes a teacher student ratio of 1:30 till a student population of 200 students at the primary stage. This would increase the demand for qualified elementary school teachers many times. The country has to address the need of supplying well qualified and professionally trained teachers in large numbers in the coming years. The launch of the massive Sarva Shiksha Abhiyan in 2002 and the recent financial commitment and education cess to augment the Universal Elementary Education mission have underscored the need to adequately prepare teachers to address the growing demand for quality education.

**Main Features of NEP 2020 on Emerging trends on Teacher Education:**

- The 4-year integrated B.Ed. offered by such multidisciplinary HEIs will, by 2030, become the minimal degree qualification for school-teachers.
- The 4-year integrated B.Ed. will be a dual-major holistic Bachelor's degree, in Education as well as a specialized subject such as a language, history, music, mathematics, computer science, chemistry, economics, art, physical education, etc.

- Beyond the teaching of cutting-edge pedagogy, the teacher education will include grounding in sociology, history, science, psychology, early childhood care and education, foundational literacy and numeracy, knowledge of India and its values/ethos/art/traditions, and more.
- The HEI offering the 4-year integrated B.Ed. may also run a 2-year B.Ed., for students who have already received a Bachelor's degree in a specialized subject.
- A 1-year B.Ed. may also be offered for candidates who have received a 4-year undergraduate degree in a specialized subject.
- Scholarships for meritorious students will be established for the purpose of attracting outstanding candidates to the 4-year, 2-year, and 1-year B.Ed. programmes.
- HEIs offering teacher education programmes will ensure the availability of a range of experts in education and related disciplines as well as specialized subjects.
- Each higher education institution will have a network of government and private schools to work closely with, where potential teachers will student-teach along with participating in other activities such as community service, adult and vocational education, etc.

NEP focuses on online learning as an alternative to regular classroom interaction between teachers and students for better understanding. NEP helps in achieving the twin objectives of cutting costs and increasing enrollment. The NEP talks about the better engagement of the private sector and provisioning for government funding for Research and Development work through a proposed national research fund. Professional education will become an integral part of the higher education system.



### 1. Improving Teachers' Skill by Doing Research

Teaching has come a long way from the traditional speaker- listener system. moment, preceptors aren't just speakers, but attendants; and scholars aren't just listeners, but co-explorers of knowledge. Education has come more interactive and existential for both parties. therefore, tutoring chops have also evolved, with further ways available for preceptors to use. Fortunately, there's one system that helps a schoolteacher see the aspects of his or her tutoring that need enhancement. This system is exploration, and particularly Classroom Action Research( CAR). In its broadest sense, exploration is itself helpful when a schoolteacher is trying to introduce generalities to scholars. preceptors who do their own exploration on the motifs they educate, rather of depending on

handbooks, can gain a much better understanding of those motifs and how their scholars interact with the motifs. As a result, they can be more effective in participating the knowledge with scholars. Auto is more specific than introductory exploration, and it's more concerned with the tutoring process itself than with the motifs tutored. Compactly, Auto is a form of guru exploration that investigates the current situation of a class. The guru( the schoolteacher) is the one who conducts active exploration on what his or her class truly needs. Since CAR is guru exploration done by one schoolteacher for a particular class, it may produce unique results that can be generalized to other classrooms. Classroom Action Research is truly helpful for preceptors to find out what the scholars need. But more importantly, it's a tool for them to identify what they themselves need to ameliorate in their instruction. This identification is the first step towards better tutoring, and accordingly, better quality education.

## **2. E-Learning:**

Information technology has long once actualized, and knowledge of it's now considered nearly an introductory necessity. It's no wonder that seminaries have begun using computers during classes, whether for introductory tasks similar as pupil report donations or indeed for pivotal conditioning similar as examinations. Electronic quizzes are hardly new moment. To round the use of computers, colorful types of software are available. The most introductory bones are the word processors, spreadsheet generators, and donation programs. Also, there are more technical bones similar as attendance trackers, educational games, and graphic organizers. With computers, the use of the internet predictably follows. And with this classroom invention comes an endless world of possibilities. Notes can be recorded, uploaded, and participated. further communication channels are opened than ever ahead. Some classes indeed use social networks for communication, as apparent in online groups and forums. There is also more substantial academy conditioning done over the internet. For case, absentee preceptors may produce online tutorials for scholars, so that scholars won't have to miss a literacy session. Some major systems also bear the use of online journals and blogs for attestation and the suchlike. There are indeed those who experiment with the creation and conservation of websites for the exclusive use of the class. In the end, this is the thing of every bit of educational elaboration a trip towards the stylish quality of education possible for the youngish generation.

## **3. Collaborative Learning:**

Collaborative Learning is a system in which two or further people cooperate in a literacy experience to partake and contribute to each member's understanding of a content and to complete a given task. participating information and connecting with others, whether we know them tête-à-tête or not, has proven to be an important tool in education. scholars are uniting with each other through social media to learn further about specific subjects, to test out ideas and propositions, to learn data, and to gauge each other's ' opinions. Collaboration is a natural part of life and should be included in the class. occasionally preceptors will make an assignment designed specifically to educate cooperative literacy and cooperation. There are numerous teambuilding games and conditioning that can be done in a classroom that force scholars to work together to complete a task. In this script, scholars can learn just as important as if they were developing a donation on their own, but they get the added benefit of learning how to unite. cooperative literacy is on the rise in our classrooms. Done rightly, it's a great occasion to break up the monopoly of the lecture, educate cooperation to our scholars, and help them to come more productive members of society in the future.

## **4. Multicultural Education:**

Multilingual education should be based on the linguistic realities and needs of the learners and the communities. It should also respect the constitutional provisions and the three-language formula of the National Education Policy (NEP 2020).

Multicultural Education is demanded as some preceptors find it delicate to relate the class to the children they educate. This might be because a preceptor in the megacity is far more likely to

educate a lesser number of children who are from a multilateral background. Experts believe this type of education is progressive, precluding youthful people from being made the victim of hypotheticals.

### **5. Global Education:**

Global Education aims to raise children and to give them a boost, putting them on an indeed standing despite their unprivileged background. Global education can also be innovated on transnational affairs, as the name would suggest. scholars who witness this conception in class are more curious about life and about the colorful complications which are associated with it. scholars who are educated with a global focus suppose about how their conduct and their lives have an impact on the world in a far larger scale than they might have imagined beforehand. It's a different way of allowing for youthful people which they can use in their everyday lives, as they make sense of the different challenges which are faced in the world.

### **6. Team Teaching:**

Putting two preceptors in one classroom is known as platoon tutoring, cooperative platoon tutoring-teaching. This model provides benefits and presents challenges to both preceptors and scholars. scholars inco-teaching classrooms observe cooperation in action and learn to see generalities from further than one perspective. They've the chance to learn from preceptors with different backgrounds and can claw deeper into subjects thanks to the occasion for further one- on-one educational openings. still, clashing personalities and the tendency of scholars to favor one schoolteacher over the other can hang the stability of this model.

### **7. Brain-based teaching:**

Based on neuroscience research that shows consistent practice of a concept creates strong pathways between neurons, brain-based teaching takes advantage of the power of the developing mind to create the greatest amount of positive changes during the short period that students are inschool. Students work in groups, participate in games that address specific concepts, and engage in lessons built around central themes; all with the goal of improving their understanding of important academic skills and ideas. Physical education is included to facilitate the growth and development of new neural pathways.

### **8. Mentoring:**

Mentoring is the best way for students currier development, Mentoring is a natural role taken on by teachers, whether it is intentional or not. This again can have positive or negative effects on children. Mentoring is a way a teacher encourages students to strive to be the best they can. This also includes encouraging students to enjoy learning. Part of mentoring consists of listening to students. Mentoring helps build students confidence and helps them want to be successful.

- Teachers also perform well, teachers must be valued, supported, respected - happy teachers and students make for excellent teaching and learning! In particular, the everyday working environment of teachers and students must be safe, comfortable, and inviting.
- Teachers, and their schools, school complexes, and classrooms, must be well supplied with the learning resources that they need for effective teaching.
- Teachers must have the autonomy to innovate and teach in the style that best suits them and their students.
- Teachers must have robust opportunities for CPD, and access to learning the latest advances and ideas in both pedagogy as well as subject content.
- Teachers must feel part of a very important role for professional community.
- Teachers work must have a caring, collaborative, and inclusive school culture, which encourages excellence, curiosity, empathy, and equity. A large part of this school culture must

be set by school principals, school complex leaders, and SMCs and School Complex Management Committee.

### Conclusion:

National Education Policy 2020 is playing an important role in the transformation of the Indian education system for knowledge center. Now it is expected to help India in reaping its demographic dividend. NEP is playing a significance role for development of higher education system in India. The teacher education presents a major opportunity to significantly improve this critical component of a high-quality education system. Examination of existing effective practices can provide a strong foundation for further reform. Since the teacher is the pivot of the entire educational system and is the main catalytic agent for introducing desirable changes in the teaching learning process, all attempts need be made for motivating teachers to become innovative and creative. It goes without saying that a self-motivated and industrious teacher can utilize his or her own resources to keep him or herself abreast of new knowledge and skills. It has been recognized that teacher education programs should be structured and modified in a way that enables their teacher graduates to respond dynamically to the new problems and challenges in the field of education.

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**FOREIGN AUTHOR  
ARTICLES**





## PREDICTORS OF STUDENT TRANSITION TO JUNIOR SECONDARY SCHOOL: A CASE OF PUBLIC PRIMARY SCHOOLS IN GARISSA TOWNSHIP SUB-COUNTY.

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### Abstract

Many students find it challenging to adjust to the school environment, but at risk are the sixth graders who are likely find it to be more difficult to cope with the new learning environment of Junior Secondary after they transit to grade seven. As a result, educational transition is seen as a challenging and unpredictable trip where familiar elements seize and consequently transient gaps in learning new skills, knowledge and abilities. In Kenya, the challenge of adjusting to a new school environment, especially by primary school leavers, is likely to be more pronounced due to recent reforms in the education system. The reforms introduced a new structure of education in which primary school years end at grade 6 instead of grade 8 in the 8-4-4 system. This change means that primary school pupils will transit to secondary school at a younger age posing questions on their ability to cope with the secondary school environment. The transition from one level of education to the next must be seamless during curriculum changes and readiness is a crucial component of education. However, Depending on the person, organization and educational system, a student's transition experience will vary. To look at the factors that predict student transition from public primary school to junior secondary school, correlation study was carried out. Data collection was done through a Census of 30 public primary school teachers in Garissa Township. Data were analyzed using multiple regression in SPSS Statistics. Results of the study revealed that school condition, school culture and teacher competencies were significant predictors of transition among grade six pupils. The implications and suggestions for action at the ministry of education are to provide students with weekend chances to take part in transitional activities and partner with community stakeholders and parents. Additionally, a systems theory research study should be conducted on student perception towards transition to junior school.

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### Statement of the Problem

In the scholarly and practice literature, school transitions have garnered a great deal of interest and concern (McGee et al., 2004). The transition to junior secondary school is seen by Mizelle and Irvin (2000) and Hawk and Hill (2004) as "one of the most treacherous" and "traumatic and stressful" phase in a child's academic career.

The freeway designated for the transition to junior secondary school has two separate lanes. A significant number of children are privy to an even, generally smooth promenade that exists on one side of the path (Hodgen & Ferral, 2006). However, some students who had trouble in primary school find that their side of the path is lumpy, with a few puddles along the route, making it difficult to navigate. This side gives proof that insufficient transition planning and execution may result in behavioral, cognitive, and social-emotional problems, as well as low student engagement in junior secondary school instruction (Wylie et al., 2006). In an effort to create independent people, the Kenyan government implemented the 8-4-4 educational system in 1985. The system, however, was unable to completely achieve its goals. Academic emphasis led to a failure to address the needs of the nation's unemployment predicament.

The government had to respond by adopting an international fit reform in the basic education sector, such as competency-based curriculum (2-6-6-3) which was a viable decision to see its citizen's move to the attainment of global competence. The transition from one outline of an educational module to the next must be seamless during curriculum changes and ministry readiness for CBC implementation in Kenya's public primary schools is a crucial component of education. Every child has the right to free

primary and secondary education, according to the 2013 Basic Education act. However, the Mwikya (2019) survey reveals that 25% of students in Machakos sub-county do not transit to secondary school. Werunga (2011) found that the cost of schooling places a significant burden on household incomes in his analysis of the variables influencing the rate of transition from primary to secondary school in Kenya.

According to a research by Kyuli (2012) on the influence of institutional determinants on pupil transitions from primary to secondary schools in the Athi River Sub-county, the expense of secondary education affects pupils' capacity to make a seamless transition from primary to secondary education. Kirera (2013) examined the variables influencing Meru County student transition from elementary to secondary school. The findings indicated that an insufficient learning and instruction environment was impeding this process. In order to balance knowledge and abilities, he advised a lot of researches to be conducted on transition rate. Anderson et al.'s (2000) posits that the less ready a pupil is for the transfer to junior secondary school the more challenges they experience.

Recent literature consistently reflects the summary of the transitional nature. According to research conducted at the school level, teamwork and information exchange between elementary and secondary schools improve the quality of the transition process. Kinney (2011) opined that to improve transition quality and increase connectedness to school, which has been shown to predict academic success, transition teams, a supportive school environment, effective communication between home and school, knowledge of adolescents' social, emotional, academic, cognitive and physical needs especially for at-risk students and the development of teachers' and school staff's skills are all necessary. The significance of each component, however, varies depending on the individual, institutional, and educational system environment surrounding the transition to junior secondary school. As a result, this study tested three of four variables in Wagner's (2014) 4 Cs transformational strategy (context, culture, condition) to predict transition of grade six students to junior secondary school in Garissa Sub County.

### **Research Objectives**

- i) To establish the relationship between school culture and student transition from primary school to junior school.
- ii) To examine the relationship between school conditions and student transition from primary school to junior school.
- iii) To determine the association between teacher competencies and student transition from primary school to junior school.
- iv) To assess whether a combination of school culture, school conditions and teacher competencies predict student transition from primary school to junior school.

### **Hypotheses of the Study**

H<sub>01</sub>. There is no significant relationship between the School culture and student transition from primary to junior secondary school.

H<sub>02</sub> There is no significant relationship between school conditions and student transition from primary to junior secondary school.

H<sub>03</sub> There is no significant relationship between teacher competencies and student transition from primary to junior secondary school.

H<sub>04</sub> School Culture, School Conditions and teacher Competencies do not significantly predict student transition from primary to junior secondary school.

### **Research Design**

This research employed a correlational research design to predict the relationship between the predictor variables and the outcome variable. Data were collected from primary school teachers currently teaching sixth graders using a self-administered Likert Scale questionnaire containing four response options (strongly disagree, disagree, agree, and strongly agree).

Data were analyzed using linear and multiple regression models to determine whether school culture, school conditions and teacher competencies predict transition of grade six pupils to grade seven in junior secondary school (Creswell, 2015). Simple linear regression was used to test the first three hypothesis and multiple regression was used to test the fourth hypothesis.

## Results

To test hypothesis one, simple linear regression was used to test if school culture significantly predicted student transition from primary to secondary school.

The fitted regression model was: school culture =  $2.343 + 0.171$ .

The overall regression was statistically significant ( $R^2 = .041$ ,  $F(1, 244) = 10.498$ ,  $p < .001$ ).

It was found that school culture significantly predicted student transition from primary to secondary school ( $\beta = 0.4852$ ,  $p < .001$ ).

Establishing the link between school culture and student transition from primary school to junior school was the study's first objective. It was hypothesized in the research that there was no significant correlation between school culture and student transition from primary to junior secondary school. The school culture's unstandardized coefficient,  $B_1$ , is 0.171 and significant at the 0.05 level. This indicates that a unit increase in school culture is likely to explain ability to transition. The null hypothesis is rejected and the analysis concludes that there is association between school culture and transition because  $Y = F(1, 244) = 0.000$ ,  $P = 0.001$ ,  $R^2 = 0.041$  shows that if this is the case School culture is explained by 4.1% of variation. As a result, the study found that, if the organizational transformation plan were to be implemented, the future culture would adjust from its current state.

To test hypothesis two, simple linear regression was used to test if school condition significantly predicted student transition from primary to secondary school.

The fitted regression model was: school condition =  $2.249 + 0.205$ .

The overall regression was statistically significant ( $R^2 = .051$ ,  $F(1, 244) = 13.117$ ,  $p < .000$ ).

It was found that school condition significantly predicted student transition from primary to secondary school ( $\beta = 0.4852$ ,  $p < .000$ ).

The study's second objective was to examine the relationship between classroom condition and pupils' transition from primary to junior secondary education. It was hypothesized that there is no discernible relationship between school condition and students' transition from primary to junior secondary education. The unstandardized coefficient  $B_1$ , for the school condition, is 0.205 IS significant at the 0.05 level of significance, an increase in the school condition increases transition by 0.205 per unit. The variable statistically strongly predicted:  $Y = F(1, 244) = 0.000$ ,  $P = 0.000$ ,  $R^2 = 0.051$  as a result, this indicates that school condition significantly predicts transition and can be explained about by 5.1% of variation therefore the null hypotheses was rejected and the study concluded that there is significant relationship between school condition and transition.

To test hypothesis three, simple linear regression was used to test if teacher competencies significantly predicted student transition from primary to secondary school.

The fitted regression model was: teacher competencies =  $2.027 + 0.289$ .

The overall regression was statistically significant ( $R^2 = .103$ ,  $F(1, 244) = 0.000$ ,  $p < .000$ ).

It was found that teacher competencies significantly predicted student transition from primary to secondary school ( $\beta = 0.46931$ ,  $p < .000$ ).

Objective three of the study sought to determine the association between teacher competencies and student transition from primary to junior secondary school. The objective was hypothesized that there was no significant relationship between teacher competencies and student transition from primary to junior secondary school, the unstandardized coefficient,  $B_1$ , for teacher competencies was 0.289 at the 0.05 level of significance. This indicates that for every unit increase in teacher capabilities, transition rises by 0.289. The linear regression was run to predict transition and teacher competencies, the variable

statistically predicted:  $Y = F(1, 244) = 0.000$ ,  $P < 0.000$ ,  $R^2 = 0.103$  therefore, the result indicates that teacher competencies significantly predict transition and it was explained by 10.3% of variance, thereby rejecting the null hypothesis.

The fourth objective was to ascertain if a student's transition from primary to junior secondary school could be predicted by variables such as school condition, school culture and teacher competencies. The study was to determine if teacher qualifications, school condition or school culture substantially influence how pupils transition from primary to junior secondary education. The unstandardized coefficient (B1) for teacher competences is 0.250, whereas those for school condition and school culture are 0.027 and 0.047, respectively. This demonstrates that, in the multiple regression models, only competences was the sole significant predictor and that competencies also mitigate the effects of school culture and school condition.

### **Recommendation**

The implications and suggestions for action at the ministry of education are crucial since the Findings show that significant fret is students' transition to junior high school. The transition activities for academic, social and organizational components will be an aspect in students' success. The following are some recommendations:

Provide professional guidance and development during transition. In order to help instructors to understand how to support sixth graders and how to create constructive connections, school counselors should be included in the transition process. They have specialized knowledge of teenage development. Counselors should hold small-group sessions to provide assistance for both students and their parents. This would provide students and parents the chance to learn more about their new schools environment and ask essential questions, which would make them feel more at ease before the shift. The advising program, which is thought to be the most long-lasting of the transitional activities, gives sixth graders and their teachers the chance to meet frequently throughout their junior school careers. According to several studies (Maute & Brough, 2002; Morgan & Hertzog, 2001; SREB, 2008) indicates that close cooperation between middle school and elementary schools in advisory schedules is the cause of the transition programs that are so frequently successful. Every year, the school's advising program should place a strong emphasis on preparing children for change in a collaborative conference for parents, students and teachers. To encourage enrollment in the right courses, job exploration, study techniques, test-taking advice and team-building exercises.

Provide modeling of expectations and planning. In the instructions for school officials organizing transition programs, according to the research, preemptive transition strategies should incorporate extensive preparation and better communication. Similarly, Hertzog and Morgan (1999) discovered that the most effective transition programs incorporated events like school visits, unique holiday programming, and learning preparation. Therefore, the precise actions entails gathering information to promote school development, incorporating greater graduation rates into the mission of the institution, reorganizing sixth grade to include support services and updating ministry policies that can cause students to lose interest in attending classes. The midway transition will be strengthened by all of these actions.

Provide students with weekend chances to take part in transitional activities. In order to improve the transition process. Zeedyk et al. (2003) suggested a number of initiatives, such as giving sixth-grade students the chance to interact with students in junior schools on the weekends, increasing the number of days when students visit junior schools, allowing kids to spend the day with seniors, encouraging high school students and professors to speak at junior schools, and giving junior school students with mentorship from their middle school peers.

Review the departmentalization schedule for grades six and seven. It is important to develop junior school transition programs and activities so that learners are fully aware of all the new

departmentalization standards, procedures, opportunities and obligations. Organization of departmentalization in junior school provides smooth transition than from the self contained primary school classroom (Wiles & Wiles, 2006). When it comes to academic, social and organizational systems of schools have many similarities and distinctions that pupils should be made aware (Smith, 2006). Transition programs and activities should be established to ensure that all students are prepared for the academic, social, and organizational demands of the new school. Transition programs, departments and activities must be continuously evaluated to ensure that they continue to meet the needs of all children. Retooling of teachers. Teachers should receive training on the particular learning pedagogy from the ministry of education. Researchers regard junior learners as distinct individuals, and instructors of teenage pupils aged 10 to 14 should get differentiated instruction (Kindle, 2000). Compton (1973) discovered that the distinctive demands of "in-between age" pupils necessitate efforts by professional teachers to be aware of the needs of teenagers and additional training to address the needs of junior students. Unique student-teaching strategies should be covered in training to assist teachers in incorporating digital literacy into teaching, the KICD should work with the County Government to create and disseminate digital learning tools to schools.

Tracking the transition program's progress by developing scales. Program components among existing staff members include administration to teacher professional development, teacher to teacher collaboration, staff to student involvement, and school to school interactions with junior school employees. The success of a student's transition into middle school may be significantly impacted in that direction by the development of intervention programs (Akos, 2002). As a result, junior school transition studies' findings show that effective transition programming is crucial for assisting and satisfying the requirements of all pupils.

Partner with community, stakeholders and parents. It is crucial for parents to be active in their children's transition from elementary to junior high school since they have a propensity to comprehend their child's educational experiences (McIver, 1990). For the curriculum to be implemented effectively there must be sufficient learning facilities and resources. According to Cotton and Mann (1994) adolescents seem to place a high value on parental and family interaction during the junior school year. Schools may make the transition from elementary to middle school more seamless by taking into account the opinions of parents. The necessity for ongoing research on parents' and kids' opinions on this transition can provide schools with the information they need to build and implement a transition program with confidence. A qualitative study on the transition of pupils to junior school should be reviewed in future research. The qualitative study would enable researchers to acquire more data through interviews from parents and educators on their personal perceptions of the school transition from primary to junior school which will reflect more on the transition patterns. Another suggestion is for the focus on sixth grade students would create an insight in research literature and perception in preparation for the move to junior school by looking at attendance behaviors, discipline patterns, course efficiency, continuous based assessment and student potential for leadership within the team or grade level could all offer evidence for future research. In order to clarify the roles of the administrator, sixth-grade teacher, support staff, students, parents, and the community in assisting and enhancing the focus on the academic, organizational, and personal perceptions of incoming sixth-grade students to the junior school, systems theory research study on student perception toward transition to junior school should be conducted.

## **Conclusion**

The assumption that the transition to junior school is difficult and frequently presents a series of intellectual, social and organizational exertions that determine whether sixth-grade learners continue with their education or drop out is clearly supported by the study. Student transition to junior school, most teens faces stress and worry as well as the added responsibilities that go along with it. In order to



ensure that sixth grade learners have a positive school experience, effective transition programs, better attendance, academic achievement and retention. Transition programs should be structured to incorporate a range of activities customized to their requirements.

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## A COMPARATIVE STUDY OF THE INTENDED BOTANY CURRICULA OF BANGLADESHI PUBLIC UNIVERSITIES CONSIDERING THE CONTENT KNOWLEDGE COVERAGE

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### Abstract

*Establishing knowledge of the subject matter is crucial to higher education quality. Departments with identical subjects at different institutions of tertiary education produce graduates with vastly varied skill sets including content knowledge, resulting in discrimination in their employability. This study explored the level of content knowledge coverage among the Botany curriculums of different public universities in Bangladesh. This study explored the level of content knowledge coverage among the Botany curriculums of different public universities in Bangladesh. A qualitative multiple case study method is employed to understand the phenomenon. In the first phase, relevant documents were analyzed, and in the second phase, interviews and focus group discussions (FGDs) of stakeholders were conducted. As instruments, the study employs document analysis frameworks, interview schedules, and FGD guidelines. Data was analyzed by means of content analysis for relevant documents and thematic analysis of collected evidences. The analysis revealed mismatch among the selected cases regarding coverage of knowledge in course-areas in their curriculum. As content selection for students' learning is aligned with meaningful learning, this mismatch may affect their learning achievement and their profile. The research findings carry implications for knowledge development, teaching learning practice, policy makers, curriculum developers and future researchers.*

**Keywords:** Content knowledge, Botany curriculum, Profile of graduates, Bangladeshi university

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### Introduction

Knowledge is often claimed to be the core of higher education (Welle-Strand, 2000). Malkki and Paatero (2014) pointed out that establishing knowledge of the subject matter (Fajaryati et al., 2020) is crucial to higher education quality. Students are able to gain a profound grasp of the subject matter through the use of high-quality content, which transforms factual information into knowledge. Furthermore, every curriculum's decisions should emphasize the curriculum content and highlight what makes for good knowledge (Bernstein, 2000). Content selection is aligned with meaningful learning, and the content of students' learning mismatch affects learning achievement (Walter & Jane, 2016). Furthermore, graduates can apply a broader knowledge base (Maharasoia & Hay, 2001) across different employment fields. The employability of graduates in an increasingly competitive job market and the amount of their contributions to organizations and national growth are indicators of the quality of education (Ahmed et al., 2017).

Graduates from different higher education institutions studying the same subjects have different skill sets, including content knowledge, which causes disparities in their employability (Ahmed et al., 2017). High graduate unemployment is mostly attributable to a mismatch between the abilities of university graduates and the requirements of the labor market (Rabbani & Chowdhury, 2014). The improvement in graduates should be linked to the undergraduate curriculum, which needs to give them skills they may use to market themselves to potential employers (Islam et al., 2017). In Bangladesh, however, not much research has been done on the knowledge coverage in curriculum of higher education. Few works on knowledge management in higher education (Ali et al., 2018), challenges of quality higher education in Bangladesh (Sarkar et al., 2013) and many other works on quality of education (Andaleeb, 2003; Islam et al., 2017; Islam & Chowdhury, 2015) but the coverage on knowledge in the curriculum has not been studied. In this context, research on the curriculum of Botany and its coverage in developing knowledge among the graduates are not exceptional.

## Literature review

Knowledge is the systematic mastery of concepts, theories, methods, and/or philosophies in certain fields of science that is obtained through reasoning in the learning process, student work experience, research, and community service related to learning (Malau et al., 2018). The basic assumption of the disciplinary discourse is that education should be an apprenticeship in effective modalities of knowledge production and powerful modes of knowing (ENSOR, 2004). The disciplinary discourse exerts a strong, explicit, and transparent impact on the pedagogy, and the teacher has explicit control over it (Bernstein, 2000). In addition, there is a substantial relationship between the disciplinary approach to academic cultures and disciplinary knowledge (Becher & Trowler, 2001). Graduate characteristics are no longer viewed as independent of discipline knowledge because they interact with it. Graduates are specialized and distinct in their comprehension of generic skills, which are honed to fit the demands of a specific academic discipline (Barrie, 2006). According to James et al. (2004), the majority of graduate attribute growth occurs within disciplines. The initial stage of a student's preparation for the workforce, job-readiness, is connected to professional knowledge (Yorke, 2006). Moreover, accreditation necessitates a particular breadth and depth of knowledge in important areas (Nagarajan & Edwards, 2014).

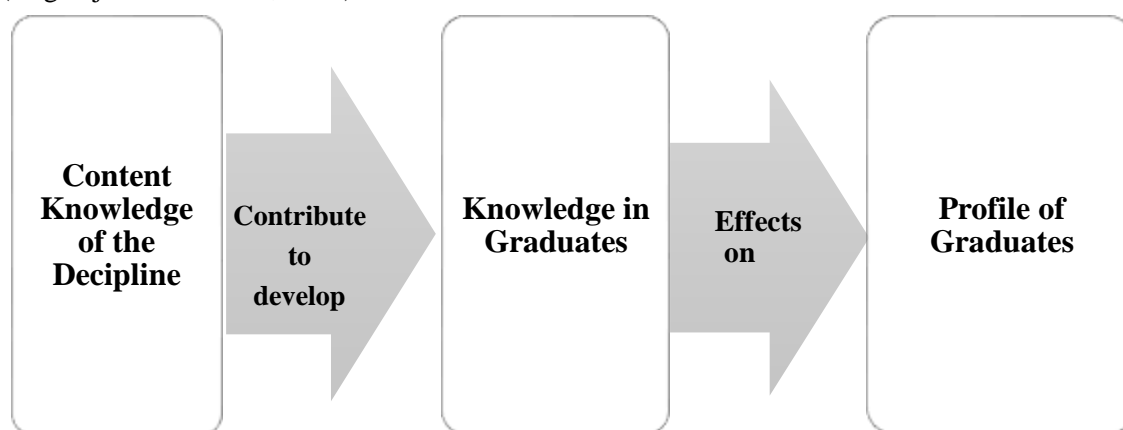


Figure 1: Schematic diagram of the conceptual framework developed by the researcher

## Purpose and Research Questions of the Study

The purpose of the study is to explore the level of content knowledge coverage among the Botany curriculums of different public universities in Bangladesh. Followings are the research question of this study.

1. What similarities do exist among the curricula of Botany at different universities of Bangladesh considering content knowledge coverage?
2. How do stakeholders perceive variations in the coverage of content knowledge among the Botany curricula at different Bangladeshi universities?

The central phenomenon of my first research question was to find existence of similarities among the curriculums of Botany at different universities of Bangladesh considering the level of coverage on knowledge and second research question is to explore the perception of stakeholders regarding the issue.

## Methodology

This study employed a qualitative multiple case study to understand the phenomenon (Yin, 2017). I have selected a multiple case study to enable in-depth analysis of the research issue within the qualitative framework. By using this approach, I was able to gather thorough data from a variety of sources, including content analysis of documents, interviews, and focus group discussions of stakeholders (Creswell & Poth, 2018). My secondary source of data was the curricula of four Botany Departments at four public universities in Bangladesh and was purposively sampled. As primary data sources, interviews and focus group discussions of teachers as well as students of selected cases were

conducted for my study. Interview was conducted with head of the department of each case. I have conducted one FGD for teachers and one for students from each case. The selection of interview participants were purposive and FGD participants were purposive and convenient. As instruments, the study employs document analysis frameworks, interview schedules, and FGD guidelines.

In first and document analysis phase, the curriculum content of the selected cases was analyzed to explore the coverage on content knowledge in developing Botany graduates. ‘Curriculum Analysis Framework for coverage of Knowledge’ was used to find knowledge coverage within the curriculum. The framework for analysis possesses ten content areas of Botany derived from the Subject Benchmark Statement in Botany, Sri Lanka (CVCD, 2004) as Sri Lanka's population had an adult literacy rate of 96.3% in 2015 and education system is very much similar to Bangladesh. Additionally, thirty-eight sub-areas within these ten content areas were identified from the curriculum analysis of the four selected cases and by consulting with course-area experts. Four-item “Likert Scales” (Likert, 1931) were developed for the analysis of curricular content with an explanation statement for “express feelings on adequacy” (Preston & Colman, 2000) to analyze the content coverage within the cases based on the coverage of important and relevant topics in the course contents. No Coverage (NC), Low Coverage (LE), Moderate Coverage (ME), and High Coverage (HE) of knowledge in content area were four scales used to collect data. Further, coverage was compared among the cases with a standard content, and this standard was conceptualized by consulting with course-area experts. To be more reliable about the collected data, inter-rater reliability tests were conducted by two experts in relevant course areas, which were done based on percentages of agreement (McHugh, 2012) among the raters.

In second phase of my research, semi-structured interview schedules and FGD guidelines were developed to gather primary data from the participants of the interviews and FGD. All the participants were selected purposively and in convenience of their availability. This phase helped me confirm the information gathered by document analysis and use the information for data triangulation (Bowen, 2009). Data was collected via a document analysis framework, semi-structured interview schedule and FGD guidelines to gather information oriented to the phenomenon of this study. Data triangulation (Denzin & Lincoln, 2017; Patton, 2014) were performed through data from document analysis, interviews with top management, and focus group discussions with stakeholders. Thematic analysis was performed on the findings from document analysis, interviews, and focus groups. The research design of the study is presented in figure1.

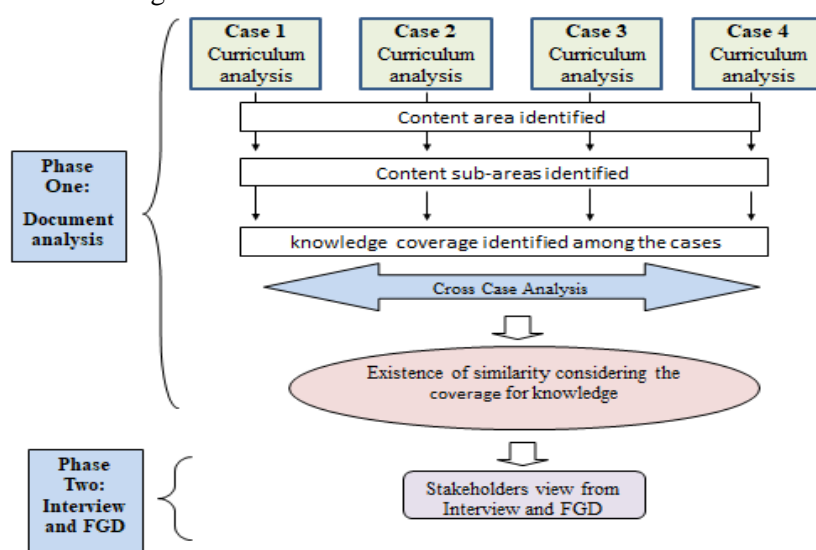


Figure 2: Research design of the study

### Results from document analysis

In addressing the first research question, I explored the existence of similarity among the curriculum of Botany in consideration of knowledge coverage through document analysis. This part of the article represents the results of the study based on ten content areas were selected for the analysis of content knowledge coverage among the selected cases.

#### Course area 1: Plant Diversity and Evolution

Table 1 represents the course area, its sub-areas, and the coverage level among the cases expressed in feelings of adequacy for the course area named 'Plant Diversity and Evolution'.

Table- 1: Coverage on content knowledge among the selected cases for the course area named 'Plant Diversity and Evolution'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Plant Diversity and Evolution	Plant Diversity	HC	MC	MC	HC
	Conservation	HC	HC	MC	HC
	Evolution	HC	LC	LC	HC
	Paleobotany	LC	MC	LC	MC

In the content area of 'Plant Diversity and Evolution' four sub-areas named Plant Diversity, Conservation, Evolution, and Paleobotany were identified in the intended curricula. Table 5.1 reveals that the sub-areas named Plant Diversity and Conservation has high or moderate coverage in all the cases. Considering the content knowledge coverage of the sub-area named Evolution, they were very rich and standard in Case A and Case D, whereas low coverage in Case B and Case C. On the other hand, Paleobotany has moderate coverage in Case B and Case D and low coverage in Case A and Case C. Overall, analysis of the content area named 'Plant Diversity and Evolution' shows high coverage in Case A and Case D compared to Case B and Case C. As a result, variations in the cases' covering of knowledge in the content area were discovered.

#### Course area 2: Cell Biology and Biochemistry

Table 2 represents the course area, sub-areas, and coverage level among the cases expressed in feelings of adequacy for the course area named 'Cell Biology and Biochemistry'.

Table-1: Coverage on content knowledge among the selected cases for the course area named 'Cell Biology and Biochemistry'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Cell Biology and Biochemistry	Cytology	MC	MC	MC	MC
	Plant Anatomy	MC	HC	HC	MC
	Embryology	HC	LC	MC	MC
	Biochemistry and Plant Nutrition	MC	HC	LC	HC

In the content area of 'Cell Biology and Biochemistry', four sub-areas named Cytology, Plant Anatomy, Embryology, Biochemistry and Plant Nutrition were identified in the intended curricula. Table 2 reveals that the sub-area named Cytology was moderately and almost equally covered in all selected cases. Furthermore, Plant Anatomy has either high or moderate coverage among the cases. On the other hand, Embryology sub-area in case B and Biochemistry and Plant Nutrition sub area in Case C has low coverage. In contrast, Biochemistry and Plant Nutrition sub-area has high coverage in Case B and D. Actually except Cytology dissimilarity existed among the cases for four sub-areas. Overall, moderate coverage was revealed in all the cases for four sub-areas of the content area named 'Cell Biology and Biochemistry'.

Course area 3: Genetics and Plant Breeding

Table 3 represents the course area, sub-areas, and coverage level among the cases expressed in feelings of adequacy for the course area named 'Genetics and Plant Breeding'.

Table-2: Coverage on content knowledge among the selected cases for the course area named 'Genetics and Plant Breeding'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Genetics and Plant Breeding	Fundamental Genetics	MC	HC	MC	LC
	Cytogenetics	HC	MC	HC	HC
	Plant Breeding	MC	HC	HC	MC

In the course content area of 'Genetics and Plant Breeding' three sub-areas named Fundamental Genetics, Cytogenetics and Plant Breeding were identified in the intended curricula. Table 5.3 reveals that Cytogenetics and Plant Breeding have almost equal coverage in all cases, whereas Case D has low coverage in the sub-area named 'Fundamental Genetics'. As a whole, this course area has high coverage in Case B and Case C and moderate coverage in Case A and Case D. Therefore, dissimilarities were found in content area coverage among the cases.

Course area 4: Ecology and Natural Resources

Table 4 represents the course area, sub-areas, and coverage level among the cases expressed in feelings of adequacy for the course area named 'Ecology and Natural Resources'.

Table-3: Coverage on content knowledge among the selected cases for the course area named 'Ecology and Natural Resources'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Ecology and Natural Resources	Ecology	HC	HC	MC	MC
	Environmental Science	MC	LC	HC	HC
	Limnology	HC	LC	MC	LC
	Marine Botany	LC	NC	NC	NC
	Soil Science	LC	MC	LC	LC

In the course content area named 'Ecology and Natural Resources' five sub-areas are considered for the intended curriculum analysis: Ecology, Environmental Science, Limnology, Marine Botany and Soil Science. Table 4 revealed that the sub-area named Ecology has high coverage in Cases A and B and moderate coverage in Case C and Case D. Moreover, Environmental Science sub-area has high coverage coverage in Case C and D, moderate coverage in Case A and low coverage in Case B. Furthermore, analysis findings showed that Limnology and Soil Science content knowledge area are not properly covered in most of the cases, and Marine Botany course is present only in Case A. As a whole, total content area has moderate coverage in Case A and Case C and low coverage in Case B and D. Therefore, enough dissimilarity existed among the cases.

Course area 5: Plant Forms and Function

Table 5 represents the course area, sub-areas, and coverage level among the cases expressed in feelings of adequacy for the course area named 'Plant Forms and Function'.

Table-4: Coverage on content knowledge among the selected cases for the course area named 'Plant Forms and Function'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Plant Forms and Function	Mycology	MC	LC	MC	HC
	Phycology	HC	MC	MC	HC
	Lichenology	LC	MC	MC	LC
	Bryophytes	MC	MC	MC	HC
	Pteridophytes	HC	MC	MC	HC
	Gymnosperms	HC	MC	HC	HC
	Plant Physiology	MC	HC	HC	HC

In the course content area 'Plant Forms and Function' seven sub-areas named Mycology, Phycology, Lichenology, Bryophytes, Pteridophytes, Gymnosperms and Plant Physiology were identified in the intended curricula. Table 5 reveals that most of the sub-areas has either moderate or high coverage in the cases. On the other hand, the content sub-area named 'Lichenology' has low coverage in Case A and Case D. Overall, this total course area has high coverage in Case D and moderate coverage in other cases. Therefore, the course content area 'Plant Forms and Function' shows very little dissimilarity among the cases.

Course area 6: Plant Systematics

Table 6 represents the course area, sub-areas and coverage level among the cases expressed in feelings of adequacy for the course area named 'Plant Systematics'.

Table-5: Coverage on content knowledge among the selected cases for the course area named 'Plant Systematics'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Plant Systematics	Systematics	MC	MC	MC	HC
	Molecular Systematics	MC	HC	HC	MC
	Palynology	LC	HC	MC	HC

In the course content area of 'Plant Systematics' three sub-areas named Sytematics, Molecular Systematics and Palynology were identified in the intended curricula. Table 6 represents that, in most of the cases, all the sub-areas have either high or moderate coverage. Case A, on the other hand, placed low coverage on the subarea named Palynology. This total area has high coverage in Case B and Case D, whereas it has moderate coverage in Case A and Case C. Therefore, the content area named Plant Systematics exhibits very little dissimilarity among the four cases.

Course area 7: Microbiology and Plant Pathology

Table 7 represents the course area, sub-areas, and coverage level among the cases expressed in feelings of adequacy for the course area named 'Microbiology and Plant Pathology'.

Table-6: Coverage on content knowledge among the selected cases for the course area named 'Microbiology and Plant Pathology'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Microbiology and Plant Pathology	Microbiology	HC	HC	MC	HC
	Plant Pathology	HC	HC	LC	HC

In the course content area of 'Microbiology and Plant Pathology' two similar sub-areas were identified in the intended curriculums. Table 7 shows that both the sub-areas of this course area has high coverage in Cases A, B, and D. In contrast, comparatively low coverage was found in Case C. Therefore, more similarity than dissimilarity exists among the cases.

Course area 8: Bio-statistics and Experimental Design

Table 8 represents the course area, sub-areas and coverage level among the cases expressed in feelings of adequacy for the course area named 'Bio-statistics and Experimental Design'.

Table-7: Coverage on content knowledge among the selected cases for the course area named 'Bio-statistics and Experimental Design'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Bio-statistics and Experimental Design	Bio-statistics Experimental Design	MC	MC	HC	MC



In the course content area of 'Bio-statistics and Experimental Design' no distinguished sub-area was observed in the intended curriculum. This area has moderate coverage in all the cases, and in Case C, it has high coverage. Therefore, very little dissimilarity exists among the cases in this area.

Course area 9: Economic Botany

Table 9 represents the course area, sub-areas and coverage level among the cases expressed in feelings of adequacy for the course area named 'Economic Botany'.

Table-8: Coverage on content knowledge among the selected cases for the course area named 'Economic Botany'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Economic Botany	Economic Botany	MC	MC	HC	MC
	Ethnobotany	HC	LC	HC	MC
	Horticulture	MC	MC	MC	MC
	Agronomy	HC	MC	MC	MC

In the course content area 'Economic Botany' four basic sub-areas named Economic Botany, Ethnobotany, Horticulture and Agronomy were identified in the intended curriculum. Table 9 reveals that the sub-areas named Economic Botany, Horticulture and Agronomy shows moderate coverage in all the cases. On the other hand, Ethnobotany has high coverage in Cases A and C, whereas it has low coverage in Case B. Furthermore, moderate coverage is identified in Horticulture among the cases. In general, based on the data, moderate coverage was established in all the cases. Therefore, the analysis shows very little dissimilarity and more similarity among the cases.

Course area 10: Molecular Biology and Bio-technology

Table 10 represents the course area, sub-areas, and coverage level among the cases expressed in feelings of adequacy for the course area named 'Molecular Biology and Bio-technology'.

Table-9: Coverage on content knowledge among the selected cases for the course area named 'Molecular Biology and Bio-technology'

Course area according to the benchmark	Sub-areas within the curriculum	Coverage level among the cases			
		Case A	Case B	Case C	Case D
Molecular Biology and Bio-technology	Molecular Genetics	HC	MC	HC	HC
	Tissue Culture	HC	HC	HC	HC
	Biotechnology	LC	HC	HC	MC
	Genetic Engineering	MC	MC	MC	MC
	Bioinformatics	MC	MC	MC	NC

In the intended curriculum, the content area of 'Molecular Biology and Biotechnology' was divided into five sub-areas named Molecular Genetics, Tissue Culture, Biotechnology, Genetic Engineering, and Bioinformatics. Table 10 represents that the sub-areas of this course area has either high or moderate coverage in all the cases except Biotechnology. Actually, this sub-area has low coverage in Case A and no coverage in Case D. On the other hand, the sub-area named Tissue Culture has high coverage, and Genetic Engineering has moderate coverage in all the cases. In general, Case C received the most coverage, while Cases A, B, and D received moderate coverage. Therefore, dissimilarity exists among the cases in the content area named 'Molecular Biology and Bio-technology.'

### Overall coverage of course content knowledge

Table-11 represents the course area, its sub-areas, and the coverage level among the cases expressed in feelings of adequacy for ten the course areas. This table shows overall coverage on course content among the cases.

Table-11: Overall coverage of course content knowledge among the cases

Course area according to the subject benchmark	Overall coverage				Comments on overall coverage
	Case A	Case B	Case C	Case D	
Plant Diversity and Evolution	HC	LC	LC	HC	Dissimilarity revealed among the cases
Cell Biology and Biochemistry	MC	MC	MC	MC	
Genetics and Plant Breeding	MC	HC	HC	MC	
Ecology and Natural Resources	MC	LC	MC	LC	
Plant Forms and Function	MC	MC	MC	HC	
Plant Systematics	MC	HC	MC	HC	
Microbiology and Plant Pathology	HC	HC	LC	HC	
Bio-statistics and Experimental Design	MC	MC	HC	MC	
Economic Botany	MC	MC	MC	MC	
Molecular Biology and Bio-technology	MC	MC	HC	MC	

Table 11 shows that there are big differences between the curricula of the cases in terms of the content knowledge coverage that the graduates are intended to gain. Thus, this intended curriculum revealed a significant difference in the coverage on content knowledge among the selected cases. Knowledge of content or subject matter emphasis found similarity for a few course content areas, but more dissimilarity in comparison to similarity is seen among the cases from document analysis. Therefore, an overall mismatch of knowledge emphasis in the curriculums of all the cases is revealed.

### Results from interview and FGD

In addressing the second research question, I explored view of head and members of the curriculum committee. Moreover, teachers and students' perspectives were also explored here. Interviews and FGD questions were designed to figure out the reason behind different levels of knowledge coverage about the subject matter among the cases. In response, the head of the curriculum committee from Case A said,

There is no coordination among the Botany Departments regarding syllabus or curriculum reformation. The Bangladesh Botanical Society is a platform for botanists to resolve organizational issues, arrange conferences, and publish a journal, but we never had discussion on similar courses and curriculum. Basic courses are similar, with more or less similar course content in all the curriculums, but there are also some specialized courses or content in every department. The proportion of the content for any course is never balanced among the departments.

In the FGD for Case D, one of the teachers talked about why they were making specialized courses with different content knowledge from others at their university and said,

The geographic location of our university demands courses like Hill Cultivation, Marine Ecology etc. Not only that, when a teacher returns with a specialized foreign degree, he or she tries to introduce a new course or course content; the opposite may happen when a teacher retires from the job and his or her course is gradually omitted from the syllabus.

In all the cases, teachers agreed that their course contents had not changed even though reformation occurs rather they had changed their curriculum into an outcome-based format. At this point, a participant teacher in Case B said, "Our new curriculum is nothing but the same product in a new wrapper; therefore, the content remained almost the same." Students were very dissatisfied in Case C with their course content, which represented a comparison of courses, and were told, "Our courses lack



applied sides in comparison to other universities, which pushes us back in the job market.” Therefore, FGD and interview data supported the document analysis data.

Most of the teachers viewed dissimilarity among the cases regarding content selection as a normal phenomenon, as there is no coordination among the cases to select the contents. Some teachers viewed it as an obstacle for the quality graduate production procedure. Few teachers viewed this knowledge coverage mismatch positively as it offered diversification among the students to gain different jobs. Most of the students viewed the knowledge mismatch among the Botany graduates from different universities as a result of mismatched curriculum. Many of the students mentioned that, not having any scope to express an opinion on curriculum content, their expectations were not met.

### **Discussion**

Botany departments at four selected universities focused differently on knowledge in ten content areas with thirty-eight sub-areas of Botany. Knowledge is often claimed to be the core of higher education (Welle-Strand, 2000). Malkki and Paatero (2014) pointed out that establishing knowledge of the subject matter (Fajaryati et al., 2020) is crucial to higher education quality. Students are able to gain a profound grasp of the subject matter through the use of high-quality content, which transforms factual information into knowledge. In addition, Bernstein (2000) argued that the choices made in any curriculum should highlight what constitutes good knowledge and emphasize the chosen curriculum content. Furthermore, graduates can apply a broader knowledge base (Aamodt & Havnes, 2008; Maharasoja & Hay, 2001) across different employment fields. In addition, this broader knowledge base provides students with networks, relationships, self-assurance, and objectives that will affect their attitude toward their employment and their progression through the labor market (Brennan, 2016). Content selection is aligned with meaningful learning, and the content of students’ learning mismatch affects learning achievement (Walter & Jane, 2016). Therefore, a mismatch of course content may bring about a difference in the knowledge of the subject matter achieved by the graduates of Botany.

### **Implication and conclusion**

My research supplemented some knowledge for teachers of Botany Departments regarding a comparative scenario of curriculum content which may help them to update their knowledge on content of Botany. Even the students will have clear knowledge about their curriculum content. Moreover, a comparative scenario of curriculum content will help them improve their content delivery and selection of teaching-learning and assessment strategies for quality teaching. The findings of the research for cross-case curriculum analysis for coverage on content knowledge can also create a competitive spirit among the Botany departments in curriculum reformation for producing quality graduates.

Curriculum developers, university authority and curriculum developer may have some guidance about content mismatch among the curriculum. Moreover, to minimize the differentiation among the graduates of Botany they may consider curriculum harmonization. Curriculum harmonization may help to adopt uniform educational standards which may help to maintain similar education in universities with similar subject. Besides, contextualization and standardization when harmonizing curriculum programs may bring positive effect on the quality of education. So, formal educational institutions may seek international college or university homologation program.

As a concluding remark, it should be highlighted that to raise the standard of higher education in Bangladesh, it is crucial to guarantee that equivalent focus is placed on content knowledge in curriculums for related courses across various universities. Furthermore, to achieve skilled and qualified graduates from higher educational institutes, policymakers must rethink producing a harmonized curriculum to fill the gap between quality mismatch among Botany graduates. However, investigation on this issue is required to support the points made in this study. The effectiveness of a harmonized curriculum in producing knowledgeable graduates in botany will surely be improved by further research in this field.

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## TEACHERS' PERCEPTION OF THE PRACTICED FORMATIVE ASSESSMENT TO ACHIEVE THE ILOS OF PRIMARY SCIENCE TEACHING PRACTICE IN BANGLADESH

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### Abstract

*This study aims to explore the primary science teachers' perception of the formative assessment methods and the perception of the extent of students' ILO achievement. Within the qualitative framework, a multiple case study approach focusing on the primary science teachers (who teach science) of rural and urban was purposively applied. Along with the teacher each case was considered by three concerned stakeholders (Assistant Upazila Education officer, instructors of Upazila Resource Center, and Primary Teachers Training Institute). Primary science textbooks, Teacher's editions, and Assessment Guide were also used as samples. Data collected from lesson observation, semi-structured interviews, and document analysis were analyzed by qualitative content analysis and thematic analysis. The findings reveal that in the primary science teaching practice of Bangladesh, teachers and concerned stakeholders have somewhat perception of the formative assessment methods and the extent of students' ILO achievement. Concerned stakeholders' perceptions may be reflected in teachers' classroom practice as they are engaged in teacher training, supervision, and monitoring. The provided information in the curriculum documents is also somewhat which may also be reflected in teachers' and concerned stakeholders' perceptions. The findings of the study carry implications for the Ministry of Primary and Mass Education, Directorate of Primary Education, National Curriculum and Textbook Boards, National Academy for Primary Education, curriculum developers, and policymakers to take into account for further improvement of primary science teaching practice. The findings provide knowledge to the literature which will help curriculum developers, textbooks, and teacher's edition writers to develop curriculum documents, and researchers for further research on educational settings.*

**Keywords:** Primary science teaching practice, primary science teachers' perception of formative assessment methods, perception of the extent of students' ILO achievement.

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### Introduction

According to Biggs (2003), assessment has two significant purposes: to emphasize the quality of learning and to outline what is to be learned by the students (Intended curriculum). The assessments carried out in school are two types: formative (assessment for learning) and summative (assessment of learning), both are interconnected (Lau, 2016) and interdependent (Houston & Thompson, 2017). Formative assessment is found as a vital component for effective teaching-learning and it helps to select methods or strategies used in the classroom to identify students' difficulties or understanding of a particular concept and to solve it for students' effective learning (Ainscow, 1988; Popham, 1999). However, many scholars confirm that formative assessment is a typical benchmark of the teaching-learning process which enhances the learning process and they also give evidence that significant learning can be achieved when formative assessment is incorporated into classroom practices (Stiggins, 1992; Black & William, 1998). Further, formative assessments allow students to demonstrate their knowledge, skills, and attitude in accordance with the curriculum intention so that their performance can be clearly interpreted (LaMarca, 2001).

Harlen (2014) suggests that when teachers practice assessment unconsciously, without a deep understanding of its meaning or purpose, it could have negative impacts on students' achievement of ILOs. Further, Elkader (2008) found that teachers' assessment practices are directly related to instruction, student learning, and achievement of ILOs. Teachers are expected to be knowledgeable about assessment methods and able to use assessment knowledge to ensure students' achievement levels (Bookhart, 2001; Cambell & Evans, 2000). Therefore, teachers' perception of the practiced formative assessment methods and the extent of students' ILO achievement is important as Biggs (1999) suggested that effective teaching-learning requires a careful alignment of intended learning outcomes,

teaching-learning activities, and assessment. However, most teachers are unaware of whether the intended learning outcome is achieved or not after the completion of a lesson (Rahman, 2015). However, teachers place less emphasis on assessing learning outcomes in doing ongoing assessments (Khan et al., 2016).

### **Purpose and Research question of the study**

This study attempted to find primary science teachers' perceptions of the practiced formative assessment methods to achieve the intended learning outcome. The study also aimed to explore primary science teachers' perceptions of the extent of students' learning to achieve the intended learning outcomes. To fulfill these purposes this study was undertaken to answer the following questions,

- How do primary science teachers perceive the practiced formative assessment methods to achieve the intended learning outcomes?
- How do primary science teachers perceive the extent of students' learning to achieve the intended learning outcomes?

### **Methodology**

The study followed an interpretive qualitative approach (Guba & Lincoln, 1994) to investigate the central phenomena of this study which was teachers' perception of the practiced assessment methods and the extent of students' ILO achievement (Creswell, 2015; Creswell & Creswell, 2018). Within the qualitative framework, a multiple case study strategy was adopted for the study allowing to explore comparison within and among the cases to get the real picture of different contexts (Yin, 2014, 2018). The study is exploratory and interpretive in nature and prefers a small number of samples to collect data from data sources directly related to events or individuals (Creswell & Poth, 2018). The study selected four case study which is suitable for a single study (Yin, 2018), and this number provide plentiful opportunities to identify themes of the case as well as cross-case theme analysis (Creswell & Poth, 2018). The study selected three types of data sources: teachers (T1, T2, T3, & T4), curriculum documents (Textbooks and Teacher's edition), and concerned stakeholders (AUEO, instructors of PTI and URC), where data were compared within and across the case studies to get maximize validity (Yin, 2018). Intentionally teachers, concerned stakeholders, and curriculum documents were selected purposively as the study wanted to know the central phenomena by getting available needed information (Creswell, 2015; Creswell & Creswell, 2018).

In this study, one primary science teacher (who teaches science) from one selected primary school was considered as a case or unit of analysis. Four teachers of different contexts: two from the urban area and two from the rural area, were selected so that the concerned stakeholders' perception and teachers' classroom practice may differ for different contexts, and the real picture of classroom practice in a different context would be found. Four classes of each teacher were observed in lesson observations and after that lessons were analyzed from documents (Textbooks, Teacher's edition, and Assessment Guide). This research considered four cases and each case was formed by the following members,

- Primary science teachers (Who teach science)
- Curriculum documents (Textbooks, Teacher's guide)
- Assistant Upazila Education Officer (AUEO)
- Upazila Resource Center Instructor (URC Instructor)
- Primary Teachers Training Institute instructor (PTI Instructor)

The main focus of RQ 1 is to explore primary science teachers' perceptions of the practiced formative assessment methods to achieve the intended learning outcome, and RQ 2 is to explore primary science teachers' perceptions of the extent of students' learning to achieve the intended learning outcomes.

In this study, a semi-structured interview schedule, lesson observation schedule, and document review protocol provided information on the existing perceptions of teachers and concerned stakeholders. The open-ended and non-directed semi-structured interview helped teachers and concerned stakeholders to



unfold their thoughts, opinions, and perceptions in their real context (DiCicco & Crabtree, 2006; Lopez & Whitehead, 2013) which verified the accuracy of the observations (Fraenkel et al., 2015). However, lesson observation provides a complete description of teachers' behavior gathered in a specific natural classroom setting (Adler & Adler, 1994; Angrosino & Pérez, 2000; Ary et al., 2018; Mulhall, 2003) and mostly acts as a complementary purpose with teachers' interview (Swanborn, 2010). Moreover, a review of documents was used in case studies combined with others to support other collected data as a means of triangulation (Denzin, 1978; Yin, 2018). Thematic analysis (Braun & Clark, 2022) and qualitative content analysis (Patton, 2002; Schreier, 2012) have been used for data analysis. Vagias's (2006) Likert-scale technique has been used to develop scales for data analysis.

## Results

Case-wise results are presented here where case A, case B, case C, and case D were designed in relation to the research question to explore teachers' perception of practiced formative assessment methods to achieve the ILOs and perception of the extent of students' learning to achieve the ILOs.

### Case A

This section presents the results of the perception of the practiced formative assessment methods to achieve the ILOs and the perception of the extent of students' learning to achieve the ILOs by formative assessment.

Perception of practiced formative assessment methods to achieve the ILOs

The results of comprehending practiced formative assessment methods through document analysis, lesson observation, and interviews are presented next.

- *Formative assessment: areas and tools*

Assessment must allow students to reveal the area of their knowledge and skills according to the expectations of the curriculum frameworks (LaMarca, 2001). At the beginning of the teacher's edition, there is an instruction for the teachers to determine assessment methods and tools for assessing the achieved ILO so that students' competency can be assessed and possible necessary steps can be taken during formative assessment (NCTB, 2020).

### *Provided information in Text Books (TB), Teacher's Edition (TE) and Assessment Guide (AG) and Teacher's classroom practice*

It is clearly instructed at the start of the teacher's edition that, "conduct a formative assessment of the student during and end of the lesson, and keep record according to assessment guide". However, table 1.1 presents the findings from document analysis and lesson observations of assessment areas (cognitive knowledge, science process skills; scientific attitude and values), and assessment tools (Oral and written).

**Table 1.1: The provided information of formative assessment methods in grade 3, chapter-soil, ILOs no-4.1.2, 4.1.1; Lessons 2 &3; and T1's practiced formative assessment methods**

Selected assessment areas, sub-areas, and tools in the Assessment Guide			Assessment focused at TE		Assessment focused at TB		Assessment practiced by the teacher	
areas	sub-areas	tools	Assessment areas	Assessment tools	Assessment areas	Assessment tools	Assessment areas	Assessment tools
cognitive Knowledge	remembering	oral assessment checklist	knowledge	questions	knowledge	questions	knowledge	oral questions
	understand							
	application							
	higher order learning	written questions						
science process skills	observation	observation checklist	observation	Verify students' classwork				
	measurement							
	classification							

Selected assessment areas, sub-areas, and tools in the Assessment Guide			Assessment focused at TE		Assessment focused at TB		Assessment practiced by the teacher	
	prediction	oral checklist	prediction	Verify students' answer				
	decision making							
	experiment							
	communication							
scientific attitude and values	interest	observation checklist	positive attitude	Verify students' active participation in group discussion	positive attitude			
	curiosity							
	open-mindedness							
	curious on verification							

Analyzing the primary science textbooks (TB), teacher's editions (TE), and assessment guide (AG) it is found from Table 1.1 that, the provided information has been moderately addressed in AG; somewhat addressed in TE and was not addressed in TB that way. Further, Table 1.1 reflects that T1 focused only on knowledge for assessment through oral questions. T1 did not focus on any scientific skills and attitude and did not focus on any other tools which are also mentioned in TE. Therefore, T1's practice was somewhat on assessment areas and tools.

The summary of the findings of T1's classroom practice of formative assessment methods and the information provided in TB, TE, and AG are shown in Table 1.2.

**Table 1.2: Teacher's lesson observation and the provided information in documents of formative assessment methods**

Chapter & lessons in Grade three	Teacher's lesson practice	Information provided (Based on literature Review)		
		In TB	In TE	In AG
Chapter: 5 Lesson: 1	Not practice	Somewhat addressed	Somewhat addressed	Moderately addressed
Chapter: 5 Lessons: 2&3	Lesson-1: Somewhat practiced	Somewhat addressed	Somewhat addressed	Moderately addressed
Chapter: 5 Lessons: 4&5	Lesson-2: Somewhat practiced	Somewhat addressed	Somewhat addressed	Moderately addressed
Chapter: 6 Lesson: 1	Lesson-3: Somewhat practiced	Somewhat addressed	Somewhat addressed	Moderately addressed
Chapter: 6 Lesson: 2	Lesson-4: Somewhat practiced	Somewhat addressed	Somewhat addressed	Moderately addressed

The table reflects that T1 somewhat practiced formative assessment to achieve the ILOs. The information of formative assessment areas and assessment tools are moderately addressed in AG and somewhat addressed in TB and TE. Therefore, curriculum documents mostly somewhat address the formative assessment methods.

#### **Stakeholder's views about formative assessment methods: areas and tools**

Teacher 1 and concerned stakeholders have different views on formative assessment areas and tools.

##### **• Formative assessment areas**

According to Lok et al. (2016), one of the main principles of assessment is to grade students with different levels of knowledge and skills. The primary science teacher's edition provides guidance for the teachers, to give special emphasis on students' content knowledge, science process skills, and scientific attitude during the assessment. Here, stakeholders were asked about the focus areas of formative assessment. The PTI instructor1 said,

The classroom assessment focus is learning outcome. knowledge, application, and affective domain come in different lessons wherever it is needed as assessment areas, these areas may not be focused in all the lessons for assessment, these are in TE.

In the statement of PTIII1, skill is totally absent as an assessment focus which indicates PTIII1's somewhat perception of the focus areas of formative assessment.

Emphasis has been given in science teaching-learning activities to enhance scientific knowledge, science process skills, and scientific attitude that was mentioned at the beginning of science textbooks as a 'Major feature' (NCTB, 2020). To know stakeholders' knowledge about the information provided in documents, they were asked about the scopes of assessment areas on given activities in TE and TB with an example. The teacher1 said,

Actually, we have to do work along with our classes and have classes in different subjects. So, we couldn't concentrate on each subject in TB and TE deeply. Actually, I tried to follow TB but so far, I noticed TE, but I could not understand.

The explanation reveals T1's unawareness of the information provided in the documents as T1 did not follow TE and TB and did not understand that way.

The primary science TE directs teachers to conduct formative assessments during and at the end of lessons focusing on the assessment areas: science knowledge, science process skills, and scientific attitude, and to keep assessment records as per the AG (NCTB, 2020). Therefore, stakeholders were asked about teacher's classroom practice of formative assessment areas. The AUEO1 said,

Most of the teacher remains restricted in students' knowledge level, they can't focus on understanding and application level. Most of the students could not read, so the teacher did not get interested in assessing them focusing on different areas.

In the explanation, AUEO1 specified only knowledge among the mentioned assessment areas in TE and AG, which reveals that AUEO1 has somewhat perception of the assessment areas.

- **Formative assessment tools**

The primary science teacher's edition recommends teachers complete formative assessments of students using methods and tools according to the assessment guide (AG). Here, stakeholders were asked about the scope of assessment tools in the provided activities of TE and TB. The teacher1 said,

Actually, I became so busy with my class and other school-based activities that I could not get a chance to see the TE and TB that way, but I followed TB for classroom assessment.

The statement explores the unawareness of T1 about the formative assessment tools as T1 follows TB where the given information is addressed somewhat. Hence, T1 has somewhat perception of classroom assessment tools.

According to the instructions of AG, the teacher will assess the students using one or more processes such as oral, written, and observation according to ILO during conducting lessons (NCTB, 2020). Additionally, teachers can effectively assess students by following textbooks and teacher's editions in addition to the assessment guide. Hence, stakeholders were asked about the assessment tools practiced in the classroom. URC instructor1 said,

There are two processes for classroom assessment: oral and written, teachers usually use oral questions for assessment and rarely use written questions. They did not fully assess the students; only the chosen 2 or 3 can answer and the teacher considers the assessment complete.

In the statement, URCII mentioned oral and written processes for classroom assessment that reveals URCII's somewhat perception as according to AG observation is an essential assessment tool for assessing scientific attitudes in science teaching-learning activities.

A summary of stakeholders' perception of the formative assessment methods is presented in Table 1.3.



**Table 1.3: Stakeholders' perception of formative assessment methods: areas and tools**

Stakeholders	Stakeholders' perception of formative assessment methods: areas and tools					Overall perception of formative assessment methods
	Areas of formative assessment	Information of formative assessment areas in TB, TE & AG	classroom practice of formative assessment areas	Information of formative assessment tools in TB, TE & AG	Classroom practice of formative assessment tools	
Teacher	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
PTI	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
URC	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
AUEO	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception

The table reveals that T1 and concerned stakeholders have somewhat perception of the areas and tools of formative assessment. However, they also have somewhat perception of TB, TE, and AG provided information.

### **Perception of the extent of student's learning to achieve the ILOs by formative assessment**

The following section presents the results of comprehending the extent of students' learning to achieve the ILOs by formative assessment.

#### ***Stakeholders' views on the extent of students' achievement of ILOs***

According to AG, a specific objective of formative assessment is to identify the learning status of students and take necessary action accordingly. To know the stakeholders' view, they were asked 'How to understand to what extent the ILOs have been achieved during conducting lessons? The PTI instructor1 said,

Asking students questions at the end of the lesson and their answering approach of spontaneity and silence help teachers understand how much students' LO has been achieved. For example, if the teacher asks them the way of recovering from diarrhea, if they can they will answer spontaneously, and if can't, they become silent.

In the statement, PTI1 states that teachers understand the extent of students' achievement of ILO by their answering approach at the end of the lesson through questioning. This statement reveals that PTI1 has somewhat perception of the extent of students' achievement of ILOs.

Further, it is mentioned in the AG of primary science that teachers have to carry a 'subject-based assessment guide', textbooks, teacher's edition, subject-based terminal competency, and class-wise attainable competencies (NCTB, 2020). Moreover, according to AG formative assessment and teaching-learning activities are interconnected; and these are instructed in the TE for each lesson. To know stakeholders' views, they were asked about the information provided in AG, TB, and TE to assess the extent of achieving the ILOs by formative assessment. The AUEO1 said,

Teachers do the formative assessment in each class with the provided questions in TB and TE or they create their own questions to evaluate the students in class. We have also formatted structure for classroom assessment.

The statement reveals that although AUEO1 was aware of the provided information for formative assessment but was unaware of the subject-based assessment guide. Here, AUEO1 has somewhat perception of the information provided in documents.

According to AG, teachers get help from a formative assessment format to assess the learning of primary students during teaching-learning activities in the class where knowledge, skills, and attitude are

mentioned as assessment focus. To know the classroom practice, stakeholders were asked about the practice of assessing the extent of students' ILO achievement by formative assessment. The teacher1 stated,

Students' achievement can be known by question-answer during class time focusing on knowledge, understand, and application. If the students give answers about what is soil? or explain the characteristics of soil types or identify soil types for plant growth; then they achieve the ILO. We do not have any system to give them marks for formative assessment.

In the statement, T1 explained the way of assessing the extent to achieve the ILOs without following any given instruction or format in class. Hence, T1 has somewhat perception of the practice of assessing the extent of students' ILO achievement by formative assessment.

A summary of findings about stakeholders' perception of the extent of students' achievement of ILOs by formative assessment is presented in Table 1.4.

**Table 1.4: Stakeholders' perception of the extent of students' ILO achievement by formative assessment.**

Stakeholders	Stakeholders' views about the extent of students; ILO achievement by formative assessment			overall perception of the extent of students' ILO achievement by formative assessment
	Understanding of the extent of ILO achievement	Information provided in AG, TB & TE about formative assessment extent	Practice of the extent of ILO achievement	
Teacher	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
PTI	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
URC	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
AUEO	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception

The table reveals that T1 and concerned stakeholders have somewhat perception of the extent of students' ILO achievement by formative assessment.

➤ **Remarks on the perception of the formative assessment methods to achieve the ILOs and the extent of student's learning to achieve the ILOs by formative assessment**

T1's perception of the formative assessment methods to achieve the ILOs and the extent of students' ILO achievement by formative assessment was reflected in T1's classroom practice. However, concerned stakeholders' perceptions also may be reflected in T1's perception and classroom practices. Curriculum documents provided information may also be reflected in T1 and concerned stakeholders' perception and T1's classroom practice.

The following section presents the overall results of perception of the practiced formative assessment methods to achieve the ILOs, and perception of the extent of students' ILO achievement from Case A, Case B, Case C, and Case D where T1 and T3 were from a rural primary school and T2 and T4 were from an urban primary school.

Overall perception of the practiced formative assessment methods to achieve the assess ILOs

The summary of findings about stakeholders' perception of formative assessment methods to achieve the ILOs of all four cases is shown in Table 1.5.

**Table 1.5: Perception of the practiced formative assessment methods to assess ILOs**

Stakeholders	Perception of the practiced formative assessment methods to achieve the ILOs			
	Case A	Case B	Case C	Case D
<b>Teacher</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
<b>PTI instructor</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
<b>URC instructor</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
<b>AUEO</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception

The table reflects that teachers and concerned stakeholders have somewhat perception of formative assessment methods.

The summary of findings of teachers practiced formative assessment methods in the classroom; and the information provided in TB, TE, and AG of all four cases are shown in Table 1.6.

**Table 1.6: Teachers practiced formative assessment methods and the information provided in curriculum documents**

Cases	Teacher's lesson practice	Information provided in curriculum documents
<b>Case A</b>	Somewhat practiced	Somewhat addressed
<b>Case B</b>	Somewhat practiced	Somewhat addressed
<b>Case C</b>	Somewhat practiced	Somewhat addressed
<b>Case D</b>	Somewhat practiced	Somewhat addressed

The table shows that teachers somewhat practiced formative assessment in the classroom. The information on formative assessment areas and assessment tools is somewhat addressed in curriculum documents.

#### **Perception of the extent of student's learning to achieve the ILOs in all four cases**

A summary of findings of stakeholders' perception of the extent of students' achievement of ILOs by formative assessment is presented in Table 1.7.

**Table 1.1: Summary of findings about the stakeholders' perception of the extent of formative assessment.**

Stakeholders	overall perception of the extent of ILO achievement through formative assessment			
	Case A	Case B	Case C	Case D
<b>Teacher</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
<b>PTI</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
<b>URC</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception
<b>AUEO</b>	Somewhat perception	Somewhat perception	Somewhat perception	Somewhat perception

The table states that the teachers and concerned stakeholders perceive somewhat the extent of students' learning to achieve the ILOs by formative assessment.

➤ **Overall remarks on the perception of formative assessment methods to assess ILOs and the extent of students' ILO achievement**

Teachers' perception of the formative assessment methods to assess ILOs and the extent of students' ILO achievement by formative assessment was reflected in their classroom practice. However, concerned stakeholders' perceptions also may be reflected in teachers' perceptions and classroom practice. Curriculum documents provided information may also be reflected in concerned stakeholders' perception and teachers' perception and classroom practice.

**Discussion**

The findings indicated that teachers of the four cases in this study have somewhat perception of formative assessment methods. The earlier research suggests that assessment helps teachers improve the quality of learning and teaching in classrooms and helps to achieve the ILOs (Biggs, 2003; Hargraves, 2007; Irons, 2008; Jones, 2005). Teachers somewhat perceptions may not support them to improve the quality of teaching and learning; and may inspire them to practice usual traditional assessment methods in the classroom without giving their attention to whether the intended learning outcome is achieved or not after the completion of a lesson. According to Ainscow (1988) and Popham (1999) formative assessment is found as a vital component for effective teaching and learning and it helps to select any planned methods or strategy used in the classroom to identify students' difficulties or understanding of a particular concept or idea and to solve it for students effective learning. Many scholars confirm that formative assessment is a typical benchmark of the teaching and learning process which enhances the learning process (Stiggins, 1992; Black & William, 1998). They also give evidence that significant learning can be achieved when formative assessment is incorporated into classroom practices. Stiggins and Chappuis (2006) suggested from their research that, assessment has a powerful influence on learning outcomes; so, integration of assessment with teaching and learning is essential for effective teaching-learning. Teachers' somewhat perception of formative assessment and the extent of students' ILO achievement in this study, may influence teachers' formative assessment planning; and this can affect students' achievement of ILOs. However, LaMarca (2001) found that formative assessments must allow students to demonstrate their knowledge, skills, and attitude in accordance with the curriculum intention so that their performance can be clearly interpreted. Broadfoot and Black (2004), and Ellis (2004) found in their study that, traditional assessment negatively affects teaching and learning. The somewhat perception of the teachers in this study, may not give students the opportunity to achieve in line with the curriculum expectations; and may allow them to practice traditional ongoing assessment which negatively affects teaching and learning.

Classroom assessment practices are the most important aspect of classroom instruction. Gronlund (2006) found in his research on educational assessment that, traditional assessment practices need less time and low-level thinking of students which has less impact on students' academic achievement. The teachers somewhat perception of formative assessment methods instructs them to follow traditional assessment systems without giving attention to ILOs, so students think low level and that may impact students' academic achievement. Moreover, Harlen (2014) suggests from his study that when teachers practice assessment unconsciously, without a deep understanding of its meaning or purpose, it could have negative impacts on students' achievement of ILOs. Moreover, Hussain et al. (2019) found that the majority of teachers carried out assessment practices without understanding these practices properly which negatively influenced students' achievement and teachers' performances. Elkader (2008) found that teachers' assessment practices are directly related to instruction, student learning, and achievement of ILOs. Teachers are expected to be knowledgeable about assessment methods and able to use assessment knowledge to ensure students' achievement level and to what extent students achieve ILOs (Bookhart, 2001; Cambell & Evans, 2000). Teachers' somewhat perception of assessment methods and the extent of students' achievement may hamper the effectiveness of teaching programs, students'

achievement, and teachers' performances; and motivate them to practice ongoing traditional assessment methods while being unaware of whether the intended learning outcome is achieved or not.

The study did not find any significant difference in teachers' and concerned stakeholders' perceptions of the practiced assessment methods to achieve the ILOs and teachers' practices.

### **Implications of the findings of the study**

The study found that the primary science teachers in all four cases have somewhat perception of formative assessment methods and the extent of students' achievement of ILOs. It is also found from the study that the perception of concerned supporting human resources, and the addressed supporting materials may be reflected in teachers' perceptions and practices. These results then ultimately carry implications for primary science teaching practices in Bangladesh. Several implications are presented based on the findings into three categories: knowledge, policy, and practice.

#### ***Implications for Knowledge Gap***

The research findings have an implication in the knowledge that is useful to almost all stakeholders. Moreover, researchers, policymakers, curriculum developers, and curriculum document developers may benefit from this knowledge. The research findings of this study revealed that in the primary science teaching practice of Bangladesh, teachers have somewhat perception of practices formative assessment methods and the extent of students' achievement of ILOs.

- The knowledge of the findings of teachers' perception in primary science teaching practice provides a clear scenario in the literature for further research.
- The findings may help policymakers and science educators to take necessary steps at the policy level for teachers' better perception of curriculum documents.
- The curriculum developers and curriculum document developers can use this knowledge of the findings to develop or revise curriculum documents.

#### ***Implications for Policy***

In Bangladesh, the findings of the study can be considered by MoPME, DPE, NCTB, and NAPE to make changes for improvement accordingly.

- The Ministry of Primary and Mass Education (MoPME) can take necessary steps for primary teachers' professional development by formulation of policies.
- Policymakers can take necessary steps for the school authority so that they can arrange special training for teachers' better perception of curriculum documents and assessment methods.
- Policymakers can follow the research findings and take necessary policies for DPE to implement the necessary training for teachers' better perception of assessment methods.
- Policymakers can take necessary policies for NCTB so that NCTB can take into account the findings for teachers' better understanding of curriculum documents and assessment methods.
- Policymakers can take necessary steps for NAPE to innovate and develop new methods of teaching-learning for better and quality primary education considering teachers' perception of assessment methods.

#### ***Implications for Practice***

The research findings suggest implications at the practice level where educators, teachers, and learners may benefit. Moreover, DPE, NAPE, PTI, URC, and school authorities may also use these findings in practice. All these institutions can be addressed or use the findings of the study to design and implement training programs and other programs related to teachers' professional development.

- DPE can take the necessary steps through training for teachers and concerned stakeholders as the findings revealed that primary science teachers and their supporting human resources have somewhat perception of formative assessment methods.
- NCTB can consider the findings to develop educational materials: curriculum, curriculum documents, etc. for teachers' and concerned stakeholders' better perception of formative assessment methods.



- NAPE arranges necessary measures considering the findings like training, seminars, and workshops for the academic staff of PTIs and other field officials who are related to teachers' professional development.
- UEO, AUEO, Instructors of PTI, and URC may take into account the findings of the study for their professional development as the findings revealed that the concerned stakeholders who are engaged in teachers' training, monitoring, and supervision have somewhat perception of formative assessment methods.
- Teachers' instructional decisions are directly influenced by professional development workshops. Therefore, the school authority can take necessary steps for teachers' professional development by providing them the opportunity for proper training and proper classroom practice, as the findings revealed that teachers have somewhat perception of formative assessment methods.

## Conclusion

In the primary science teaching practice of Bangladesh, teachers' perception of the practiced formative assessment methods and perception of the extent of students' learning to achieve the ILOs is very important as ILO represents the curriculum intention that is implemented by the teachers. Teachers' somewhat perception of the practiced formative assessment methods and the extent of students' achievement of ILOs may hamper primary science teaching practice and students' achievement of ILOs. The somewhat perception of the concerned stakeholders and the somewhat addressed curriculum documents may prevent teachers' perception of formative assessment methods and students' achievement of ILOs. The study hopes that, if the concerned stakeholders perceive better, and if the concerned curriculum documents are properly addressed, then the teachers will perceive better, and this will be reflected in their classroom practice and students' achievement.

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## LEARNING BARRIERS AND BEHAVIORAL PROBLEMS: A CASE STUDY OF GARISSA UNIVERSITY STUDENTS

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### Abstract

*Learning is a process which leads to change and which occurs as a result of experience and increases the potential for improved performance and future learning. The change in a learner may happen at the level of knowledge, attitude or behaviour. The process of learning occurs when people enroll in an institution of learning. Once the learner gets involved in the process of learning, the process can be faced with challenges, which we will call barriers. The barriers can emanate from within the learner or from without. These barriers have the potential to cause negative impacts on the learner and hence result into uncalled for behaviours. The research was conducted in an institution of higher learning and it was purely descriptive study. It involved 80 undergraduate students, both males and females. The sample included students aged between 18 and 26 years of age drawn from about 70 per cent of the counties in Kenya. The focus of this study was to examine and analyse learning barriers among university students and the resultant behavioural problems.*

**Key words:** Learning Barriers, Behavioural Problems, University students.

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### 1.0 Introduction

A barrier is anything that hinders one from going through a process that is considered to be of benefit to that person during the process or at the end of the process. The barrier can be from within the person in question or external. This barrier may be known to the person or the person may not be aware that there is a barrier.

### 2.0 Methodology

This section contains the research design, research variables, research procedure and data analysis and they have been explained below:

#### 2.1 Research Design

This is qualitative research with a quantitative element. It is a non-experimental narrative study. It explains the core barriers to learning among university students and the resultant behavioural problems from the particular respondents perspective and also from the general society's perspective. It seeks to establish what hinders or makes it difficult for learners to learn as is expected by all education stakeholders.

#### 2.2 Variables

This study involved ongoing 80 students: 40 female undergraduate students and 40 male undergraduate students all aged between 18 and 26 years. Data for this study was collected by use of oral unstructured interviews. The reason for employing this tool is because the researcher wanted to be natural and unofficial so as to create free atmosphere hence enable the respondents to feel free and also be real.

#### 2.3 Procedure

The respondents were identified randomly but putting in mind the issues of gender. This sample involved students in first year up to fourth year. Regional balance was also considered. We used oral unstructured questionnaire

#### 2.4 Data Analysis

There were two categories of data in this study, namely, learning barriers and behavioural problems. Learning barriers were further divided into two categories: intrinsic and extrinsic barriers. Intrinsic barriers are those issues that emanate from within an individual whether consciously or unconsciously



but have the potential of deterring an individual from achieving future or current goals in life. On the other hand, extrinsic barriers come from without or are external barriers. Equally, the concerned individual may or may not be aware of them.

Age, gender and regional balance of the respondents was also considered in the classification of data. The section below contains the results of this study.

### **3.0 Results of the study**

The data collected in this study confirms that majority of people aged between 18 and 26 years are either transiting from high school to colleges or universities, are doing their studies at university or are waiting to graduate if they have not just graduated from university. These individuals confirmed that they have experienced a barrier(s) at one stage of their lives or another. Consequently, these barriers have led to behavioural problems. However, some behavioural problems exhibited by the respondents had no relationship with any learning barrier encountered.

#### **3.1 Extrinsic barriers**

As mentioned earlier, extrinsic barriers are problems or situations or issues that prevent one from normal learning. Learning in this paper is looked at as the ability to go from one level of education to another, at the right time and having achieved the expected learning experiences, values and skills. It has also has to do with that individuals satisfaction or that feeling that I did this, I went through this and I am okay that it happened that way. This paper explains the following external barriers:

##### **3.1.1 Cultural Practices.**

The respondents in this study are people from different communities in Kenya. Each community has its unique culture. All communities in Kenya have embraced education as a very important tool for sustainable development. However, it was noted that in some communities education for boys is given more weight as compared with that of girls. Some female respondents alluded to the fact that this cultural practice has negative impact on their learning process. For example, 70% of the female respondents expressed discontentment with the way they are treated when it comes to education matters. They expressed a feeling that their male counterparts are given more space. They also said that they are given more house chores compared to male respondents.

This study also established that some female students had escaped early marriages because of the firm policy of the Kenyan government that every child has a right to education. The very thought that my family wanted me to be married without my consent continues to haunt many even though they were not. This remains a psychological barrier to learning and it was triggered by external factor.

##### **3.1.2 Hostile learning environments**

Hostile learning environments involve situations whereby a learner does not have a conducive environment to do what they are supposed to do as learners. We have families who have hostile relationships. For instance, parents fighting in the house, abusive relatives, and unsupportive parents or caretakers, parents' divorce or separation and other family related problems. Respondents from such families find it difficult to concentrate in their studies.

It was also observed that some respondents hail from communities that have faced ethnic clashes and fighting. In these areas, learners don't have the peace of mind to concentrate on their studies.

Some areas are prone to natural disasters like flooding and draught. Once these phenomena occur, learning is distracted.

It is also worthy noting that quite a number of our respondents come from pastoral communities. Parents in these communities keep on moving from one region to another in search of water and pasture for their animals. Learners from these communities have intermittent learning periods. At one time they are in school and another time they are absent from school because they have to move with their parents. It is not a wonder to find a student who is joining university at the age of 24 years, which the age at which

majority of their age mates are concluding their studies in university. This barrier is common at all ages, both gender and some communities

### **3.1.3 Bad Company and Peer pressure**

Some of our respondents associates their lack of achieving their life goals to bad company and peer pressure. We had cases of young people who are fighting to free themselves from life threatening habits. These include drug and substance abuse, toxic relationships, sexually transmitted diseases, unwanted pregnancies and challenges of becoming parents at an early stage in life. This barrier is common at all ages, both gender and all communities

### **3.1.4 Economic challenges**

Poverty and lack of essential commodities has prevented some young men and women from attaining their targets in life or at the right time. You find that some students have stay away from university or miss examinations because they are unable to raise tuition fee. Others are forced to keep deferring their studies because they lack the economic power. This barrier is common at all ages, both gender and all communities.

### **3.1.5 Lack of role Models**

We established that some students have not realized their potential because they lacked someone who would show them the way. It happens that in a village there is nobody who has gone past secondary school. To add insult to injury, there may be no one in that village who understands the value of education. In such a scenario, children lack someone who can motivate them or even show them the way. Such children may not see the importance pressing on in education. This barrier is common at all ages, both gender and some communities.

## **3.2 Intrinsic Barriers.**

These are things or issues that come from within an individual and have the capacity to prevent that individual from attaining set targets in life. These are internally generated barriers. They can be emotional, psychological and even attitudes. They hinder learners from participating fully in the learning process. Internal barriers have the potential of causing frustrations or even make an individual not to achieve set objectives. Some of the intrinsic barriers identified in this study included:

### **3.2.1 Attitudes**

We found out that some students have formed some attitudes towards themselves, other people or even a particular issue. Some students would plainly and loudly say 'I can't make it, it has never happened in our family and it won't happen etc'. With this kind of mentality, it becomes impossible for such a student to make effort to change or do something. This barrier is common at all ages, both gender and all communities.

### **3.2.2 Superstitions or Unfounded Beliefs**

We had scenarios of students who had failed to achieve some objectives in life because of beliefs that seemed like they inherited from their communities. For example, if one doesn't get a child at a particular age, chances are that they may never have children or their marriage will never last. This barrier is affected a few students, both female and male and in a few communities.

### **3.2.3 Ignorance and Indecisiveness**

Ignorance in this study means lack of the right information and lack of desire to look for it. Indecisiveness is used here to refer to the inability and willingness to take charge of one's life. There are some students who move with whatever comes their way. This category ends up not planning and implementing important life goals that would otherwise make their future good.

### **3.2.4 Physical Disability**

There were cases of student who are living with physical disability. This is a learning barrier in the sense that the individual is limited to what they can do and what they cannot do. In this case some of these

students suffer psychologically because they may be stigmatized by the society. This barrier affects a few students.

### 3.2.5 Emotional and Personality Disorder

This study was able to identify some students who keep nursing wounds in their hearts. They struggle with emotions that hinder them from making meaningful decisions. Some of these emotions were self-manufactured or forced on them by external factors. A good example is an individual who was raped, got pregnant and now is a mother. This example depicts a bitter person and may not behave like other students of the same age.

We also noted a small percentage of students who can only move on in life when there is someone cheering them. They are the people who will do weird things to attract attention. People will refer to such as attention seekers.

### 3.2.6 Ailments

People suffering from terminal diseases tended to blame their lack of progress to the diseases they suffered from. Some exhibited despair and therefore their academic performance was affected. This is especially if they have to keep visiting hospitals. This situation can also make a student isolate himself/herself.

### 3.4 Behavioural Problems

Students who had faced challenges in their learning displayed some problems as far as their behavior is concerned.

#### 3.4.1 A Critical Mentality

These students will tend to fault almost all things. This means 'I am right and everyone else is wrong.'

### 4.0 Summary and Conclusions

This study found out that learners in university have faced learning challenges. These challenges or barriers are spread throughout their life. Some barriers came early in life while others are presently encountering the barriers. These barriers are both internal and external. It was also noted that female students have more learning barriers than male students. The learning barriers are more at early years than in later years. This is because the older one grows, the more the ability to avoid or deal with the challenges.

On the other hand, it was established that some learners who have had learning challenges. However, there is a big percentage of learners who have overcome the challenges and don't have any behavioural problems.

It is worthy noting that not all behavioural problems were brought about by learning barriers. Some behavioural problems are caused by other factors that are not related to this study.

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## DEVELOPMENT OF VIPASSANA MEDITATION ON ACADEMIC STRESS, DEPRESSION, AND ANXIETY OF SPECIAL STUDENTS AND ITS EFFECTIVENESS

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### Abstract

*The primary research purpose is to determine the effectiveness of Vipassanā meditation technique in reducing Academic stress, Anxiety, Depression, and Academic achievement results. In this study, the researcher took data from Students with disabilities who belong to XI standard class and responded via an assessment DASS 42 standard scale (Lovibond and Lovibond (1996)) and GCAT (General Classroom Achievement Test). Vipassanā meditation technique was applied twenty minutes three days per week for 12 weeks by bringing awareness and paying attention to respiration process, feelings, and sensations in the body and mind. As the study found out, there is a remarkable difference between mean scores of pretest and posttest through both groups (Experimental group and Control group). It proved that Vipassanā meditation program was adequately developed and has significantly influenced the positive way in reducing Academic Stress, Anxiety, and Depression and is effective in getting studying results*

**Keywords:** GCAT, Vipassanā meditation, Academic stress, Academic Anxiety, Academic Depression, Special Student.

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### Development of Vipassanā Meditation Programme on Academic Stress, Anxiety, Depression of Special Students in Higher Secondary School

#### Conceptual Framework and Background

Vipassanā meditation is a mental training method that Siddhartha Gautama discovered, practiced, and taught during his life (Goenka, 2004). Besides that, we also understood it as a technique that cultivates clarity and understanding free from addiction, aversion, delusion, and suffering by understanding the object and phenomenon “as it is being,” which observes phenomena happening in mentality as well as the external thing without placing any notions to it through the object respiration, feelings, and sensations.

A special student is one who receives special education with learning disabilities (LD) was perceived as “special” (Sharon Vaughn & Sylvia Linan-Thompson, 2003)

Academic depression is sensitive to dysphoria, hopelessness, and devaluation of life, lack of interest/involvement, anhedonia, and inertia (Lovibond & Lovibond, 1995). Academic anxiety is sensitive to autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect (Lovibond & Lovibond, 1995). Academic stress exposed to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive, and impatient (Lovibond & Lovibond, 1995).

Vipassana meditation is one of the most ancient meditation techniques discovered in the 6th century B.C by Siddhartha Gautama (563-483 BC), the Enlightened One. Since 1969, Satya Narayana Goenka, he was born in Burma to an Indian business family. He moved to India in 1969 and started teaching meditation. His teaching emphasized that the Buddha's path to liberation was non-sectarian, universal, and scientific. He became an influential teacher and played an essential role in establishing non-commercial Vipassana meditation centers globally.

Vipassanā meditation focuses on observing your thoughts and emotions "as it is" that without judging or attaching to them; therefore, it can help meditators relieve stress and tension by self-

observation, and the object is to eventually reach a state of inner and outer calmness and balance of mind. It is a self- exploratory process to the regular foundation of the brain and body that breaks up mental pollution, bringing about a better personality loaded with adoration and empathy (Bhargava & Srivastava, 2019).

To provide effectiveness of Vipassana meditation on improving mental health.

S.No	Title of Paper	Name of Author	Name of Journal	Findings
1.	Evaluation of Vipassana Meditation Course Effects on Subjective Stress, Well- being, Self- kindness and Mindfulness in a Community Sample: Post- course and 6- month Outcomes	Roberta A. Szekeres Eleanor H. Wertheim	Stress & health Volume31, Issue5 December 2015 Pages 373-381	Findings, suggested positive effects of the Vipassana course in reducing subjective stress and increasing well- being, self- kindness and overall mindfulness (present moment awareness and non- reaction).
2.	Vipassana Meditation and Life Effectiveness	Dileep Kumar. M.	Journal of Education and Vocational Research Vol. 3, No. 2, pp. 48-57, Feb 2012 (ISSN 2221-2590)	The research finding that 'Vipassana meditation process may significantly relate to the life effectiveness among business management graduates in their professional and personal life.' It clearly indicates that there is positive correlation (significant at the 0.01 level) exists between 4 sub variables of Dependent Variable life effectiveness (viz., psychological, physical, professional and managerial,) with independent variable Vipassana meditation process viz.,(3 sub variables of Vipassana meditation process).
3.	An on the job mindfulness based intervention for paediatric ICU nurses: a pilot	Gauthier et al.	<i>Journal of Pediatric Nursing</i> Volume 30, Issue 2, March–April 2015, Pages 402-409	The intervention was found to be feasible for paediatric ICU nurses. Significant: decrease in stress from baseline to post intervention ( $p= 0.006$ ) and maintained 1 month following intervention. Significant: positive correlations were found between mindfulness and self-compassion (SCS $p < 0.001$ ) and negative correlations between mindfulness and stress (NSS $p < 0.001$ )

4.	The effectiveness of a stress coping program based on mindfulness meditation on the stress, anxiety, and depression experienced by nursing students in Korea	Kang et.al	Journal of nurse Education Today, 13 Jan 2009, 29(5):538-543	A stress-coping program founded on mindfulness meditation is an effectiveness tool for reducing nursing students's stress and anxiety. Stress (PWI-SFb) and anxiety (SSAI) scores decreased significantly for the experimental group ( $p = 0.020$ ) and ( $p = 0.013$ ). No significant differences in BDI score.
5.	Effectiveness of traditional meditation retreats: A systematic review and meta-analysis	Khoury et.al	Journal of Psychosomatic Research 92 (2017) 16-25	Effect-size calculations of results united suggested that conventional meditation retreats are moderate-ly effective in pre-post analyses ( $n = 19$ ; Hedge's $g = 0.45$ ; 95% CI [0.35, 0.54], $p < 0.00001$ ) and in analyses comparing retreats to controls ( $n = 14$ ; Hedge's $g = 0.49$ ; 95% CI [0.36, 0.61], $p < 0.00001$ ). Results were maintained at follow-up. No differences were observed between meditation styles.

### Research methods

The DASS-42 is a set of three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress. The DASS-42 was constructed not merely as another set of scales to measure conventionally defined emotional states but to further the process of defining, understanding, and measuring the ubiquitous and clinically significant emotional states usually described as depression, anxiety, and stress with 42 items (Lovibond, Lovibond, 1996). It has created by scholars of the School of Psychology, University of New South Wales Sydney, Australia. It is a self-rated questionnaire that assesses the severity of depression, anxiety, and stress symptoms. It contains statements referring to the past weeks. Each item rates on a 4- point scale (Did not apply to me at all means a score of 0, Applied to me very much or most of the time means a score of 3). Subjects had asked to circle a 0-3 number indicating how much each statement applied to them in the last week. Scores for depression, anxiety, and stress had calculated by adding the scores for the relevant items.

Multi-method used for this study. The researcher conducted document analysis, survey, interview, product development, and experimental methods in the study. The research design will apply to two groups (experimental and control group) and apply pretest and post-test. Participants of the present study were special students between 14-18 years old in Special schools in Pune city, India. The data has accumulated from 200 special students from 10 randomly chosen schools. The special students between 14-18 years old in Special schools, Pune, India.

*Step 1:* After randomly choosing 200 special students from 10 special schools, the researcher conducted a pretest on DASS-42 Standard scale and interviewed the students to evaluate their Academic Stress, Anxiety, and Depression for group one with 100 special students (Experimental group). The second group (the Control group) interviewed and applied the DASS-42 scale to identify the Academic Stress, Anxiety, and Depression status of 100 students. To conduct Questionnaires for both groups regarding the following subjects: Drawing, Sport, and Craft.

*Step 2:* Conduct a Vipassanā meditation course two days per week for three months in the first group (Experimental group). S.N. Goenka's technique instructs the practice of Vipassanā meditation. The Vipassanā meditation course would not apply to the second group (the Control group)



Vipassanā meditation techniques are compacted by four of characters O-F-D-S means and following steps:

1. Observation of the objective meditation
2. Feeling deeply for sensations
3. Dwelling in the present moment
4. Spread of loving .

They are applied throughout processing of sitting meditation of students aims to decrease the negative states of mind as academic stress, academic depression, academic anxiety. The formulation, O-F-D-S that the researcher give out are developed base on the four foundations of mindfulness (Vipassanā meditation) that taught by Buddha and selected from the Vipassanā meditation Programme which developed by Shri. S.N. Goenka. This formulation will direct toward to help the students easy to remember techniques and apply it in their school life easily and attain effectively.

Obsevation (Observation of the objective meditation)

Step 1: To aware of breath in, breath out with the mindfulness.

Step 2: To follow your breath in and breath out.

Felling (Feeling deeply for sensations)

Step 1: Consciousness of your body

Step 2: Release intension and calm my body

Dwelling (Dwelling in the present moment)

Step 1: To generate Joy, Happiness

Spread (Spread of loving)

Step 1: Spreading of loving to your internal organs.

Step 2: Spreading of loving to your members family or others (friends, neighbors, co-worker...) and can practice forgiving.

*Steps 3:* Again, using the standard scale DASS-42 and Questionnaires for both groups regarding the following subjects: Drawing, Sport, and Craft to evaluate their effectiveness. GCAT (General Classroom Achievement) will be tested before and after Vipassana meditation training.

*Step 4:* Analysis and compare the results of both groups in steps one and three. The researcher used the SPSS analysis tool to analyze the data and did the descriptive analysis to study students with the highest and least scores.

Result

The total strength of students who participated was 200 special students rated DASS-42 scale. The mean age of the respondents was 15 years, 65% (120) female, 35% (80) male student respondents. Depression, Anxiety, Stress on DASS-42.

Group	Pre –Test														
Experim ental Group	Depression					Anxiety					Stress				
	N	M	Mo	S	ExS	N	M	Mo	S	ExS	N	M	Mo	S	ExS
	8	4.7	10	20	57.3	14.6	4.9	11.5	25.3	43.7	3.1	3.7	12.6	27.4	53.2

Group	Post –Test														
Experim ental Group	Depression					Anxiety					Stress				
	N	M	Mo	S	ExS	N	M	Mo	S	ExS	N	M	Mo	S	ExS
	70.2	7.1	7.3	10.2	5.2	60.3	21.3	5.7	5.4	7.3	80.4	4.8	4.3	7.3	3.2

\*(N= normal; M= mild; Mo = moderate, S= severe, ExS= Extremely Severe)

Regarding special students' Depression, Anxiety, and Stress, symptoms in the before and after stage of Vipassanā meditation significantly change positively.

The researcher founds the result of the Mean, SD, and t-value of Depression, Anxiety, and Stress as follows:

	Depression				Axiety				Stress				
Group	Pre-Test		Post Test		Pre Test		Post Test		Pre Test		Post Test		df
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
Exp.Gr.	17.2	0.57	34.3	0.14	15.5	0.51	25.1	0.12	16.9	0.58	16.4	0.59	199
Control Gr.	17.3	0.46	17.5	0.04	15.4	0.41	15.6	0.31	20.5	0.43	20.6	0.45	

\*Significant at 0.005 significant level

It implies a significant difference between the Depression, Anxiety, and Stress mean scores of the experimental group and control group. The control group does not show much difference in mean scores of Depression, Anxiety, Stress of pretest and Depression, Anxiety, Stress of the posttest. Still, the experimental group has the mean score of Depression, Anxiety, Stress on pretest and Depression, Anxiety, Stress which differs significantly in the posttest and pretest. Hence, Vipassanā meditation is effective in reducing Depression, Anxiety, and Stress in special students. Sport skill before and after practising Vipassana meditation.

		Before	After
Scale	Responses	Pecentage	Pecentage
a	Inferior	70%	00
b	Poor	15%	00
c	Average	15%	00
d	Good	00	5%
e	Excellent	00	95%

For sports skill, before conducting Vipassanā meditation techniques, 70% of students stated that their sport skill was inferior, 15% of students accepted that their sport skill was poor, and 15% of students considered their sport skill to be average. It indicated that before applying Vipassanā meditation, their sport skill was inferior. However, after using Vipassanā meditation, their mastery of sport has considerably changed, which tends to be positive way, 95% of students have stated that their sport skill was excellent, and 5% of students consider their sport skill to be good. It represented that Vipassanā meditation positively influenced them.

Drawing skill before and after practising Vipassana meditation.

		Before	After
Scale	Responses	Pecentage	Pecentage
a	Inferior	75%	00
b	Poor	21%	00
c	Average	04%	00
d	Good	00	00
e	Excellent	00	100%

Drawing skill before and after practicing Vipassanā meditation has remarkably changed. 75% of students accepted that their drawing talent was inferior, 21% stated that their drawing was poor, and the remaining 4% claimed that their picture was average. Besides that, after doing Vipassanā meditation, their drawing has improved significantly 100% of students claimed that their drawing skill is outstanding. Based on the above observation, we can see that Vipassanā meditation has particularly effective for special student's drawing skill.



## Discussion

Applied meditation techniques to reduce and cope with stress and depression as an effective strategy for full-time employees, as demonstrated by scholars (Manocha R, Black D, Sasris J, et al. (2011)). Besides, fewer scholars studied meditation-based stress management, significantly reducing stress in university students. (Oman D 2008). Similar to this study, Vipassanā meditation effectively reduces Academic stress, Depression, and Anxiety for special students through the analysis presented above.

## Recommendations

To decrease Academic Stress, Anxiety, and Depression, the special students should participate much more in the Vipassanā meditation course at the Vipassanā meditation center. Vipassanā meditation technique should be conducted in the special school every day to decrease Academic stress, Academic Anxiety, and Academic Depression for students.

## Suggestion for Future Research

Future research efforts should extend Vipassanā meditation techniques to disable students and school systems for social adjustment and educational achievement.

Vipassana meditation has four different aspects of practicing. The Buddha taught his talks with students, Satipatthana Sutta, “The Hymn of the Awakening of Consciousness,” and told his disciples to go to a solitary place, sit there and practice the four types of mindfulness.

He showed them the path to self-knowledge that consisted of 4 aspects of meditation:

1. Kayanupassana (constant observation of the body)
2. Vedananupassana (constant observation of sensation)
3. Cittanupassana (constant observation of the mind)
4. Dhammanupassana (constant observation of the contents of the mind)

After practicing Vipassana meditation, almost the special students have changes positively in results of studying. They felt greater joy and peace of mind and felt relief from the negativities of the past and found their mind becoming more stable, more peaceful and more concentrated.

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## **STAFF ARTICLES**



## ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING: IN THE PERSPECTIVE OF PSYCHOLOGY AND SPORTS

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### Abstract

*Computer scientists in AI seek to create intelligent computers that can learn and do complex tasks normally requiring human intellect. Building blocks of AI are specialized hardware and software for developing and retraining machine learning algorithms. There are many go-to languages for AI development, although the common options are Python, R, and Java. AI (AI) systems typically function by taking in massive volumes of labeled training data, processing that data to identify patterns and correlations, and then utilizing those insights to predict future outcomes. A chatbot may learn to mimic human conversation by analyzing instances of textual interactions between humans. In contrast, image recognition software can learn to recognize and describe items in photos by analyzing millions of examples. Artificial intelligence (AI) and machine learning (ML) have changed the game in a variety of industries, including sports. The potential of AI and ML to analyze and predict vast quantities of information and make smarter decisions is transforming how sports are played, managed, and experienced. In this blog, we will examine the numerous uses and considerable influence of AI and ML in sports, ranging from the involvement of fans and game plan optimization to athlete analysis of performance and prevention of injury.*

*Key words: Artificial Intelligence, Machine Learning,*

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### Introduction.

**Artificial Intelligence (AI)** is a growing topic in the technology and business world. Many of us interact with AI each day, whether it's Siri (Apple), Alexa (Amazon), Google Assistance (Google), Watson (IBM), or many of the other services in our homes and mobile devices. In many occasions, research on incorporating human brain in a machine (like Robot) has failed. As the human brain is always considered more superior than any technology in the world, the nature of the brain is also changing. Computer scientists in AI seek to create intelligent computers that can learn and do complex tasks normally requiring human intellect. Building blocks of AI are specialized hardware and software for developing and retraining machine learning algorithms. There are many go-to languages for AI development, although the common options are Python, R, and Java. AI (AI) systems typically function by taking in massive volumes of labeled training data, processing that data to identify patterns and correlations, and then utilizing those insights to predict future outcomes. A chatbot may learn to mimic human conversation by analyzing instances of textual interactions between humans. In contrast, image recognition software can learn to recognize and describe items in photos by analyzing millions of examples.

### What is Artificial Intelligence?

Artificial Intelligence (AI) refers to the ability of machines, mostly computers, to demonstrate characteristics often associated with human intellect. Expert systems, Linguistics, voice recognition, and machine vision are all concrete examples of how Intellect is used. The potential uses of AI are limitless. Many fields and organizations may benefit from this technology. Machines with AI include chess-playing computers and autonomous vehicles, which are now being tested in the healthcare sector. In banking and finance, AI spots red flags such as odd debit card use or significant deposits. AI development prioritizes these three cognitive abilities: learning, reasoning, and self-correction.

### Educating oneself

Acquiring data and developing rules for transforming it into useful knowledge is the emphasis of this area of AI programming. Algorithms are rules that tell computers how to do something by carrying out each step in the sequence.

### Skills in Deductive Reasoning

This area of AI development emphasizes making strategic algorithmic decisions.

## **Methods of Self-Improvement**

This area of AI development aims to tweak programs to yield precise outcomes constantly.

### **What is significant about AI?**

AI is significant because it has the potential to provide businesses with previously unavailable insights into their operations and because it can sometimes do jobs better than people. AI systems are particularly effective at completing activities quickly, with relatively few mistakes, especially when it comes to repetitive, specific tasks like reviewing many legal papers to verify that important areas are filled in appropriately. This has fueled a surge in productivity and given some huge companies access to brand-new markets. A decade ago, it would have been unthinkable to use algorithms to match passengers with cabs; now, Uber is one of the world's most valuable corporations. The system uses complex machine learning techniques to anticipate the times and locations where the most demand for trips will occur, allowing drivers to be sent in advance. Another case in point is Google, which has risen to prominence as a leader in many niche online service industries thanks largely to its use of machine learning to better understand and cater to its users' needs. Google CEO Sundar Pichai said in 2017 that the business would be an "AI first" enterprise. The world's biggest and most profitable companies have incorporated AI into their operations to boost efficiency and acquire a competitive edge.

### **What Contributes to AI?**

Artificial intelligence is a science and technology that draws on fields such as computer science, biology, psychology, linguistics, mathematics, and engineering. Developing computer functions associated with human intelligence, such as thinking, learning, and problem-solving, is a key focus of AI. One or more of the following areas can contribute to developing an intelligent system.

### **Various Artificially Intelligent Versions**

There are two types of AI, and they are weak and powerful, respectively.

#### **Weak AI**

A computer program that can only do one specific task. Games like chess and digital assistants like Alexa and Siri are examples of weak AI systems. When you put a query to the helper, it responds.

#### **Powerful AI Systems**

These are those that can do actions often associated with humans. These systems are often more intricate and sophisticated, and their software prepares them to solve problems autonomously in various settings. Applications for such systems include things like self-driving automobiles and operating rooms.

### **Where do we now apply AI?**

Today, AI is used in various contexts, often with varying degrees of complexity. Popular applications of AI include recommendation algorithms that suggest what people may enjoy next and chatbots that appear on online websites or in the shape of smart devices (e.g., Alexa or Siri). Forecasting the weather and the economy, streamlining manufacturing, and reducing duplicate cognitive work are just a few of the many uses for AI today. AI may be divided into four sorts, from task-specific systems to sentient ones that do not exist yet. Categories

#### **Reactive Machines**

These AI systems are task-specific and memoryless. Deep Blue defeated Garry Kasparov in the 1990s. Deep Blue can detect chess pieces and make forecasts, but it lacks memory and cannot learn from previous mistakes.

#### **Memory**

These AI systems can utilize prior experiences to make future judgments. Self-driving automobiles use this method for some decision-making.

#### **Mind type**

AI with social intellect can comprehend emotions. This AI can discern human intents and forecast behavior, allowing it to join human teams.

**Self-awareness**

AI systems in this category have self-awareness and consciousness, and Self-aware machines know themselves, and this AI does not exist.

**Advantages and Disadvantages of AI**

AI is growing swiftly because it analyses enormous volumes of data more quickly and generates more accurate predictions than humans.

**Advantages**

Digital virtual agents are constantly accessible and good at detail-oriented work.

**Disadvantages**

Expensive; technological skills required, few competent AI developers; only what is displayed; and Unable to generalize.

**Machine Learning**

Machine learning is the process through which a computer extracts meaning from training data. If you want an algorithm to detect spam in e-mails, for example, you must train the algorithm by exposing it to many instances of e-mails that have been manually tagged as spam or not spam. The algorithm "learns" to recognize patterns, such as the recurrence of specific terms or word combinations, that indicate the likelihood of an e-mail being spam. Machine learning may be used to solve a wide range of issues and data sets. You may train an algorithm to recognize photographs of cats in photo collections, possible fraud instances in insurance claims, turn handwriting into structured text, and so on. All of these scenarios would need labeled training sets.

Depending on the approach employed, an algorithm can be improved by adding a feedback loop that tells it where it went wrong. The distinction with AI is that a machine learning algorithm will never "understand" what it was programmed to perform. It may be able to detect spam, but it will need to learn what spam is and why we want it to be detected. Furthermore, if a new type of spam emerges, it will most likely be unable to recognize it unless someone (human) re-trains the algorithm. Most AI systems are built on machine learning. However, while a machine learning system may appear "smart," it is not according to our definition of AI.

**Roles of AI in Sports**

Below are the five roles of AI in Sports –

**1. Performance Analysis and Prediction**

AI algorithms are capable of analyzing a significant portion of athlete data, involving biometric information, match facts and training metrics. This study aids coaches and athletes in understanding performance trends, pinpointing areas in need of development, and making predictions about results. To improve performance, AI can offer personalized training plans and immediate input.

**2. Injury Prevention and Rehabilitation**

Artificial intelligence (AI) systems can evaluate an athlete's physical state, track their degree of exhaustion, and examine their movement to spot potential injuries. AI can offer early alerts and preventive steps, lowering the likelihood of damage, through the use of information gathered by wearables and sensors. AI can monitor development during rehabilitation, create tailored training regimens, and deliver feedback to speed up recovery.

**3. Game Strategy Optimization**

Huge volumes of match history can be analyzed by AI to find trends in opponents' performance and weaknesses. As a result, teams are better able to plan winning game plans, make tactical choices, and modify their strategy in response to in-game analyses. Computer vision systems with AI capabilities can monitor players' movements and produce data and understanding useful to coaches and analysts.



#### **4. Fan Engagement and Experience**

By tailoring suggestions for content based on preferences and behavior data, AI improves the fan experience. Artificial intelligence-powered chatbots and virtual assistants communicate with followers, answer questions, and deliver quick updates. Organizations can evaluate the public's perception using sentiment analysis on social media, and AI-driven camera systems can record and analyze audience reactions to assist broadcasters in learning more about how audiences react.

#### **5. Referee Assistance**

By reviewing video and spotting fouls, offside situations, and handballs, artificial intelligence (AI) systems can help referees make correct calls. To reduce human mistakes and assure fair play, VAR (Video Assistant Referee) systems which employ AI algorithms have been implemented in several sports.

#### **Roles of ML in Sports**

Below are the five roles of ML in Sports –

##### **1. Player Performance Prediction**

Depending on previous data such as previous achievements, player qualities, and contextual factors, machine learning algorithms can forecast the performance of certain players. Coaches can use this information to make educated decisions regarding player decision-making, substitution tactics, and team structures.

##### **2. Pattern Analysis and Recognition**

ML algorithms are excellent at spotting intricate patterns in massive datasets. In sports, ML can spot trends in opponent behavior, team strategies, and player movements. This study helps in determining the tactics and vulnerabilities of the opposition as well as in making game forecasts.

##### **3. Injury Risk Assessment**

ML models may analyze a variety of elements, including player workload, workout intensity, and past medical conditions to evaluate injury risks. ML algorithms can assist teams and medical personnel in creating individualized training and prevention of injuries programmes by recognizing risk variables.

##### **4. Sports Analytics**

The extensive statistical analysis of sports data made possible by ML algorithms reveals hidden patterns and relationships. The evaluation of the team's performance, player performance analysis, and game statistics are all included. Additionally, during games, ML can offer real-time insights that let coaches make prompt decisions based on data-driven advice.

##### **5. Sports Broadcasting and Commentary**

Machine learning algorithms can automatically create live match commentary, delivering in-the-moment analysis of what is happening on the pitch. The viewing experience for viewers can be improved by using ML models to analyze match information, player performance, and historical perspective to produce insightful and interesting commentary.

#### **Conclusion**

Recent efforts in AI have led to progress in many areas, including some previously unexplored. Moreover, AI has become more and more concrete, powering automobiles, detecting sickness, and solidifying its place in popular culture. As the first computer program, IBM's Deep Blue beat world chess champion Garry Kasparov in 1997. Two prior Jeopardy! IBM's Watson beat champions, a supercomputer developed in the 1990s, and the public was enthralled. Costs associated with AI hardware, software, and personnel mean that many suppliers are integrating AI features in their base products or granting access to AI platforms. Businesses and individuals may use AI as a service to try out the technology for their own needs without fully committing to any AI platform. In the world of sports, artificial intelligence and machine learning have become essential instruments. AI and ML continue to influence the future of sports by improving athlete success, reducing injuries,

revolutionizing game methods, and increasing audience engagement. The possibility for AI and ML to further revolutionize sports is huge, especially as technology progresses and more information becomes accessible. To ensure that the human component stays at the core of sports, it is vital to find a balance between human skill and technological improvements. Sports are positioned to become more active, data-driven, and fascinating than ever before with the continued integration of AI and ML.

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## CREATIVE TEACHING STRATEGIES

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### Abstract

*Teaching is one of the most influential roles in the society. After parenting, it is perhaps the most crucial, for all ages. And yet, teaching-whether to children or adults- is a profession in which few practitioners have any substantial training. Much of a teacher's success in the classroom is hinged on their use of teaching strategies, or to put it another way, their approach to their approach to their teaching, how they implement instructions, how they teach, how they communicate, and how they deliver information, how they communicate data to students.*

*The act of teaching is a process that is used to promote the student growth and development of original or creative thought and action. Creativity is like the uniqueness of an individual that comes when you and your teacher work hard. A teacher is a person who directs and influences people easily, especially when it comes to teaching children. People always think that the teacher must share knowledge and experiences with the children. But the truth is, that teacher prepares children for the hardships and pleasures of life, they prepare the student for future success and help the young ones to find the inner creativity they have by teaching children to feel self-confident and motivated. Creative teaching focuses both on the methods a teacher uses to deliver the learning and the overall effects of those methods on students and the outcomes produced. Creativity is highly appreciated in every field.*

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**Key Words:** Creative Teaching, Strategies, Education

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### Introduction

In today's ever-changing world it becomes even more essential for the teacher to keep reinvesting in themselves. To transform themselves into smart creative teachers. **"The smarter the teacher, the smarter the children."** In a normal classroom teacher have a deeper understanding of a subject but the creative teacher goes beyond the subject knowledge for igniting creativity in the students. In seeking to become an innovative teacher one should have a deeper understanding of their creativity, imaginative approaches, and the activities that can employ to develop the children's capacity for original ideas and actions.

Creative Teaching Creative teaching has been variously defined. Most of the definitions have focused on teaching creativity, i.e., teaching creative thinking with the aim of enhancing creative thinking skills among students. There is another aspect of creative teaching that has been neglected in the definition of creative teaching, i.e., teaching creatively. This paper intends to present a model of creative teaching that comprises teaching creatively and teaching creativity. For the purpose of this study, teaching creatively is defined as a process of incorporating creative processes and components of creativity in the teaching process. In also incorporates the teachers' creative personality characteristics and creative thinking processes which he or she uses to design the instruction strategies to enhance learning and motivate the students.

There is not only one factor that contributes to creativity the most important factor that influences the creativity of children is their social environment the environment may be the classroom environment or family environment. The process of developing creative learning in the children by encouraging them to do something unique for society. The teacher inspires the learner's interest in learning material and leads the student to find the solution of a problem by themselves creatively or present specific problems and ask the learner to apply all sorts of available resources they have to find the best satisfying solution creatively.

There are some techniques that teachers should use in his/her classroom:

**1) Audio and video tool:** The Technique that helps the student to learn faster. This can be in the form of short films, videos, Models, pictures, infographics, and many other brain mapping tools. This helps the student to engage in the imaginative part of the brain and let that part thrive and grow. For example,

3000 words- a document about anything easily go away from your mind but when we will see that information in the form of a video it will always remain in your mind and is easy to remember.

**2) Brainstorm:** Brainstorming is the best and most effective tool that helps the student to think of new and creative ideas by strengthening the brain muscles and making the brain more flexible. In this process, the person is involved in imagination and at the same time “on-point” thinking and mind development. The teacher should use this technique by giving a group activity to the students and asking them to give creative solutions. The multiple brains focus on a single idea and get back the multiple solutions of a single idea.

**3) Classes outside the classroom:** If it is possible to plan an educational trip for the students it will be surely helpful for them. This helps them to realize and understand that learning takes place everywhere in their surroundings and that teachers should teach their minds to accept that learning is not only limited to the classroom, but they’ll learn every day even outside the classroom.

**4) Role play:** The technique that teaches the student to develop interpersonal skills and get out of their comfort zones and be more confident and take a stand by solving a problem creatively. When they put themselves in the shoes of the character, they will learn how they solve the problem in this position.

**5) Participation:** The teacher should organize activities like games or visual exercises that can attract young students and encourage them to take participate in the activities and make more and more creative contributions.

**6)Interactive lessons:** Students are your innovative learners! One-way lessons are very traditional and sometimes exhausting for you and your students, so create an environment where students feel encouraged to speak up and express their ideas.

Students can join in-class activities in many ways, not just by raising their hands or being called out to answer. These days, you can find online platforms that help you make interactive classroom activities to save heaps of time and get all students to join instead of just two or three.

#### **7) Using virtual reality technology**

Enter a whole new world right inside your classroom with virtual reality technology. Like sitting in a 3D cinema or playing VR games, your students can immerse themselves in different spaces and interact with ‘real’ objects instead of seeing things on flat screens.

Now your class can travel to another country in seconds, go outer space to explore our milky way, or learn about the Jurassic era with dinosaurs standing just meters away.

VR technology may be costly, but the way it can turn any of your lessons into a blast and wow all students makes it worth the price.

#### **8)Using AI in education**

AI assists us in doing so much of our work, so who says we can’t use it in education? This method is surprisingly widespread these days.

Using AI doesn’t mean it does everything and replaces you. It’s not like in the sci-fi movies where computers and robots move around and teach our students (or brainwash them).

It helps lecturers like you reduce their workload, personalise courses and instruct students more efficiently. You probably use many familiar things, such as LMS, plagiarism detection, automatic scoring and assessment, all AI products.

So far, AI has proved it brings about many benefits for teachers, and the scenarios of it invading the education field or Earth are the stuff of movies only.

#### **9) Blended learning**

Blended learning is a method that combines both traditional in-class training and high-tech online teaching. It gives you and your students more flexibility to create effective studying environments and customize learning experiences.

In the technology-driven world we live in, it's hard to neglect powerful tools like the internet or e-learning software. Things like video meetings for teachers and students, LMS to manage courses, online sites to interact and play, and many apps serving studying purposes have taken the world.

### **10) 3D printing**

3D printing makes your lessons more fun and gives students hands-on experience to learn new things better. This method takes classroom engagement to a new level that textbooks can't ever compare.

3D printing gives your students real-world understanding and ignites their imaginations. Studying is much easier when students can hold organ models in their hands to learn about the human body or see models of famous buildings and explore their structures.

### **11) Project-based learning**

All students do work on projects at the end of a unit. Project-based learning also revolves around projects, but it allows students to solve real-world issues and come up with new solutions over a more extended period.

PBL makes classes more fun and engaging while students learn new content and develop skills like researching, working independently and with others, critical thinking, etc.

### **12) Inquiry-based learning**

Inquiry-based learning is also a kind of active learning. Instead of giving a lecture, you start the lesson by providing questions, problems or scenarios. It also includes problem-based learning and doesn't rely much on you; in this case, you're more likely to be a facilitator rather than a lecturer.

Students need to research the topic independently or with a group (it's up to you) to find an answer. This method helps them develop problem-solving and research skills a lot.

**13) Cloud computing teaching;** The term can be strange, but the method itself is familiar to most teachers. It's a way to connect teachers and students and allow them to access classes and materials from thousands of miles away.

It has a lot of potential for all institutions and educators. This method is easy to use and cost-saving, secures your data, allows students to learn distance, and more.

It's a little different from online learning in that it requires no interaction between lecturers and learners, which means that your students can learn anytime and anywhere they want to finish the courses.

### **14) Flipped classroom**

Flip the process a little bit for a more exciting and effective learning experience. Before classes, students need to watch videos, read materials or research to have some basic understanding and knowledge. Class time is devoted to doing the so-called 'homework' typically done after class, as well as group discussions, debates or other student-led activities.

### **Benefits of Creative Teaching Methods**

The following are the benefits of creative Teaching methods are good for the students and worthy to try.

1. **Encourage research** – Innovative approaches to learning encourage students to explore and discover new things and tools to broaden their minds.
2. **Improve problem-solving and critical thinking skills** – Creative teaching methods allow students to learn at their own pace and challenge them to brainstorm new ways to address a problem instead of finding answers already written in textbooks.
3. **Avoid receiving a lot of knowledge at once** – Teachers using new approaches still give students information, but they tend to split it into smaller parts. Digesting info can now be more accessible, and keeping things short helps students get the basics faster.
4. **Adopt more soft skills** – Students have to use more complex tools in class to finish their work, which helps them learn new things and spark their creativity. Also, when doing individual or

group projects, students know how to manage their time, prioritise tasks, communicate, work with others better, and much more.

5. **Check students' understanding** – Grades and exams can say something, but not everything about a student's learning capacity and knowledge (especially if there are sneaky peeks during tests!). Innovative teaching ideas let teachers monitor classes and better know what their students struggle with to find the most suitable solutions.
6. **Improve self-evaluation** – With great methods from teachers, students can understand what they've learnt and what they're missing. By discovering what they still need to know, they can understand why to learn particular things and become more eager to do it.

## Conclusion

The strategies are used to inspire creativity and success in the classroom. Change is necessary and through change, we are bound to fail or miss a beat. However, failing is ok. One of the most important lessons we teach our students is that they need to try and if they fail, then that's ok. Failing is ok as long as we take lessons from that and try again. Though these strategies seem like we are taking a big leap into something new, we don't have to apply them to our entire teaching strategy. Think of how you can use one or the other for a specific lesson. Maybe some subjects lend themselves to a project-based learning exercise while others benefit from simply asking open-ended questions. Keep your ears and eyes open. Many teachers are going through this journey with you. There are some fantastic examples online that you can use as source material for your classroom experiments.

As long as we're innovating, we are growing. Give it a go, it's always an exciting time to be in the classroom. It's especially exciting now while many are looking to introduce innovative teaching strategies as solutions to the challenge students face today.

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## STUDY OF SOCIAL INTELLIGENCE OF DEGREE STUDENTS

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### *Abstract*

*In the present investigation an attempt has been made to identify the study of social intelligence at degree students GFGC, Shikaripura. The test of Social Intelligence developed and standardized Dr. N.K.Chadha and Usha Ganesan was used.*

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### **Introduction**

Social intelligence as distinct from other human intelligence such as abstract and mechanical. He defined social intelligence as "The ability to understand men and women, boys and girls to act wisely in human relation". It emphasizes three main elements which are: capacity of social towards society; social knowledge and individual's capacity for social adjustments. He has interrupted social intelligence as providing. The efficient and effective way of learning depends upon the study habits of the students. Study habits are important; they influence the academic achievement of students. So parents and teachers must help in improving the study habits of students. Some investigators have sought to determine what study habits are characteristically used by pupils when left to work by themselves with little or no direction.

### **Statement of the problem**

**“Study of Social Intelligence of degree Students in relation to their Study Habits, Emotional Competence and Self-Perception”**

### **Objectives of the study**

- To identify the social intelligence of degree students.

### **Research Hypotheses of the study**

As the present study is intended to identify the Social Intelligence of degree students, the following hypotheses are formulated.

**Hypothesis 1.:** There is no significant difference between Arts, Science and Commerce faculty students of degree with respect to social intelligence .

### **Methods**

#### **Sample**

For the present study stratified random sampling technique will be adopted. The population of 560 sample is GFGC, Shikaripura students. The sample consisted of Science 111, Arts 316, Commerce 133.

### **VARIABLES OF THE STUDY**

For the present study the following variables have been considered;

- **Independent Variable**  
Social intelligence
- **Dependent Variable**

#### **Subjects**

- a. Science
- b. Commerce
- c. Arts

#### **Tools**

- Social Intelligence developed and standardized Dr. N.K.Chadha and Usha Ganesan was used.



## Discussion

The data collected on social intelligence, and Emotional competence scores from students of degree College. Then the data were analyzed with according to the objectives and hypotheses by in terms of descriptive statistics, differential analysis including unpaired t-test, 2-way ANOVA followed by Tukeys multiple posthoc procedures, correlation analysis, and multiple regression analysis by using SPSS 21.0 statistical software and the results obtained thereby have been interpreted.

**Hypothesis 1.:** There is no significant difference between Arts, Science and Commerce faculty students of GFGC, Shikaripura with respect to social intelligence .

To achieve this hypothesis, the one way ANOVA test was applied and the results are presented in the following table.

Table: Results of ANOVA test between Arts, Science and Commerce faculty students of degree with respect to social intelligence scores

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F-value	P-value	Signi.
Between faculties	2	846.29	423.14	4.3914	0.0127	S
Within faculties	657	63307.36	96.35		<0.05	
Total	659	64153.65				

From the results of the above table, it can be seen that, a significant difference was observed between Arts, Science and Commerce faculty students of degree with respect to social intelligence scores ( $F=4.3914$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, the Arts, Science and Commerce faculty students of degree have different social intelligence scores.

If F is significant, to know the pair wise comparisons of Arts, Science and Commerce faculty students of degree with respect to social intelligence scores by applying the Tukeys multiple posthoc procedures and the results are presented in the following table.

Table: Pair wise comparisons of Arts, Science and Commerce faculty students of GFGC, Shikaripura with respect to social intelligence scores by Tukeys multiple posthoc procedures

Faculty	Arts	Science	Commerce
Mean	90.26	90.57	87.52
SD	9.05	10.53	11.39
Arts	-		
Science	P=0.9550	-	
Commerce	P=0.0138*	P=0.0415*	-

\* $p<0.05$

From the results of the above table, it can be seen that,

- A non-significant difference was observed between Arts and Science faculty students of degree with respect to social intelligence scores at 5% level of significance. It means that, the Arts and Science faculty students of GFGC, Shikaripura have similar social intelligence scores.
- A significant difference was observed between Arts and Commerce faculty students of degree with respect to social intelligence scores at 5% level of significance. It means that, the Arts faculty students of GFGC, Shikaripura have higher social intelligence scores as compared to Commerce faculty students of degree.

A significant difference was observed between Science and Commerce faculty students of GFGC, Shikaripura with respect to social intelligence scores at 5% level of significance. It means that, the Science faculty students of degree have higher social intelligence scores as compared to Commerce faculty students of degree. The mean and SD scores are also presented

### **Finding of the study**

1. The Arts, Science and Commerce faculty students of GFGC, Shikaripura have different social intelligence.
2. The Arts and Science faculty students of GFGC, Shikaripura have similar social intelligence.
3. The Arts faculty students of GFGC, Shikaripura have higher social intelligence as compared to Commerce faculty students of degree.
4. The Science faculty students of GFGC, Shikaripura have higher social intelligence as compared to Commerce faculty students of degree.

### **Conclusion:**

The findings of the above study will be useful to the curriculum frames of degree courses. The main purpose of the degree course is to prepare successful and competent fresh batches of students effectively and successfully.

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## EXPLORING THE DIFFICULTIES AND CONSTRUCTIVE RECOMMENDATIONS IN TEACHER EDUCATION

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### Abstract

*"No society can rise above the standard of its teachers". -National Policy on Education (1986).*

*As stated by NCTE (1998) in Quality Concerns in Secondary Teacher Education, "The teacher is the most important element in any educational program. It is the teacher who is mainly responsible for the implementation of the educational process at any stage." The success of a student depends most of all on the quality of the teacher. With the advent of standards-based reforms, the quality of teachers has become a major concern of policy-makers, colleges and universities, especially at the colleges of teacher education and the public in general. Every child deserves a quality teacher. In an era of increasing standards and accountability in education, teacher quality and teacher training will be more important than ever. Teacher Training or Teacher Education is a continuous process and its pre-service and in-service components are complimentary to each other. Nowadays Teacher preparation has been a subject of discussion at all levels, from the government, ministries, regulatory bodies, and schools, to teachers themselves. Some problems are plaguing the system of teacher education so the teachers should be given the most appropriate tools during and after their training, including content knowledge and skills as well as teaching methodology to be able to do their work professionally. In this article, the researcher highlighted ongoing debates that the problems, challenges and some positive suggestions to improve the quality of teacher education and these suggestions will be helpful to educationists, Policy Makers, universities and colleges and those interested in improving the quality and standard of teacher education for the future.*

*Key Words: Education, Quality, Challenges and Suggestions.*

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### Introduction

Man is a social being and a product of society and society depends upon its individual for its development. Aims and objectives can be achieved through the efficient teacher for an education system of its man of any society through proper education. So, we require efficient teachers. There are many problems and issues plaguing the system of teacher education. Teacher preparation has been a subject of discussion at all levels, from the government, ministries, schools, and regulatory bodies, to teachers themselves.

### Problems of Teacher Education

Some of the problems concerning teacher education are discussed below:

- **Problem to Monitor of Teacher-Education Institutions:**

The National Council for Teacher-Education (NCTE) is a regulatory body which controls the functioning of teacher-education institutions and prevents them from becoming Commercial (money-making) institutions, but because the country is so diverse with innumerable institutions, it sometimes gets difficult to monitor all the institutions. Some unscrupulous institutions have become simply money-making centres and produce certified but incompetent teachers which is a matter of great concern because the incompetency of teachers can harm the system of education.

- **Deficiencies in Selection Procedure:**

While taking admission to teacher education programmes by the trainees the government or management does not follow a proper selection procedure. A good selection procedure would not only improve the quality of teacher education courses but also provide a suitable candidate for this pious profession.

- **Lack of Regulations in Demand and Supply:**

There is a considerable lag between the demand and supply of teachers. The State Education Department has no data on the basis of which they may work out the desired intake for their institutions. This has created the problems of unemployment and underemployment and created student unrest.

- **Deficient in Facilities for student-teacher:**

As we know teacher education is the cornerstone of education even then it is treated as a step-son of education in India. About 20 per cent of the teacher education institutions are being run in rented buildings without any facilities. An experimental school or laboratory, library and other equipment are necessary for a good teacher education department. There are no separate hostel facilities available for students.

- **Lack of Facilities for Professional Development**

Most of the programmes are being conducted in a routine and unimaginative manner. Even the association of teacher educators has not contributed anything towards the development of a sound professionalization of teacher education in the country.

- **Developing Life Skills -**

Life skills are certain skills which are essential for personal development and growth. These skills enable man to deal with life's difficulties and adversities more effectively. These skills are (a) Thinking Skills (b) Self Awareness, Problem Solving, Creative Thinking, Decision making and Critical Thinking (b) Social Skills – Interpersonal Relations, Effective Communication and Empathy (c) Emotional Skills – Stress Management.

The main issue is that teacher-education is memory-based i.e., there is no active involvement of students, so we are lacking in the development of life skills among the students, which are essential for all round development of students.

- **Problems of Practice Teaching**

Practice teaching is the most important part of this programme but inspires all kinds of elaborate arrangements regarding practice in teaching, student teachers are non-serious to the task of teaching, deficient in sense of duty irresponsible, aimless, indifferent to children, lacking innovative measures in teaching which are great obstacles in the development of pedagogical skills.

- **Problem of Supervision of Teaching**

The supervisory organizations for practice teaching aim at bringing improvement in the instructional activity of the student teachers by using various techniques and practical skills in teaching and helping them to develop confidence in facing classroom situations. It aims to guide in planning their lessons, learning to organize content, formulating suitable gestures and developing other related skills. At present the lesson plans are checked superficially and no discussion is made by the subject method specialist.

- **Incompetency of Students and Teachers**

The current training program does not provide proper opportunities for student teachers to develop competency because the organizers of the teacher's training program are not aware of the present problems of schools. So, there should be a close matching between the work schedule of the teacher in the program and the school adopted for teacher preparation in a training college.

- **Poor Academic Background of Student-Teachers**

Most candidates do not have the requisite motivation and academic background for a well-deserved entry into the teaching profession. They take admission in teacher education programmes because they could not take admission in their desired course due to low performance in such fields. So, after being admitted to the teacher education programme, they show poor performance.

- **Practice teaching neither adequate nor appropriately conducted**

Inspired by all kinds of elaborate arrangements regarding practice in teaching, student teachers are not serious about the task of teaching, deficient in sense of duty indifferent to children, irresponsible, aimless, and lacking innovative measures in teaching which are great obstacles in the development of pedagogical skills.

- **Lack of subject knowledge**

The teacher training programme does not emphasize the knowledge of the basic subject. The whole teaching practice remains indifferent with regard to the subject knowledge of the student teacher.

- **Isolation of teacher's education department**

Teacher education has become isolated from schools and current development in school education has been observed by the education commission. The schools consider the teacher education department as an alien institution and not a nursery for the professional development of school teachers. These departments do not care for the sounders of pedagogy involved in the procedure but only observe the formality of finishing the prescribed number of lessons.

- **Deficient in the Curriculum of the Teaching Subject**

The curriculum of teacher education programmes in India has been criticized. Some educationists feel that it does not fully address the needs of contemporary Indian Schools and society and it does not contain relevant content for teachers who are to impart quality education in school.

- **Segregation of Teacher's Education Department**

As has been observed by the education commission, teacher education has become segregated from schools and current development in school education. The schools consider the teacher education department as an alien institution and not a nursery for the professional development of school teachers. These departments only observe the formality of finishing the prescribed number of lessons not caring for the sounders of pedagogy involved in the procedure.

- **Inadequate Empirical Research**

Research in education has been considerably neglected. The research conducted is of low quality. Before undertaking any research, the teacher programmes are not studied properly.

- **Faulty Teaching Method**

In India, teacher educators are averse to experimentation and innovation in the use of teaching methods. Their acquaintance with modern classroom communication devices is negligible.

- **Some other problems of teacher education:**

- a. Poor standards with respect to resources for colleges of education.
- b. Unhealthy financial condition of the colleges of education
- c. Negative attitude of management towards the development of both human as well as material resources.
- d. Lack of occupational perception
- e. Feedback mechanisms lacking.
- f. Objectives of teacher education not understood.
- g. Secondary-level teacher education is not the concern of higher education.
- h. Lack of dedication towards the profession.
- i. Uniform education policy of the government treating excellent institutions alike.
- j. Traditional curriculum and teaching methods of teaching in the teacher education programme.
- k. Haphazard and improper organization of teacher education.
- l. Unplanned and insufficient co-curricular activities.

**Suggestions to improve the present situation of teacher education**

Here are some suggestions for improving the condition of teacher education:

- Teacher education institutions should be put under strict control of this regulatory body (NCTE) for the selection of teachers, students and provisions of good infrastructure etc.
- There should be a planning unit in each State Education Department. The function of this unit should be to regulate the demand and supply of teachers at various levels of schools. This unit can also be given the responsibility of projecting future requirements of teachers in various categories.
- Educational institutions should be equipped with facilities for organizing various types of activities such as daily assembly programmes, community living, social work, library organization and other curricular activities, which promote a democratic spirit of mutual appreciation and fellow feeling.
- The practising schools have to be taken into confidence. For this the members of the staff of teacher's colleges should be closely associated with the schools. The course of studies and the practical work and practice teaching can be easily moderated in such a way that they will have useful implications for improving school practices.
- The selection procedure must be improved and interviews, group discussions along common entrance tests and marks should be introduced.
- The working of Teacher education institutions should be examined from time to time and strict action should be taken if they fail to come up to the expected level.
- Privatization of teacher education should be regulated.
- Evaluation Teacher education, like technical education and higher education, must be the responsibility of the central government.
- Among teacher education institutions uniformity must be ensured and maintained in terms of timings of the programme, curriculum and duration.
- Affiliation conditions should be made strict.
- Educational institutions should be graded according to the standards of the institution and admission should be allowed according to standards of the institutions.
- Teacher educators must be well qualified and experienced with language proficiency.
- The curriculum of the teacher education programme should be revised from time to time according to the changing needs of society.
- The quality of the teacher education programme should be upgraded. The teacher education programme should be raised to a university level and the duration of the programme should be appropriately enhanced.
- There should be a free exchange of scholars from one department to the other. This will improve the quality of teacher education programmes immensely.
- For the professional growth of teacher educators, there should be seminars, summer institutes and research symposia at more frequent intervals.
- Correspondence courses in teacher education should be provided, with a strict and high screen for admissions and a rigorous manner of assessment.
- Teachers should be able to think critically make the right decisions and maintain harmonious relations with others.
- Several types of co-curricular activities in the curriculum should be included.
- The government should look after the financial requirements of the institutions.
- Teacher educators must be experienced and well-qualified with language proficiency.
- In practice teaching more emphasis should be given till mastery is reached with appropriate feedback.
- Refresher courses should be organized for teacher educators frequently.
- Teacher pupil ratio should be ideally 1:8.



- Internships in teacher education should be objective, reliable and valid.

### Conclusion

Teachers and their education are very significant aspects of any nation. Education gives a new shape to the individual and the nation as well. It is a well-known saying that a teacher is a nation-builder. The quality of the teacher education programme needs to be upgraded. Teacher education has not come up to the requisite standards. Teachers are not able to think critically and solve the issues related to teaching methods, content, organisation etc. teacher education programme needs comprehensive reform and restructuring curriculum of the teacher-education programme needs to be revised according to the changing needs of society.

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## BLENDING LEARNING IN CLASS ROOM PRACTICE

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### Abstract

*Innovative educators have for many years been creating new delivery methods in education by combining elements of in-person teaching with technology-enabled learning to bring people together virtually. Since the late 1990s, when simple learning management systems began to emerge, blended learning has grown very quickly. There are now many possible combinations and permutations, but it took time for this to occur.*

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### Introduction:

We have to presents new ways of thinking about teaching and learning to help you better prepare your students to learn and develop into 21<sup>st</sup> century global citizens. According to the U.S. Department of Education (Means, Toyama, Murphy, Bakir, & Jones, 2009), a blend of classroom and web-based teaching and learning offers access to the widest range of learning modes and methods for developing student skills and expertise as learners (Cleveland-Innes, 2017). Many findings on blended learning show an increase in learners' ability to learn collaboratively, think creatively, study independently and tailor their own learning experiences to meet their individual needs.

This also provides information about some of the technology tools you can use to support in-person delivery in a seamless, truly blended way. Through careful, thoughtful blending and with consideration for technological skill levels and Internet access, learning for anyone can now take place with greater flexibility and convenience.

While computers became part of everyday life for most in the early 2000s, education was slower to integrate computer technology. When it did, technology use was often limited to supplementing the usual teach-by-telling approach. As computers and the Internet demonstrated opportunities for connecting people in multiple locations as well as for more interaction, more visuals and greater access to information, innovation increased but in fragmented, uneven ways.

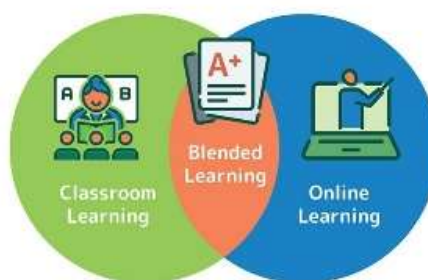
Soon, Internet connectivity and browser development allowed broader and more user-friendly resources for anyone wanting to learn. Web-based learning replaced CD-ROM materials. "Rather than having to distribute CD-ROMs to learners, organizations could simply upload material, e Learning assessments, and assignments via the web, and learners could access them with a click of a mouse button" (Pappas, 2015b).

Today, computers, tablets and smart phones are available to the majority of the world's population, and technology-enabled learning has become more varied and accessible. More and more institutions and teachers are adding web-based learning to their delivery methods, and learners have access to many applications to support their learning. The mantra "anytime, anywhere" has been taken up to describe the new wave of education. However, this notion is being challenged by education practitioners and researchers, who know that learning competence is not universal, student skills are very different from skills needed to participate in social media, and access to broadband Internet is not evenly distributed.

### What is Blended Learning?

Blended learning is an instructional approach that combines traditional face-to-face teaching methods with online and digital learning activities. It integrates both in-person and virtual learning experiences to create a more flexible and personalized learning environment. Blended learning allows

## Blended Learning



Educators to leverage the advantages of traditional classroom instruction and online resources, catering to diverse learning needs and enhancing the overall learning experience.

There are two blended learning definitions that are most frequently cited in the literature. These have been suggested by Graham (2006), and Garrison and Kanuka (2004), and have been cited 2149 and 3116 times, respectively (Google Scholar, Oct 25, 2018). Graham (2006) defines blended learning as follows: “Blended learning systems combine face-to-face instruction with computer-mediated instruction” (p. 5). Garrison and Kanuka (2004) define blended learning as “the thoughtful integration of classroom face-to-face learning experiences with online learning experiences”.

### Characteristics of Blended Learning:

- **Mix of Learning Modalities:** Blended learning combines various learning modalities, including in-person lectures, group discussions, hands-on activities, and
- **Online learning resources** such as videos, interactive Modules, and digital assessments.
- **Flexibility:** Learners have the flexibility to access course materials and complete assignments online at their own pace and convenience, while still benefiting from face-to-face interactions with the instructor and peers during scheduled class sessions.
- **Personalization:** Blended learning allows for individualized learning paths, enabling learners to progress through content at a pace that suits their needs and interests. Learners can revisit and review online materials as needed.
- **Technology Integration:** The integration of technology is a key aspect of blended learning. Digital tools and online platforms facilitate the delivery of e-content, collaborative activities, and communication between learners and educators.
- **Data-Driven Instruction:** Blended learning often employs data analytics to track learner progress and performance, enabling educators to make data-informed decisions and provide personalized support.
- **Enhanced Engagement:** The use of interactive and multimedia elements in online materials can boost learner engagement and motivation, complementing the face-to-face interactions in the physical classroom.
- **Differentiation:** Blended learning allows educators to differentiate instruction, tailoring content and activities to meet the diverse needs, interests, and learning of individual students.

### Blended Learning Models:

- **Flipped Classroom:** In this model, learners’ instructional content, such as pre-recorded Video lectures readings, online before coming to the physical classroom. Class time is then utilized for discussion; group activities, and hands-on learning experiences,
- **Station Rotation:** Learners rotate between different learning stations, which can include online activities small group work, individual assignments, and face-to-Face instruction with the teacher.

- **Flex Model:** In the flex model, learners have significant control over the pace, time, and place of their learning, they can choose to attend physical classes or access content and complete assignments online.
- **Online Driver Model:** In this model, most of the learning occurs online, and face-to-face interactions are limited to specific occasions, such as assessments or individualized support sessions.
- Blended learning offers an effective and adaptable approach to education, combining the best elements of both traditional teaching and online learning to create a dynamic and engaging learning environment that meets the diverse needs of modern learners.

#### **Advantages of Blended Learning:**

- **Flexibility and Convenience:** Blended learning allows learners to access course materials and resources online, providing flexibility in scheduling and the ability to learn at their own pace.
- **Personalization:** The mix of in-person and online learning allows for personalized learning paths, catering to individual learners' needs, interests, and learning styles.
- **Increased Engagement:** The integration of multimedia, interactive content, and technology in online resources can enhance learner engagement and motivation.
- **Improved Learning Outcomes:** Blended learning's combination of different instructional methods can lead to improved learning outcomes and knowledge retention.
- **Enhanced Collaboration:** Online collaboration tools and activities facilitate communication and collaboration among learners and educators, promoting a sense of community and teamwork.
- **Data-Driven Instruction:** Blended learning often utilizes data analytics to track learner progress, enabling educators to provide targeted interventions and support.
- **Cost-Effectiveness:** Blended learning can potentially reduce costs associated with traditional classroom-based instruction such as the need for physical facilities and printed materials.
- **Access to Resources:** Learners can access a wide range of digital resources, including e-books, videos, simulations, and interactive modules, which may not be readily available in traditional classrooms.
- **Self-Paced Learning:** Online components allow learners to review and revisit content as needed, supporting self-paced learning and mastery of concepts.
- **Preparation for Digital Skills:** Blended learning equips learners with digital literacy skills, which are essential in today's technology-driven world.

#### **Disadvantages of Blended Learning:**

- **Technological Challenges:** Blended learning relies heavily on technology, and technical issues, such as internet connectivity problems or platform glitches, can disrupt the learning process.
- **Access Barriers:** Some learners may not have access to reliable internet connections or suitable devices, creating a digital divide and limiting their participation in online activities.
- **Time-Intensive:** Designing and implementing effective blended learning experiences can be time-consuming for educators, requiring careful planning and preparation.
- **Training Needs:** Educators and learners may require training and support to effectively use online tools and navigate digital learning platforms.
- **Lack of Face-to-Face Interaction:** In fully online components of blended learning, learners may miss the face-to-face interactions with peers and instructors that can be valuable in building social connections and communication skills.
- **Balancing Workload:** Finding the right balance between in-person and online activities can be challenging, as too much online work may overload learners with screen time.
- **Inconsistent Learning Experience:** The quality and effectiveness of online materials may vary, leading to inconsistent learning experiences for learners.

- **Resistance to Change:** Some educators and learners may be resistant to adopting new technology and may prefer traditional teaching methods.
- **Assessment Challenges:** Creating fair and reliable assessments that measure both in-person and online learning outcomes can be complex.
- Despite these challenges, when designed and implemented effectively, blended learning can offer a powerful and flexible approach to education, combining the benefits of traditional instruction and online learners to meet the diverse needs of learners the digital age.

### **Role of teacher in using blended learning**

The blended classroom requires teachers to assume newer responsibility to proactively develop and deliver goals of personalized learning for every individual learner. Here are 5 key roles that the teachers will have to be prepared for before using the blended learning.

- **Classroom Planners:** The blended classroom requires a teacher to opt for long-term planning of curriculum and instructions in advance, Teachers cannot plan over shorter immediate stints such as doing weekly lesson plans. Curriculum planning as well as instructional strategies must be figured in advance even before the session starts. The curriculum design must feature essential built-in resources for accommodating differentiated instructional strategies as well as assistive elements, rather than changing the design later when such user may opt for a course.
- **Classroom Managers:** In a blended classroom all students will be working differently, on a different content, on different tasks at a different pace, in different groups. The learners are expected to self-monitor their progress; however, it is also important for the instructor to assume the larger role of a manager. Setting appropriate leads to ultimately qualify all learners for the same learning goals. The instructor manager needs to set appropriate learning norms, learning checkpoints, as well as engage all learners with differentiated tactics.
- **Data Analytics:** Teachers in a blended learning setting are expected to collect data upon students' performance as well as metrics to analyse content engagement which can be leveraged for real-time as well as long-term betterment of their course. With the integration data analytics tools in Learning Management Systems and big data analytics tools in blended classrooms, teachers can easily leverage classroom data to offer truly adaptive and personalized learning in a blended classroom. Teachers will be able to proactively analyse students' performance, keep track of students' learning pace, as well as monitor individually for each student where they stumble.
- **Risk Loving:** The traditional standard-based curriculum has stifled the risk-loving teachers by tying students' performance with their pay. Most teachers have taken to the road-most treaded and have been resistant to try novel approaches when it comes to content, instructions, or assessments. The blended learning setting provides the perfect outlet for Teachers to explore risk-taking and in fact risk-taking teachers with higher engagement statistics, fulfilled learning outcomes, as well as greater referrals from learners. Blended learning allows teachers to experiment with different instructional techniques, content strategies, as well as assessment formats to suit a diverse variety of learners for same set of learning outcomes.
- **Content Experts:** A blended setting requires teachers to master the art of content creation as well as content utilization. Not only is it imperative for teachers to transform the stretched-out learning materials in quicker, succinct, and more engaging micro content, but also to render that content in different formats such as video, tutorials, learning through doing eBooks, online lectures, podcasts, and others, so as to capture the learning style of diverse students in their classrooms. The content needs to be differentially rigorous, so that it can be effectively delivered across a spectrum of learning pace and desired learning outcomes.

Blended learning shifts the teacher's role from knowledge provider to coach and mentor. This shift does not mean that teachers play a passive or less important role in students' education. Quite the contrary-

with blended learning, teacher can have an even more profound influence and effect on students' learning.

**Conclusion:** Teachers are still a key part of blended learning - teachers who have subject-matter expertise and basic technology skills, along with the new pedagogies that go with technology, such as constructivism and collaboration. Blended learning expertise provides both. Blended learning is an educational approach that combines traditional in-person teaching with online resources and digital tools. It offers students a flexible and personalized learning experience, allowing them to access content and interact with instructors and peers both in the physical classroom and through virtual platforms. This combination of in-person and online elements aims to enhance learning outcomes and adapt to the diverse needs and preferences of modern learners. Blended learning is an educational approach that combines traditional, in-person instruction with online or digital learning. Blended learning aims to combine the best of both in-person and online learning to create a more dynamic and effective educational experience.

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## A STUDY ON READING HABITS OF SECONDARY SCHOOL STUDENTS

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### *Abstract*

*This study examines the reading habits of secondary school students, focusing on potential differences based on gender and residential background (rural vs. urban). The research seeks to provide insights into the reading habits of secondary school students and identify any significant variations that may exist in these two critical demographic factors. Objectives of the study are to study the difference in reading habits of male and female secondary school students and to study the difference in reading habits of rural and urban secondary school students. Descriptive survey was used for the study. It is a research method used to gather information about a population, group, or phenomenon by collecting data from a sample through surveys or questionnaires. The primary aim of descriptive survey research is to describe and summarize the characteristics, behaviours, attitudes, opinions, or other attributes of the study's subjects. 100 secondary school students were selected randomly with the help of simple random sampling technique for purpose of the study. A self-prepared instrument entitled "Reading Habits Questionnaire" was used for the purpose of data collection from the secondary school students. The study concludes that there is no significant difference in reading habits of male and female secondary school students and also rural and urban secondary school students.*

**Key words:** reading habits, secondary school students

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### **Introduction**

Reading is a fundamental skill that serves as the cornerstone of academic achievement and intellectual development for students. It not only enhances cognitive abilities but also fosters critical thinking, creativity, and empathy, contributing significantly to a student's overall academic success and personal growth (Krashen, 2004). However, despite its paramount importance, there is an increasing concern regarding the declining reading habits among secondary school students in the contemporary educational landscape.

A "reading habit" refers to a person's regular and consistent practice of reading. It encompasses the routine and frequent engagement with written materials, such as books, newspapers, magazines, e-books, or any text-based content. Reading habits can vary in terms of the type of material read, the frequency of reading, and the individual's purpose for reading.

The current era is characterized by a multitude of digital distractions, including social media platforms, video games, and streaming services, which have led to a noticeable shift in leisure activities among adolescents (Rideout, 2019). Consequently, the time allocated for reading, particularly for pleasure or personal enrichment, has gradually diminished, and potentially impeding the development of a lifelong reading habit among students.

Given the significance of fostering a culture of reading among the youth, it is imperative to conduct a comprehensive investigation into the reading habits of secondary school students. This study aims to analyze the factors influencing reading preferences, the impact of digital media on reading habits, and the role of parental involvement in cultivating a reading-friendly environment at home. By comprehensively understanding the reading behaviors and preferences of secondary school students, this research endeavors to propose effective strategies to promote and sustain a culture of reading among adolescents.

Through an empirical analysis of the various determinants affecting the reading habits of secondary school students, this study aspires to contribute to the development of targeted interventions and initiatives that can encourage a renewed interest in reading, thereby fostering a lifelong love for literature and knowledge acquisition among the youth.



## Literature review

Reading habits are integral to the academic and personal development of secondary school students. In this section, we explore existing research and scholarly works that shed light on the various aspects of reading habits among this demographic.

Numerous studies have underscored the link between reading habits and academic performance. Research by Guthrie and Wigfield (2000) highlights that students who read regularly tend to have better comprehension skills and perform well in standardized tests. Similarly, a study by Anderson, Wilson, and Fielding (1988) found that students who engage in frequent independent reading experiences enhanced vocabulary and reading fluency, resulting in improved academic outcomes.

The proliferation of digital media and technology has transformed the reading landscape for secondary school students. Research by Rideout (2019) indicates that adolescents are increasingly spending time on screens, which can detract from traditional reading. This digital shift can have both positive and negative effects on reading habits. Some scholars, like Merga (2018), argue that digital platforms can be leveraged to engage students with e-books and online reading materials, potentially rekindling their interest in reading. However, the overuse of digital media may lead to information overload, reduced attention spans, and a decline in traditional book reading (Hawi & Rupert, 2015).

Family plays a crucial role in shaping a student's reading habits. Research by Senechal and LeFevre (2002) emphasizes the significance of parental involvement in fostering reading habits. Parents who model reading behaviors and provide access to a variety of reading materials create an environment that nurtures a love for reading. Conversely, the absence of such support can hinder a student's interest in reading (Neuman & Celano, 2001).

Understanding the reading preferences of secondary school students is crucial. Research by Krashen (2004) suggests that choice in reading materials is a key factor in motivating students to read. It is important to recognize that students have diverse interests and that tailored recommendations and access to books that cater to their preferences can be a catalyst for building reading habits.

The literature reviewed here underscores the multifaceted nature of reading habits among secondary school students. While reading habits are closely linked to academic achievement, the advent of digital media poses both challenges and opportunities. Moreover, family and parental involvement are pivotal in shaping these habits. Understanding the reading preferences of students can help educators and parents create an environment that encourages reading. This review lays the foundation for our study, which aims to explore the reading habits of secondary school students in light of these various factors and provide insights into how educators and parents can promote a culture of reading among adolescents.

## Importance of the study

The study on reading habits of secondary school students holds paramount importance as it delves into a critical aspect of their academic and personal development. Understanding the reading behaviors of these students can directly impact their academic achievement and cognitive development, as a strong reading habit is closely associated with improved performance in standardized tests and enhanced cognitive skills. Furthermore, in an age of digital media proliferation, this study can shed light on the influence of digital distractions on traditional reading habits, helping to address potential challenges. Promoting a love for reading in secondary school students not only fosters lifelong learning but also contributes to the development of critical thinking, creativity, and an enriched vocabulary. This research can also uncover the role of parental involvement in nurturing reading habits at home, offering insights into collaborative efforts between educators and parents. Ultimately, the study is instrumental in devising strategies to create a reading-friendly environment that supports the growth and well-rounded education of secondary school students.



### Objectives of the study

1. To study the difference in reading habits of male and female secondary school students.
2. To study the difference in reading habits of rural and urban secondary school students.

### Methodology

Descriptive survey was used for the study. It is a research method used to gather information about a population, group, or phenomenon by collecting data from a sample through surveys or questionnaires. The primary aim of descriptive survey research is to describe and summarize the characteristics, behaviors, attitudes, opinions, or other attributes of the study's subjects.

### Sampling technique

The sample of present the study was drawn from various Government and Private Secondary schools located in Shikaripura Taluk, Shimoga District. Shikaripura Taluk is having four hobbits. Among them 100 secondary schools students were selected randomly with the help of simple random sampling technique for purpose of the study.

### Instrumentation

A self-prepared instrument entitled "Reading Habits Questionnaire" was used for the purpose of data collection from the secondary school students.

### Statistical techniques used in the study

Independent Samples T-Test was used for the analysis of data. This test is used to compare the means of two independent groups to determine if they are significantly different from each other. The null hypothesis ( $H_0$ ) typically states that there is no significant difference between the means of the two groups. The alternative hypothesis suggests that there is a significant difference between the means.

### Objective-wise and hypothesis-wise analysis of data

**Objective 1:** To study the difference in reading habits of male and female secondary school students.

**Hypothesis 1:** There is no significant difference in reading habits of male and female secondary school students.

**Table 1 shows mean, standard deviation and t-value of male and female secondary school students.**

Reading habits	Gender	N	Mean	SD	t-value
	Male	46	56.7826	9.56594	0.128
	Female	54	57.0370	10.25148	

\* Not-Significant at 0.05 level of significance

It is clear from the above table 2 that the obtained t-value 0.128 is not-significant at 0.05 level, it is less than the table t-value 1.96. Hence, the null hypothesis is accepted. From this it is concluded that There is no significant difference in reading habits of male and female secondary school students.

**Objective 2:** To study the difference in reading habits of rural and urban secondary school students.

**Hypothesis 2:** There is no significant difference in reading habits of rural and urban secondary school students.

**Table 2 shows mean, standard deviation and t-value of rural and urban secondary school students.**

Reading habits	Locality	N	Mean	SD	t-value
	Urban	50	57.7200	11.63394	0.807
	Rural	50	56.1200	7.81584	

\* Not-Significant at 0.05 level of significance

It is clear from the above table 2 that the obtained t-value 0.807 is not-significant at 0.05 level, it is less than the table t-value 1.96. Hence, the null hypothesis is accepted. Hence, it is concluded that There is no significant difference in reading habits of rural and urban secondary school students.

### Educational Implications of the study

- a) These results underscore the importance of promoting a reading culture among all students, irrespective of their gender or geographical background. Educators and policymakers should focus on strategies that encourage reading as a universal habit.
- b) Gender should not be a barrier to developing strong reading habits. Schools and teachers must ensure that both male and female students receive equal opportunities and encouragement to engage in reading, whether it be through inclusive reading materials or classroom activities that cater to diverse interests.
- c) The absence of a significant difference in reading habits between rural and urban students implies that students from rural areas should have equal access to reading resources and opportunities. Policymakers and schools should invest in libraries, digital resources, and community programs that promote reading in rural areas to bridge any potential gaps.
- d) While there might not be significant differences on average, it's crucial to remember that individual students vary in their preferences and reading habits. Educators should consider this when designing reading programs and provide support to meet the unique needs of each student.
- e) To engage all students, it's important to offer a diverse range of reading materials that cater to different interests, including a variety of genres, topics, and reading levels.
- f) Encouraging parents to support their children's reading habits is essential. Schools can provide resources and guidance to parents on how to foster a reading-friendly environment at home.
- g) Teachers should receive training on how to inspire and guide students in developing strong reading habits. They should be equipped to recognize and address potential obstacles that may hinder some students' interest in reading.
- h) Given that there are no significant differences between gender and location, peer influence can play a crucial role. Schools can create reading clubs or peer mentoring programs to harness the positive influence students can have on each other's reading habits.

### Conclusion

Based on the information provided, it can be concluded that there is no significant difference in the reading habits of male and female secondary school students. Additionally, there is no significant difference in the reading habits of rural and urban secondary school students. These findings suggest that reading habits in secondary school students are not influenced by gender or the students' place of residence (rural or urban). This implies that factors other than gender and location may play a more significant role in shaping the reading habits of secondary school students. Further research may be needed to explore the specific factors influencing these reading habits and to develop strategies to promote a love for reading among all secondary school students.

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## INTEGRATING SOCIAL MEDIA INTO TEACHING AND LEARNING

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### *Abstract*

*Social media has gained incredible popularity over the past few years as an open source of information and knowledge sharing platform. Educational institutions are using social media space to interact with young minds. We are seeing educators leveraging the potential of social media technologies to enhance the overall teaching-learning process.*

*The emerging role of social media in teaching-learning process cannot be ignored. It not only provides students access to useful information but also connects them with learning groups and other educational systems that make their overall learning process more interesting and engaging.*

*Social platforms like Facebook, LinkedIn, Twitter, YouTube and Instagram are being used by almost everyone. These social channels are all about collaborating, networking, sharing and generating knowledge and content – something which is of great value in the context of education.*

**Keywords:** Social media, Teaching and Learning

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**Introduction:** There is valuable knowledge to be gained through social media such as analytics and insights on various topics or issues for study purposes. As an educational institution, it is crucial to be active in many social platforms possible; this helps create better student training strategies and shapes student culture.

The great thing about using social media in education is that you soon learn who the experts are in different fields and subjects. When you start following these experts you learn more and gain useful content from them, this empowers you to produce great results.

Social media has the ability to broaden your perspective on various subjects and gives illuminating, instant content that is new. You have the opportunity of engaging experts to get answers on topics that you may need help in.

**Social Media:** According to the Dictionary definition, “Social Media is websites and applications that enable users to create and share content or to participate in social networking.” Social media is not just limited to posting pictures about holidays online. Social media has gained credibility over the years as a reliable source of information and platform where organizations can interact with audiences.

**Social Media in Education:** Today, we can see education institutions adapting these developments into their systems and relying on group resources and mechanisms to improve student life. The use of social media in education helps students, teachers and parents to get more useful information, to connect with learning groups and other educational systems that make education convenient.

**Social media impact and uses for students:** Institutions can share supportive and positive posts that reach all students that are connected to the networks and pages. A video is a prominent tool in social media trends that is effective and you can use it to share useful videos that inspire students and help them in their course subjects.

Through social mediums such as YouTube, Facebook or Instagram live video the engagements between students and the institution can be sustained. The benefits of social media in the education process don't have to stop at the teacher-student relationship. There are a lot of other benefits that can be extracted from the use of social networking at higher levels as well.

**Objective of the Study:** To find out the integration of Social Media in Teaching and Learning of degree colleges

**Hypothesis of the Study:** Integration of Social Media in Teaching and Learning of degree colleges are not satisfactory.

**Methodology adopted:** Survey method was used for the present study for collecting necessary data. The Questionnaire consisted of twelve items related to the aspects of usage of Social Media in Teaching and Learning. The investigator sent the google forms randomly selected teaching faculties of Degree colleges in the Shivamogga District.

**Sample selected for the Study:** The Sample of the study consists of 50 Degree college teaching faculties of the Shivamogga District..

**Tools used:** Questionnaire developed by the investigator was used for collecting data. Statistical techniques used. The data obtained was analysed by using appropriate statistical techniques like Percentages.

#### Findings of the study:

Sl. No.	Social media	Opinion	Responses
1	Usage of Whatsapp in teaching	Using personally	18.18 %
		Created students group	77.27 %
2	YouTube	Using YouTube videos in class room	68.18 %
		Having own YouTube channel	31.82 %
3	Do you have your own educational website?	Yes	4.55 %
		No	95.45 %
4	Do you have your own educational blogs?	Yes	4.55 %
		No	95.45 %
5	Do you use Facebook for sharing information to your students?	Yes	50.00 %
		No	50.00 %
6	Do you use Facebook Messenger for sharing information to your students?	Yes	36.36 %
		No	63.64 %
7	Do you use Instagram for sharing information to your students?	Yes	27.27 %
		No	72.73 %
8	Do you use Telegram for sharing information to your students?	Yes	59.09 %
		No	40.91 %
9	Do you use LinkedIn for the teaching and learning?	Downloaded the information	63.64 %
		Uploaded the information	36.36 %
10	Do you have your twitter account?	Yes	13.64 %
		No	86.36 %
11	Do you use Snap chat for the teaching and learning?	Yes	4.55 %
		No	95.45 %
12	Do you use Skype for the teaching and learning ?	Yes	27.27 %
		No	72.73 %

As per the study, 77.27% of the degree college faculties effectively use whatsapp groups to share information with their students. The majority of faculty members use YouTube videos in class, but 31.28% have uploaded their own videos to YouTube. Only 4.55 percent of faculties have their own educational websites and educational books. Almost all the faculties are using Facebook, but only 50% of the faculties are sharing educational information on Facebook for their students. 63.64% of faculty members do not have a Facebook Messenger account, and 72.73% do not use Instagram. Telegram is used by 59.09% of faculties to communicate with their students. 36.36% of faculties are uploading their information on LinkedIn. 86.36% of faculty members do not have a Twitter account.

#### Implications of the study:

The use of social media in education helps students, teachers and parents to get more useful information, to connect with learning groups and other educational systems that make education

convenient. Social network tools afford students and institutions with multiple opportunities to improve learning methods.

**Limitations of the study:**

The study is limited to Shivamogga district Degree college faculties. It may continue to other locality and other levels like higher and lower level education.

**Conclusions:**

Social networks, it is easier and convenient to exchange information, communicate with each other and stay connected. Teachers and students can use social platforms to stay connected to each other and can use it for educational purpose. Social networks are empowering students and educational institutions with opportunities to improve teaching-learning process. Social media is also a medium where students can establish beneficial connections for their careers. As an educational institution, it is crucial to be active in many social platforms possible, this helps create better student engagement strategies and makes learning more interactive and inclusive.

Faculty can create groups using social media where useful information can be accessed by all. It is a good platform for sharing ideas. Social media is increasingly becoming popular in building relationships outside the classroom setting. It is helping drive admissions and strengthen public relations of the Institute. Students' welfare department in colleges are taking help of social media to engage students by addressing their grievances. It is further being used to showcase life at campus and build strong alumni networks.

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## SPIRITUALITY IN SCHOOL EDUCATION

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### *Abstract*

*Spiritual knowledge prevents a human being from progressing towards downfall. The darkness that has arisen inside a human being due to materialism can be dispelled only by the light of spirituality. Only spiritual knowledge can help him or her to understand the dimension of God and creation of human who is just a creation of Universe. Spirituality makes a person internally empowered. In all situations of profit-loss, honor-disgrace, happiness-sorrow, rise-fall, the traveller of the spiritual path keeps on moving unwaveringly. God is not omnipresent. To understand and imbibe the know ability of his deep secrets is not only difficult but also rare. Since time immemorial, many sects have been trying to know this deep secret. The regulator of all our tendencies is some invisible force. Our instincts propel us to act only when indicated by the Power in our heart.*

**Key words:** Spirituality, teaching spirituality, spirituality to teachers, spirituality to curriculum.

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### Introduction

Spirituality is an essential aspect of human life that can influence an individual's overall well-being and quality of life. In the context of education, spiritual well-being is increasingly recognized as a vital component of a holistic approach to education. In this paper, the importance of spiritual well-being in education and how it can benefit both students and teachers has been discussed. Spiritual well-being refers to a person's sense of connection to something greater than themselves, whether it is a higher power, nature, or the universe. It involves a sense of purpose, meaning and belonging in life and it can contribute to feelings of inner peace, contentment, and happiness. When spiritual well-being is nurtured, individuals can develop a positive outlook on life, cultivate empathy and compassion, and develop a sense of social responsibility.

### Spirituality and its connection with one's development

In education, students' entire growth can be greatly aided by their spiritual well-being. According to research, students who feel linked to their spirituality generally have better mental health, succeed more academically and are more resilient when faced with challenges. Students who are often under pressure to succeed academically and professionally, nurturing spiritual well-being can provide a valuable source of support and perspective. Additionally, a sense of purpose and meaning in life can be influenced by spiritual well-being, and this can inspire students to set and meet their goals. Spiritual well-being can also benefit teachers, who are often under significant stress and pressure.

### Reasons to Develop and Grow Your Spirituality

Developing our spirituality can help us deal with life's challenges and grow into a better, more whole and happy person. So, here are benefits to developing spiritual nature.

**1. Hopefulness:** If there is one thing that spirituality can add to our life it is a sense of hope and optimism. Spirituality strengthens our outlook for a better future.

We will always encounter challenges in life, but if we stay hopeful during these trying times we will persevere. Spiritual growth enhances our ability to deal with life's ups and downs and bounce back from those difficult experiences.

**2. Compassion and Understanding :** It is easy to look at others with judgment and criticism, but when we start to grow spiritually we realize how much healthier it is to cultivate compassion and understanding for others instead. It not only provides us the wherewithal to serve and help others but also improves our personal well-being. When look at life through a compassionate lens we can grow a sense of connection to others and begin to recognize the positive impact we can have.

**3. Sense of purpose and meaning:** A feeling that our life is worthwhile and that we aren't just here by some random mistake can make a major difference in the trajectory of our life. We are alive for a reason



and are meant to contribute something to the world. Without a sense of spirituality we can lose sight of what is really most important and meaningful.

**4. Inspiration and appreciation:** Life is full of inspiration when we are looking for it. There is also much to be grateful for despite the struggles and challenges we face. Through spiritual growth we can learn to see the beauty and wonder in our day to day life. The things we often take from granted can start to offer us greater inspiration and joy.

**5. Peace of mind:** Part of spirituality is connecting to a higher power. The important thing is the sense that there is something greater than ourselves and that we don't have to carry the entire burden alone. When we learn how to "let go" of the emotional baggage we carry it really adds to peace of mind.

### **Ways to Begin Teaching Spirituality**

**Getting to the Spiritual Heart of Holidays:** School can organise celebrations to talk about the importance of spending time together, celebrating blessings and caring for one another. By its very nature, thanks giving is a secular way to broach the subject of spirituality in positive and celebratory light. Go Natural: Teaching kids the importance of appreciating nature and caring for the environment can show them that it takes a collective effort for society to prosper. We should not litter or pollute because we are hurting nature and ourselves at the same time. Getting kids started on a path toward natural spirituality can be as simple as looking at the stars or gazing off into the horizon at sunset to install in them a feeling that we are just a part of larger universe. Read and Tell Stories with Spiritual Lessons Together: In schools provide moral theme books for students that can explain the basis spirituality. Books that simplify the importance of kindness, understanding and other lessons of a spiritual life. Connect Spirituality to Modern Issues : For children who are old enough to follow current events and who may be confused or saddened by many of the troubles society faces, spirituality is a good way for them to build resilience.

### **Impact of spirituality on teachers**

Teachers who feel connected to their spirituality can find a sense of inner peace and fulfilment that can help them manage stress and burnout. Additionally, it can help teachers develop empathy and compassion for their students, leading to a more positive and supportive learning environment. It is important to note that spiritual well-being does not necessarily have to be linked to religion. While religion can be an important aspect of spirituality for some people, others may find spirituality through nature, art, music, or other means. Thus, educators should strive to create an inclusive environment that respects and supports diverse spiritual beliefs and practices.

### **Adding a touch of spirituality to curriculum**

Incorporating spiritual well-being into education can take many forms, such as mindfulness practices, meditation, yoga, or other contemplative practices. Some schools have even developed spirituality-based curricula, which teach students about different spiritual traditions and practices, and provide opportunities for students to explore their own spirituality in a supportive environment. Even in School of Business and Management, Jaipur National University, it is a regular practice to incorporate exercises that improve the focus of the students, reduce stress and enhance overall well-being.

**Conclusion:** Besides this, a more positive and encouraging learning atmosphere can result from teachers who are spiritually healthy as they learn to have empathy and compassion for their students. Spiritual well-being can play an important role in supporting the overall well-being and success of students. By providing a sense of purpose and meaning, promoting resilience and coping skills, fostering a sense of community, and encouraging ethical decision-making, spiritual practices can help students navigate the challenges of their program and emerge as well-rounded and balanced leaders.

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## IGNITING CURIOSITY IN STUDENTS: NEED OF THE HOUR

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### Abstract

*Curiosity is widely acknowledged as a crucial aspect of children's development and as an important part of the learning process. Research showing associations between curiosity and achievement. Despite this evidence, there is little research on the development of curiosity or on igniting curiosity in school settings, and measures of curiosity. This paper gives a descriptive overview of dimensions and ways of igniting curiosity in students.*

**Keywords:** Curiosity, dimensions, igniting curiosity

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### Introduction

Stella Benson

**“Curiosity needs food as much as any of us, and dies soon if denied it.”**

Curiosity is as a crucial aspect of children's development, and as an important part of the learning process. Research studies reveals that there are associations between curiosity and achievement at school. All these researches suggests that there is a need to nurture the student's curiosity and help them to explore their ideas in effective manner and improve their academic achievement.

### The five dimensions of curiosity

Researcher Todd Kashan claims that curiosity simply can't be defined as a single trait; it actually has multiple dimensions. They found evidence for five specific dimensions of curiosity:

**“Joyous Exploration” Curiosity:** You are filled with wonder and fascinated by the world—like when you travel to a new place, discover a new artist you love, or pursue a new hobby like geocaching.

**“Need to Know” Curiosity (“Deprivation Sensitivity”):** You feel uncomfortable because there is a gap in your knowledge, and you have to fill that gap—like when you're prepping for the science fair, and the robot you built just went belly-up, literally. What do you need to know in order to fix it?

**“Social” Curiosity:** You want to know more about another person, so you watch them and talk to them—like when you try to find out what makes your new friend laugh.

**“Accepting the Anxiety” Curiosity (Stress Tolerance):** You tolerate any uncomfortable feelings that may come with a new experience, and they don't hold you back—like when you join a new hip hop club even though you don't know any of the other members.

**“Thrill Seeking” Curiosity:** You take risks because you enjoy new and exciting experiences—like when you run for president and give a speech at school or go snowboarding for the first time. You don't just tolerate the anxiety; it actually feeds you.

These dimensions help the educators to develop curiosity among students

### Ways of Igniting Curiosity in Students

We have never seen a student that was not curious about something. We have seen many students who have suppressed their curiosity when they enter school to such an extent as to be nearly undetectable, but it is still there. Human beings are hardwired to be curious and being curious is a major activity of childhood and young adulthood

#### ➤ Mix It Up a Little

If we notice students are not curious in our classes, then we should first look at what we are doing, or not doing, that might cause this to happen. We have some suggestions of places to inspect first.

- Is the classroom a bright, cheery, and inviting place?
- In the design of our lessons, do we purposefully try to engage as many senses as possible?

- As we teach, do we go to great lengths to include all students and not just the few who raise their hands?
- Looking at our lessons, in general, is the student doing most of the talking and working?

If the answer to any of the questions is no, then getting students to be curious again is a relatively easy fix: just change what we are doing or not doing.

➤ **Inquire Within**

Need to allow the students to be curious and they will appreciate the liberty that you are giving them to explore their ideas,

➤ **The Standards and Testing**

The teachers have to quit teaching right up to the minimum standards, but instead, to inspire learning beyond the them.

➤ **Give Time to Explore, Think, and Discover**

"Memory is the residue of thought." This means that we remember most what we think about most. If the students are interested and inspired to think about things for prolonged periods, then memory is enhanced. This is where inquiry, constructivism, and curiosity come into play -- providing opportunities for students to think about what they are learning.

➤ **Model and encourage academic risk-taking.**

If "avoiders" are struggling with accepting the anxiety that comes with new experiences, we can help them by modeling risk-taking, all the time, in our classrooms. Solve a math problem on the board with your students (and mess up). Or write a poem, live, in front of them while sharing all the stops and starts and moments of struggle that occur as you think aloud. Students need to see us falter, and they need to feel like it's okay to be unsure of themselves when they try something new. Otherwise, we will continue to have "avoiders" in our classrooms.

➤ **Normalize fear and anxiety.**

For people who score highly on "thrill-seeking" curiosity, risk-taking actually makes them feel more excited and alive. They thrive on the anxiety. What can we learn from them?

At the very least, there are ways to accept the fear we sometimes feel rather than fight or ignore it altogether. Mindfulness and self-compassion practices provide us with practical tools for tolerating stress and navigating the frustration, fear, or anxiety associated with trying new things.

➤ **Provide challenging group project options.**

Based on the research studies, we know that curious students do not necessarily get higher grades and test scores unless they believe that school is challenging. Not only should students' learning tasks be challenging but they should also center around group inquiry i.e. experiments, expeditions, and other research driven by higher-order questions and supported by cooperative group structures where students can work interdependently.

➤ **Link the boring stuff with things kids want to know.**

Of course, learning isn't always fun and exciting; there are some things we just have to know and do, whether we like it or not. For those skills, try to find ways to make learning more enticing. If you need to teach students to write topic sentences or research papers, have them choose something of interest to explore.

➤ **Let curiosity drive goal-setting and growth.**

Research's suggests that curious people may also be more hopeful and purposeful. So why not think more about how curiosity can inform your students' short- and long-term goals? What units and subjects most excite them at school? What do they dream about exploring, but haven't yet? What careers are most appealing and interesting to them? With all of the standardized tests and academic hoop-jumping we do these days, we need to hold on to the fun and joy of learning—all of us. We can take advantage of our human capacity for curiosity and all the energy, interest, and enjoyment it brings.

## Conclusions

As educators, we have the opportunity to create more spaces and places for joyful exploration. Our classrooms can become curiosity centers where students share what fascinates and energizes them. But each student will be curious in their own way. According to fascinating new research, there are several different types of curiosity—which affect what students are interested in and what that interest looks like. If we welcome and celebrate all types of curiosity at school, we can not only help our students learn but also contribute to their well-being in life. Curiosity comes in different forms, and we can encourage it in the classroom to help our students thrive.

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## A STUDY ON SCIENTIFIC ATTITUDE AMONG SECONDARY SCHOOL STUDENTS

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### Introduction

The main objective of the present study is to study scientific attitude among secondary school students. The success of science has more to do with an attitude common to scientists than with a particular method. The main objective of the present study is to examine the effect gender on the scientific attitude of the secondary school students. Scientific Attitude Scale prepared by Dr. Amandeep Kaur, and Dr.S C Gakhar (English) is used for data collection. This scale consists of 61 items. A sample of 87 secondary school students of class IX students from private schools of Shikaripura and test was employed for analysis of the data. The findings are, the scientific attitude the female students had significantly similar, more or less levels of scientific attitude like that of the male students.

Keywords: **Scientific attitude, Scientific attitude scale, Gender**

### Review of Related literature

**Prasanthi** (2019) conducted a study on scientific attitude among secondary school students in model school. The findings of the study revealed that the students were good in the domains of curiosity, open mindedness, faith in scientific method, critical mindedness, cause and effect relationship, seeking evidence, suspended judgement, objectivity and aversion to superstition.

**Jampannanavar** (2018) studied the relationship between scientific attitude and academic achievement in science among secondary school students. The study revealed that there is high correlation between scientific attitude and academic achievement in science of secondary school students.

### Need and significance of the study:

Development of Scientific attitude among the students is the main goal of science teaching. The development of scientific attitude makes pupil open minded, helps him to make critical observations, develops intellectual honesty, curiosity, unbiased and impartial thinking etc. Scientific attitude is the most important outcome of science teaching. Though some educationists view, scientific attitude as a product of teaching science. Scientific attitude having scientific attitude is found to have love for the exploration of truth by adopting true means for such exploration and believing in the results of such true findings. The main aim of science teaching should be the development of knowledge and inculcation of proper scientific attitude among students. In the present educational system though students' knowledge in science increase, they fail to develop proper scientific attitude. So it is necessary to encourage the students to develop scientific attitude. The present study has been undertaken to find out the level of scientific attitude among high school students.

### Statement of the problem

“A Study on Scientific Attitude of Secondary School Students”

### Objectives of the study

- ✓ To study the scientific attitude of secondary school students.
- ✓ To study the differences in the Scientific attitude of secondary school boys and girls.

### Hypothesis:

There is no significant difference between the mean values of Scientific Attitude among boys and girl's students of secondary school students.

## Methodology of the Study

### 1. Variables of study

**Independent variables:** Gender (Male, Female)

**Dependent variables:** Scientific attitude of secondary school students.

### 2. Research design

The study followed the design of a Descriptive survey to find out the scientific attitude of secondary school students.

### 3. Population and sample

**Population:** Secondary school students of class IX students of private schools of Shikaripura

**Sampling procedure:** Stratified Random Sampling.

**Sample:** 87 secondary school students in which 50 boys and 37 girl's students are taken for data collection.

### 4. Tools Used for the Collection of the Data

The Researcher used the following tools for collection of related data. **Scientific attitude scale** by Dr. Amandeep Kaur, and Dr. S C Gakhar (English):

#### Scoring of the Scientific attitude scale

Sl.no	Types of items	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
i	Positive	5	4	3	2	1
ii	Negative	1	2	3	4	5

**Table-01: Scoring of Scientific Attitude Scale**

Type	Serial number of Items in Scientific Attitude Scale	Total No. of Items
Positive	1, 2,3, 4,5, 6, 8,9, 10,11, 12, 13,14, 15,16,18, 19,20,21,23,24,25,26,28,29,30,31,33,34,35,36,38,39,41,42,44,48,50,51, 53,56,60,	42
Negative	7,17,22,27,32,37,40,43,45,46,47,49,52,54,55,57,58,59,61,	19
<b>Total</b>		<b>61</b>

#### (h)Statistical Techniques Used for Analysis of the Data

The data were analyzed through certain descriptive statistics. Scientific attitude is assessed by calculating Mean and Standard Deviations, test of significance, i.e., paired "t" test was calculated to compare the independent variables in between the groups

The researcher has used the following statistical techniques for the analysis of the data.

- Mean and Standard Deviations were calculated for the scores in the group.
- Test of Significance i.e. paired "t" test was used to compare the different groups in respect of dependent variable.

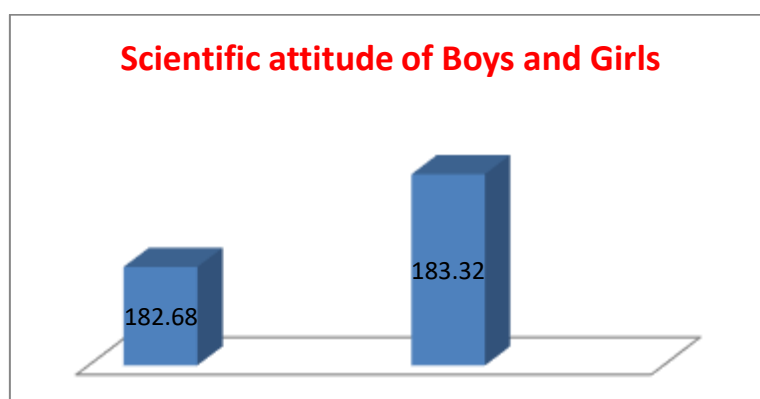
#### Scientific Attitude of Secondary School Students Based on gender

In order to find out whether the scientific attitude of secondary school students vary with gender, the mean and the standard deviation of the scores on the scientific attitude of secondary school students –boys and girls were calculated. To know whether two groups varied significantly in their scores on scientific attitude, the t-test of non-equivalent groups was administered. The values thus obtained are given below.

**Table 1: Significance of difference mean values of Boys and Girls in the Scientific attitude**

Group	N	Mean	SD	Mean Difference	t- Value
Boys	50	182.68	6.85	.88	.64
Girls	37	183.32	5.97		

❖ Non – significant at 0.05 level of significance



**Figure 01: Column Graph showing the Scientific attitude of Boys and girls**

The t- test results in the table 1 and figure 1 depicts that, No significant difference in the mean Scores of Scientific attitude of Boys and girls. Therefore, Hypothesis, which states that there is no significant difference in the mean value of scores of Scientific attitude among Boys and girls was accepted. From this it is concluded that, Boys and girls group do not differ in their Scientific attitude.

**(i) Main Findings and Conclusions of the Study**

The followings are the major findings of the study.

1. There is no significant difference between the mean values of Scientific attitude among the Boys and Girls.

**(j) Educational Implications of the Study**

The present study is undertaken to determine the scientific attitude among secondary school student. The findings of the present study have ample implications for the teachers, educational administrators, curriculum planners, government and other professionals working in the field of the education and other relevant areas.

These implications are presented in the following section: The research suggests that on secondary school students for the development of Scientific attitude is needed without any gender discrimination.

**Limitations of the study**

- ❖ The investigation is restricted only to the IX standard 87 English medium students of Shikaripura Taluk of Shivamogga District.
- ❖ The study is confined only to find out the, Scientific attitude of secondary school students.

**(k) Suggestions for the further Study**

At the completion of any research, so many new ideas spring up which ought to be presented in the form of topic for further research. A further research can be undertaken in the following areas:

- ❖ The present investigation was limited to 9<sup>th</sup> standard students. A similar research can be conducted by taking the students at different levels of education such as primary, secondary, post-graduation and university level.
- ❖ The present study was conducted on secondary school Boys and Girls, therefore it is suggested to conduct research by considering the locality, i.e. rural, urban and also the different socio economic status of students.

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## TEACHING AND LEARNING ENVIRONMENT WITH SPECIAL REFERENCE TO INCLUSIVE SCHOOL

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### Abstract

*Education is the most important invention of mankind. It is more important than his invention of tools, machines, spacecraft, medicine, weapons and even of language, because language too was the product of his education. Man without education would still be living just an animal. It is education, which transformed man from a mere 'two-legged animal' into human. It helps him to behave like a man and prevents him from behaving like an animal. The word 'Education is like a diamond which appears to be of a different colour, when seen from different angles. It is as basic to civilization, to social survival, as reproduction and nutrition are essential to biological evolution. Through the Education only we gave to equal opportunity to all the members in the society. So that we give the inclusive education for all children in one roof like school. In this way we provide inclusive education. Inclusive education is a having with the SEN and disabilities children with the normal students; it is as a inclusive education. So we are the teachers in school, we should develop among to students to observe equally to students in the classroom, and then only we develop educational systems in our places. So we are the teachers to create the environment for the disabled children's in the normal school environment. "Inclusive learning and teaching in higher education refers to the ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all" (Hocking, 2010). For many students, school is a place fondly remembered for sparking their passion or connecting to them to a favourite mentor – but for others, school is a place in which discrimination made it harder to pursue their dreams. Inclusion can be promoted by designing and supporting environments that encourage each and every child's full participation. This is particularly critical in early childhood when learning through exploration, with peers and through the environment is so critical to a child's future learning as well as growth and development.*

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### Design and Support for Inclusive Environment:

1. Communicating with parents on a daily or frequent basis, conducting parent/ teacher conferences on an ongoing basis and involving parents in their child's development, learning and program.
2. Teaching, modeling, encouraging and rewarding positive behaviors. Give more attention for positive behavior than for misbehavior.
3. Providing support for maintaining social skills.
4. Using developmental assessments and observation to modify and adapt teaching and learning strategies so that all children grow and learn.

### Differentiating:

- a) We know that everyone learns differently, so move past the "one-size-fits-all" approach to instruction and assessment. Try allowing students to engage with information in a variety of formats, such as websites, videos, Books, magazines, and periodicals provide ways for students to progress through materials as well.
- b) Provide small group or individual, direct instruction so you can tailor content delivery more accurately for specific learners' needs.
- c) Customize students' experiences in our classroom, we can build upon their strengths and help to develop and improve their understanding of topics with which they are struggling.

### Healthy Grading:

\*Stop talking off points for behaviors like lateness, unpreparedness, or talking out of turn. While these and other behaviors are important to manage, they shouldn't be used to mask or reflect students' understanding of a topic.

\*Instead, focus on what the students do know and let that show in your grade book.



\*Regular formative assessments in which quality, descriptive feedback is generated and personalized for each student.

\*Once satisfactory understanding is demonstrated on formative assessments, students are ready to attempt a summative test. Ensuring that students are prepared for an exam increases the likelihood of initial success—which builds confidence and purpose.

### **Relationships:**

- The most effective way to build an inclusive learning environment comes from forming meaningful connections with your students. Simple, time-honored techniques such as not raising your voice and saying their names correctly are great ways to start building relationships.
- By taking some extra time and effort to view each pupil as an individual and truly believing that each student can succeed, you'll become partners in success.
- The goals of education are the same for all children provided that these goals are balanced and brought in harmony with the individual needs of each child.
- Not all children with disabilities have SEN at the elementary level. They learn along with their peers with the help of aids such as wheelchairs, hearing aids, optical or non-optical aids, educational aids etc.
- Common Practices in Inclusive Education.
- Students in an inclusive classroom are generally placed with their chronological age-mates, regardless of whether the students are working above or below the typical academic level for their age. Also, to encourage a sense of belonging, emphasis is placed on the value of friendships.
- Teachers often nurture a relationship between a student with special needs and a same-age student without a special educational need. Another common practice is the assignment of a buddy to accompany a student with special needs at all times (for example in the cafeteria, on the playground, on the bus and so on).
- This is used to show students that a diverse group of people make up a community, that no one type of student is better than another, and to remove any barriers to a friendship that may occur if a student is viewed as "helpless." Such practices reduce the chance for elitism among students in later grades and encourage cooperation among groups.

### **Teachers use a number of techniques to help build classroom communities:**

- Using games designed to build community
- Involving students in solving problems
- Sharing songs and books that teach community
- Openly dealing with individual differences by discussion
- Assigning classroom jobs that build community
- One teach, one Support:
- One teach, one Observe:
- Station Teaching (Rotational Teaching):
- Parallel Teaching:
- Alternative Teaching:
- Team teaching (content/support shared 50/50):

Finally I conclude that this type of education we needed in present society and we also encourage that type of the students. And we give the education in normal schools with the normal children's and we as the teachers we should follow the same techniques and methods to involved in the study and reading in the class time. So we are the teachers, in our responsibilities are to develop the students knowledge and learning skill and modify the their behaviour through usage of different techniques and methods as well as strategies.

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## RESEARCH IN TEACHER EDUCATION

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### Abstract

*Educational Research is the systematic and scholarly application of the scientific method interpreted in its broader sense to the solution of educational problems, conversely, any systematic study designed to promote the development of education as a science can be considered as educational research. Research is an honest effort which presents solutions to the problem in specific area of education. The research imparts training in scientific method to neo-researchers, enhances the pyramid of education and develops scientific attitude in the researchers. It builds future of a country. Therefore, it is assumed that all the researchers must have this quality in themselves. Moreover the researcher possessing these qualities makes significant contribution towards the existing knowledge. It also reflects morality on the part of the researcher..*

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### Introduction

The well-established tradition of teaching and learning in India has retained its inherent strength even under adverse circumstances. The paradigm shift from the gurukula system of ancient times to the post-independence period was characterized by major efforts being made to mould teacher education to meet the changing needs. Pre-service education has come under considerable pressure as a result of the expansion and growth of school education, through efforts to universalize elementary education. Having inherited a foreign model of teacher preparation at the time of independence from Britain in 1946, major efforts have been made to adapt and update the teacher education curriculum to local needs, to make it more context based, responsive and dynamic to India's rapidly changing needs. The current system of teacher education is supported by a network of national, state and district level resource institutions, like NCERT, NCET, SCERT, DIET, IASE and others working together to enhance the quality and effectiveness of teacher preparation programmes at the pre-service level and also through in – service programmes for serving teachers throughout the country.

### Need for Research

Teacher education is an important field for research since the quality of teacher education has been regularly questioned by governments at the same time as teacher quality is increasingly being identified as crucial to educational outcomes and pupil gains. Consequently, teacher education researchers need to work together in order to:

1. Share emerging research findings;
2. Develop innovative research methodologies within teacher education.
3. Disseminate innovative pedagogical methods within teacher education.
4. Find new publishing outlets within an overcrowded academic field.
5. Support colleagues in institutions with underdeveloped research profiles.

Research in teacher education can be categorized into several areas. Researching teacher education in changing times and with current national policies is the need of the day. In the light of National Curriculum Framework for Teacher Education 2010, the innovations to be incorporated into teacher education provide an excellent basis for research.

In the first four surveys, 410 studies have been identified as belonging to the area of teacher education. Researchers working in this area have brought into their study a wide spectrum of variables. This was because teacher education is a vast subject covering a range of disciplines. The institution, the process of admission, training climate, administrative set-up, the student-teacher, the personal characteristics of teachers, practice schools – these factors, and quite a few more, are constantly at work in the teaching learning scenario.

### **Teacher Education Research in Historical Context**

Research on teacher education has evolved through various phases since the beginning of the 20<sup>th</sup> century within the overall context of the history of teacher education. Although the body of research on the history of teacher education is relatively small, major works by Barrowman and Labaree have revealed significant factors that have framed subsequent research efforts. The nature, methodology of research, and a systems approach to teacher education.

### **Gaps in Teacher Education Research**

Several questions need to be answered in the context of teacher education and school education. Are the demands of teacher's need and classroom concerns met? How can teachers be made more independent, motivated and critical thinking oriented regarding the teaching profession? How can teaching practice be made more effective, interactive, vibrant and meaningful with use of e-resources material in teacher education? How can the gap between teacher education curriculum and school curriculum be bridged?

Some educationist are coated the points lacking in the teacher education curriculum.

- Lack of knowledge of school subjects.
- Pedagogical weakness.
- Lack of coordination between technocratic culture and cultural heritage.
- Lack of research on problems of school and education.
- Scarcity of resources in schools and training institutions.

### **Future directions for Research**

Over the past three decades, as new research methods and methodologies have been developed in the social sciences, they have been employed in educational research in general and in teacher education in particular. Methods of research in teacher education have not yet shown the same kind of dynamic relation between the problems and context of the field and the kinds of research methods that are being developed.

### **Teaching Process and Teacher Behavior**

The research in organization and behavior in teacher education has centered its attention primarily on how best to teach teachers what they need to learn to do to positively affect student learning. One aspect of this line of research tries to identify teacher behaviors and techniques that can be shown to be most effective with groups of students. Although the research is not directly research on teacher education, it has formed the basis for identifying strategies that can be used to organize teacher education content and processes and the research programme that can be used to assess their effectiveness.

### **Relationships and Academic Achievement**

A special research emphasis should be placed on the impact of social relationships in the emergence of both emotional and academic competence. It may be that healthy, supportive relationships with teacher and peers can promote both emotional competence and, contemporaneously of subsequently, academic engagement in the classroom.

### **Conclusion:**

The changing role of teachers and the changing definitions of teacher effectiveness have been increasingly studied and analyzed, with research undertaken. The current focus of researchers, policy makers and practitioners with regard to teacher education is on the development of professional competencies, and on the most effective ways of achieving higher levels of commitment and motivation for higher level performance on the part of teachers. The NCFTE 2009 – Towards Preparing Professional and Humane teacher, on implementation, will result in a major transformation in India.

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## METHODS OF EFFECTIVE TEACHING IN PHYSICAL EDUCATION

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### *Abstract*

*The perspective of this article is that the purpose of the methods of teaching program is the effective of a physically education in school. the method of effective teaching in physical education setting in terms of academic learning time and management roles and communication and content-development skills of the teacher. Teaching is an art and it shall follow a procedure adopted to situations so that effective learning takes place. An efficient and experienced teacher will always resort to such procedures that produce desirable outcome. Hence method may well be defined as the technique of procedure adopted by a teacher to bring about desirable changes in his pupils. In short, method is the approach to the subject matter. Method is not static and there is no set pattern of teaching. The pattern should be changed according to the varying conditions and needs. Teacher uses a different method of teaching in physical education and sports.*

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**Keywords:** *Physical Education, Sports, Yoga Exercise, Warming Up*

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**Effective Teaching:** Over the years, the educationists have realized to a great extent that the centre of all education is the child or individual. This implies that the teaching-learning process in education has taken a broader meaning and scope. Teaching the books and just passing on bits of the information is lop-sided education. In fact no teacher can teach unless the child, the beneficiary, is ready to learn to receive. If teaching is causing to learn we must admit that teacher is great source of help to the child who is to understand the nature of things around him. Now that physical education has been accepted as an integral part of education. Physical education teacher must raise himself from the status of trainer or an instructor to that of educator. His teaching is a combination of theory and practical's, and that is way the sphere of his working is much broader than generally found in class room teaching. Although teaching has been a focus of attention for many years, research on teaching is still a relatively new field of inquiry. Initially, studies tended to be focused on teachers, not on the learning environment, trying to identify characteristics or qualities of effective teachers. For example, the initial idea of an effective teacher in the early 1900s was a judgment primarily based on the "goodness" of a person. Honesty, generosity, friendliness, dedication, and consideration were all regarded to be vital components of an effective teacher. These personal qualities needed to be demonstrated in an authoritarian, disciplined, and organized classroom. Unfortunately, this definition of an effective teacher lacked any objective standards of performance.

Diverse factor has to be taken into consideration in determining the methods of teaching. They are as follows:

- **Subject matter:** The Subject matter plays a very important part in choosing a proper method of teaching; for example, teaching a topic in History or a Problem in Mathematics or western roll in High Jump Each of these requires a different method of teaching Lecturing, Black board work and Demonstration respectively.
- **The Past experiences of the pupils:** There is a lot of difference in teaching a subject to a novice and to one who possesses some knowledge of the subject For example in teaching "Ashoka" to the pupils of Elementary grade, only a few facts concerning the biography of Ashoka will be taught whereas at the college level more advanced teaching takes place. Similarly, in teaching football to beginners we stress on fundamental skills whereas in the case of the members representing a school or college, advanced coaching involving drills in skills, positional play, team tactics etc., shall be given.
- **Situations:** Situation will not be the same at all times and in all places. Different situations require

different methods of teaching for example. A Geography teacher finds no chart or map for teaching a particular topic. He has to draw a diagram on the black-board to see that his teaching is successfully done, similarly a Physical Education teachers. Who has prepared his lesson for section of 40 boys finds himself in a situation where two section report to him (due to the absence of his colleague). He has to adjust his method so that both sections are controlled and the lesson taught.

- **Time and the material at the disposal of the teacher:** In teaching a subject, a teacher has to collect data and information from various sources so that he can use the materials collected for effective teaching. Even though a teacher gathers a lot of information from several sources he may not be able to deliver the goods unless he has sufficient time at his disposal. Therefore, a teacher has to adjust his teaching methods in such a way that he will be able to impart knowledge to his pupils within the time available.
- **Scientific Principles:** A knowledge of the Sciences of Anatomy and Physiology, Educational Psychology and Sociology is imperative for all teachers and especially for the physical education teachers it is all the more important because of the physical, mental and moral value derived from wholesome physical activities.

#### **Various Methods of Teaching in Physical Education:**

**1. Command Method:** Usually formal activities are taught by command method where certain words of command are used to obtain the required position This is of two types (viz) Response Command & Rhythmic Command. To teach an exercise, Response Command is used where each position of the exercise is to be held and the accuracy and the precision of the position are to be emphasized. The Rhythmic Command is used when the exercise already taught is to be repeated rhythmically for physiological results. Here, emphasis is on movements and not on held positions.

**2. Oral Method :** In this method the teacher merely explains the activity by words without any demonstration and expects the class to perform it. (This method of teaching is not wholly desirable).

**3. Demonstration Method :** Here the teacher will demonstrate the activity with a brief explanation. The students have to observe the teacher's demonstration and then perform the activity on the command of the teacher. This is the most highly recommended method of teaching.

**4. Imitation Method :** This is adopted when an activity is one that was already taught or an activity which can be easily followed. In this case the teacher says "Follow me" or "Do as I do" When the teacher leads an activity and then changes the movements, the boys perform the same by imitation.

**5. Dramatization Method :** In this method the pupils are made to perform the movements of animals. birds, motor cars, trains airplanes, soldiers, sailors etc., story plays and action songs in play form. There is a lot of scope for exhibiting the imagination of the pupils. This method is most suitable for the children of the elementary grades.

**6. At-Will Method :** In this method the students are given an opportunity to perform the activity in their own time and rhythm. In other words this is a free form of exercising.

**7. Set – Drill Method :** This method will consist of a series of well-planned exercises of free arm type and exercises with light apparatus (dumb-bells, clubs, wands, poles etc.) These exercises are memorized and done rhythmically. not only for physiological effects but also for demonstrative values.

**8. Whole Method :** This method is adopted whenever an activity is to be taught as a whole action without breaking it into its component parts. For example, the teaching of an athletic event like High Jump which includes a series of movements (viz. approach, take-off, lay-out and landing) is done by this method. Even though each of these movements may be analyzed and emphasized.

**9. Part Method :** This is adopted whenever a particular activity is broken into its meaningful parts and taught; for example, the teaching of the individual skills of a major game.

**10. Whole-Part- Whole Method :** In this method a full and clear conception of the whole activity is given at the outset. Then the activity is divided into its meaningful parts and taught.; after practicing



these parts as separate skills they are put in a practice game situation. Thus initial practice is on the individual parts. Then the parts are combined into the whole activity. This method is highly recommended to teach a major game. The following examples will clearly indicate what may be meant as a WHOLE or as a PART.

**11. progressive Part Method:** This method is to be adopted usually to teach rhythmic activities which require a lot of co-ordination in this method, the activity is taught step by step. At the outset step 1 will be taught: then step 2: afterwards steps 1 & 2 will be combined. Thereafter step 3 will be taught and steps 1, 2 & 3 will be combined. In this manner all the steps of the activity will be taught in a progressive manner. Finally the whole activity will be performed with proper co-ordination. This method of teaching is called the progressive part method. This method is also adopted to teach Track & Field athletics.

**12. Observation and Visualization Method:** Student, whenever opportunity arises, may be taken to places where Champion Teams and Athletes compete (eg State, National Competition etc.) so that they can observe them in action and learn some of the finer tactics. Observe them in action and learn some of the finer tactics. Strategies and technique of games and the events, Films, preferably in slow motion, depicting the finer points of the activity may be repeatedly shown with due comments so that effective learning may take place.

### Conclusion

Since a method is a general way of guiding and controlling learning experiences, We must that the choice of method in physical education, for any teacher, depends upon his personal experiences, mental inclination and ability to pass on desirable experiences to students. So how to choose a method for a successful teaching-learning, depends upon teacher's own understanding, learning, experiences etc. However, no single method can wholly make teaching a happy affair. they have to be used in combination with each other.

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## NEED OF YOGA IN PHYSICAL EDUCATION AND SPORTS

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### *Abstract*

*Yoga is one of the Indian philosophical systems that emphasize the importance of the work with the body to develop healthy behaviours and thoughts. Among all its techniques the physical postures, called asanas in Sanskrit, are the ones that got. It is necessary to remember that sports and gymnastics belong to the scope of Physical Education. Aim of the present article is the role of some yoga elements in physical education and sports. Once there was a time when people said "it is not the winning itself but the competing nobly that really matters", when the place where competitions took place was sacred and the respect between competitors was essential. In our modern society the term Physical Education has been understood in different ways. Some say it is the "education of the body", which is educating the body to achieve some skills and abilities as it is done, for example, in sports. Others think it is the "education to the body", which is working out only to improve one's looks. Unfortunately, this is the main reason why people join gyms, especially before the summer.*

*In fact, the expression Physical Education originally means "Education through the body". It is using the work with the body as a strategy to reach the noblest goals of education: autonomy and ethics in our relationships with each other and the environment. It is necessary to remember that sports and gymnastics belong to the scope of Physical Education. Once there was a time when people said "it is not the winning itself but the competing nobly that really matters", when the place where competitions took place was sacred and the respect between competitors was essential. Both Yoga and Physical Education in their origin use the body as a tool for developing attitudes and abilities that are important to achieve physical and mental health. Nowadays they can be considered complementary subjects. While the West developed the aerobic conditioning and the sports training and focused on its relationship with good health, the East pursued the same goals through concentration and relaxation.*

**Keywords:** *Sports, Yoga, Physical Education Exercise, Science*

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### **Introduction**

The word 'yoga' means "to join or Yoke together". It brings the body and mind together to become a harmonious experience. Man is a physical, mental and spiritual being; yoga helps promote a balanced development of all the three. Yoga is a method of learning that aims at balancing "Mind, Body and Spirit". Yoga is a practice with historical origins in ancient Indian philosophy. Yoga is distinctly different from other kinds of exercise as it generates motion without causing strain and imbalances in the body. Other forms of physical exercises, like aerobics, assure only physical well-being. They have little to do with the development of the spiritual or astral body. Yogic exercises recharge the body with cosmic energy and facilitates. They have little to do with the development of the spiritual or astral body. Yogic exercises recharge the body with cosmic energy and facilitates

### **Benefits for Physical Education**

Yoga is then commonly taken as a system of physical education with a spiritual component, although the truth is the reverse: Yoga is a spiritual system with a physical component. The practice of asanas is yet only a small part of the complete system of Physical Culture & Education known as Hatha Yoga.

Need of yoga in education from various angles, including the type of education that was being provided to children throughout the world as well as the different levels of stress that children face in the classroom environment. The difficulties, problems, conflicts, distractions and dissipation of their energies were also considered. We started using certain principles and practices of yoga, firstly, as an experiment to increase the children's learning ability and, secondly, to inspire teachers to teach their subjects in a slightly different way. Our belief was, and still is, that we are educating our children without considering or caring for the growth of their entire personality. We are cramming their brains and minds with information without creating any support group outside the classroom environment

where they can continue to imbibe education. We have to look at what science says about the growth of a child, what psychoanalysis says about child psychology and how the hormones and glands alter and influence the rationality, emotional structure and creative output of the child.

### **Benefit for Sports**

Sports can lead to injury because of its repetitive nature and the resulting musculoskeletal imbalances. On a physical level, yoga restores balance and symmetry to the body, making it the perfect complement to sports. Runners are often drawn to yoga to deal with specific issues, such as improving flexibility or helping with an injury. Yet many are shocked at the world it opens for them, specifically, the strengthening capacity and the use of muscles they never knew they had. Let's take a closer look at the effects of yoga, both physical and mental, on runners.

### **Physical Effects**

As seen in the preceding definitions, yoga encompasses more than the mere physical postures. Nonetheless, the physicality of yoga is what draws most people to their first yoga class. The following summarizes the physical benefits that sports persons can expect from yoga.

#### **Strength**

Like Runners are strong in ways that relate to running. However, a running stride involves only the lower body and movement in one plane—sagittal (i.e., forward and backward). Thus, certain muscles become strong while others are underused and remain weak. Runners have strong legs for running, but when faced with holding a standing yoga pose, they are quite surprised to find that their legs feel like jelly. This is simply because a properly aligned yoga pose involves using all the muscles in a variety of planes. The muscles that are weak fatigue quickly, and those that are tight scream for release—thus, the jelly-leg syndrome. Additionally, a by-product of becoming stronger is greater muscle tone. Yoga helps shape long, lean muscles that do not hinder free range of movement in joints.

#### **Flexibility**

Many sports person cite greater flexibility as the number one reason for beginning a yoga practice. This is a good reason, because yoga stretches the muscles that are tight, which in turn increases the range of motion in related joints. Increased flexibility decreases stiffness, results in greater ease of movement, and reduces many nagging aches and pains.

#### **Biomechanical stability**

Overusing some muscles while under using others creates muscular imbalances, which affect the entire musculoskeletal balance and impairs biomechanical efficiency. For mostly sports persons, biomechanical imbalances eventually lead to pain and injury. Depending on the action, a muscle is either contracting (i.e., an agonist) or lengthening (i.e., an antagonist). For example, if you make a fist and lift your forearm, the biceps contract while the triceps stretches. If you want showy biceps and do repeated biceps curls to pump up the muscle, the triceps will shorten and you could lose the ability to straighten your arm. A healthy balance is to work to both contract and stretch to maintain muscle equilibrium as well as functionality. For example, when stretching the hamstrings, the quadriceps need to contract. This coordinated action not only creates a deeper and safer hamstring stretch, but also provides an opportunity to strengthen the quadriceps, especially the inner quadriceps, which are weak in many runners. This is crucial for runners because the hamstrings most likely need lengthening while the commonly weak inner quads need strengthening. Every yoga pose is a balance of stability (muscles contracting and strengthening) and mobility (muscles stretching and lengthening). At no time is only one muscle group used. Even the simplest yoga pose requires an awakening of every part of the body. Downward dog is an exemplary pose to demonstrate this. Following is a summary of the major muscle actions in this fundamental pose.

#### **Stability (Strength)**

- Arms: hands, wrists, lower arms, triceps, deltoids

- Back: lower trapezius, serratus anterior
- Legs: quadriceps, tibialis anterior (front of shins)

**Mobility (Flexibility)**

- Arms: fingers, biceps
- Back: latissimus dorsi, paraspinals (both superficial and deep layers of back muscles)
- Legs: hamstrings, calves, Achilles tendon

A balanced yoga practice requires most of the muscles in the body to perform some action. At the same time, joints are taken through their full ranges of motion as the corresponding muscles contract or stretch to support the movement. The result is improved muscle balance, which translates to better form, stronger running, and fewer injuries.

**Improved Breathing**

Lung capacity is of prime importance for players, because it creates the ability to maintain an even breathing pattern through all phases of running. The better the lung capacity is, the more oxygen is circulated through the system, which is most helpful for running long and strong. However, the breathing pattern used in running and other forms of aerobic exercise involves quick and shallow inhalations and exhalations. This uses only the top portion of the lungs, leaving the middle and lower portions untouched. Yogic breathing involves slow, deep inhalations and long exhalations, making use of the upper, middle, and lower portions of the lungs. Yogic breathing has been shown to increase lung capacity, and greater lung capacity increases endurance and improves overall athletic performance.

**Conclusion**

Yoga can play a key role in cultivating mind control and concentration which helps a sportsperson to perform at their game. Yoga offers new learning possibilities to a wider group of students than traditional sports or fitness curriculum, making it a valuable addition to any educational program. Additionally, adding yoga to a school's curriculum will help provide a quality physical education program as modification of traditional physical education yoga in sports as important as other think it helps us in different ways and different levels in a sports men life. It offers children and adults an opportunity to experience success in physical activity, which can help build a foundation of strong of life. However, curriculum specialists, teachers, trainers and students should know and analyse seriously the real challenges of yoga education in classroom settings and real life as well.

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## DIGITAL LIBRARIES: CHALLENGES AND PROBLEMS

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### Abstract

*This research report explains the term "digital library" in its simplest form with meaning and definition, conveys the core concepts of rapidly evolving digital libraries, and provides readers with information on how to successfully implement digital libraries. It will help you understand the challenges and work on them further digital libraries in a rapidly changing ICT-based environment.*

**Key words:** Digital Library, Universal accessibility, Electronic objects.

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### 1. Introduction:

The traditional concept of the library as a repository of knowledge is lagging behind, and concepts such as digital libraries, e-libraries, virtual libraries, libraries without walls, and even a paperless world are rapidly emerging. Digital libraries allow users to access the information they need, focusing on electronic objects or digital formats rather than traditional printed book formats, and distributed across networks with the click of a button. Provides universal access to the information provided networks.

### 2. Meaning and Definitions:

#### 2.1 Meaning

Digital library is a relatively new concept. The term digital library explains the nature of its collection. Digital library enables the users to interact effectively with information distributed across the network and thus provides universal access to digitized information.

#### 2.2. Definitions:

There are many definitions of digital library, some important definitions are:

**2.2.1)** In the words of Ravi S Chandra R. and Sharma R. K. , "A digital library maintains all, or substantial part of its collection in computer process able form as an alternative to supplement or complement the conventional printed material that currently dominates the library collection".<sup>-1</sup>

**2.2.2)** A digital library is, "a collection of documents in organized electronic form, available on the Internet or on CD-ROM (compact-disk read-only memory) disks. Depending on the specific library, a user may be able to access magazine articles, books, papers, images, sound files, and videos".<sup>-2</sup>

**2.2.3)** According to Berkeley Digital Library Project, University of California, "The digital Library will be a collection of distributed information sources, producers of information will make it available and consumers will find it perhaps through the help of automated agents".<sup>-3</sup>

From above definitions, it is clear that 'Digital Library' is simply a computerized system that allows access and successful retrieval of information from an organized, electronically stored repository of information and data.

### 3. Factors Responsible for Emergence of Digital Libraries:

The crucial factors responsible for emergence of digital libraries are:

**3.1.** Increasing demand for more information at the desktop from users;

**3.2.** Inadequate funds disabled libraries to cope with the rising demand of users for hard copies of journals;

**3.3.** Promptness in locating, accessing and making available, the needed documents to the researchers specialist users etc. ;

**3.4.** Explosion of information disables self sufficiency regarding document collection;

3.5. Access to needed information at click of mouse button through internet;

3.6. Librarians' more emphasis to provide access to resources available elsewhere rather than physically possessing them.

#### **4. Important Characteristics of the Digital Library:**

Some of the important characteristics of the digital library are described below:

4.1. Storage of information in digital form;

4.2. Direct usage of communication networks for accessing and obtaining information;

4.3. Copying by either down loading or on-line / off-line printing from a master file.

#### **5. Advantages of Digital Library:**

5.1. Universal accessibility;

5.2. Access to more information;

5.3. Support to both formal and informal learning;

5.4. Remote access to rare and expensive material;

5.5. Protecting rare books which are rapidly deteriorating due to over use or storage condition;

5.6. Solving massive storage problems;

5.7. Prompt and faster access to information;

5.8. Enables managing very large amounts of data;

5.9. They also help to perform searches that are manually not feasible.

#### **6. Challenges and Problems associated with Digital Library:**

The problems and issues associated with digital information like "acceptability, accuracy, accountability, authenticity, readability, standardization, copy right and pricing have been dealt by Lakshmana Moorthi and Karisiddappa."<sup>4</sup> Some important problems and challenges associated with digital libraries are described below.

**6.1. Information Accuracy:** "Most of the digital library projects implement Optical Character Recognition (O C R ), which is only 95% accurate"<sup>5</sup> and it is true that near about 5 % error may remain, raising the problem of information accuracy. Copying without distorting or losing information is difficult.

**6.2. Compatibility of Hardware/Software:** Use of digital collection for accessing and retrieving information will pose compatibility problem. Breath-taking innovations in the field of computer hardware and software's, creates the problem of compatibility in the implementation of modern technology with the ICT infrastructure available in the library, although backward compatibility is ensured by manufacturing firm.

**6.3. Reliability of Information:** It is observed that many times the information uploaded on various web sites , and social medias like blogs, twits, wikis, face book etc is not authentic , which is also available in digital formats.

**6.4. IPR Issues:** Protection of intellectual property rights is not fully feasible in digital media. Difficulties are still persisting regarding the copyright protection of the authors and publishers etc. of e-resources.

**6.5. Data Security:** Data security is about keeping data safe .There are key threats to data stored in digital media, such as system crash, faulty disks, power failure, accidentally deleting or over writing the files, computer virus, hacking, natural disasters, money making, revenge etc.

**6.6. Fair Use:** The extent of 'fair use' regarding digital resources is not included in any law. It is difficult to determine how much one can copy under fair use.

**6.7. Convenience of usage:** Reading the information stored in the digital form is not as comfortable, fast and effective as reading a printed book, periodicals etc. It also puts more strain on the eyes.

**6.8. Needs Technology:** In order to retrieve the information stored in digital media, use of the devices such as Computers, CD players, CD-ROM players, Disk drives etc become the part and parcel of the information retrieval systems.

**6.9. Costly:** To retrieve and read the information stored in digital form, need certain devices, which are costly and one should know how to operate these devices.

**6.10. Storage life/Shelf life:** The storage life of the electronic media is much more less than the print media. Storage life of the hard disks, floppy disks, computer tapes, CDs, CD-ROM etc is of few years.

**6.11. Digital reading and storage devices should be omnipresent:** A large number of users visit the library regularly to satisfy their information needs, therefore, in order to save the time of the users, the devices useful for reading and storage of digital information, should be omnipresent.

**6.12. Conversion of conventional printed material into digital form is tedious and very expensive:** In many libraries, substantial part of their collection is in the conventional print form and hence, it is challenging, tedious, time consuming as well as very expensive, to convert these print resources into the digital form.

**6.13. Need of Hardware and Software:** Software in consistence with the available hardware is needed for the digitization of the print resources.

**Conclusion:** A digital library is a library that stores data in digital format. Storage of information in digital form; direct usage of communication networks for accessing and obtaining information; and, copying by either down loading or on-line / off-line printing from a master file etc., are the important characteristics of the digital library. The major advantages of the digital library are: universal accessibility; access to more information; support to both formal and informal learning; remote access to rare and expensive material; protecting rare books which are rapidly deteriorating due to over use or storage condition; solving massive storage problems; prompt and faster access to information; enables managing very large amounts of data; they also help to perform searches that are manually not feasible. On the contrary, challenges and problems regarding digital libraries comprise: information accuracy, compatibility of hardware/software, reliability of Information, IPR Issues, data security, fair use, convenience of usage, needs technology, costly, storage life/shelf life, digital reading and storage devices should be omnipresent, conversion of conventional printed materials into digital form, need of hardware and software. If attempts are made to overcome these problems and challenges of digital environment are accepted successfully, no doubt, digital library is a great boon for the users as well as the LIS professionals.

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## E-LIBRARY: IMPORTANCE OF DIGITAL LIBRARY FOR STUDENTS

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### Abstract

*During the past recent years, there has been tremendous development reaming the concept of digital libraries, the biggest online platform of knowledge that can be stored and retrieved through online networks. Digital libraries are considered as the most complex form of data systems that associate with the digital document preservation, distributed database management, hypertext, filtering, information retrieval, and selective dissemination of information. This has really overcome geographical barrier offering a wide range of academic, research, and cultural resources with multimedia effects which can be accessed around the world over the distributed networks. The study also highlighted the information on the digital library projects undertaken in countries.*

*This article provides information to the audience on the subject matter in terms of what has been already discovered and explored on the importance of Digital Library and what all can be further explored. The literature pertaining to the studies relating to how digital libraries emerged discussed in this article. The idea is to brief the readers about the concept of library resources shifted into digital libraries with the help of technology and its growth sourced from already existing literature. The contemporary trends reflecting the current state of the library and how it has progressed over time also discussed here.*

**KEYWORDS:** Digital Libraries, Electronic resources, Digital resources

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In today's digital age, the traditional library is no longer the only option for students seeking information and knowledge. The emergence of electronic libraries or e-libraries has transformed the way students access information, making it easier, quicker and more convenient to find and retrieve information than ever before.

The importance of e-libraries for students cannot be overstated. It allows students to access information from anywhere, at any time, with just a few clicks of a mouse or taps on a screen. E-libraries offer a wealth of resources that can help students broaden their knowledge, improve their research skills, and boost their academic performance. Students can also access digital materials that may not be available in traditional libraries, providing them with access to the latest information and research in their field of study.

Moreover, e-libraries can help students save money by eliminating the need to purchase costly textbooks and reference materials.

### What is E-Library or Digital Library and Its Purpose?

An e-library or digital library is a collection of digital resources that are accessible to users via the internet. These resources can include books, articles, journals, research papers, multimedia materials, and other types of content. The purpose of an e-library is to provide users, including students looking for the best primary school, with easy and convenient access to a vast array of information from anywhere and at any time. E-libraries also provide benefits such as cost-effectiveness, space-saving, and the ability to search and retrieve information quickly and efficiently. They are particularly useful for students, researchers, and professionals who need access to up-to-date information and resources for their work.

### What Are The Types of Digital Library?

There are several types of digital libraries, including:

#### Academic Digital Libraries:

These are digital libraries that support academic research and education. They typically contain scholarly resources such as journals, research papers, and academic books.



**Public Digital Libraries:**

These are digital libraries that provide access to resources for the general public. They may contain resources such as e-books, audiobooks, and online magazines.

**Specialized Digital Libraries:**

These are digital libraries that focus on a particular topic or subject area. Examples include medical digital libraries, legal digital libraries, and digital libraries for the arts.

**National and International Digital Libraries:**

These are digital libraries that are created by governments or international organizations to provide access to information and cultural heritage. Examples include the Library of Congress and the European Digital Library.

**Corporate Digital Libraries:**

These are digital libraries created by organizations for their employees or customers. They typically contain resources such as training materials, technical documents, and marketing materials.

**What Are The Features of A Digital Library?**

Here are some of the key features of digital libraries:

**Access To Digital Resources:**

Digital libraries provide users with access to a wide range of digital resources such as e-books, audiobooks, videos, images, research papers, and academic journals.

**24/7 Availability:**

Digital libraries are available to users 24/7, providing them with convenient access to resources from anywhere and at any time.

**Search and Retrieval:**

Digital libraries provide users with powerful search tools that allow them to quickly and easily find the resources they need.

**Remote Access:**

Users can access digital libraries remotely using their personal devices such as computers, tablets, or smartphones.

**Cost-Effective:**

Digital libraries are often more cost-effective than traditional libraries as they eliminate the need for physical space, maintenance, and staffing.

**Personalization:**

Digital libraries allow users to customize their experience by creating personalized accounts, saving their search history, and setting up alerts for new resources.

**Preservation:**

Digital libraries enable the preservation of cultural heritage and information by digitising and archiving rare or fragile materials for future generations.

**Importance of A Digital Library For Students****● It Gives the Reader Access to Up-To-Date Information**

An e-library provides the reader with access to up-to-date information on various topics. With digital resources updated regularly, readers can stay informed with the latest research and developments in their field of interest.

**● No Fixed or Rigid Time Limit**

Digital libraries have no fixed or rigid time limit, allowing users to access resources at any time and from any location. This flexibility makes it easy for users to study or conduct research at their own pace and convenience.

- **It Preserves Resources and Knowledge**

Digital libraries play a crucial role in preserving resources and knowledge for future generations. By digitising rare or fragile materials, digital libraries ensure that these resources are available to researchers and students worldwide, thus contributing to the preservation of cultural heritage and intellectual property.

- **It Is Easily Accessible**

Digital libraries are easily accessible to users, as they can access resources remotely using their personal devices. This accessibility eliminates the need for users to visit physical libraries, saving them time and effort while ensuring that they have access to a vast array of digital resources from anywhere and at any time.

- **Improves Interaction In Real-Time**

Digital libraries enable real-time interaction among users by facilitating collaboration, discussion, and sharing of resources. With the use of online forums, chat rooms, and other interactive tools, users can connect with each other, share ideas, and engage in meaningful discussions, thereby enhancing their learning experience.

- **Automated Library Management**

Digital libraries employ automated library management systems that help in the efficient organization, storage, and retrieval of digital resources. These systems automate routine tasks such as cataloguing, indexing, and archiving, freeing up library staff to focus on more important tasks such as user support and collection development.

- **Quick Access**

Digital libraries provide users with quick access to resources, with powerful search tools that enable users to quickly and easily find the information they need. This quick access saves users time and effort, making it easier for them to conduct research or study efficiently.

- **24/7 Availability**

Digital libraries are available to users 24/7, eliminating the need to worry about library opening hours. Users can access digital resources at any time and from any location, making it convenient for them to study, conduct research, or access information whenever they need it.

- **Collaboration**

Digital libraries facilitate collaboration among students by allowing them to share resources, discuss ideas, and work together on projects.

- **Environmental Sustainability**

Digital libraries contribute to environmental sustainability by reducing the use of paper and other resources required for traditional libraries.

## **Conclusion**

E-libraries or digital libraries play a crucial role in providing school admission in noida students with access to a vast array of digital resources, which can enhance their academic performance and broaden their knowledge. Digital libraries are cost-effective, convenient, and easily accessible, with powerful search tools that enable students to find information quickly and efficiently.

Digital libraries also provide real-time interaction, collaboration, and sharing of resources, which can improve students' research skills and learning experience. Moreover, digital libraries contribute to environmental sustainability by reducing the use of paper and other resources required for traditional libraries, while also preserving cultural heritage by digitising and archiving rare or fragile materials for future generations. In today's digital age, digital libraries are an indispensable resource for students seeking to excel in their academic pursuits.

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## INTERACTIVE TECHNOLOGIES IN EDUCATION: TRANSFORMING LEARNING EXPERIENCES

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### Abstract

*Interactive technology in education refers to the use of digital tools, devices, software, and platforms that enable active engagement, collaboration, and two-way communication between students, educators, and learning resources. This study reviews literature related to interactive technology in Indian education and also explores the list of interactive technologies in education, challenges and considerations while implementing interactive technologies in education are highlighted and educational implications of interactive technology are listed in this study. The study concludes that, there are challenges to be addressed in the integration of interactive technologies in Indian education, their potential educational implications are significant. By prioritizing equitable access, teacher training, and innovative pedagogical approaches, India can harness the power of interactive technologies to create a more inclusive and effective education system, preparing its students for the demands of the 21st century.*

**Keywords:** Interactive technology, challenges, educational implications.

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### Introduction:

The integration of technology has revolutionized the way education is delivered and received. Interactive technologies encompass a diverse array of tools and platforms designed to engage students actively in the learning process. This article investigates the transformative influence of these technologies, emphasizing the advantages, addressing the challenges, and forecasting their future impact on education.

The advent of the internet and digital technology has revolutionized education delivery in India. Online courses, Massive Open Online Courses (MOOCs), and e-learning platforms have democratized access to education (Khanna, 2020).

In recent decades, the landscape of education has been profoundly shaped by the rapid evolution of interactive technologies. These technologies have revolutionized the way knowledge is acquired, disseminated, and applied in educational settings, ushering in an era of unprecedented transformation in learning experiences. The advent of digital tools, interactive software, and online platforms has not only enriched educational methodologies but has also redefined the roles of educators and learners alike. This paper explores the dynamic journey of interactive technologies in education, tracing their development from their inception to their current state and examining their far-reaching implications for the educational landscape.

The integration of interactive technologies into education has been driven by a multitude of factors, including advancements in information and communication technology (ICT), the increasing demand for personalized and accessible learning, and the recognition of the need to prepare students for a rapidly changing globalized world. As these technologies have become more sophisticated and accessible, they have opened up new possibilities for enhancing student engagement, fostering active learning, and facilitating global collaboration (Clark & Mayer, 2016; Freeman et al., 2014; Senge, 1990).

This exploration will delve into the multifaceted aspects of interactive technologies in education, encompassing their historical development, their impact on pedagogical approaches, the opportunities they present for personalized learning, and the challenges they pose for educators and institutions. Through a comprehensive examination of this evolution, we will gain insights into how

interactive technologies have reshaped the educational landscape and continue to shape the future of learning.

### **Review of literature related to interactive technologies in Indian education:**

The digital divide has been a prominent issue in Indian education, where access to interactive technologies varies significantly across socio-economic groups (Kumar & Kumar, 2020). Kumar and Kumar's systematic literature review emphasized the disparities in technology access and use among different segments of the Indian population. Selwyn (2019) further discussed how this digital divide affects educational outcomes and opportunities for students in India. These studies highlight the need for policies and interventions to bridge the gap in technology access.

The emergence of online learning platforms like BYJU's and Khan Academy in India has transformed the educational landscape (Sharma & Varkkey, 2018). Sharma and Varkkey conducted an exploratory study on the impact of these platforms, particularly on healthcare professionals from diverse backgrounds. Their research shed light on how these platforms can enhance learning outcomes and accessibility, especially in regions with limited educational resources.

Virtual Reality (VR) and Augmented Reality (AR) technologies have been explored for their potential in enhancing education in India. Raj and Raj (2020) discussed the integration of VR in Indian schools, particularly in science education. Their case study highlighted how VR can engage students and improve understanding in complex subjects.

The rise of Massive Open Online Courses (MOOCs) and e-learning platforms like SWAYAM has had a significant impact on higher education in India (Panigrahi et al., 2018). Panigrahi and colleagues examined the implications of MOOCs on Indian learners, emphasizing the potential for expanded access to quality education. This shift toward online education has opened up new avenues for both students and educators.

Integrating interactive technologies into Indian classrooms presents various challenges and opportunities (Mishra & Yadav, 2019). Mishra and Yadav's study examined the problems and prospects of ICT integration in Indian education. They highlighted issues related to teacher readiness, curriculum adaptation, and the need for professional development. This research underscores the importance of addressing these challenges to maximize the benefits of interactive technologies in Indian education.

As the field of educational technology continues to evolve, it is crucial for policymakers, educators, and researchers to stay informed about the latest developments and studies in interactive technologies within the Indian education context.

### **List of interactive technologies in Education:**

Interactive technology has greatly enhanced the educational experience by making learning more engaging, immersive, and effective. Here are some examples of interactive technologies used in education:

- a) **Smartboards and Interactive Whiteboards:** Smartboards and interactive whiteboards are large touch-sensitive displays that can be connected to a computer. Teachers can use these boards to display content, write with digital pens, and interact with educational software and applications. Students can also participate by touching the board, making it an interactive tool for lessons.
- b) **Tablets and Mobile Apps:** Tablets and mobile devices have become integral tools in education. Educational apps and software are designed to make learning fun and interactive. Apps cover a wide range of subjects, from math and science to language learning and art. Students can use these apps to practice skills, complete assignments, and explore educational content in an engaging manner.
- c) **Virtual Reality (VR):** Virtual Reality immerses students in a computer-generated environment, making it particularly useful for subjects that require visualization, such as science and geography.

With VR headsets, students can take virtual field trips, explore historical settings, or interact with three-dimensional models to enhance their understanding of complex concepts.

- d) **Augmented Reality (AR):** Augmented Reality overlays digital content onto the real world. In education, AR can be used to provide additional information, animations, or 3D models when students view physical objects through AR-enabled devices like smartphones or tablets. This technology enhances interactive learning experiences by blending the virtual and physical worlds.
- e) **Online Learning Platforms:** Online learning platforms, including Learning Management Systems (LMS), provide a digital space where students and teachers can interact. Features like discussion forums, quizzes, and interactive assignments allow for collaboration and engagement. Platforms like Moodle, Canvas, and Google Classroom are commonly used in both K-12 and higher education.
- f) **Gamification:** Gamification incorporates game elements and principles into educational activities. Educational games and gamified learning platforms motivate students through challenges, rewards, and competition. This approach encourages active participation and problem-solving while making learning enjoyable.
- g) **Collaborative Tools:** Collaboration tools like Google Workspace (formerly G Suite) and Microsoft Teams facilitate group work and interactive learning. Students can collaborate on projects, edit documents in real time, and communicate with peers and instructors seamlessly, fostering teamwork and interaction.
- h) **Interactive Simulations:** Interactive simulations are digital models that allow students to manipulate variables and observe outcomes. These simulations are particularly valuable in science and mathematics, enabling students to conduct experiments and visualize complex concepts in a controlled environment.
- i) **Adaptive Learning Systems:** Adaptive learning systems use algorithms to personalize the learning experience. They assess students' strengths and weaknesses and tailor content to meet individual needs. This technology ensures that students receive targeted instruction and can progress at their own pace.
- j) **Robotics and Coding Kits:** Robotics kits and coding platforms, such as LEGO Mindstorms and Raspberry Pi, introduce students to programming and engineering in a hands-on, interactive way. Students can build robots, write code, and see the immediate results of their actions.

#### Challenges and Considerations:

- a) **Infrastructure and Accessibility:** Ensuring equitable access to interactive technologies remains a significant challenge. Eisenberg and Johnson (2016) discuss the limitations of educational institutions lacking the necessary infrastructure and resources for effective implementation.
- b) **Teacher Training:** Effective integration of interactive technologies necessitates comprehensive teacher training and professional development (Cuban, Kirkpatrick, & Peck, 2001). Without proper guidance, these tools may not reach their full potential.
- c) **Digital Divide:** The digital divide continues to be a pressing issue, with some students lacking access to essential devices and reliable internet connections (Warschauer, 2004). Bridging this divide is imperative to ensure that interactive technologies benefit all students.
- d) **Screen Time and Distraction:** While interactive technologies offer many advantages, excessive screen time can lead to distractions and health concerns, such as eye strain and sedentary behavior (Strasburger, 2010). Balancing screen time with other forms of learning and physical activity is vital.
- e) **Future Prospects:** The future of interactive technologies in education holds great promise. Emerging technologies like AI-driven tutoring systems, blockchain-based credentialing, and immersive learning environments are expected to play significant roles. Furthermore,



advancements in natural language processing will enable more interactive and responsive virtual tutors (VanLehn, 2011).

### **Educational implications of interactive technologies:**

1. Interactive technologies make learning more engaging by providing opportunities for active participation and immediate feedback (Means, 2010). This engagement can lead to increased motivation and improved learning outcomes (Clark & Mayer, 2016).
2. Interactive technologies enable adaptive learning platforms that cater to individual student needs and learning styles (Kozlowski et al., 2010). This personalization can enhance student achievement (Pane et al., 2015).
3. Interactive technologies promote active learning strategies, such as problem-solving, collaboration, and critical thinking (Prince, 2004). These strategies are associated with improved retention and understanding of content (Freeman et al., 2014).
4. Interactive technologies can make education more accessible to students with disabilities (Burgstahler & Chang, 2010). Features like screen readers and captioning tools can accommodate diverse learners.
5. Interactive technologies facilitate global communication and collaboration, allowing students to connect with peers and experts worldwide (Senge, 1990). This global perspective can broaden students' horizons and cultural awareness.
6. Interactive technologies generate data on student performance, enabling teachers to make data-informed instructional decisions (Penuel & Gallagher, 2017). This can lead to more effective teaching practices.
7. Interactive technologies support the flipped classroom model, where students access content outside of class and engage in interactive activities during class time (Bergmann & Sams, 2012). This approach can deepen understanding and promote active participation.
8. Interactive technologies promote lifelong learning by providing access to online courses and resources (Anderson, 2008). This allows individuals to continually update their skills and knowledge.
9. Interactive technologies facilitate formative assessment and timely feedback, helping students track their progress and make improvements (Black & Wiliam, 1998). This supports learning and skill development.
10. Interactive technologies can be used for teacher professional development, allowing educators to learn about new teaching methods and tools (Ertmer & Ottenbreit-Leftwich, 2010). This contributes to the ongoing improvement of teaching practices.

Hence, interactive technologies have a substantial impact on education, offering opportunities for enhanced engagement, personalized learning, active learning, accessibility, global connections, data-driven instruction, and more. These implications align with the evolving educational landscape and the need to prepare students for a rapidly changing world.

### **Conclusion:**

The integration of interactive technologies in Indian education has ushered in a promising era of innovation and transformation. However, as we have explored the landscape of interactive technologies in Indian education, we have also encountered a range of challenges and observed significant educational implications.

One of the foremost challenges is the digital divide, which persists as a barrier to equitable access to technology-driven educational opportunities. Socioeconomic disparities in access to devices and reliable internet connectivity have the potential to exacerbate educational inequalities. Addressing this divide is not only a technological challenge but also a moral imperative to ensure that all learners, regardless of their background, can benefit from interactive technologies. Furthermore, there are



challenges related to the readiness and training of educators. Many teachers in India may lack the necessary skills and training to effectively utilize interactive technologies in their teaching methods. As such, investments in teacher professional development and support are vital to harness the full potential of these tools.

On the brighter side, interactive technologies offer numerous educational implications that are poised to revolutionize the learning landscape in India. They have the potential to make learning more engaging and personalized, catering to the diverse needs and learning styles of students. These technologies can facilitate interactive and collaborative learning experiences that transcend geographical boundaries, thus expanding access to quality education. Moreover, interactive technologies can provide data-driven insights into student performance, enabling educators to tailor instruction and interventions. They also empower students to take ownership of their learning journey, fostering critical thinking, problem-solving skills, and digital literacy.

In conclusion, while there are challenges to be addressed in the integration of interactive technologies in Indian education, their potential educational implications are significant. By prioritizing equitable access, teacher training, and innovative pedagogical approaches, India can harness the power of interactive technologies to create a more inclusive and effective education system, preparing its students for the demands of the 21st century. This journey towards educational transformation will require ongoing commitment, collaboration, and adaptability from all stakeholders, but the rewards for India's educational landscape are undoubtedly worth the effort.

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## ROLE OF MULTIMEDIA FOR EFFECTIVE TEACHING AND LEARNING PROCESS

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### Abstract

*This essay explores the use of computer technology and multimedia in students learning. Undoubtedly, the advent of computer technology has changed the way humans learn and do things. Moreover, "Computer has become standard equipment" in everyday life. The ability to process data in a real time has helped teachers and learners to learn and obtain data and information more rapidly. Despite of all the advantages of having computer as tools for learning, the disadvantages and challenges existed. Issue such as copyright, less face-to-face interaction in education, as well as privacy continues to be the greater challenge in the use of technology. Regardless of the disadvantages and challenges of technology use in education however, the benefits of it outweighs when it comes to learning and the much readily available of information and opportunities of varieties of information that are otherwise challenging.*

**Keywords :** Multimedia, Technology, Learning

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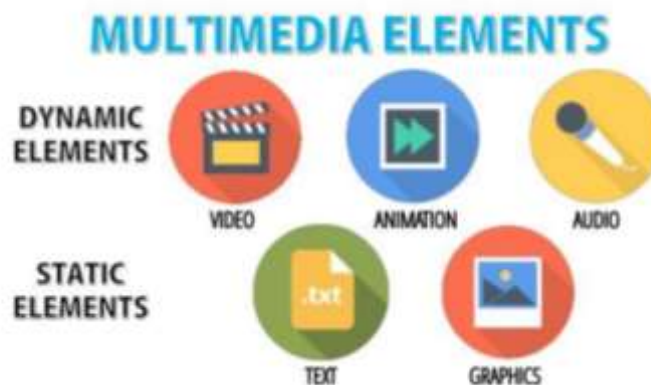
Multimedia learning is the process of learning, usually in a classroom or similarly structured environment, through the use of multimedia presentations and teaching methods. This can typically be applied to any subject and generally any sort of learning process can either be achieved or enhanced through a careful application of multimedia materials. Multimedia learning is often closely connected to the use of technology in the classroom, as advances in technology have often made incorporation of multimedia easier and more complete.

In general, the term "multimedia" is used to refer to any type of application or activity that utilizes different types of media or formats in the presentation of ideas. With regard to education, multimedia learning usually means the use of different types of media to teach a lesson or enhance a lesson with further examples or activities for students. This type of learning can be as simple as using film clips of footage shot during World War II while learning about the war in a history class, or as complicated as having students use computer software to create simulations in a physics class. The connection between multimedia learning and technology is usually made because advances in technology often make the use of different media easier and less expensive for schools and teachers. This is demonstrated by the use of overhead projectors in the classroom.

Initially these projectors allowed teachers to go beyond the limitations of the chalkboard and present ideas in writing in a way the entire class could see more easily. Technology has advanced beyond the older projectors, however, and modern smart boards and digital projectors allow a teacher to type at a computer and have it displayed for the entire room to see. This type of multimedia learning can also include a teacher seamlessly incorporating video clips or interactive presentation software on the computer into a lesson as well. Multimedia learning goes beyond passive learning, however, and can also allow students to interact with computer software and video or audio presentations to further enhance their learning. Some students, for example, may be able to learn about the human body through lectures and images in books that demonstrate the various systems within the body. For other students, however, the ability to use a computer program that provides a digital model of the human body and how each system is interrelated can be far more powerful. Especially as the students are able to interact with the model and see each system separately and together from various angles and points of view. This effort to give the tools of learning to students, then allow them to learn in the way that is most meaningful for them, is one of the cornerstones of multimedia learning.

## The Five Elements of Multimedia

Multimedia fall into one of five main categories and use varied techniques for digital formatting. One or any combination of this content can be used to enhance your website or social media platform.



### 1. Text

As a multimedia option, text can easily be overlooked, but it is still the most fundamental element and most effective way to communicate in multimedia. Text is used as headlines, subtitles, and slogans. Its purpose is to express specific information or reinforce information in other media. It involves the use of text types, sizes, colours and background colour. For example, you can choose the font and its size and colour to set a tone or project an image, or you can choose the mood you want to evoke with background colour. Text can make the intended message you want to convey through multimedia more understandable, it can be used as an alternative in case a digital image is not available in a visitor's browser, and other media or related information can be accessed by clicking on text links. Text options in multimedia are limitless!

#### Presentational characteristics of text

- ❖ Text is particularly good at handling abstraction and generalisation, mainly through written language
- ❖ Text enables the linear sequencing of information in a structured format
- ❖ Text can present and separate empirical evidence or data from the abstractions, conclusions or generalisations derived from the empirical evidence
- ❖ Text's linear structure enables the development of coherent, sequential argument or discussion
- ❖ At the same time text can relate evidence to argument and vice versa
- ❖ Text's recorded and permanent nature enables independent analysis and critique of its content
- ❖ Still graphics such as graphs or diagrams enable knowledge to be presented differently from written language, either providing concrete examples of abstractions or offering a different way of representing the same knowledge

### 2. Graphics

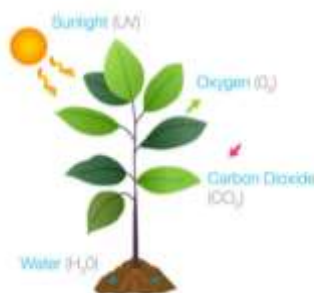
Graphics are an important part of multimedia because humans are visually oriented. Images including photographs, illustrations, drawings, clip art, icons or any other non-text elements on a website or in social media are an example of graphics. There is no movement in these types of pictures. Still/static pictures typically accompany text to illustrate the point or ideas the text makes. Photos in a multimedia application go beyond using them just as decoration. In a multimedia context graphics may consist of slide shows or galleries that a website or social media visitor can view. They may have clickability that leads the viewer to another element, such as audio or video. Graphics appear in many multimedia applications providing communication through attractive visual affects.

Ways to Use Graphics for Learning Virtually everyone has an opinion on how to use graphics in their training materials. The criteria most people use for selecting visual elements is typically based on surface features - things like style, colouring, degree of realism, etc. While there is no doubt those are important considerations, they have little, if anything, to do with how well a graphic contributes to the learning experience. When it comes to learning, evidence suggests that how you use your graphics is more important than their visual properties. It is much more important for a graphic to clearly communicate your message regardless of how it looks. Representational graphics are used to represent the actual appearance of something. These types of visuals are best for presenting things learners will encounter when transferring their learning to actual tasks. Representational graphics include things like software application screens, forms, equipment, etc.



### 3. Animation

Animated elements are common multimedia applications. Animation is a series of images put together to give the effect of movement. In multimedia, 2D and 3D digital animation is used. Movement, rather than just viewing a still image, is especially useful for illustrating concepts that involve movement. Animation is used to add visual interest or bring attention to important information or links. It can illustrate how things work or present information in entertaining ways. Animation can also include interactive effects allowing visitors to engage with the animation action using their mouse and keyboard. Animation is a dynamic and media-rich content that stays within one container on a page – a very powerful form of communication.



### 4. Audio

Sound can enhance your website design and social media platforms. It is a multimedia application that uses dialogue, recorded narration, music and sound effects. These are called the audio or sound elements. When used in moderation, adding multimedia such as sound to your presentation can be a great way to catch and focus the visitor's attention, to deliver information to visitors, and to help reinforce the visitor's comprehension of the information presented. For example, narration can be used to describe what is being seen in an animation clip enhancing the understanding of what the clip is all about. Featuring related music and special sound effects are also very effective multimedia applications that can add to the visitor's experience.

### 5. Video

Video is a visual multimedia application that combines a sequence of images to form moving pictures and sound. Video can have an impact on websites and on social media platforms in a very unique and powerful way. You can inform the world that your company exists, spread the word about

your company, grab attention to show your visitors how to do something, showcase a new product, build brand awareness, or even promote an upcoming event. You name it, you can do it with video! Video is ideally suited to showing practical demonstrations of a task or theory. There is a long history of this type of content being used within education as it suits students with a range of preferred learning styles. The success of this kind of video to explain both basic and complex concepts is evident by the numerous popular examples on YouTube.

### **Why Teach with Video?**

When students have access to video content to watch outside of class, class time can be used for comprehension checks, discussion, and reinforcement of content. Multimedia content helps to vary and enhance the learning process, and leads to better knowledge retention. Educational video can provide more opportunities for students to engage with the content. Students around the world can learn from course content made available through video. Video can sometimes demonstrate complex ideas and access other times and places better than speaking can. Video can help instructors overcome limitations like large class sizes and limited time.

### **What can we do with video?**

Instructors can use video to provide supplemental materials for their students. This can help reinforce content and give students resources to prepare for assessments. Many teachers have benefitted from using video to flip their classroom. A flipped course is one in which students absorb new material largely outside of class time. Instructors benefit from flipped classrooms. When a course is flipped, teachers have more time available to engage with their students, rather than racing through introductions to new content. Once an instructor has created or found a suitable video content, they possess a permanent library of learning resources which can be reused for new students in various learning contexts. Students benefit from flipped classrooms. In a flipped course, students have more opportunities to engage with their instructor and peers. Students also can take greater ownership over their education, and are allowed a level of flexibility that is unavailable in traditional class structures. Massive Open Online Courses, or MOOCs, are created largely through video. These courses consist of a series of learning modules that explain content, punctuated by comprehension checks at the end of each section. They are valuable for students around the world learning in diverse contexts.

### **How is Video Best used in the Classroom?**

Successful and productive school use of television and video has increased dramatically over the last decades. As the technology continues to grow both more sophisticated and more user-friendly, teachers continue to become more skilful at integrating these media into their instruction. In recent survey, 92% of teachers said that using TV and video helped them teach more effectively, and 88% said that “it enabled them to be more creative” in the classroom (CPB, 2017). As with all educational technologies, the value of video relies on how it is implemented in the classroom. Reviews and meta-analysis of the research indicates that positive learning and affective outcomes are greatly enhanced and extended when the video is integrated into the rest of the lesson. Effectively integrating video into classroom instruction involves preparation and activities before, during and after viewing.

Teachers can prepare for using video by previewing the content, establishing clear purposes for viewing and deciding what selections will best support that purpose. The value of video “is highly correlated to its integration within the curriculum—in other words, how closely the content fits into the overall instructional sequence”. For instance, video may be used at the beginning of a unit to whip up interest, during a unit or lesson to bring demonstrations into the classroom that might not otherwise be possible, or as a means of reviewing or reinforcing content. Supporting students to engage with video as active learners requires creating the right setting for such learning to occur. Setting expectations for students and providing a context for the activity, beneficial with any learning tasks, may be especially crucial for viewing of video with content that is highly emotionally-charged.



Selecting Video Content Selecting effective video is an essential component of integrating this medium into practice and realizing the promise of multimedia in the classroom. In reviewing the historical, political and economic contexts of each major classroom technology over the past century, one of the most significant factors in the success or failure of an educational technology is the quality of the content, rather than the technology itself. Selecting video that has strong, visually-rich educational content is a critical element for maximizing the effectiveness of video.

Video is a visual medium, and optimal use capitalizes on the strengths of its visual material. This includes providing visual demonstrations or evidence, dramatizing events and concepts, and appealing to the emotions. Educational video with instructional strategies and cognitive modelling traits embedded in the video itself can aid in student comprehension. Examples range from zooming in on details, to providing titles and other attention-drawing graphics, to animations. Videos with closed captioning can further promote learners' reading fluency and motivation to read.

The following are suggestions of positives to look for when evaluating videos:

- ✓ Variation in the presentation
- ✓ Humor
- ✓ Age-appropriate narration and developmentally-appropriate thinking skills
- ✓ Chunking, or organization in sections
- ✓ Provision of meaningful examples
- ✓ Posing of open-ended questions
- ✓ Opportunities for students to carry out individual thinking
- ✓ Opportunities for extension
- ✓ Teacher guides outlining possibilities for previewing or extension activities.

Video becomes less effective if the selections shown depend too closely on non-visual elements of video and thus exploit the weaknesses of the medium by presenting abstract and non-visual information, relying too much on a "talking heads" style of conveying information or presenting intellectual arguments not backed up with physical evidence. Since video conveys information that is both auditory and visual, these two modes must work in concert for video to be most effective. Overly-dramatic sound tracks, visuals and narration that are not supportive of one another, and excessive use of still frames or slides can all distract from the educational message.

### **Merits of using Multimedia in the Classroom**

Using multimedia in classroom helps educators engage students and provide them with valuable learning opportunities. It is easy to remember a picture than a paragraph, an animated video of a concept worth more of a lecture and a video demonstration of a process (or an instrument) by a scientist gives more real time knowledge than a theoretical explanation. There is no doubt educators consider multimedia as a great tool to improve student learning. Here are a few benefits of using multimedia in classroom:

- Multimedia empowers students to create and design rather than absorb representations created by others.
- It improves reflective thinking.
- It also provides students with suitable learning resources according to their learning styles and abilities.

Most of the educators and administrators are adopting latest educational technologies in order to reach the 21st century learning standards. Of all those tech approaches, usage of multimedia is one of the great tools to engage students. Let's hear what educators suggest about new ways of using multimedia in classroom below:

**Personalized Learning using Multimedia Resources:**

Multimedia resources help different learners meet their learning needs. As we know, different students have different learning styles, educators can easily provide them with suitable learning resources using multimedia. Educators use YouTube to provide visual learners with online videos, podcasts for auditory learners and interactive games for tactile learners. Multimedia resources make everything easy for students to learn in their comfortable learning style. Unlike traditional approaches, in which only the teachers used to lead the entire classroom delivering long lectures at the same pace, the use of multimedia results in personalization of learning.

**Group Learning:**

Multimedia tools such as blogs, social networks and wikis enable students to work together in learning a particular concept. Students use these to share their works with others, give feedbacks on others' works and discuss among others a particular topic. It can be done through either blogging or micro blogging (Tweets). Using these multimedia tools, educators can engage students in several works and watch them collaborating with each other, peer assessing each other's works and learning as a group.

**Improve Presentation skills:**

Using storyboarding, videos and slideshows is a great way to improve student learning, because it allows them to engage with text in a very visual way aided by multimedia. Multimedia tools enable students to express their ideas and works in concise ways that capture the attention of the audience and they develop an ability to communicate thoughts and concepts through a variety of resources, including text and recorded narrations.

Giving students a wider choice of software and tools to present their work is an effective approach as it allows learners to decide on the style of presentation that best suits their personality. This is also a way to allow the learners to engage in their education in a more personalized way and also improve their creativity, critical thinking and reflective thoughts.

**Practical Disadvantages to Using Multimedia**

Multimedia lessons or components of lessons delivered via video or image require computers, projectors and other electronic devices depending upon the subject and the amount of original material a teacher creates. The expense associated with quality projectors or computers for every student can be quite high, and the number of images and videos in a lesson can slow down the delivery and pace of the class as a result. Student access to computers at home may also cause problems, and varying quality of student electronic devices can create inequity in projects and presentations. When designing a multimedia learning experience, the role of the teacher shifts from instructor to facilitator. If a lesson allows students to complete learning at their own pace as they move through stages of learning, classroom management becomes increasingly difficult. This is particularly true if students work in groups to view multimedia sources or share computers. Additionally, students who are not as proficient with technology may have to spend more time learning computer skills to access information than focusing on course materials.

**Multimedia Storage**

Multimedia storage is an important concern in developing multimedia products because a huge amount of storage is required due to the presence of streaming media like audio and video, in addition to static media. Even static media like images consume a substantial amount of memory space. There are two aspects of storage, namely, devices for storage as well as storage of data in databases.

**Some of the popular devices for multimedia storage are:**

1. Magnetic media. E.g. Discs, floppies, and tapes
2. Optical media. E.g. Gramophone, compact disc (CD), CD-ROM (read-only memory), CD-R (CD-read); CD-RW (read-write); and enhanced CD



3. Flash and solid-state chip devices
4. Cloud storage
5. File systems (traditional, multimedia)

**The output devices for the stored data are:**

1. CD-ROM
2. DVD
3. Scanner (for capture of data)
4. Charge-coupled devices (CCDs), which are also used for data acquisition.

**Conclusions :**

There is almost no end to the list of things that can be done by students and teachers in using technology in teaching and learning from being the medium of instruction with online information, simulation, visual literacy, cost effective, to mass storage. Like a coin, there are advantages as well as disadvantages side in the use of technology in education as well as in daily lives. With the availability of technology, educational software and applications become readily available in the market to assists teachers and students in learning as well as to obtain online information. All these are meant to help learners learn better and have more understanding whatever they are trying to achieve. Technology has become an integral part of our society whereby people are required to master certain skills in order to be able to operate it. The use of computer, internet, cellular phone, video, MP3, I pod, I phone, I pad and many more gadgets are now connected and can't be separated from human life, especially for younger generations. As a result, students learn more and faster than previous generations.

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## EXPLORING MULTIDISCIPLINARY EDUCATION: UNVEILING ITS CONCEPT AND ADVANTAGES

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### Introduction

**"Your brain has a capacity for learning that is virtually limitless, which makes every human a potential genius." Michael J. Gelb**

There's no limit to learning and the multidisciplinary educational approach mentioned in the NEP 2020 is the correct step taken towards promoting the same. Multidisciplinary approach is a method of curriculum integration that highlights the diverse perspectives that different disciplines can bring to illustrate a theme, subject or issue. In a multidisciplinary curriculum, multiple disciplines are used to study the same topic.

When we speak of the hierarchical educational structure, the concept of "learning" gets bounded with so many aspects such as – curriculum, teaching-learning methodologies, time limitations, and much more.

That's why in today's hyper-competitive world, limitless learning, a unique educational system that promotes a multi-disciplinary approach to help students follow their passion is vital. Although the National Education Policy (NEP-2020) has asked institutions to pay attention to it, stakeholders are still in a dilemma about its advantages & disadvantages. In this article, I am going to cover the advantages and disadvantages of a multidisciplinary educational approach. Whether you are a faculty, student, or educator, you can go through these points to drive institutional success.

### What is Multidisciplinary Education?

Education is a complex world with many styles, values, and philosophies. When it comes to choosing what's right for you, it's important to take the time to figure out what kind of system fits your personal learning style. *Especially* if you're the one paying for it. You have the amazing opportunity to choose your own path; what direction will you take?

Multidisciplinary learning is a wonderful way to totally integrate your education into a comprehensive unit rather than scrambling to draw connections between seemingly unrelated parts. It empowers you to see tangible correlations across subject matters rather than view each in a silo.

Multidisciplinary learning is not your average school experience. A Multidisciplinary curriculum is one in which a single topic is studied from the viewpoint of more than one discipline. If you need some multidisciplinary examples to better understand, think about a business degree. Instead of just studying Economics and Political Science separately, you would have professors from each department drawing on their specialty to provide a well-rounded understanding of the subject matter.

The multidisciplinary approach relies on people crossing disciplines to share knowledge, thereby enhancing your scope and depth of learning. Interdisciplinary education is similar to multidisciplinary in the sense that it looks to combine knowledge from multiple disciplines. However, it emphasizes the importance of the process rather than the product of something. Interdisciplinary's focus is to combine theories, methodologies, and perspectives from two or more disciplines; it connects a single theme or idea across disciplines.

## Advantages of a Multidisciplinary Education

- The Privilege to Choose

I can bet you've heard such things from your relatives & friends as well who got settled in foreign countries. But, it's not true anymore! To change the mindset of youngsters and make them realize the power of the Indian education system, authorities have seriously taken great efforts and multidisciplinary education is a live example of it.

With multidisciplinary education in colleges, students get a right to choose their favorite subject, the subject that they want to learn. Subjects that can **add some value** to their knowledge. Subjects that can **raise the bar of education**. Not the ones which are forced onto them. Ultimately, it will help in establishing a more **collaborative** teacher-student relationship.

- Reach Within To Discover Passion

Here, the keyword is **"choice of subjects"**, but the advantages extend to students' personal growth as well. See, on one hand, as a faculty, you will have the power to innovate the usual teaching-learning processes. And on the other, your students will be able to access **vast e-content** that can help them realize their passion or true purpose. The more e-content they consume, the more insights about their deeper interests they'll find!

Even when your students are clueless about their passion initially, they can discover it during the teaching-learning journey. Thus, the combination of online education tools such as a Learning Management System (LMS) integrated within the college ERP software along with a multi-disciplinary approach can boost personal development in students.

- Pragmatism & Flexibility

Multi-disciplinary education allows your students to understand the power of new ideas.

It helps them develop a **pragmatic attitude** by allowing them to decide what subjects they will opt for and what could be their possible benefits. They get time to make a decision by calculating the risks & advantages. Thus, a multi-disciplinary program brings pragmatism and flexibility to the table. It enables your students to **carve their own path** by utilizing their mind-power and edTech devices and not walk on the path pre-decided by the educational system.

- Holistic understanding

One of the benefits of a multidisciplinary approach in education is you get a more holistic understanding of the world. Rather than looking at individual departments and their subject matters separately, a multidisciplinary approach integrates parts of each department into the study programs of the other.

- Different perspectives

Have you ever been trying to solve a puzzle by yourself and have one section that totally defeats you? You stare at it for hours, but can't figure it out for the life of you. Then, one day, a friend saunters by and picks up that pivotal piece and places it perfectly. Ah, the magic of different perspectives. A multidisciplinary approach is kind of like that. With different professors integrating subject matters, it opens the doors to different ideas and ways of understanding.

- Real world approach

Multidisciplinary learning isn't just an educational philosophy it's a tangible way of understanding the world. When you graduate, you'll be working with people from across disciplines.

- Collaboration skills

Hopefully, any education route you take emphasizes the importance of collaboration. However, one of the most important advantages of multidisciplinary curriculum is the idea of coming together to create a better whole.

Being able to communicate effectively with people across disciplines is integral to multidisciplinary learning. You learn the same vocabulary, you understand their values, and you know what motivates them. These skills will help you make connections, solve big problems, and work synergistically with your peers.

- **Strong mentorship**

A youngster fresh out of high school, does not always have a handle on life's choices ahead and that's okay. Higher education is not only about gaining advanced knowledge of disciplines, but also learning more about yourself, discovering your interests, nurturing your passions, channelling your talents, challenging yourself and growing as a student, individual, and member of society.

- **Critical thinking & problem-solving skills**

At the end of the day, the real world is complex. Phenomena are complex. You simply cannot understand it through one lens. A rounded, holistic perception is key. An inevitable outcome of looking at life and learning through a multidisciplinary lens is the ability to approach problems with a broader perspective.

- **Preparing for new jobs**

New roles are being carved out with the changing times and in an era of exponential change and development, an undiscovered future awaits young India. Even recruits are on the lookout for hiring multidisciplinary talent. Narrow training is giving way to transferrable and dynamic skills. Through a multidisciplinary approach, a student gains an arsenal of skills problem-solving, critical thinking, time-management, self-management, communication and writing, analysis and research methodologies, team work, and much more that are easily transferable across work environments.

Youngsters can now find very interesting careers in new and emerging fields as a result of a vibrant multidisciplinary background. It gives them the exposure, education and experience to branch out into different directions and expands their avenues.

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## **THEME - 1**



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## ROLE OF HEALTH EDUCATION IN REDUCING STRESS AND ENHANCING PHYSICAL AND MENTAL HEALTH OF A LEARNER

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### Abstract

*Present day is an age of Anxiety. Industrialization and urbanization have generated competition resulting in pressure, insecurity and stress. 'Wants' have outstripped 'needs' causing stress as well as distress. Tranquil life of the rural surroundings has given place to the tense, impersonal life of the metropolis. We have become a cog in the wheel of the industrialized world, as Bertrand Russell put it. The concept of physical health refers to a sound body which will have high resistance to all adverse conditions, strong and robust in nature. Whereas mental health is the ability to adjust satisfactorily to the various strains of the environment we meet in life and mental hygiene as the means we take to assure this adjustment. Health education provides information about the human body and the factors that promote or damage health. Health education teaches children physical, mental, social, and psychological health (overall well-being). It helps students to make healthy choices and avoid risky behaviors. Health education training mainly focuses on preserving health, avoiding illnesses, and training students to make healthier decisions in their lives. The present paper mainly focuses on importance of health education in reducing stress and enhancing physical and mental health of a learner.*

**Keywords:** Health Education, Physical and Mental Health and Stress Management.

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### INTRODUCTION:

The concept of adjustment is as old as human race on earth. The process of adjustment starts right from the birth of the child and continues till his death. Man, among the living beings have the highest capacities to adopt to new situations. Man as a social animal not only adapts to physical or mental demands but he also adjusts to social pressures in the society. The nature of adjustment process is decided by a number of factors particularly, internal needs and external demands of the human beings. When a conflict occurs between internal needs and external demands, in such conditions, there exists word Stress.

Stress is an individual phenomenon and it is a subjective unpleasant feeling of distress. Modern world is an age stress. There are 3 types of stress: Conflicts, Frustrations and Pressures. Every one of us irrespective of our age, sex, education, occupation, socio-economic status, whether we live in rural or urban area, faces stress. In recent years, incidences of mental and physical ill health have tremendously increased and have posed a serious problem before the nation. Industrial development, social and economic changes have given rise to a number of new problems. The problem of physical and mental health has acquired importance in the programmes of national development.

Health education can be defined as the principle by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance, or restoration of health. A comprehensive health education program plays a crucial role in a child's education, from kindergarten to higher education. Health education teaches children physical, mental, social, and psychological health. It helps learner to make healthy choices and avoid risky behaviors. Health education is a profession of educating people about health. Areas within this profession encompass environmental health, physical health, social health, emotional health, intellectual health, and spiritual health, as well as sexual and reproductive health education. The present paper will describe impact of stress on daily

life, effect of stress, the role of health education in reducing stress of the learner and stress management and its benefits.

### **IMPACT OF STRESS ON DAILY LIFE:**

The term stress originated from the discipline of physics. It refers to a force exerted on a system that deforms, destroys or alters the structure of that system. The resulting change is termed 'strain'. In biological and human sciences it refers to a state in which the vital functioning of the organism is threatened. When our capacity to deal with a problematic situation is inadequate we feel tense and experience stress. Everyone is endowed with a capacity to put up with stress which is known as 'frustration-tolerance' or 'stress-tolerance'. When the limit is crossed we get upset. Stress can be likened to the tension on a violin string. If the string is too tightly fastened it snaps; if it is held too loose it won't make music. Prolonged exposure to great stress and continued incapacity to cope with it can be injurious to mental and physical health. It is a kind of silent-killer.

The symptom of stress is a kind of restlessness, apathy and despair and marked diminution of zest and zeal characteristic of a healthy individual. Inadequate personal communication can compel an individual to bottle up his feelings and emotions that would generate stress. A sense of false pride stands in the way of plain-speaking. One is tempted to assume a façade that conceals inward insecurity. The age-old habit of crying over an agony upon the shoulders of an understanding companion has a cathartic effect. Surprisingly this healthy outlet is sealed by the so-called sophistication characteristic of modern life. The net effect is accumulation of minor irritants that add up to unmanageable stress.

### **EFFECT OF STRESS ON A LEARNER:**

The major effect of stress on a learner is many but some important effects listed below: The rate and the force with which heart beats increase, we feel the heart pounding in the chest. Blood-flow increases under the skin and we blush. We feel the warmth and sweat. The blood-flow to the brain is decreased. We feel giddy and in a severe condition, may faint. Blood pressure rises. There is an increased but shallow breathing. There may be a sensation of constriction in the chest. There are contractions of the muscles. There may be shivering. Because of continuous contractions, there may be aches and pains. Headache, chest pain, back pain, pain in the limbs, joint pains, easy fatigability are common in people who are under stress. But no abnormality is seen in the body. There may be increased frequency of micturition, premature ejaculation, no or poor erection of penis, no desire to have sex. Thus a person under stress may suffer from poor sexual drive and ability.

Dryness of mouth, poor or no appetite, lack of taste, fullness of stomach, nausea, vomiting, indigestion, increased flatulence, diarrhea or constipation. Thus food-intake becomes irregular and 'not enjoyable'. Negative emotions like fear, anger, and sadness engulf the individual. Decreased attention, concentration, poor memory, inability to take quick decision, poor learning, inability to perceive and interpret the stimuli, and inability to remain comfortable and composed, are reported by people under stress. Thus there is a general decline of mental including intellectual functioning of the individual. This in turn increases the stress and it becomes a vicious circle. All these changes occur because of excess secretion of adrenaline as Hypothalamus- pituitary-Adrenal glands become hyperactive under stress. Prolonged stress leads to increased 'wear and tear' of the body and mind which in turn leads to many ill effects.

Because of poor attention, concentration, faulty perception and inappropriate decisions, the individuals under stress become more accident prone. They meet with more road accidents, home or workplace accidents than people who are not under stress. Anxiety disorders like Depression, Hysteria, Somatoform disorders, Acute psychosis, exacerbation of already existing mental disorders are frequently seen in people who are under stress. Stress is one of the causes of mental disorders. It is

a common experience of many people that when they are under tension, they smoke and take drinks more than usual.

Compared to other people, people under stress are more prone to develop physical disorders: Immunity is reduced, disease-producing organism like bacteria, virus, fungi take upper hand and cause infections. Repeated soar-throats, skin-boils, upper respiratory tract infections, pneumonia, typhoid, tuberculosis, urinary tract infections, diarrheas and dysenteries are common. Hyperacidity or gastric problem and peptic ulcers, chronic diarrheas and dysenteries will occur. Heart related diseases like Hypertension, Myocardial infarction like Heart attacks, Chronic Bronchitis and Asthma Chronic Arthritis (joint swelling and pains), Menstrual cycle irregularities may appear. Migraine and Tension Headaches, Skin diseases like eczema, psoriasis, allergic rashes, fall of hair will also occur.

### **ROLE OF HEALTH EDUCATION IN REDUCING STRESS:**

Health education promotes one's responsibility to one's health by addressing health concerns such as nutrition, exercise, fitness, disease prevention, growth and development, environmental and social health, conflict resolution and violence protection. Education and healthcare are two of the most crucial factors that determine a country's overall growth and development. A well-educated and healthy population is essential for a nation to prosper and compete globally. Education is the foundation for economic growth and development. Health education helps adolescents acquire functional health knowledge, and strengthens attitudes, beliefs, and practice skills needed to adopt and maintain healthy behaviors throughout their lives.

We have to increase our coping skills to manage the stressful issues and situations. There are a few techniques to reduce stress: Avoid getting overtired, by keeping a nice balance between rest and activity. Good quality sleep. Cultivate the ability to say 'No' to demands put on you if you feel that these are going to cause you to feel overburdened. Don't be afraid to admit your limitations; Keep a "stress diary" in which you note your particularly stress times during the week. By spotting the critical periods you will be able to apply anti-tension relaxation measures when they are needed to reduce your unwanted responses.

Never be shy about seeking help and advice about stressful situations. One of the problems with stress is that it can be self-reinforcing. Ability to relax, remain calm and composed in times of stress. Ability to understand the nature of the problems tries to think of possible and feasible solutions. Maintain self-esteem and take control of the situation and ability to set realistic objectives and goals and try to achieve them. Ability to have more realistic, appropriate attitude, knowledge and change the behavior as required by the situation. Ability to get the help of family members and others in facing the situation or the problem.

### **HEALTH EDUCATION AND STRESS MANAGEMENT:**

World Health Organizations stress management guide doing what matters in times of stress – aims to equip people with practical skills to cope with stress. A few minutes each day are enough to practice the guide's self-help techniques. The guide can be used alone or with its accompanying audio exercises. Having a daily schedule can help us use our time efficiently and feel more in control. Set time for regular meals, time with family members, exercise, daily chores and other recreational activities.

Health Education promotes physical and mental health, where Stress management is necessary for maintaining physical and mental health, improving cognitive function, fostering healthy relationships, preventing burnout, and enhancing the quality of life. Stress Management is about making a plan to be able to cope effectively with daily pressures. The ultimate goal is to strike a balance between life, work, relationships, relaxation and fun. By doing this, you are able to deal with daily stress triggers and meet these challenges head on.

In today's society, stress and change often are thought of as the same thing. Stress is a physiological and psychological response to a change in a situation the body and mind find to be overwhelming. With the fast pace of work and home, being constantly inundated with technology and still wanting to have time to connect with those around you, life can feel overwhelming and stressful at times. You may often ask yourself how you should manage stress.

**These are five strategies to manage stress:**

1. *Use guided meditation:* Guided meditation is a great way to distract yourself from the stress of day-to-day life. There are many guided meditations available online that can help you find five minutes of centered relaxation.

2. *Practice deep breathing:* Deep breathing is a great way to reduce the activation of your sympathetic nervous system, which controls the body's response of fight or flight to a perceived threat. Deep breaths taken in for a count of five seconds, held for two seconds and released for a count of five seconds, can help activate your parasympathetic nervous system to rest and digest, which helps reduce the overall stress and anxiety you may be experiencing.

3. *Maintain physical exercise and good nutrition:* Physical exercise and nutrition are two important components in how you respond to stress. When your body is healthy, your mind can be healthy and vice versa. Physical exercise is proven to be a great stress reliever and also helps to improve your overall quality of life. Nutrition is important because stress can deplete certain vitamins, such as A, B complex, C and E. Maintaining proper nutrition not only helps your body feel better, but your mind as well, which allows you to better combat stress.

4. *Manage social media time:* Spending time on social media sites can become stressful, not only by what you might see on them, but also because the time might best be spent enjoying visiting with friends, being outside enjoying the weather or reading a great book. In addition, many people use social media at night, which may worsen sleep due to increased stress at the exact time people are trying to wind down for the evening, resulting in fewer overall hours of quality sleep.

5. *Connect with others:* Humans are social beings. You need to have connections with people to feel supported. Finding a sense of community, whether at work, with a religious organization or through shared activities, such as organized sports, is important to your well-being. Enjoying a shared activity allows you to find support and foster relationships that can be supportive in difficult times.

**BENEFITS OF STRESS MANAGEMENT:**

We may feel overwhelmed and exhausted if you're dealing with high-stress levels. Stress can cause poor physical and mental health. It may affect all bodily systems and can influence your mood. Stress is part of your body's response to pressure, which includes dealing with life's demands. Most people feel stressed from time to time, but some individuals experience prolonged or chronic stress. Any stress can be a risk factor for both physical and mental health conditions.

Learning to manage stress better can lead to improved heart health, mental health, sleep, and more. Benefits of Stress Management are reducing stress may reduce your blood pressure and your overall physical health. It can also improve performance and lower your risk of developing mental health conditions. This suggests that managing stress could reduce your heart rate, improve your overall physical well-being, and mitigate your risk of heart disease. This suggests that stress-reduction techniques, particularly before bed, could help you sleep better. Based on this, it's likely that stress management could reduce muscle tension, feelings of irritability, and tension headaches.

**CONCLUSION:**

Physical and Mental health and Health education are closely related with each other. For any type of achievement sound body and high mental health is the first condition. If a person is not having sound body and high mental health, they cannot concentrate in their work and retain the knowledge received in the environment. Learning is dependent on sound body and high mental health. Health



education was not given much importance earlier and was underestimated. But with raised health awareness, people learned the importance of health education at home, in school, and in communities. Healthy person have a desire to acquire more and more information and skills that will give them better control over their environment. Recent research studies have proved that learning is not the activity of single function but is bound up with the total personality of the learner. The ultimate goal of health education is to promote, maintain and improve individuals' and community health. Health education is aimed at reducing morbidity and mortality due to preventable health problems. Health education which triggers both Physical and Mental health is as essential to the learning process as intelligence. It is an inseparable part of Education.

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## EDUCATION THROUGH SOCIAL MEDIA AMONG SECONDARY SCHOOL STUDENTS- A COMPARATIVE ANALYSIS OF INDIAN AND FOREIGN SCHOOLS

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### Abstract

*Technological integration is widely used in education to enhance the teaching and learning process and achieve pedagogical goals. It is an effective way to support the curriculum and traditional teaching methods. There are various sources of technological integration, including computers, smartphones, tablets, virtual reality tools, software applications, the internet, and social media platforms. Technology can be integrated in different ways, such as substitution, augmentation, modification, and redefining. The Triple E framework, developed in 2011, is used to measure the effectiveness of technology integration in the classroom and focuses on three areas: engagement, enhancement, and extension. We are currently in a technological era where inventions and discoveries are prevalent due to the latest technological advancements worldwide. Social media is one of the most significant technological developments, which greatly impacts youth, especially teenagers. We can observe that the youth are increasingly connected to social media, particularly through online platforms that have emerged and are still emerging. These platforms allow the youth to connect with a world of ideas, thoughts, facts, and possibilities. In recent years, institutions, especially CBSE and ICSE schools, have integrated technology, providing ample opportunities for students to use technology both in daily classroom practices and school administration. However, technology integration can only be successful if it is routine, transparent, and accessible for students, helping them to reach their goals. Social media is a term used to describe the various virtual platforms and networks where students can interact, share, and exchange information and ideas. In this particular study, social media platforms such as Facebook, YouTube, Telegram, Instagram, and WhatsApp are included in the definition of social media.*

**Keywords:** *Social Media, Technology Based Education, Integration of Technology*

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### INTRODUCTION:

Acquiring education is a crucial component for success in various fields of life. It plays a vital role in shaping an individual's life in the right direction. Education refers to the process of acquiring knowledge and skills in different areas in a highly competitive world. Nelson Mandela once said, "Education is the most powerful weapon to change the world." Over the past century, the education process has undergone significant changes. In the 21<sup>st</sup> century, the world has made tremendous technological advancements. With the advent of the internet, individuals' lives have transformed both personally and professionally. The internet has made it easier for people to share information in different forms.

As technology continues to improve, more platforms for internet users to search and share information emerge. Social media is one such credible platform that connects educational institutions. It has become one of the most effective mediums for interaction and information exchange. The platform enhances the education system by introducing new and possible teaching and learning processes to teachers and students in educational institutions.

The COVID-19 pandemic has made it necessary for everyone to shift from offline to online learning. In this scenario, social media has played a significant role in reaching learners in multiple ways simultaneously. Social media is a broad term that varies from person to person. A broader perspective is essential to understand its meaning. Social media refers to an internet-based application that enables us to share or communicate information. Here, we can exchange text, audio, video, or any other type of information. It is extensively used in different sectors, including educational institutions.

Social media has a significant impact on the educational sector, particularly in aspects such as general knowledge, study habits, and mental health, especially among secondary school students. It enables access through various electronic gadgets such as mobile phones, tablets, laptops, and desktops.

### EVOLUTION OF SOCIAL MEDIA

The concept of social media arose much earlier than in the 21<sup>st</sup> century. It all began in the year 1844 on May 24 with a series of electronic dots and dashes tapped out by hand on a telegraphic machine by Samuel Morse. Gradually in 1969, it led to the emergence of the modern origin of today's internet and social media point called ARPANET (Advanced Research Projects Agency Network) created by the United States (Department of Defence) **Error! Reference source not found.** and used by scientists. In 1987 came into being (The National Science Foundation) which is a direct precursor to today's internet with moves robust and nationwide digital network. Later after a decade, in 1997 the first true social media platform was launched.

According to ‘ ‘ The History of Social Networking ‘ ‘ on the technology news site Digital Trends, the internet came up with online communication services such as CompuServe, America Online, and Prodigy. Here digital communication was used through email, bulletin board messaging, and online chatting.

The first social media began with the platform called Six Degree founded by (**Error! Reference source not found.**) This allowed users to set up profiles, connect to family, and friends, and text them. It brought 1 million users to social networking. Later, in the mid-90s various search engines slowly started to emerge. Later in the 20<sup>th</sup> century, a rudimentary platform arose and attracted millions of users called Friendster launched in 2001. Gradually many social media platforms came into existence consecutively. There are more than 100 social media platforms around the world. The following are some of the social media platforms along with the founders, the year of launch, its headquarters, the users, and the purpose of the social media platform accessed in various fields and by different age groups depending on their requirements.

Technology has become an integral part of education in our fast-paced world. By integrating technology into education, we enhance the student learning experience. (**Error! Reference source not found.**) claim that designing user-centered learning environments using new technologies and approaches is important in meeting the requirements of the information age and the changing needs of new generations.

Implementing technology in the classroom creates a pathway for students to engage with their learning objectives. It helps them achieve their individual unique needs within the classroom environment. Many institutions have come up with smart classrooms, which create a virtual teaching and learning platform to improve understanding. Through the use of technology, instructors can foster the students to engage in auditory and visual learning. Simple technologies, such as PowerPoint presentations in the classroom, internet homework assignments, and online grouping, can also be implemented. Social media platforms like WhatsApp, YouTube, Telegram, and Facebook have become an essential part of classroom communication. WhatsApp is now used by all institutions for grouping classes, updating assignments, and tracking attendance. Telegram has been particularly useful during the COVID-19 pandemic for sharing large files of video lessons and notes to help students learn better. Facebook account groups allow students to share their opinions, ideas, and thoughts and showcase their capabilities.

Initially, social media interfaces were used casually by everyone to connect with people and entertain themselves, but gradually, they became a vital part of everyone's daily life and a source of information. Adolescents started using it for both educational and entertainment purposes. With the increasing use of the internet and social media, it has become easier for students to learn at their own

pace. This nature of learning helps in attaining the four C's: critical thinking, communication, collaboration, and creativity, which are essential for achieving academic excellence.

Technology is now its form of literacy based on how often it is used in daily life. Once students transform themselves into independent thinkers and use technology at the middle school level to develop basic life skills, they discover career development benefits at the secondary school level. This helps them communicate better, learn to collaborate, and prove themselves as creative individuals.

However, not all students in a classroom are at the same level of learning, retention, or retrieval of knowledge. Some classrooms may not have access to technology, or students may not be aware of utilizing the devices they have to their full potential. When there is a lack of connectivity with technology, students may fall behind, making them unable to build life skills that ensure success. Seamless integration occurs when students have access to a variety of technologies to build a deeper understanding of the content, rather than just having one computer in the classroom. The use of technology depends on what technology is used, by whom it is used, and how much access one has when using it.

### OPERATIONAL DEFINITIONS OF THE TERMS USED

**Social Media** refers to the means of interaction among students in which they create, share, and /or exchange information and ideas in virtual communities and networks. For the present study, Social Media refers to the following Social Media Platforms such as Facebook, YouTube, Telegram, Instagram, WhatsApp etc

**The Secondary School** refers to a school or a school of the corresponding grade, ranking between a primary school and a college. In the present study secondary school refers to the 9<sup>th</sup> to 12<sup>th</sup> standard class recognized by the Central Board of Secondary Education (**Error! Reference source not found.**) and the Indian Certificate of Secondary Education (**Error! Reference source not found.**).

**Integration of technology** refers to in education simply refers to the use of technology to enhance the student learning experience. Utilizing different types of technology in the classroom, including a virtual classroom, creates learners who are actively engaged with learning objectives.

### SOCIAL MEDIA USAGE SCENARIO IN FOREIGN EDUCATION SCHOOL CONTEXT:

The research at an international level is summarized below based on themes identified from those studies.

- **Students** Born into a world of computing, the present and future generations of students are digital natives. Social media support new approaches to their learning, relying on voluntary and peer-to-peer communication using various devices and software. Understanding the modes and drivers of their participation can provide insights into how universities and instructors can be socially ready for this change (Mikum et al., 2018). For example, individual learning styles (i.e. participatory, collaborative, or independent) may affect the adoption of social media technologies for learning purposes (Balakrishnan & Gan, 2016).

Social network sites allow students to connect to formal and informal learning settings. It facilitates connection among similar-minded people and informal knowledge exchange among students for educational purposes. Studies revealed that generally, freshers use social network sites for social interaction and integration to seek contact with other students regarding orientation. Communication about social issues on social network sites goes hand in hand with study-related knowledge exchange (Wodzicki et al., 2012).

- **Teachers** Similar to students, teachers also use social media for personal and educational reasons. The use of social media and other internet applications for discovering educational resources is gradually increasing (Hunter & Hall, 2018). Several studies have been conducted on teachers to understand their perception of social media as an academic tool to aid classroom teaching or

disseminate research studies (Rochez, 2015). Studies in developing countries have been conducted to understand the value and use of social media as an effective teaching and learning tool in higher education (Sobaih et al., 2016).

- **Technology** Massive open online courses (MOOCs) have been a topic of much debate for their potential to transform higher education by opening access to a large mass of people. Massive Open Online Courses (MOOCs) potentially challenge the traditional dominance of brick-and-mortar institutions as providers of quality higher education. While students may benefit from reduced education costs and global access to exclusive institution courses and instructors, the benefits for institutions are often vague because of the financial overhead required to develop and deliver content suitable for mass consumption. (Burd et al., 2015). On the other hand, despite attracting a high volume of learner cohorts, controversies surrounding quality in learning and teaching provision abound in MOOCs. Impressive headline figures on MOOC enrolments often contrast with extremely low course completion rates (Freitas et al., 2015). Research work revealed that lecturers in transnational higher education perceived MOOCs as unsuitable for accredited prior learning. However, they believed that MOOCs might be a supplementary resource for student learning and professional development (Annabi & Wilkins, 2016). Popular MOOCs have been found to have problem-centric learning with clear expositions, instructor accessibility and passion, active learning, peer interaction, and helpful course resources (Hew, 2014).

- **Pedagogy** Many researchers have focused on MOOC because of its emerging importance in the fast dissemination of knowledge among a large number of people. Massive Open Online Courses (MOOCs) offer high-quality, free courses to anyone with an Internet connection. Course materials and learning experiences have been found to affect MOOC courses directly, positively, and significantly, which in turn significantly impact students' use of social network sites (Karajeh et al., 2018). However, as stated earlier, a lack of student motivation to learn generally plays a significant role in student attrition and dropouts in MOOCs. Combining a plethora of learning strategies in a curriculum that integrates MOOC affects the sense of academic achievement in some students. Social learning strategies and self-regulated learning have been found to assist in promoting learning in MOOCs (Magen-Nagar & Cohen, 2017).

#### **SOCIAL MEDIA USAGE SCENARIO IN INDIAN EDUCATION SCHOOL CONTEXT:**

The research of the Indian level is summarized below based on themes identified from those studies.

- **Students:** As India continues to experiment with more creative methods for teaching and learning, Bharucha (2018) pointed out that the country is at an embryonic stage compared to advanced nations. A digital divide separates students between generations, as well as within the same generation. Students are far from reaping the full benefit that technology offers to them. Bharucha (2018) emphasized that the students' experience should be paramount when incorporating social media into higher education. This research focused on the use of social media in business education. He also deliberated on the flip side of learning with social media. The study points to the fact that the basic challenge lies in aligning social media with the curriculum.

- **Pedagogy:** A study conducted by Madan et al. (2016) predicts that social networking on Facebook and higher education can work in parallel. The case-based research study conducted by Saurabh and Sairam (2013) provides information to academicians on enhancing the quality of education by using social media. Nadar and Kamatchi (2017) presented a hybrid research model by considering different factors of ICT education using social media to facilitate collaborative learning in a course of algebraic maths.

- **Technology:** Jena (2018) developed a model to automatically detect students' learning styles based on their personal, academic, and social media data. This research suggested that by capturing and analysing appropriate data from social media to identify students' learning styles teachers, educators,



and administrators can work together with students for the overall improvement of their learning outcomes.

#### AUTHORS' OPINION ON ABOVE THEMES:

Due to the changing scenario, education must be imbibed through social media which has made the teaching-learning activity very easy and more comprehensive, compared to the traditional one. Moreover, by these users can utilize the content where & when with accurate evidence. It nourishes teacher's competency so they can easily reach the learner, which helps them to improve their academic achievement. It is mandatory nowadays to tutor & learners must be aware of its effective access.



#### DIFFERENT WAYS TO IMPLEMENT TECHNOLOGY IN EDUCATION TO BENEFIT THE STUDENTS

- **Basic technological integration that can be used in the classroom:**
  - Writing an essay in a Word document
  - PowerPoint presentation
  - Use of digital textbooks
  - Use of websites
  - Engaging in video conference
  - Engaging in social media platforms
  - Use of digital whiteboards
- **Creating digital literacy:** it is important to have a digital literacy skill to use the technology better which can be done through online learning and yet be focused on the academics.
- **STEM education through technology:** this helps in developing the four C's which are very important 21st-century skills.
- **Communication Skills:** communication has become a core part of our social life, students practice their communication skills through social media platforms like WhatsApp, YouTube, Telegram, Facebook, Instagram, and Snapchat. This is the place where students especially adolescents tend to spend more screentime in exchange of thoughts, sharing ideas, photos videos, etc.
- **Internet homework assignments:** posting the topics on social media platforms helps the students to work independently and keep them engaged and organized in their work.
- **Grading system:** Grading the student's performances online helps the parents and student's strengths and areas of improvement and helps the teacher to keep track of the student's record.

- **Classroom tablet:** helps the teacher to have one-to-one instruction allowing the students to work at their own pace with their assigned work.
- **Different learning styles:** In any activity assigned to the students, we cannot accept the learning at the same speed, and similarities, and individual differences can be seen. Implementation of the technology helps them to cope with their learning styles.
- **Other resources:** apart from the classroom teaching and textbook, students with the help of computers and smartphones access outside the curriculum to learn about the people places, and their fields of interest, also the textbook provides online sources that provide extra pictures, videos, and activities which interest the students.
- **Job readiness:** in the present world job profiles are specified with the basic technological skills, the learning of technological skills and having an open eye and mind on the social media platforms at the secondary school level help them in choosing their career and leverage their knowledge of the digital world to solving the obstacles.

### **CHALLENGES TO FACE IN INCORPORATING SOCIAL MEDIA AS A TECHNOLOGICAL INTEGRATION IN EDUCATION**

Social media technologies may be an effective way to incorporate into the teaching-learning process which enhances communication, synchronously delivers the content, user-friendly, free of cost, receiving feedback instantly with ease of connectivity allowing the flexibility for distance learning and with space constraints and time reduction, there are always challenges that arise such as the socio-economic status, students who are unable to access the social media tools and the connectivity. While using the social media platforms there are chances of diversion due to the influence of the bloggers and the influencers. Distraction is always the nature of the human beings. Limitations and restrictions are very much needed while accessing the internet in and out of the classroom.

### **INITIATIVES THAT CAN BE TAKEN BY THE INSTITUTION TO EXPAND THE ACCESS TO TECHNOLOGY FOR THE STUDENTS**

- One-to-one access to technology
- Dominate the opportunities for the students
- Pre learning assignment for the students
- Robust internet connection

### **TECHNICAL ADVANTAGES OF SOCIAL MEDIA IN EDUCATION TODAY:**

- **Interactivity and academic involvement:**

The past few decades witnessed the rise of social media and its credibility as a rich source of information. It is more like a beacon of change that globalizes one's presence as an independent contributor. It is through social media that teachers foster technological utility and students' involvement in studies. A good sense of collaboration in the classroom enhances the overall impact of the lecture. The increased level of involvement takes interpersonal communication to a new level.

- **Propagation:**

Effective interchange of ideas, information, and links has become easier than ever before. Students spend a crucial part of their academic curriculum with their classmates. Staying connected through handheld devices prevents the mismanagement of information. Thanks to the augmented opportunities of remote sharing.

- **Universal presence:**

Most frontrunners in the education world stay connected to their academic audience through modern-day channels. Their definition may include YouTube, Twitter, Facebook, and LinkedIn. These channels apply themselves earnestly to sensitize the educational details and updates.





## LIFE SKILLS DEVELOPMENT THROUGH YOGA EDUCATION AT THE SCHOOL LEVEL

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### Abstract

*Yoga, which is deeply entrenched in Indian culture, has gained global recognition for its numerous advantages that include physical, mental, and spiritual well-being. This research investigates the tremendous influence of incorporating yoga into India's educational fabric, notably in cultivating vital life skills among schoolchildren. It investigates the historical relevance of yoga in Indian education, investigates the life skills that yoga fosters, and gives empirical evidence supporting its success in India. Despite the hurdles, the article emphasizes the importance of incorporating yoga into the Indian education system because it not only improves academic performance but also provides students with important life skills, allowing them to thrive in an increasingly complex environment. Yoga education is proving to be a potent catalyst for the development of life skills among Indian schoolchildren. Yoga opens the way for a more holistic and balanced approach to education by addressing physical, mental, and emotional well-being. Moving forward, it is critical that yoga become an important part of the Indian educational environment, cultivating not only academic achievement but also the necessary life skills that will enable children to survive in an increasingly complex world.*

**Keywords:** Life Skills, Education, Yoga, School level, Development, Health.

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### Introduction:

Yoga, an ancient practice with profound roots in Indian culture, has earned worldwide recognition for its numerous physical, mental, and spiritual benefits. In recent years, there has been a rising recognition of the value of yoga in improving life skills, particularly among Indian schoolchildren. This research investigates the tremendous influence of implementing yoga into the Indian education system as a means of cultivating key life skills in schoolchildren.

### Yoga

Yoga, a phrase that has crossed cultural boundaries and become a global phenomenon, is extremely important in human life. It is a holistic approach to wellbeing and self-realization, not only a physical discipline. The purpose of this study is to investigate the meaning and definition of yoga, as well as to shed light on its multifarious value in our lives.

### Meaning and Definition of Yoga:

**Historical Roots:** Yoga has been practiced for over 5,000 years and has its origins in ancient India. The term "yoga" comes from the Sanskrit word "yuj," which means "to unite or join." Yoga is fundamentally about uniting the individual ego (atman) with universal consciousness (Brahman).

**Philosophical Perspective:** Yoga is a spiritual and philosophical discipline, according to philosophy. It includes several paths, such as Raja Yoga, Karma Yoga, Bhakti Yoga, and Jnana Yoga. These routes provide several avenues for individuals to achieve self-realization and oneness with the divine.

**Physical and Mental Practices:** Yoga is comprised of a variety of physical postures (asanas), breathing exercises (pranayama), meditation techniques, and ethical precepts (yamas and niyamas). These activities aim to improve physical health, mental clarity, and emotional well-being.

### Importance of Yoga:

- **Physical Health:** Yoga improves physical health by increasing flexibility, strength, and balance. It also aids in the prevention and management of a variety of health ailments, including back pain, arthritis, and cardiovascular problems (Innes & Selfe, 2016).
- **Mental and Emotional Well-being:** Yoga relaxes the mind and decreases tension and anxiety. Regular yoga meditation and mindfulness practice improves emotional resilience and mental clarity (Khalsa et al., 2015).

- **Self-Realization and Spirituality:** Yoga is fundamentally a spiritual activity that promotes self-realization and connection with a higher awareness. It allows people to explore their inner selves and find their actual essence.
- **Holistic Wellness:** Yoga addresses the physical, mental, and emotional components of health in a holistic manner. It promotes a balanced and harmonious way of life that promotes general well-being (Raub, 2002).
- **Stress Reduction and Relaxation:** Yoga is a powerful method for stress reduction and relaxation. Deep breathing and meditation techniques, for example, produce a sensation of calm and inner peace (Cramer et al., 2016).

Yoga is a sophisticated technique for reaching physical, mental, and spiritual well-being that is more than just a collection of physical exercises. It is rooted in ancient philosophy and remains relevant in our current, fast-paced environment. Yoga offers a road to self-realization, holistic wellness, and a greater knowledge of our place in the universe by connecting the body, mind, and spirit.

#### **Yoga and Its Relevance in Indian Education:**

Yoga, an ancient discipline with strong roots in Indian culture, has transcended time and borders to become a worldwide sensation. Yoga is revered not only as a kind of physical exercise but also as a holistic system for personal and spiritual development in India, its birthplace. This paper investigates the role of yoga in Indian education, emphasizing its historical significance, philosophical roots, and practical benefits for students.

**Historical Importance:** Yoga's historical roots can be traced back over 5,000 years in India. It is mentioned in ancient books such as the Vedas and Upanishads, highlighting its significance in bringing the body, mind, and spirit into balance. In works such as the Yoga Sutras, Indian sages and philosophers such as Patanjali codified and systematized the practice of yoga, offering a formal framework for its implementation.

**Philosophical Foundations:** At its heart, yoga is a philosophical and spiritual practice that provides numerous paths to self-realization and enlightenment. Raja Yoga: The road of meditation and self-control is one of these paths.

Karma Yoga is the path of selfless action and service.

Bhakti Yoga is a devotional and loving path.

Jnana Yoga is the path of wisdom and knowledge.

Yoga's philosophical components provide a comprehensive framework for nourishing individuals' moral, emotional, and spiritual development in addition to physical wellness.

Students will benefit from the following practical advantages: Yoga asanas (postures) improve physical health by increasing flexibility, strength, and balance. It also helps to address common health issues among students, such as back pain and bad posture.

**Stress Reduction:** Yoga practice incorporates stress management, relaxation, and mental well-being strategies. These qualities are invaluable for students in a competitive academic setting (Sharma et al., 2020).

**Concentration and Focus:** Yoga improves mental clarity and concentration through meditation and mindfulness practices. These abilities are required for effective problem-solving and learning (Bhattacharya, 2017).

**Holistic Development:** Yoga promotes comprehensive growth by addressing not just physical health but also emotional and ethical issues in a student's life. The yamas and niyamas, yoga's ethical precepts, promote moral values and a disciplined attitude to life.

**Cultural Preservation:** Incorporating yoga into Indian education helps to maintain and celebrate India's rich cultural legacy. It helps children recognize their cultural identity by connecting them with their roots.

Yoga's importance in Indian education goes beyond physical fitness. It takes a holistic approach to education, encouraging students' moral, emotional, and spiritual development as well as academic brilliance. India has the opportunity to build well-rounded individuals who can negotiate life's obstacles with composure, compassion, and a deep awareness of their position in the world by incorporating yoga into the curriculum.

Yoga, often known as a holistic science, has been a part of Indian traditions for ages. Physical postures (asanas), controlled breathing (pranayama), meditation, and ethical ideals are all part of it. Yoga is a helpful tool for holistic development in the context of education, addressing the physical, mental, and emotional elements of a child's maturation (Tiwari, 2019).

### **Life Skills**

Life skills are fundamental qualities that allow people to successfully handle the challenges of everyday life. Acquiring these skills is critical for schoolchildren because they lay the groundwork for personal development and future success. This paper investigates the concept and meaning of life skills, highlighting its significance in the context of schoolchildren's education.

### **Meaning and Definition of Life Skills:**

Life skills are a set of cognitive, social, emotional, and interpersonal abilities that enable people to deal with varied life events effectively. They are the talents that allow people to make informed decisions, communicate effectively, and control their emotions, among other things.

Life skills are defined by the World Health Organization (WHO) as "abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life." These abilities improve an individual's ability to live a healthy and productive life, making them essential for schoolchildren as they enter adulthood.

### **Importance of Life Skills for School Children:**

- **Personal growth:** Life skills are the foundation of personal growth. They help children define goals, make decisions, and develop a strong sense of self (Lerner et al., 2013).
- **Improved Communication:** Effective communication is an essential life skill. It enables youngsters to communicate accurately, actively listen, and form strong relationships with peers and adults (Hall, 2017).
- **Decision-Making and Problem-Solving:** Critical thinking and problem-solving abilities assist youngsters to make informed decisions and effectively face obstacles (Hess, 2015).
- **Emotional Regulation:** Emotional regulation is an important part of life skills. It assists youngsters in coping with stress, developing resilience, and maintaining mental well-being (Goleman, 1995).
- **Healthy Lifestyle Choices:** Life skills include health-related abilities such as nutrition, exercise, and personal hygiene. These abilities encourage a healthy lifestyle and lower the risk of chronic diseases (WHO, 2003).

Life skills are essential for students as they prepare for the difficulties and opportunities of life. These abilities enable children to grow as individuals, communicate successfully, make educated decisions, regulate emotions, and live healthier lives. Recognizing the value of life skills in school is critical for developing well-rounded individuals capable of thriving in a complicated and ever-changing world.

### **Life Skills Nurtured through Yoga:**

Yoga is well-known for its comprehensive approach to well-being, which is profoundly founded in Indian culture and philosophy. Yoga, in addition to physical postures and breath control, is a strong tool for developing important life skills. This article investigates the life skills created by yoga, notably in India, and emphasizes yoga's tremendous impact on personal growth and development.

**Emotional Intelligence:** Yoga improves self-awareness, emotional regulation, and empathy. Individuals become more responsive to their emotions as a result of connecting with their inner selves (Choudhury & Gupta, 2018). This increased emotional awareness is essential for developing healthy relationships and communicating effectively.

**Stress Management:** In the fast-paced world of India, stress affects people of all ages. Yoga provides practitioners with stress-reduction strategies such as deep breathing methods and mindfulness practices (Sharma et al., 2020). These abilities enable people to face life's obstacles with fortitude and poise.

**Patience and Discipline:** Patience and discipline are required for learning and mastering yoga postures. Yoga's continuous progression encourages discipline and perseverance (Sharma & Singh, 2016). These characteristics extend to other spheres of life, such as academics and personal pursuits.

**Physical Health:** Yoga improves physical health by increasing flexibility, strength, and balance. It addresses typical physical difficulties that people in India face, such as poor posture and musculoskeletal discomfort (Yadav & Yadav, 2019). A healthy body improves overall well-being and self-esteem.

**Concentration and Focus:** Yoga improves mental clarity and focus through meditation and mindfulness techniques (Bhattacharya, 2017). These abilities are necessary for academic performance, problem solving, and good decision making, all of which are highly prized in Indian society.

**Conflict Resolution:** Yoga promotes nonviolence and peaceful harmony. Conflict resolution is taught to practitioners with compassion and empathy. This promotes concord and decreases incidences of hostility (Raub, 2002). Yoga's conflict resolution concepts help to a more peaceful and inclusive society in India.

**Holistic wellbeing:** Yoga approaches wellbeing holistically, addressing physical, mental, and emotional components of health. The practice promotes a balanced and peaceful way of living, which promotes total well-being (Raub, 2002). This comprehensive approach is consistent with traditional Indian values of mind-body-spirit balance.

**Cultural Appreciation:** Yoga is profoundly steeped in Indian culture and traditions. Individuals who practice yoga connect with their cultural background and get a respect for India's rich history and philosophy. This cultural link develops a sense of belonging and identity.

Yoga is a sophisticated method for acquiring fundamental life skills, not just a physical practice. Yoga offers a holistic approach to cultivating emotional intelligence, stress management, patience, and physical well-being in India, where the constraints of modern life are enormous. These life skills not only help with personal development, but they also contribute to a more balanced and harmonious society in India.

#### **Effectiveness of Yoga Education Programs:**

Yoga, which is deeply established in Indian culture and history, has seen a recent rebirth as a method for fostering holistic well-being. Yoga education programs have been introduced at a number of educational institutions in India. This research investigates the success of such initiatives in India, focusing on empirical evidence from Indian studies.

#### **Empirical Evidence on Yoga Education Programs in India:**

Numerous research have been undertaken to analyze the impact of yoga on the development of life skills in Indian schoolchildren. According to a study conducted by the National Institute of Yoga,



students who participated in regular yoga sessions improved their concentration, emotional management, and physical health (NIY, 2020). Similarly, a study published in the Journal of Yoga Education found that students who practiced yoga on a regular basis saw a significant reduction in stress (Jain & Kapoor, 2018).

**Improved Academic Performance:** Telles and Singh (2013) investigated the impact of yoga on academic performance among Indian school pupils. Students who participated in regular yoga sessions indicated enhanced concentration, memory, and overall academic performance, according to the findings.

**Stress Reduction:** Sharma et al. (2019) investigated the effectiveness of yoga in lowering stress among college students in India. The results showed that participants who participated in a yoga intervention program had significantly lower stress levels and enhanced emotional well-being.

**Enhanced Emotional Resilience:** Choudhury and Gupta (2018) investigated the impact of yoga on emotional intelligence among Indian schoolchildren. The study found that yoga practice improves emotional awareness, regulation, and empathy, all of which are important components of emotional intelligence.

**Physical Health Advantages:** Yadav and Yadav (2019) did research on the function of yoga in boosting physical health among Indian schoolchildren. The study found that yoga asanas enhanced individuals' physical fitness, posture, and general health.

**Enhanced Holistic Development:** Sharma and Singh (2016) studied the benefits of yoga on self-discipline and overall personal growth in Indian students. Yoga, according to the findings, promoted self-discipline and holistic development by instilling ideals and a balanced approach to life.

Empirical research undertaken in India demonstrates the usefulness of yoga education programs. Positive effects from these programs include improved academic achievement, stress reduction, increased emotional intelligence, physical health advantages, and holistic development. Yoga's incorporation into the Indian educational system provides students with vital tools for personal growth, well-being, and success.

**Challenges and Future Directions:** While the benefits of yoga education in India are obvious, there are limitations, such as the lack of skilled yoga instructors and the incorporation of yoga into the curriculum. To overcome these challenges and guarantee that yoga becomes a fundamental component of the school system, policymakers, educators, and parents must collaborate.

**Conclusion:** Yoga education is proving to be a potent catalyst for the development of life skills among Indian schoolchildren. Yoga opens the way for a more holistic and balanced approach to education by addressing physical, mental, and emotional well-being. Moving forward, it is critical that yoga become an important part of the Indian educational environment, cultivating not only academic achievement but also the necessary life skills that will enable children to survive in an increasingly complex world.

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## RECENT TRENDS AND ROLE OF PHYSICAL EDUCATION AND SPORTS

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### *Abstract*

*Access to physical education and sport, which are crucial for a person's whole personality development, is a fundamental right of every person. Both inside the school system and in other spheres of social life, the freedom to develop one's physical, intellectual, and moral faculties through physical education and sport must be guaranteed. Physical education is "education through movement" within the context of comprehensive education, which includes both mental and physical education, so research and teaching in this area must consider certain other interrelated aspects of its subject. It is now considered to be an integral aspect of education, with a focus placed on educational experience rather than purely physical development. The paper is based on descriptive method and followed the secondary sources to reach the objectives of the paper.*

**Key Words:-** *Physical Education, Sports, India*

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### **Introduction:**

The proverb "health is wealth" emphasizes the importance of maintaining good health for the general well of both individuals and societies. A common adage is "All work and no play makes Jack a dull boy." The necessity of engaging in regular physical activity is actually the focus of this. We prefer to choose nutritious foods over stringent workout routines and healthy eating habits because our conception of health is so flawed. The current idea of physical education has increased one's awareness of the world. The idea of physical education is currently one of the most crucial elements in cross-cultural integration. A way for international understandings to be made is through sports, which have their own language. The development of amicable ties between the citizens of different countries can be facilitated by a variety of sports. A subset of recreational and professional activities that incorporates both physical exercise and competition, according to Simon Jenkins, is a sport.

The New Encyclopedia Britannica defines sports and games as "competitive or recreational activities that require some level of physical strength or skill. When games were first invented, pastimes like fishing, shooting, and hunting were considered to be organized athletic contests that were played by teams or people in accordance with set rules.

### **Methodology:**

The paper is based on descriptive method and followed the secondary sources to reach the objectives of the paper.

### **UNESCO's 1978 International Charter of Physical Education and Sports.**

Physical education acts as a resource for the nation, aids in the development of the educational assessment system, and encourages the growth of physical education globally. Sports and physical education are essential components of education in every nation at every stage of history. As a result, each nation should attempt to establish a framework for an action plan to promote and improve physical education and sports. Contrarily, sports are being gravely undervalued inside the educational system while seeing a remarkable surge in the media spotlight across the globe, especially in India. When comparing the present to earlier times, we can see a decline in the importance of physical education in the classroom. In order to develop a discipline-wide approach to physical education and sports, it is necessary to overcome obstacles and fight for better infrastructure and structure.

**Situation of Physical Education in India:** The government of India made numerous efforts to remedy the deteriorating state of physical education after India attained independence in 1947. The creation of a committee with the name "Tara Chand Committee" was a significant step in this

approach. The establishment of this committee occurred in 1948. This group provided a number of proposals to enhance the state of physical education in the nation. In 1948, the Dr. S. RadhaKrishanan Committee on School Education was also established. In 1950, a board known as the Central Advisory Board of Physical Education and Recreation was established to provide advice to the government on different physical education-related topics. The need of requiring physical education in both schools and universities was emphasized by the Kothari Commission on Education in 1965. The Government of India launched some unique types of programs to develop athletes in a variety of competitions and sports. The following other significant committees and boards were appointed to promote physical education and sports:

- All India Council of Sports (1954)
- National Institute of Physical Education renamed as Laxmibai National College of Physical Education, Gwalior(1957)
- National Institute of Sports, Patiala (1961)
- All India Sports Congress (1962)
- National Sports Policy (1980)
- Ministry of Sports and Youth Affairs (1982)
- National Sports Policy (1984)
- National Sports (Development) Bill (2011)

Through recess, designated classroom physical activity time, and other opportunities, students should perform more vigorous or moderate-intensity physical activity throughout the course of the day. Physical activity should be a priority for all schools, especially if there is a chance to increase academic attainment, because it enhances both health and learning. To teach health courses, physical education teachers must currently be certified in several states. Physical education and health are frequently offered as a single credential in colleges and universities. Beginning in the intermediate level, this push for health education includes courses on bullying, self-esteem, managing stress, and managing rage. Physical education can benefit from incorporating local indigenous knowledge to create a variety of memorable experiences and a method to learn about other cultures. Students can be introduced to a variety of ideas, such as holistic learning and the medicine wheel, by incorporating traditional knowledge from various indigenous tribes.

It could be centered on participating in age-old pastimes, experiencing a place or mood while outdoors, or outdoor environmental education. These types of lessons are simple to incorporate into other curriculum areas and provide an opportunity for Aboriginal children to integrate their culture into the local school community. Studies on how physical education can enhance academic achievement have been conducted. Sport Festivals are occasionally conducted after exams during the vacuum period. Students can now compete against one another by bringing their own class flag. Some colleges, like ITB, have PE as part of the freshman curriculum. Numerous sports are played, including basketball, volleyball, cricket, tennis, badminton, khokho, and kabaddi. There are several physical exercises taught. Trends in school sports and physical education Recently, trends in physical education have evolved to include a wider range of activities besides traditional sports. Early exposure to sports like Frisbee, walking or hiking, or bowling can help students form healthy exercise routines that will last into adulthood.

**Physical Education and Sports Courses Presented in India:** It is interesting to note that the oldest professional courses in physical education are the one-year Certificate in Physical Education and Diploma (now Bachelor's degree) in Physical Education. This is because physical education teacher education programs have evolved over the years in the nation. A step towards the advancement of physical education as a field of study and a profession on par with others like medicine, engineering,

technology, law, etc. was made with the introduction of the Master's Degree in Physical Education in 1963–1964. Since then, it has gone by a number of names, including the Master of Education (Physical Education), a one-year program offered by the Punjab Government College of Physical Education in Patiala, a division of the Punjabi University (later, other institutions introduced it and called it M.P.Ed.), and the Master of Physical Education, a two-year program offered by the Laxmibai National College of Physical Education in Gwalior (now the Laxmibai National University). The National Council of Teachers of Education has standardized the postgraduate degree in physical education in terms of its course structure, nomenclature, duration, etc., and directed all concerned institutions to fall in line or face derision. This was done in order to bring about uniformity, as well as to remove the misconception from people's minds as well as to make it easier for the administration to make appointments in educational institutions without any hassle about basic qualifications. Finally, the program has a two-year duration and is called as the Master of Physical Education (M.P.Ed.) with effect from 2002. A M.P.Ed. Course is run on yearly examination basis but several university departments of physical education and, even some colleges, have switched over to semester system as per general policy of the University Grant Commission on the structure of post-graduate courses.

**Physical Education in Post Globalization Period :** The unique nature and significance of physical education and sports to education remain a continuing cause of concern, despite attempts by member states to promote and expand them with international collaboration. Given the social significance and extensive media coverage of sports, the results of Physical Education and Sports have been worrying (especially inside the educational system). Its effects can be observed in the national movement in the public and commercial systems of physical education and sport toward high-performance and media-friendly sports. An important illustration of the need for a clear division between the Ministries of Education and Youth Affairs and Sports. The Physical Education World Summit was held in Berlin to discuss the status of physical education and sports. This project was supported by a study outlining the increasingly precarious state of physical education and sports in many nations. A global comparative study that gathered information and literature from approximately 120 nations produced the following key conclusions.

1. Less time is now allotted for physical education in educational programs.
2. Budget cuts and insufficient staff, material, and financial resources.
3. The subject has a poor social status.
4. Teachers in many nations lack the necessary training.
5. Current physical education regulations are not correctly followed.

**Importance of Physical Education In daily life:** There are many issues we are dealing with, and these issues can be resolved with the aid of physical exercises. According to Sharma et al., physical education is important because: Physical activity aids in the development of a child's innate intellectual abilities of many different kinds. Physical education can therefore aid in the intellectual development of kids. Players gain experience working in teams with the finest coordination and cooperation. Participating in physical activities can help people develop attributes like teamwork, loyalty, and strong bonds. These traits contribute to people developing strong moral character.

A variety of physical activities aid in the development of the body's organic system and physiological processes. They also increase a person's capacity to withstand fatigue, stay active, and work well. It fosters a sense of global fraternity and integration among players and their home countries. Participants develop emotional maturity by engaging in a variety of physical activities. The muscular and neural systems of the human body must be kept healthy and functioning properly in order to maintain the body's overall state. If there is some sort of coordination between these systems, they will operate properly. Participants become good decision makers and mentally developed only by taking part in various sports. Physical education brings leadership qualities among players

**Discussion and suggestions:** In India, education and research in physical education and sports are expanding quickly. The results, however, are unsatisfactory when we give little thought to our standards of instruction and research on a global scale. Research is being done in these areas as well as education is being given in sports institutions with a lot of potential. As can be seen, sports have come a long way to become more respected in Indian society. Government and non-government organizations have put a lot of effort into broadening the country's base of sports, but there is still much to be done in this area. People are drawn to games due to numerous incentives provided on various stages in the form of monetary awards, job reservations under the sports quota, etc. Physical activity can aid in children's intellectual development, according to a long-held belief that "a healthy body leads to a healthy mind." According to research, PES can improve self-esteem, mood, mental alertness, and blood flow to the brain, all of which can improve academic achievement.

**Conclusion:** Government and the general public must restructure our curricula, the sports scientists must have good research facilities, and the design and effective execution of policies are significant issues to think about. It is necessary to fix every flaw at every level. In summary, we can say that there is much work to be done in India in the areas of teaching and research in physical education and sports. The general populace is aware of the value of good health. Even so, it's possible that the general population is unaware of or underappreciates the value of physical education. The relationship between effective physical education and individual health is frequently distorted by opinions about prior experiences with physical education in school. Health and physical education go hand in hand, and this is key.

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## NEW TRENDS IN PHYSICAL EDUCATION

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### *Abstract*

*The aim of this paper is to identify the current trends and challenges in physical education and sports and based on these current challenges, future trends and challenges would be discussed. There are various factors which are diminishing the interest of students in physical education activities. Although the physical education is being taught as a part of curriculum in all the schools but lack of adequate time and trained teachers, good facilities are responsible for little interest in this field. The future challenges to make this field interesting involves an adequate curriculum, sufficient funds allotment for holding various competitions and role of technology to create awareness about the importance of physical activities and sports in our daily life. All these issues have been discussed in the present study.*

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### **Introduction**

The importance of physical education has never been emphasised more than it is today. It is widely recognised that physical education and sports is relevant and important in developing an active and healthy lifestyle and the solution to rising obesity rates worldwide. Although in most countries, physical education is part of the school curriculum, lessons are not given, thus leading to a reduced experience of physical activity for children and youth. The practice of a physically active lifestyle in combination with healthy nutrition, however, needs to be started in early childhood. Therefore, ensuring that all children engage in regular physical activity is crucial, and the schools are the only place where all children can be reached. Quality Physical Education is the most effective and inclusive means of providing all children, whatever their ability/disability, sex, age, cultural, race/ethnicity, religious or social background, with the skills, attitudes, values, knowledge and understanding for lifelong participation in physical activity and sport and is the only school subject whose primary focus is on the body, physical activity, physical development and health. The present study will identify the current trends, issues and challenges in PE and sports based on which future challenges will be addressed.

### **Current trends in school physical education and sports**

Physical education trends have developed recently to incorporate a greater variety of activities besides typical sports. Introducing students to activities like bowling, walking or hiking, or Frisbee at an early age can help students develop good activity habits that will carry over into adulthood. Some teachers have even begun to incorporate stress-reduction techniques such as yoga, deep-breathing and tai chi. Tai chi, an ancient martial arts form focused on slow meditative movements is a relaxation activity with many benefits for students. Studies have shown that tai chi enhances muscular strength and endurance, cardiovascular endurance, and provides many other physical benefits. It also provides psychological benefits such as improving general mental health, concentration, awareness and positive mood. It can be taught to any age student with little or no equipment making it ideal for mixed ability and age classes. Tai chi can easily be incorporated into a holistic learning body and mind unit. Teaching non-traditional sports to students may also provide the necessary motivation for students to increase their activity, and can help students learn about different cultures. While teaching students sports and movement skills, P.E. teachers are now incorporating short health and nutrition lessons into the curriculum. This is more prevalent at the elementary school level, where students do not have a specific Health class. Recently most elementary schools have specific health classes for students as well as physical education class. With the recent outbreaks of diseases such as swine flu,



school districts are making it mandatory for students to learn about practicing good hygiene along with other health topics. Today many states require Physical Education teachers to be certified to teach Health courses. Many colleges and Universities offer both Physical Education and Health as one certification. This push towards health education is beginning in the intermediate level, including lessons on bullying, self-esteem and stress and anger management.

### **Future for Physical Education Physical education**

should be individualized. One size does not fit all. This is extremely challenging, but with creative tools like Physical Best, Fitness for Life, and Fitness gram, physical educators are becoming more like personal trainers than coaches. We should focus on activity and nutrition leading to good health and wellness. If we can't do everything, we need to at least do this. Therefore, while playing age-appropriate games is important, our emphasis needs to be on building lifelong skills and attitudes. Being active and eating well is vital at any age, but it becomes a matter of life or death as we get older. We can't put fitness in the bank and use it later; we have to keep active and eating well to maintain the benefits. We also need to emphasize participation and stop the trend toward becoming a nation of spectators, with a few highly skilled athletes playing and everyone else watching. All students should be provided opportunities to both cooperate and compete in physical activities. Both are important life skills, and both can be fun. Our students should graduate with an understanding of the key principles of fitness and nutrition. They should be informed consumers of activity, nutrition, and wellness and be ready to assume self-responsibility for their own health through prevention.

### **Role of technology**

Children born in the early part of this millennium are known as the "iGeneration" (Rosen, 2010, 2011). This group of individuals has access to forms of technology unheard of just two decades ago. They have never known life without wireless high-speed internet connections, cellular phones with data connections, texting or video gaming consoles. Most of them are very familiar with technology interfaces, using apps and social media on a regular basis. The implications of such dramatic changes in access to technology among children and youth should be self-evident in all learning areas. Applications in health and physical education pedagogy are available and can be applied to enrich and enhance curricular offerings in most school settings. Numerous technological applications focused on promoting physical activity and fitness are available and easily accessible. However, application of various technologies will require new student and teacher competencies and practices. Students will be required to demonstrate competency in basic motor skills and also competence in using technology. In addition, such technology will enable individuals to learn in a student centered self-directed fashion; students will be required to gain greater time management skills in order to enable appropriate time on a task. Teachers will also be required to gain knowledge of contemporary, technology-based instructional strategies. Furthermore, teachers will need to gain a greater awareness of teaching strategies that support anytime, anywhere learning and leverage technological applications. Technology holds promise for the way that students learn and also for the way in which teachers teach. Physical and health educators are challenged to become more responsive to a technology-driven environment that provides enhanced opportunities for learners well beyond the walls of the traditional classroom setting. Technology thus can play vital role in generating the interest in physical education and sports activities.

### **Conclusion**

The current practices and present curriculum need to be modified to generate interest of students in physical education and sports activities. The future challenges will mainly be the appropriate curriculum to be made and followed and to make available adequate funds from various organisations in order to support the needy but intelligent children so that they can only focus on their game without worrying about the funds. The technology will also play an important role in expanding

and creating the interest in physical activities. The importance of physical education and sports activities are being identified in today's world and efforts are being made to improve the situations so that more and more talent can be recognised.

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## COMBINED EFFECTS OF SWISS BALL TRAINING AND YOGIC TRAINING ON SELECTED PHYSICAL PHYSIOLOGICAL AND SKILL PERFORMANCE VARIABLES AMONG SCHOOL HANDBALL PLAYERS

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### Abstract

*Most of the hand ball players now days adopted only traditional method of training such as General warming up catching, throwing, passing and shooting. No new type of training and special training are being given to the players to develop their playing skill. Success in hand ball playing depends upon a variety of factors including physical characteristics and Physiological capacities of the players, their level of skill, their degree of motivation and tactics employed by them against the opposition. Some of these factors are not easily neared objectively, but others can be tested using standardized methods and can prove useful information for coaches to enhance physiological improvement effectively and to bring about a change, the combination of swiss ball training and yoga training to the Hand Ball players will improve the mental, physical and spiritual ability and also improve strength and stability, flexibility recovery and reduce the stress and physical injury. The swiss ball and yogic training will serve better than utilized with modification suited to the individual or a group deal with. This combined best training program increases desired quality at higher rate without causing unwanted effect.*

**Keywords:** Sports training, Yoga, Physical Exercise, Physical Physiological.

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### Introduction

In the last few decades, sports have gained a place of prominence and are becoming tremendously popular at national and international level. Sports reflect the changes in societies that ranges from the individual values such as discipline and simplicity to collectives like fairness, and general ones like belief in effort, as well as capitalistic belief of, the survival of the fittest. Such being the case, sports are strongly linked to the lifestyles in modern societies. Sport has the ability even to replace function of religions by defining a specific set of values. It can even play a constructive role of integrating, image building for individuals, groups of societies or entire society. Swissball is a huge inflatable ball made by tough elastic rubber. It is most often used in athletic training and physiotherapy to enhance the neuro-development. The Swiss ball is a training aid aimed mainly at the stretching and strengthening of the abdominal, lumbar back, groin and upper leg muscles of the body. The development of muscle helps to the building and maintaining of core strength and vital stabilizing feature in all sport. Swiss ball movements need a greater degree of coordination than other floor stretches. Yoga is timeless and ageless. It is an ancient science of well-being and suitable for everyone to practice irrespective of their ages. Yoga leads to natural and stress less life. Yoga opens the frontiers to the higher dimension of existence through a systematic process encircling all nuances of human life.

However, this exploration requires a paradigm shifts from the objective experimentation to subjective experience state of pure awareness and also during the journey helps us with its psychotherapeutic effect. The Handball game has gained a vast popularity all over the world. Handball is played today and certainly has a chequered history. The handball has evolved over a period of time and the format of game seems to have undergone a considerable change. Swissball training along with yogic training improves the overall performances of handball players. And this study attempted to examine the combinations of swissball training and yogic training on school level hand ball players

### .Reason for the Selection of the study

A successful programme needs to be designed with balance and the goal in mind. A programme that is too general will not properly prepare the sport person, and a programme that is too specific will also not properly prepare the player. Researchers have been done on many training like

resistance training, strength and power parameters, comparing its effect with some other training effect of various sports specific training it with other training etc. So the investigator felt the need to do it, so that coaches and athlete can benefit from the training methods that come as a proof at the end of the study. Though several studies have been conducted on hand ball players with various sports specific training, swiss ball training with yogic practices for school players effect relations were not studied clearly. In order to find out the influence of combinations of swiss ball training with yogic practices and their effect relations between training methods, the investigator selected this study.

### **Purpose of the study**

1. To investigate the changes on selected physical, physiological and skill performance parameters due to the effect of swiss ball training with yogic training
2. To examine how far the experimental groups differ in their changes on physical, physiological and skill performance parameters.

### **Statement of the problem**

The statement of the problem is to determine the combined effects of yoga training and swiss ball training on selected physical physiological and skill performance variables among School handball players.

### **Hypothesis**

1. It is hypothesized that there will be a significant improvement on selected physical, physiological and skill performance variables due to swiss ball training.
2. It is hypothesized that there will be a significant improvement on selected physical, physiological and skill performance variables due to Yogic training.
3. It is hypothesized that there will be a significant improvement on selected physical, physiological and skill performance variables due to the combined effects of swiss ball training and yogic training.
4. It is further hypothesized that the improvement during the training period of selected criterion variables would differ significantly among experimental groups.

### **Delimitation**

The study will be delimited in the following factors.

1. The study will be restricted in school level boys hand ball players.
2. The age of the subjects range from 15 to 17 years.
3. The training period is limited to 12 weeks and their frequency was three days a week.
4. Three experimental groups and one control group were employed in the study.
5. The study is concerned with four groups of 20 subjects each.

### **Independent variables**

1. Swiss ball Training
2. Yogic Training
3. Swiss ball training with yogic training.

### **Dependent variables Physical variables**

1. Speed
2. Agility
3. Leg Explosive power
4. Muscle strength

### **Physiological variables**

5. Vo2 max
6. Resting heart rate
7. Breath holding time
8. Systolic Blood Pressure

### Skill performance variables

9. Dribbling
10. Passing
11. Throwing
12. Shooting

### Selection of the subjects

The purpose of the study is to find combined effects of swiss ball training and yogic training on Hand ball players for this purpose, 80 school level hand ball players will be selected random from various Shivamoga. The player's age ranged between 15-17 years.

### Methodology

This include procedures and methods applied in selection of the subjects selection of variables, selection of the test, design of the study, reliability and validity of the test, orientation of subjects, administration of test and statistical techniques are explained and presented. To achieve the purpose of this study, 80 hand ball players will be selected randomly from Shivamoga .Age of the subjects range from 15 to 17 years. They will be divide into four equal groups. The Group I is consider as yogic training group. Group II will be considered as Swiss ball training group. Group III will consider as Swiss ball training with yogic training. Group IV is control group which will not allowed to participate in any training. Training will be given for the period of 12 weeks. All the four groups will be pre tested and post tested before and after the 12 weeks the collected dates will be analyzed for result.

### Motor Components

S.No	Variables	Tests
1	Speed (EQUAL)	50 yards dash
2	Agility (EQUAL)	Shuttle run
3	Leg Explosive power (EQUAL)	Standing broad jump
4	Shoulder Strength (EQUAL)	Pullups

### Physiological variables

S.No	Variables	Tests
1	Vo2 max (YOGA)	Coopers 12 mn run test
2	Resting Pulse Rate (YOGA)	Pulse count
3	Breath holding time (YOGA)	Time in seconds
4	Blood Pressure (YOGA)	Spicmo Mono Meter

### Skill performance variables

S.No	Variables	Tests
1	Dribbling (EQUAL)	Oregon Hand Ball Test
2	Passing (EQUAL)	Oregon Hand Ball Test
3	Throwing (EQUAL)	Oregon Hand Ball Test
4	Shooting (EQUAL)	Oregon Hand Ball Test

### Statistical procedure

To find the significant difference between pre test and post test scores mean gains or loss of all the groups T test may be done then to find the variance difference among the groups form the pre test level analysis of co variance (ANCOVA) may be used and to find the adjusted means and the 'f' ratio, value, to find that the variance is caused due to the treatment and not by the sampling error, then scheffe's post hoc comparison may be used to find the better training for improving the criterion variable , were by the conclusion may be drawn for the research.

### Conclusion

The purpose of the study was to find out the effect of swissball training, yogic training and its combinations on physical, physiological and skill performance variables among school handball players. Some of these factors are not easily neared objectively, but others can be tested using standardized methods and can prove useful information for coaches to enhance physiological improvement effectively and to bring about a change, the combination of Swiss ball training and yoga training to the Hand Ball players will improve the mental, physical and spiritual ability and also improve strength and stability, flexibility recovery and reduce the stress and physical injury. The Swiss ball and yogic training will serve better than utilized with modification suited to the individual or a group deal with. This combined best training program increases desired quality at higher rate without causing unwanted effect.

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## IMPACT OF ACTIVITY BASED TEACHING METHOD ON PROBLEM SOLVING ABILITY IN SCIENCE

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### Abstract

*Problem solving occurs when an organism or an artificial intelligence system needs to move from a given state to a desired goal state which is the frame work or pattern within which creative thinking and reasoning takes place. It is the key to success and has been regarded as the most significant aspect of human behavior. Knowledge and understanding are fundamental to studying mathematics and from the base from which to explore concepts and develop mathematical reasoning to make deductions and solve problems. Using an appropriate mathematical concept and problem-solving ability in both familiar and unfamiliar situations including those in real - lifesituations (Ois, 2011).*

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### INTRODUCTION

Problem solving occurs when an organism or an artificial intelligence system needs to move from a given state to a desired goal state which is the frame work or pattern within which creative thinking and reasoning takes place. It is the key to success and has been regarded as the most significant aspect of human behavior. Knowledge and understanding are fundamental to studying mathematics and from the base from which to explore concepts and develop mathematical reasoning to make deductions and solve problems. Using an appropriate mathematical concept and problem-solving ability in both familiar and unfamiliar situations including those in real - lifesituations (Ois, 2011).

Problem solving plays a critical role in the initial learning of mathematical concepts and skills, not just as a context for practicing concepts and skills as discussed above. Research shows that understanding develops during the process of problem solving in which important math concepts and skills are embedded (Schoen & Charles, 2003). It plays a vital role in the academic achievement of students. The central aim of all formal educational efforts is academic achievement, on the part of the students. More over in some cases the students are forced to seek academic education, due to over enthusiasm and ambition of the parents. Such students do not pursue the education with one essential will and year, which enables them to have a negative attitude towards academic achievement. Lack of proper guidance at the right movement hinders the interest, aptitudes, ability and capacities of an individual. All these problems have contributed to develop negative attitude towards education and effects on academic performance.

The emphasis of effective learning in a classroom has vital importance in student retention. The teachers are required to be adaptive to the changing classroom and student needs' such that the students enjoy the course and establish goals. One such method is Activity Based Teaching Learning Method (ABTLM), which is defined as a learning process in which students are constantly engaged (Panko et al., 2007). Activity Based Learning is defined as a setup where students actively participate in the learning experience rather than sit as passive listeners. These writers emphasize that active learning method is different from the traditional method of teaching by:

- (a) the active role and involvement of students in the classrooms and
- (b) (b) collaboration amongst the students in a learning environment. These two items are the key to ABTLM and aim to establish a positive learning environment in the classroom. Churchill (2003) propagates that activity-based learning aids students and learners to construct mental models that allow for higher-order performance such as applied problem solving and transfer of information and skills.

Activity-based learning is the baseline for creative and critical thinking skills enhancement. However, this method will not function properly if students are not motivated enough to achieve their actual potential. The most useful and effective method to teach concepts that are complex in nature is by involving students in interactive activities, which is also the backbone of ABTLM. By utilizing different activities in the classroom, critical thinking skills and creative skills of the students are also enhanced. Hake (1998) emphasizes on the importance of various activities and their relevance in everyday activity-based teaching methodologies. He brings light to the fact that ABTLM is a cognitive-based learning technique that works on constructive learning. Constructive learning comprises prior knowledge along with personal experiences. This theory emphasizes that learning is a process that comprises the psychological environment of an individual along with their interactions with various other structures of the society. It is vital for learners in ABTLM classrooms to share personal experiences which enhance the whole constructive atmosphere. Using constructive method of teaching is believed to be far more effective than a traditional classroom setup as it enhances the learning process.

### **Aims of Problem Solving Ability**

The aim of Problem solving ability and learning mathematics are to encourage and enable students:

- To recognize that permeates the world around us
- To appreciate the usefulness, power and beauty of mathematics
- To enjoy mathematics and develop patience and persistence when solving problem
- To understand use the language, symbols notation of mathematics
- To develop mathematical curiosity and use inductive and detective reasoning when solving problems
- To become confident in using mathematics to analyze and solve problems both school and in real - life situations
- To develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics
- To develop abstract, logical and critical thinking and the ability to reflect critically upon their work and the work of others
- To develop a critical appreciation of use of information and communication technology in mathematics
- To appreciate the international dimension of mathematics.

Children in given classroom may not vary only in their knowledge and in their capability of learning but also in which they approach and deal with the given task in which direct themselves to do something such as ABTLM in science which play a significant role in developing scientific interest and scientific attitude and improving their academic achievement.

Teaching for understanding means helping students to get the habit of thinking, reasoning, solving problems scientifically, If these habits are to be acquired educators need to incorporate them in to their lesson. Hence systematically designed ABTLM can directly or indirectly leads to human development hence there is great need for designing ABTLM to foster scientific interest, attitude and improve academic achievement.

### **Need for the Study**

Problem solving ability is a heart in the study of mathematics and highest level of learning in the hierarchy proposed by Gagne. It is a deliberate or purposeful act on the part of an individual to realize the set goals by inventing some novel method or symbolically following some planned steps for the removal of interferences or obstacles in the path. Learners those have differential levels of problem solving ability are supposed to have different levels of academic achievement and has a great impact



on it. It is a process of overcoming difficulties that appears to interface with the attainment of a goal. Mathematics is synonymous with solving problems, doing word problems, creating patterns, interpreting figures, developing geometric construction, proving theorems, etc. The goal of teaching mathematics to be effective were students able to solve their problem which shows that learning mathematics aimed to develop their cognitive and affective domain that can support problem solving abilities. Therefore, the investigator was used to find out the ground realities entitled as **“Impact of Activity based teaching method on Problem solving ability in Science”**.

#### **Objective of the study:**

To find out whether there is an significant difference in effectiveness of activity based teaching method on problem solving ability.

#### **Hypothesis of the study:**

- There is no significant difference was observed between test and retest scores of problem solving ability.

#### **Variables of the study:**

The variables used in the study are classifieds in to dependent independent and moderate variable.

**Independent Variable:** Activity based teaching method

**Dependent Variable:** Problem solving ability.

**Moderate Variable:** Boys and Girls.

#### **Sample of the Study:**

The study has experimental design. The present study was conducted in secondary school located in Davanagere City. The sample consists of 50 students of two private secondary schools.

#### **Tools used for the study:**

Problem solving ability questionnaire was developed by the investigator. Multiple choice of items were prepared as they are regarded as the most valuable and most generally applicable of the test forms. These consists of 85 items and out of these more than 50 items are collected from different sources and remaining items are prepared by the researcher.

#### **Statistical techniques used:**

Mean, Standard Deviation, t value.

#### **Analysis of problem solving ability tool (pilot study)**

Thirty-five items were found satisfying the said condition and they are included in the final investigation were 85 items.

#### **Final study of tool preparation**

This stage is concerned with the distribution of the final items in the tool. The 35 items were distributed in the final tool. All the 35 MCQ formed significantly and positively discriminating the upper and the lower groups were considered as valid statements for the problem solving ability tool.

#### **Data analysis and interpretation**

The analysis of interpretation data in every research work requires keen observation of calculation. This deals with the problem solving ability of the students.

**Table: Reliability of test and retest scores of problem solving scale by Karl Pearson's correlation coefficient**

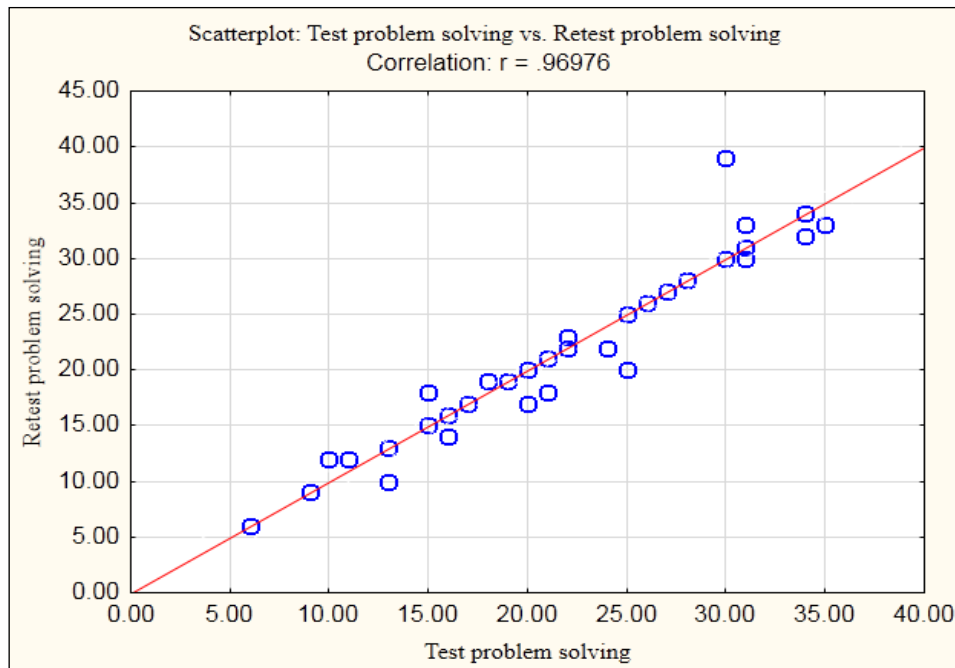
Tests	Correlation between test problem solving scores with			
	r-value	%age	t-value	p-value
Retest problem solving scores	0.9698	96.98	27.5266	0.0001*

\*p<0.05

The reliability of test and retest scores of problem solving scale is 0.9698 (96.98%) and which is found to be statistically significant. It means that, the scale is reliable for assessment of problem solving ability among the students. The correlation between test and retest scores of problem solving scale is also presented in the following figure.

Figure: Correlation between test and retest scores of problem solving scale





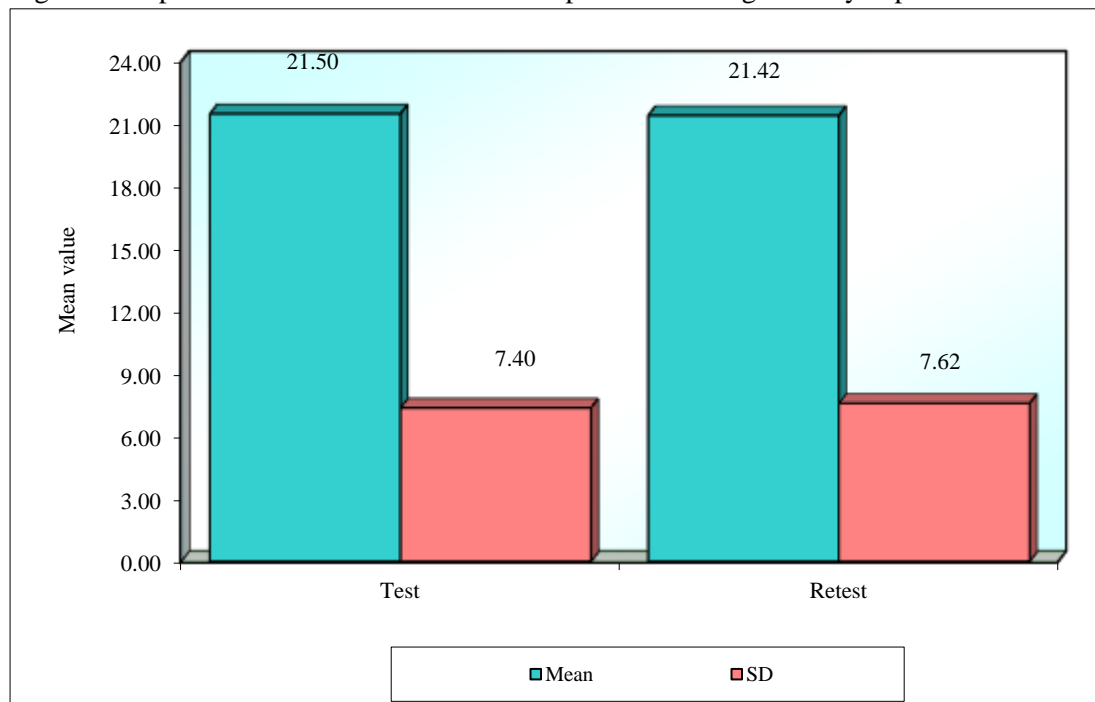
Further, to know the difference in test and retest scores of problem solving scale, the dependent t test was applied and the results are presented in the following table.

**Table: Comparison of test and retest scores of problem solving scale by dependent t test**

Scores at	Mean	SD	Mean Diff.	SD Diff.	t-value	p-value
Test	21.50	7.40				
Retest	21.42	7.62	0.08	1.86	0.3040	0.7624

It clearly showing that, no difference was observed between test and retest scores of problem solving scale ( $t=0.3040$ ,  $p=0.7624$ ). It means that, the mean of test and retest scores of problem solving scale are similar. It means that, the scale produces a similar score immediately after retest. The mean of test and retest scores are also presented in the following figure.

**Figure: Comparison of test and retest scores of problem solving scale by dependent t test**



## Conclusion

Problem is an individual process which requires various strategies to tackle proper teaching strategies like activity based teaching method used in class room by the teachers, emphasis on understanding in spite of rote learning, through moderate motivation, encouraging divergent thinking can help students to develop their problem solving ability. Education in today's world should not simply be about acquiring high score/degrees. It is more about being able to apply acquired abilities in the real world.

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## ENHANCING TEACHING SKILLS IN SECONDARY EDUCATION TRAINING (B. ED) STUDENTS THROUGH LIFE SKILL PACKAGE

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### Abstract

*This conceptual article explores the integration of life skill packages into the training of Bachelor of Education (B.Ed.) students specializing in secondary education. Secondary education plays a pivotal role in shaping the future of students, making it imperative for educators to possess not only subject expertise but also essential life skills that enable them to be effective mentors and role models. This article delves into the significance of incorporating life skill packages within the B.Ed. curriculum, thereby equipping future educators with the tools to empower their students holistically. The article begins by discussing the evolving landscape of secondary education and the need for educators to adapt to the changing demands of the 21st century. It emphasizes that secondary education should not solely focus on academic content but also on the development of students' critical life skills, such as communication, problem-solving, emotional intelligence, and adaptability. Life skill packages encompass a range of skills, including digital literacy, interpersonal skills, stress management, and cultural competence, and are tailored to the specific needs of secondary education settings. The conceptual framework presented here underscores the potential benefits of this integration, including improved teacher-student relationships, enhanced classroom management, and increased student engagement. It also addresses potential challenges and barriers to implementing life skill packages, such as resource constraints and resistance to change, and offers strategies to overcome these obstacles. By enhancing the teaching skills of future educators in secondary education, we can better prepare them to inspire, motivate, and empower the next generation of students, ultimately contributing to a more competent and well-rounded society.*

**Keywords:** Life Skill Package, B.Ed. students, Teacher Training Programme, Secondary Education, and Teaching skills.

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### Introduction:

Teacher education plays a pivotal role in shaping the future of our society by equipping educators with the knowledge and skills necessary to foster the growth and development of young minds. Secondary education, in particular, is a critical phase in a student's academic journey, where educators need to be well-prepared to address not only academic needs but also the holistic development of students. In this context, the incorporation of life skills into the training of Bachelor of Education (B.Ed) students is gaining prominence as it helps future educators become more effective and well-rounded mentors. This conceptual article delves into the importance of integrating life skill packages into the B. Ed curriculum to enhance the teaching skills of prospective secondary education teachers.

### Understanding the Relevance of Life Skills in Education

Life skills are a set of abilities that enable individuals to effectively manage the challenges and demands of everyday life. These skills encompass various domains, including communication, critical thinking, problem-solving, emotional intelligence, teamwork, and decision-making, among others. In the context of teaching, these skills are invaluable. They not only aid teachers in becoming better communicators and mentors but also empower them to navigate the complexities of the classroom environment more successfully.

- **Effective Communication:** B.Ed. students need to learn how to communicate clearly and empathetically with their students, parents, and colleagues. Life skills training can help prospective educators improve their verbal and non-verbal communication, making them more relatable and approachable figures in the classroom.

- **Critical Thinking and Problem Solving:** Encouraging critical thinking and problem-solving skills in students is a fundamental aspect of education. B.Ed. students who are equipped with these skills can design engaging lesson plans, adapt to the diverse learning needs of their students, and address unexpected challenges with confidence.
- **Emotional Intelligence:** Life skills training can help future educators better understand and manage their emotions, a crucial aspect of maintaining a positive classroom environment. It also allows them to support the social and emotional growth of their students.
- **Teamwork and Collaboration:** Teachers often collaborate with other educators and stakeholders in the education process. Life skills such as teamwork and collaboration empower B.Ed. students to work effectively with their colleagues, fostering a more cooperative educational environment.
- **Decision-Making:** Educators regularly face decisions related to curriculum, discipline, and student support. Life skills training enhances their ability to make informed and ethical decisions, which ultimately benefit the students and the institution.

### **Adapting to the Changing Landscape of Secondary Education in the 21st Century:**

The landscape of secondary education is undergoing significant changes in the 21st century, driven by technological advancements, shifts in societal needs, and evolving student expectations. Educators are facing a growing need to adapt to these changing demands to effectively prepare students for the challenges and opportunities of the modern world. Several key aspects of this evolving landscape and the corresponding need for adaptation:

#### **1. Technology Integration:**

- **Digital Literacy:** With the proliferation of technology, students need to develop strong digital literacy skills to navigate the internet, use software applications, and critically evaluate online information. Educators must integrate technology into their teaching methods and curricula.
- **Blended Learning:** The combination of in-person and online learning is becoming more prevalent. Teachers need to adapt to a blended learning environment, creating engaging and effective online materials while maintaining meaningful face-to-face interactions.

#### **2. Changing Curriculum:**

- **21st Century Skills:** The curriculum needs to emphasize critical thinking, problem-solving, creativity, collaboration, communication, and adaptability. Educators should design lessons that encourage these skills to prepare students for a rapidly changing job market.
- **STEM Education:** As technology becomes increasingly central to many industries, STEM (Science, Technology, Engineering, and Mathematics) education is gaining importance. Teachers must have the skills and resources to provide STEM-focused instruction.

#### **3. Personalized Learning:**

- **Individualized Instruction:** Students have diverse learning needs and paces. Adaptive technologies and teaching strategies that cater to individual learning styles are crucial. Educators should be skilled in assessing and addressing these differences.

#### **4. Globalization and Cultural Competency:**

- **Cultural Awareness:** In a globalized world, educators should promote cultural competency and global awareness. This includes addressing issues like diversity, equity, and inclusion. Teachers need to create inclusive classrooms that prepare students for the multicultural realities of the 21st century.

**5. Assessment and Accountability:**

- **Alternative Assessment Methods:** Standardized testing is being reevaluated in favor of more authentic, project-based, and performance-based assessments. Educators must adapt their assessment methods to measure 21st-century skills effectively.

**6. Teacher Professional Development:**

- **Continuous Learning:** Educators themselves must be lifelong learners. They need to stay updated on the latest pedagogical approaches, educational technologies, and research findings. Professional development opportunities are essential.

**7. Environmental and Sustainability Education:**

- **Climate Change Education:** Given the pressing issue of climate change, educators should integrate environmental and sustainability education into the curriculum. This helps students understand the global challenges they will face and how to address them.

**8. Mental Health and Well-being:**

- **Emotional Intelligence:** Teachers must be equipped to address students' mental health and well-being, as these issues have become increasingly prevalent. This includes fostering emotional intelligence and providing support where necessary.

**9. Career and College Readiness:**

- **Career Education:** Preparing students for post-secondary education and the workforce is a primary goal. Educators should provide guidance, career exploration opportunities, and real-world experiences to help students make informed decisions about their future.

**10. Parent and Community Engagement:**

- **Partnerships:** Collaboration with parents, local communities, and external organizations is becoming more important in education. Teachers should engage with these stakeholders to enhance the educational experience for students.

The evolving landscape of secondary education demands a shift in pedagogical approaches, curricular content, and the development of skills that are relevant to the 21st century. Educators play a central role in helping students adapt to these changes by being adaptable and proactive in their teaching methods, embracing technology, and continually seeking opportunities for professional growth. Ultimately, preparing students to thrive in the modern world requires educators to be responsive to the evolving needs of both their students and society at large.

**Integration of Life Skill Packages in B. Ed Curriculum**

To enhance the teaching skills of B. Ed students, it is imperative to integrate life skill packages into the curriculum. These packages can be developed in collaboration with experts in education, psychology, and counseling, ensuring a holistic approach to teacher development.

**Incorporating Life Skills in Pedagogy:** The teaching methodologies used in B.Ed. programs can be structured to include activities and exercises that promote the development of life skills. Case studies, role-playing, and reflective discussions are excellent strategies.

**Interactive Workshops:** Regular workshops on life skills can be conducted to help B. Ed students acquire these skills practically. These workshops can cover topics like conflict resolution, empathy building, and classroom management.

**Mentoring and Counseling:** Every B.Ed. student can benefit from personalized mentoring and counseling sessions to enhance their emotional intelligence and interpersonal skills.

**Field Experience:** Practical exposure to real classroom situations during internships and student teaching can provide an opportunity for B.Ed students to apply their life skills and knowledge.

**The Impact of Integrating Life Skills in the B. Ed Curriculum:** Incorporating life skill packages within the Bachelor of Education (B.Ed) curriculum can have profound implications for future educators and their ability to empower students holistically. Some reasons why this is significant:

**Real-world Relevance:** Life skills are essential for success in various aspects of life, including personal, professional, and social spheres. By including life skill packages in the B.Ed curriculum, future educators are equipped with skills that are directly applicable to the challenges students will face in the real world.

**Comprehensive Education:** Empowering students holistically involves more than just subject-specific knowledge. Life skills encompass a wide range of abilities, including communication, critical thinking, problem-solving, emotional intelligence, and adaptability. These skills are vital for personal growth and development.

**Enhanced Teaching Effectiveness:** Educators who possess life skills are better equipped to foster an environment where students can learn and thrive. Effective communication, conflict resolution, and emotional regulation, for example, can improve classroom dynamics and create a conducive learning atmosphere.

**Personal Growth and Well-being:** Teaching life skills can also contribute to the personal growth and well-being of educators. Educators who develop life skills are often more self-aware and better equipped to handle stress, leading to higher job satisfaction and reduced burnout rates.

**Empowering Students:** Life skills empower students to become independent, responsible, and socially competent individuals. These skills can help students set and achieve personal goals, make informed decisions, and navigate the complexities of the modern world.

**Preparation for Future Careers:** Many life skills are directly transferable to the workplace. By teaching these skills, educators prepare students for success in their future careers, where skills like problem-solving, teamwork, and adaptability are highly valued.

**Social and Emotional Development:** Life skills education can significantly contribute to students' social and emotional development. This is particularly important in an age where mental health issues and social challenges are prevalent among students. Educators with life skills training can better support students in these areas.

**Lifelong Learning:** By instilling the importance of life skills, educators can encourage students to be lifelong learners. They equip students with the tools to continue learning and adapting to new situations throughout their lives.

**Alignment with 21st Century Skills:** Life skills align with the 21st-century skills that are increasingly emphasized in modern education. These skills, including critical thinking, creativity, and adaptability, are essential for success in the information age.

**Community and Societal Impact:** Educators play a pivotal role in shaping the future of society. When they are equipped with life skills and integrate them into their teaching, they contribute to a more skilled, self-reliant, and socially responsible citizenry.

Incorporating life skill packages within the B, Ed curriculum is significant because it prepares future educators to empower students holistically, equipping them with the tools to succeed not only academically but also in various aspects of life. This approach recognizes the interconnectedness of personal and academic development and contributes to the overall well-being and success of both educators and their students.

### **Conclusion:**

Incorporating life skill packages into the training of B. Ed students can significantly enhance their teaching skills and overall preparedness for the challenges of the modern classroom. This approach ensures that future educators are not just equipped with academic knowledge but also possess the essential life skills necessary to create a positive, nurturing, and effective learning environment for secondary education students. By emphasizing life skills, teacher education can evolve to meet the dynamic needs of contemporary students and prepare teachers to be the guiding lights of their academic journey.



This conceptual article argues that the integration of life skill packages in B.Ed programs holds promise in enhancing the teaching skills of future educators in secondary education. By equipping teachers with a broader skill set, it addresses the multifaceted challenges of the 21st-century classroom, ultimately improving the quality of education and fostering better-rounded, empathetic, and effective educators.

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## ROLE OF PHYSICAL EDUCATION FOR IMPROVING THE QUALITY OF SCHOOL EDUCATION

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### Abstract

*'Every Child Every opportunity'. Physical Education for children has been linked to positive self-esteem, skill development, skeletal and cardiovascular health, and general healthy development. It is now widely established that childhood is the best time to establish positive attitudes and behavior relating to physical activity and a healthy lifestyle. **Physical Education** is an all-encompassing term, including fitness, skills, movement, dance, recreation, health, games and sport plus the appropriate values and knowledge of each. The skills developed through a good physical education programme are critical in ensuring that students have success in many of the sport and leisure activities common to the community. **Physical Education** has a major role to play in the development of young people. It is an integral part of the total education of any child and is closely linked to other creative and learning experiences and skill acquisition. It makes a significant contribution to the all - round harmonious development of the mind and body. The program also help students develop the competencies and beliefs necessary for incorporating regular physical activities into their lives. Through involvement in a well-taught physical-education program, students can achieve physical and personal benefits.*

**Keywords:** *Yoga, Physical Education, Classroom and Sport.*

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**Definitions:** Physical -- Education is an all-encompassing term, including fitness, skills, movement, dance, recreation, health, games and sport plus the appropriate values and knowledge of each. The skills developed through a good physical education programme are critical in ensuring that students have success in many of the sport and leisure activities common to the community. Physical -- Education has a major role to play in the development of young people. It is an integral part of the total education of any child and is closely linked to other creative and learning experiences and skill acquisition. It makes a significant contribution to the all - round harmonious development of the mind and body. The program also help students develop the competencies and beliefs necessary for incorporating regular physical activities into their lives. Through involvement in a well-taught physical-education program, students can achieve physical and personal benefits. Therefore, the planning and management of the Physical-Education Curriculum in Schools should always have children as the focus of attention, with the overall purpose of providing rich and varied experiences. Physical Education also includes sport education.

Physical Education is also the process through which sport, outdoor adventure activities, dance, gymnastics, aquatics and games are used by physical educators to help students learn motor skills and to learn about and achieve physical fitness where this is possible. Physical Education activities also assist the school to develop personal and social skill in students. Physical education promotes fitness, both physical as well as mental. Read on to know in detail the importance of physical education in schools. For the overall development of a child, along with academics, which develop his mind, a child should participate in physical activities such as sports and exercises as well. Although, researches in the field have shown that physical education should be made mandatory in schools as it develops positivity, improves the attitude and fitness of the students, yet, due to various constraints, many schools are not really able to implement this. Lack of funds, increased emphasis on academics to up the scores in order to avail government funding; there are various reasons behind this policy of the schools for not making physical education compulsory. The following Buzzle article will perhaps help such school authorities, to have a fresh look at this topic. Physical education is an important part of every school curriculum and a class every pupil awaits. Physical education is that segment of the daily timetable that every student eagerly waits to attend, as it is the only official time

when the students can be on the grounds, engaged in their favorite sports. One of the main objectives of physical education is to bring in this element of joy to the academic orientation of schools.

Physical education aims at dedicating a daily time for some physical activity for the students. The physical training class, as it is also called, involves sports, games, exercise and most importantly, a break from the sedentary learning indoors. One of the other important objectives of physical education is to instill in students the values and skills of maintaining a healthy lifestyle. Daily physical activity promotes an awareness of health and well-being among students. It boosts them to engage in physical activities on a daily basis. It promotes them to lead a healthy life in adulthood. Physical education classes constitute programs to promote physical fitness in students, train them in sports, help them understand rules and strategies in playing and teach them to work as a team. A very vital factor in physical education is to develop interpersonal skills in children. Sports aim at making them team players, developing a sportsman spirit in them and enhancing their competitive spirit. Sports that form a part of physical education classes help the students invest time in fruitful and competitive activities. Physical education is intended to inculcate in the minds of students, the importance of personal hygiene and cleanliness. Physical education classes aim at teaching the students, the habits of personal cleanliness and the importance of the maintenance of personal hygiene in life. They are also used to impart sex-education to students, help them clarify their doubts and find answers to all the questions that occur to them.

#### **Importance of Physical Education:**

**Fitness :** Obesity is a very common problem faced by numerous American kids, which if not taken care of in time, can lead to many lifestyle diseases such as heart disease, cancer and diabetes in the long run. Engaging in physical activities help to burn calories and lose fat. Regular exercising builds muscles, makes the immune system strong and improves upon a child's stamina. This increases the fitness levels and keeps various diseases and health conditions in check.

**Self-esteem :** Physical activities help to keep a child active and focused. When a student participates in physical activities, he becomes fit and attractive, which helps to boost his self-esteem. After all everyone wants to look their best, regardless of age, isn't it?

**Life Lessons :** By participating in various sports, a student gets to learn so many things about life. A student wins some games and loses some, this makes him understand that winning and losing are a part of life and should be accepted with grace. When a student participates in team games, he learns that co-operating with others is very important if goals are to be achieved. Likewise, sports can teach so many life lessons to students and thus, help them evolve mentally.

**Healthy Eating :** During the theoretical physical education classes, a student is taught the importance of healthy eating. He gets to know how harmful some of his favorite foods such as pizzas, burgers, cakes and aerated drinks can be. A student is also made to understand that if he does not make healthy food choices, he can face many health problems in the future. Equipped with this knowledge, many students inculcate healthy eating habits, by giving up high sugar and fast foods and replacing them with healthy foods like fruits, vegetables and nuts.

**Hygiene :** Physical education classes lay great emphasis on maintaining hygiene. They teach students how to remain clean and germ-free at all times. Sex education is sometimes part of this curriculum too. The safe practices taught in these classes, if followed by the students throughout their life, will save them from many diseases.

**Stress Management :** Often times, students, particularly in their adolescent years, face various kinds of pressure and experience stress and anxiety. Participation in physical activities can act as a stress buster for them. Researches have shown that when a person exercises, the levels of cortisol, a stress hormone, get reduced. Moreover, a person who exercises every day, is able to sleep better, thus giving

enough time to his body to repair and restore. This proves that by making an exercise routine, a student can remain stress-free, relaxed and concentrate more on his studies and other important things.

**Productivity :** Researches show that students who participate in physical activities have high energy levels and are more alert than those who led sedentary lifestyles. Due to these very reasons, the productivity of such students in various spheres of life, including their studies, improves considerably.

As can be seen, physical education contributes so much towards making a child grow into a healthy, intelligent, confident and level-headed adult. It can be rightly said that it's not just for individual growth, but for the improvement of the whole society, physical education should be made an important part of the school curriculum.

### **Conclusion:**

The very important objective of physical education is to encourage the upcoming sportsmen and women of the crowd. Physical education gives the budding sportspersons a platform to exhibit their talent. Those with a flair for sports get an opportunity to display their talent. Their small steps on the school playground can eventually turn into a huge leap in the field of sports. Moreover, sports refresh the students' minds. Physical education class becomes enjoyable for the kids while proving to be helpful for their overall growth and development. Physical education is indeed one of the most fruitful activities of a school schedule

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## ANALYSIS OF INTELLIGENCE AND PERSONALITY BASED ON KANNADA HANDWRITING

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### Abstract

*This study investigated the types of Personality and level of Intelligence on the basis of Handwriting size of Postgraduate Students in Kuvempu University. The present study employed the descriptive method of research. Simple random and purposive sampling techniques were employed to select the sample. The present study used Eysenck's Personality Inventory, Raven's Standard Progressive Matrices (SPM), and Kannada Handwriting Analysis scale for collecting the data. The chi-square statistical technique was used for Analysis and interpretation of the data. The results show that, the finding related to size of Handwriting of Post Graduate Students, there is no significant difference in Extrovert, Introvert and Ambivert personality types, and level of Intelligence. This result indicates percentage of size of handwriting of postgraduate students having more medium size handwriting than the large and small size handwriting. The result about size of Handwriting revealed that, the percentage of size of the handwriting of postgraduate students having more medium size handwriting than the large size and small size handwriting. This finding shows majority of the students who write medium size Handwriting manner are ambivert in their personality and general type of personality with the average level of intelligence. This study inferred that personality and intelligence are can be analyzed through various ways, and Handwriting analysis is one of the methods.*

**Keywords:** Handwriting Analysis, Kannada Handwriting, Personality, Intelligence, and Post Graduate Students.

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### BACKGROUND OF THE STUDY:

Importance of handwriting in the education and development of individuals can never be exaggerated. Handwriting is an image of unique personality. Handwriting is an essential skill for both children and adults (Feder and Majnemer, 2007). Handwriting Analysis is very easy to identify the educational skills and personality traits for students, (Girisha T., et.al.2016). Education among other things is to improve students' ability to express in writing and hence cannot be neglected in instruction (Abdul Gafoor K & Naseer A.R, 2015). Handwriting is an essential skill for both children and adults (Feder & Majnemer, 2007). Even in the age of technology, handwriting remains the primary tool of communication and knowledge assessment for students in the classroom. The demand for good handwriting and its analysis is great, whether in the classroom or beyond. The most popular elements to evaluate are the size and slant of letters, pressure applied, leveling of lines, word spacing and creation of margins and paragraphs, (Prasad et al. 2010). For example, many graphologists agree that writing large letters can identify someone who likes to be noticed and stand out in a crowd, or writing with a right slant symbolizes someone sociable, friendly and interested in others, (Prasad et al. 2010). According to an expert in Educational psychology from the University of Washington, handwriting instruction benefits students' cognitive development as well as motor functioning (Zubrzycki, 2012). In terms of students' cognitive development, evidence-based research has shown that handwriting skills can: (Rosenblum, et al. 2003) Increase brain activation, Impact performance across all academic subjects, Provide a foundation for higher-order skills and Influence reading, writing, language, and critical thinking. Hence handwriting is also known as brain writing.

### NEED AND IMPORTANCE OF THE STUDY:

Handwriting analysis is very essential for teachers to the purpose of understanding the students and helpful for Teachers to developing the student personality and motivation to high order skill and achievement of academic goal, promote to good citizen characters, develop ambition,

idealism, leadership, adventure, courage, and generosity (Girisha et al., 2016). Graphology is one of the branches of a diverse group of sciences of character reading. Humans have always been intrigued by human variability and uniqueness of the individual. With the help of graphology one focuses on interpreting the individual's.

Many researchers conducted studies on analyzed the levels of intelligence through Handwriting by conducting different intelligence tests and comparing to graphology. Ary Setya B. Ningrum and Rohmat Agung Wibowo (2017) study found that Intelligence made significant strong relationship between students' abilities in reading and their abilities in writing. Graphology is the scientific study of Handwriting. Graphology analysis is the most powerful science of understanding the strength and weaknesses of a person, (Ravindra Negi, 2014). Furnham, Adrian; Chamorro-Premuzic, Tomas; and Callahan, Ines (2003) Graphological variables did correlate with both participants' gender and intelligence, but the pattern was different in the two studies reinforcing the idea that chance factors were influential. Another one study Elmer A. Lemke and John H. Kirchner (2010) found that handwriting factors could be predicted personality and intelligence factors. One more study Pillai, Nair and Nair (1967) also found a small positive correlation obtained between the Malayam handwriting and intelligence (RPM)..

The purpose of this study is to assess whether the following, types of Personality and levels of intelligence will have a significant difference in students' handwriting and whether this intelligence will impact of the students' handwriting. Therefore, this research is intended to Measure and analyze the difference in levels of intelligence and Types of Personality of Post Graduate Students with their Size of Kannada Handwriting.

#### **OBJECTIVES OF THE STUDY:**

1. To Measure and analyze the difference in personality types of Post Graduate Students with their size of Handwriting.
2. To Measure and analyze the difference in Intelligence of Post Graduate Students with their size of Handwriting.

#### **HYPOTHESIS OF THE STUDY: -**

The hypotheses were framed in the null form

1. There is no significant difference in Extrovert, Introvert and Ambivert personality types of Post Graduate Students with their size of Handwriting.
2. There is no significant difference in Intelligence of Post Graduate Students with their size of Handwriting.

**VARIABLES OF THE STUDY:** The variables considered are Post Graduate student's Kannada Handwriting and Intelligence.

**METHODOLOGY OF RESEARCH:** In this study, Descriptive survey method of research was used. For this study, the investigators Employed the Simple random and purposive sampling technique used to select the sample of 400 (Four hundred) Post Graduate Students (without physically challenged students) from different departments of Post Graduate in Kuvempu University Karnataka India.

#### **TOOLS USED FOR THE STUDY:**

This study used Raven's Standard Progressive Matrices (SPM), and Kannada Handwriting Analysis scale (Girish and Jagannath Dange, 2017) and Eysenck's Personality Inventory (H.J. Eysenck), was used to collect and analyzed the data.

#### **STATISTICAL TECHNIQUES USED FOR THE STUDY:**

In pursuance of objectives of the study and in order to test the research hypothesis set up, the Chi square statistical technique was used to see the significance of variables.

**ANALYSIS AND INTERPRETATION OF DATA:**

The data interpretation is done on the basis of objectives and Hypothesis.

**Analysis and Interpretation of Data-Objective and Hypothesis Wise**

**Objective-01:** To Measure and analyze the difference in personality types of Post Graduate Students with their size of Handwriting.

**Hypothesis-01:** There is no significant difference in Extrovert, Introvert and Ambivert personality types of Post Graduate Students with their size of Handwriting.

**Table-1: Table shows Number, Percentage and Chi-Square Value of the students with Extrovert, Introvert and Ambivert Personality types falling under different types of Size of Handwriting.**

Types of Personality		Size of Handwriting			Total
		Small	Large	Medium	
Extrovert	Observed Frequency ( $f_o$ )	3	10	22	35
	Expected Frequency ( $f_e$ )	4.6	11.9	18.5	35.0
	% within Personality	8.6%	28.6%	62.9%	100.0%
	% within Size	5.7%	7.4%	10.4%	8.8%
	% of Total	<b>.8%</b>	<b>2.5%</b>	<b>5.5%</b>	<b>8.8%</b>
Introvert	Observed Frequency ( $f_o$ )	14	37	64	115
	Expected Frequency ( $f_e$ )	15.2	39.1	60.7	115.0
	% within Personality	12.2%	32.2%	55.7%	100.0%
	% within Size	26.4%	27.2%	30.3%	28.8%
	% of Total	<b>3.5%</b>	<b>9.3%</b>	<b>16.0%</b>	<b>28.8%</b>
Ambivert	Observed Frequency ( $f_o$ )	36	89	125	250
	Expected Frequency ( $f_e$ )	33.1	85.0	131.9	250.0
	% within Personality	14.4%	35.6%	50.0%	100.0%
	% within Size	67.9%	65.4%	59.2%	62.5%
	% of Total	<b>9.0%</b>	<b>22.3%</b>	<b>31.3%</b>	<b>62.5%</b>
Total	Observed Frequency ( $f_o$ )	53	136	211	400
	Expected Frequency ( $f_e$ )	53.0	136.0	211.0	400.0
	% within Personality	13.3%	34.0%	52.8%	100.0%
	% within Size	100.0%	100.0%	100.0%	100.0%
	% of Total	<b>13.3%</b>	<b>34.0%</b>	<b>52.8%</b>	<b>100.0%</b>

**$\chi^2=2.752$ ,  $df=4$ ,  $N=400$ ,  $P>0.600$  (NS)**

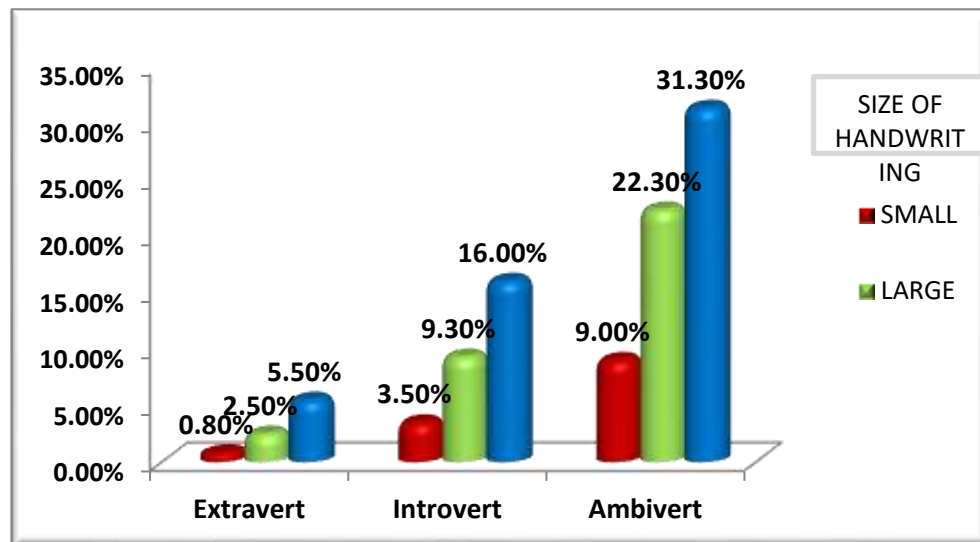
The above table-1 reveals that, about 8.8% of the students fall in Extrovert type of personality, about 28.8% of the students fall in Introvert type of personality and remaining about 62.5% of the students fall in Ambivert type of personality.

Among 8.8 % of Extrovert students, 5.5% of the students have medium size handwriting, 2.5% of the students have large size handwriting and remaining 8 % of the students have small size handwriting. Among 28.8% of Introvert type of students 16% of the students have medium size handwriting, 9.3% of the students have large size handwriting and remaining 3.5% of the students have handwriting small size. Among 62.5 % of Ambivert students, 31% of the students have medium size Handwriting, 22.3 % of the students have large size handwriting and remaining 9% of the students have small size handwriting.

It is observed that, about 52.8% of students who have medium size of handwriting comprised 31.3% of students have ambivert type personality, 16% of the students have Introvert type personality and 5.5% of the students have Extrovert type personality.

It can be inferred from the above table -1 btained  $\chi^2$  value 2.752 with  $df=4$ , which is not significant at 0.05 level of significance, so above null Hypothesis "There is no significant difference in Extrovert, Introvert and Ambivert personality types of Post Graduate Students with their size of Handwriting" is accepted.





**Graph -1: Graph showing difference between Post Graduate Students with different type of personality and their size of Handwriting.**

Graph-1 illustrates the percentage of size of handwriting of postgraduate students having more medium size handwriting (52.8%), large size (34%) and small size (13.3%). The graph also depicts that among medium size handwriting students, 31.3% students have ambivert type of personality, 16% students have introvert type of personality and 5.5% students have extrovert personality.

**Objective-02:** To Measure and analyze the difference in Intelligence of Post Graduate Students with their size of Handwriting.

**Hypothesis-02:** There is no significant difference in Intelligence of Post Graduate Students with their size of Handwriting.

**Table-2: Table shows Number, Percentage and Chi-Square Value of the students with different levels of Intelligence falling under different types of size of Handwriting.**

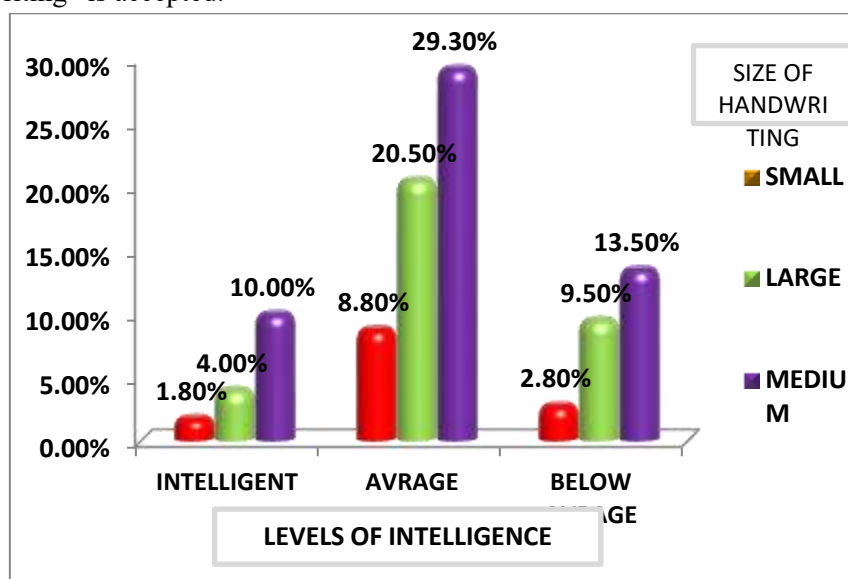
Levels of Intelligence		Size of Handwriting			Total
		Small	Large	Medium	
Intelligent	Observed Frequency ( $f_o$ )	7	16	40	63
	Expected Frequency ( $f_e$ )	8.3	21.4	33.2	63.0
	% within Intelligence	11.1%	25.4%	63.5%	100.0%
	% within Size	13.2%	11.8%	19.0%	15.8%
	% of Total	1.8%	4.0%	10.0%	15.8%
Average	Observed Frequency ( $f_o$ )	35	82	117	234
	Expected Frequency ( $f_e$ )	31.0	79.6	123.4	234.0
	% within Intelligence	15.0%	35.0%	50.0%	100.0%
	% within Size	66.0%	60.3%	55.5%	58.5%
	% of Total	8.8%	20.5%	29.3%	58.5%
Below Average	Observed Frequency ( $f_o$ )	11	38	54	103
	Expected Frequency ( $f_e$ )	13.6	35.0	54.3	103.0
	% within Intelligence	10.7%	36.9%	52.4%	100.0%
	% within Size	20.8%	27.9%	25.6%	25.8%
	% of Total	2.8%	9.5%	13.5%	25.8%
Total	Observed Frequency ( $f_o$ )	53	136	211	400
	Expected Frequency ( $f_e$ )	53.0	136.0	211.0	400.0
	% within Intelligence	13.3%	34.0%	52.8%	100.0%
	% within Size	100.0%	100.0%	100.0%	100.0%
	% of Total	13.3%	34.0%	52.8%	100.0%

$$\chi^2 = 4.661, df = 4, N = 400, P > 0.324 (NS)$$

The above table-2 reveals that, about 15.8% of the students fall in Intelligent, about 58.5% of the students fall in Average level of Intelligent and remaining about 25.8% of the students fall in



Below Average level of intelligence. Among 15.8 % of intelligent students, 10 % of the students have medium size Handwriting, 4.% of the students have large size Handwriting and remaining 1.8% of the students have small size handwriting. Among 58.5 % of Average level of intelligent students, 29.3% of the students have medium size Handwriting, 20.5% of the students have large size handwriting and remaining 8.8% of the students have small size handwriting. Among 25.8% of Below Average level of intelligence students, 13.5% of the students have medium size Handwriting, 9.5% of the students have large size Handwriting and remaining 2.8% of the students have small size Handwriting. It is observed that, about 52% of students who have medium size of handwriting comprised 10% of students have intelligent level, 29.3% of students have average level of intelligence and 13.5% of the students have Below Average level of intelligence. It can be inferred from the above table -2 that, the obtained  $\chi^2$  value 4.661 with  $df=4$ , which is not significant at 0.05 level of significance, so above null Hypothesis “There is no significant difference in Intelligence of Post Graduate Students with their size of Handwriting” is accepted.



**Graph-2: Graph showing difference between Post Graduate Students with different levels of intelligence and their size of Handwriting.**

Graph -2 illustrates the percentage of size of handwriting of postgraduate students having more medium size handwriting (52.8%), large size (34%) and small size (13.3%). The graph also depicts that among size of handwriting students, 29.3% students have average level of intelligence, 13.5% students are below average level of intelligence and 10.% students are intelligent.

**FINDINGS AND CONCLUSION OF THE STUDY:** The study found that, “There is no significant difference in Extrovert, Introvert and Ambivert personality types of Post Graduate Students with their size of Handwriting”. Percentage of size of handwriting of postgraduate students having more ambivert type of personality, (62.5) than the introvert type of personality 28.8%, and Extrovert type of personality about 8.8%. Among 62.5 % of Ambivert students, 31% of the students have medium size Handwriting, 22.3 % of the students have large size handwriting and remaining 9% of the students have small size handwriting. This result indicate, Out of 100% of ambivert students 50.% have medium size of Handwriting and out of 100% of size of Handwriting 52.8% of students have medium of Handwriting. This finding shows majority of the students who write medium size Handwriting manner are ambivert in their personality (31.30%) and with the average level of intelligence (29.3%). Another one more result also concluded that, out of 100% of ambivert students 50.% have medium size of Handwriting and out of 100% of size of Handwriting 52.8% of students have medium of Handwriting. Similar research John Antony, (2008) study showed that, medium writer are normally social and have an average ability to concentrate on things and person has a need to conform in all areas. Also one more author Jess E. Dines, (1994) established same personality traits on Medium Size

Writing. Andrea McNichol and Jeffrey A Nelson, 1994) also found they are feeling normally social and has an average ability to concentrate. One more result found that “there is no significant difference in level of Intelligence of Post Graduate Students with their size of Handwriting” According to experts of Graphology handwriting instruction benefits students’ cognitive improvement as well as motor functioning. This study helps the teachers to understanding the students’ psychological and academic aspects through their size of Handwriting.

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## A STUDY ON IDENTIFYING THE EXPERIENTIAL LEARNING ASPECTS OF THE EMPLOYABILITY SKILLS IN THE PRESENCE CURRICULUM OF POSTGRADUATE OF KUVEMPU UNIVERSITY

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### Abstract

*Higher education is the main instrument for development & change. The main role of higher education is to train students by improving their knowledge, skills, attitudes and capacities to empower students as critical and reflective learners for life and earning a degree with employability. According to the India Skills Report 2019, around 70% of the youth face problems in finding desirable jobs due to a lack of professional guidance and job readiness. Lack of employability skills is one of the many issues that discourage youth from exploring different career options. Moreover, with a few quality institutions, it is tough for many students to develop their skills during their regular degree program. Because of disables educational institutions to roll out expertise, they lack in the development of curriculums to lifelong learning systems which didn't allow professionals to always stay in touch with the new realities of the field. Therefore, higher education institutions need to improve the employability of their graduates, they have to focus on reducing the skill gap through improvements in the curriculum. Employability Curriculum is based on seven dimensions of employability: Academic Learning, Experiential Learning, Career Maturity, Professional Skills, Career Management, Meaningful Connections, and Global Perspective. The present study analyse the Employability Skills of Experiential Learning aspects in the discipline of Arts, Science and Commerce postgraduate curricula of Kuvempu University.*

**Keywords:** Employability Skill, Experiential Learning, Higher Education, Postgraduates.

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**Introduction:** In the 21st century, rapid technological and scientific innovation has fundamentally shifted the nature and structure of employment in developing countries, with a rise in the number of highly skilled professional, technical and managerial jobs. These changes have forever altered the demand for skills, which are crucial to translating creativity, curiosity and innovation into employment and economic growth. As a University, this presents a unique challenge – predominantly when allowing for the aim of ‘giving students the best possible set of skills for their future, and the opportunity to draw from deep expertise outside their core discipline. However, the existing education system is heavily focused on theoretical learning and does not include employability skills as part of its regular curriculum. Hence preparing students for fast-paced change in the real world means constant, fast-paced changes to the education syllabus. Universities that allow for faster adaptation of the syllabus during the course, in order for students to remain at maximum employability at the end of the program. A large proportion of the products of the education system are found to lack employable skills. It has considerably reduced the credibility of the higher education system. The utility of higher education in assuring employment remains questionable. Many graduate and postgraduate students do not get jobs in their respective fields. There is a gap between skill requirements for entry-level graduate employment and those offered by higher education institutions. It is a responsibility of higher education institutions to produce graduates with employability skills. It can also give universities better access to information on employer demand for skills. Through curriculum giving students the opportunity to explore their career interests, internships, hands-on experience and other part-time work can also help students develop professional and transferable skills that are sought out by employers across all fields. Experiential learning is one of the aspects in the graduate employability curriculum.

**Need and Importance of the Study:** In higher educational institutions and colleges, it is found that only the amount of qualified students increases with the lower set of skills and abilities. The result is, that they are providing a substandard level of quality in higher education that leads to a supply of poor

quality passes out to students not able to meet the expectations of the workplace. However, as most students continue their education, it is not easy for them to enter the labour market. For example, according to the estimates of the National Association of Software and Service Companies (NASSCOM), only 25 per cent of graduates are employable, and 75 per cent is not easily employable. Therefore, it is important to ensure equitable distribution and access to skills-development opportunities. There are several reasons for the lower level of employability in higher education, like system/ structural issues, unavailability of teachers, and infrastructure, outdated syllabus, insufficient practical sessions, absence of career counselling facilities, and so on. Hence, it creates a gap between higher education & employability. Therefore, recruiters today expect students to have some additional set of skills and experiential learning curriculum required for employment known as employability skills. Changing education systems in the 21st century is an array of ways to develop employability through curricula. Good curriculum design will attract more interest in developing a number of skilful practices. So, the present study was undertaken to investigate the inducing aspects of employability in the postgraduate curriculum of Kuvempu University to explore the aspects of employability among postgraduate students. The identifying the opinions of postgraduate teachers & students about the experiential learning employability aspects of presence PG curriculum.

**Concept of Employability:** Employability is a difficult concept to define concisely and comprehensively. Hillage and Pollard (1998) viewed employability is about having the capacity to gain initial employment, maintain employment and obtain new employment. Employability and capabilities that enable individuals to get employment and be successful in their professional careers.

**Graduate Employability Curriculum:** Soft skills play an essential role in this dynamic trading age. In the present scenario, there is an enormous mass of capable job seekers in society and competition within them for the acquisition of jobs and the sustainability of employment becomes more difficult. One of the ways to improve the employability skills of graduates is to integrate that training into the curriculum, into the subject. The main aim is to integrate and reinforce the development and enhancement of employability.

**Dimensions of Employability Curriculum:** Employability Curriculum is based on seven dimensions of employability: Academic Learning, Experiential Learning, Career Maturity, Professional Skills, Career Management, Meaningful Connections, and Global Perspective. (The University of Kansas, KU University Career Centers. 2014) (Peter Knight and Mantz Yorke, 2004).

**Experiential Learning:** Experiential learning is practical learning in which students develop the ability to reflect on their own experiences. It goes beyond the confines of the classroom to involve students more actively and closely in the learning process. Experiential learning creates opportunities by equipping learners with the skills and knowledge they need for employment.

**Methodology:** The survey design was chosen for this study because it was found to be most appropriate to collect information directly about teachers regarding aspects of employability in the PG curriculum.

**Sampling Design:** The population of this study includes Arts, Science and Commerce teachers selected from 14 departments with 76 teachers serving in the selected department were considered for the random sampling technique for this study.

**Tool used for the study:** The investigator was Used the following tool for the collection of relevant data. Teacher's opinion regarding the availability Employability Skills of Postgraduate Curriculum- Developed by Shilpa.V and Dr. S.S. Patil.

**Statistical Techniques:** The researcher used Percentage analysis. Inferential Analysis and interpretation.

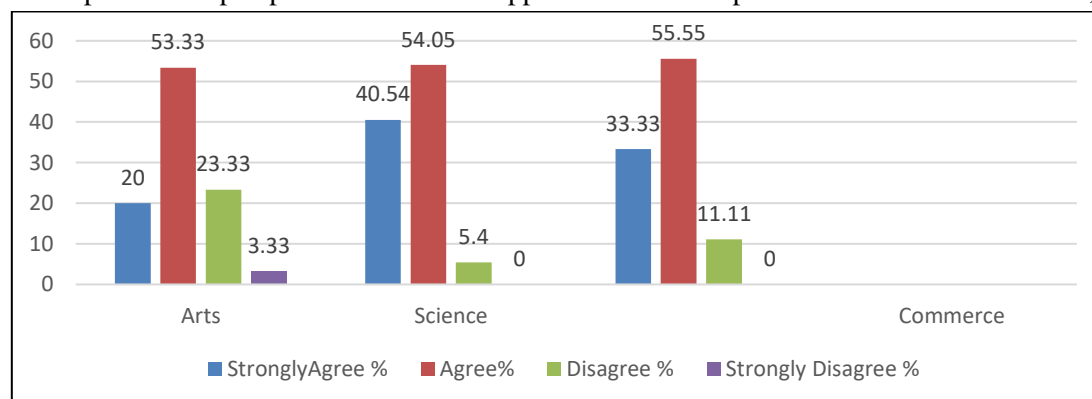
**Objective-1: To identify the presence of Experiential Learning related aspects of Employability skills in selected Postgraduate Curricula of Kuvempu University as perceived by Teachers of Postgraduate departments.**

**Hypothesis-1:** There is no significant difference between the opinions of the teaching faculty of Arts, Science and Commerce discipline with reference to the aspects of Employability in the Curriculum.

**1. The postgraduate curriculum provides first-hand experience of the workplace to help Exploration of career opportunities and expand their network to students.**

Group Statistics	Discipline	Responses									
		Strongly Agree		Agree		Disagree		Strongly Disagree		Total %	
		N	%	N	%	N	%	N	%	N	%
Employability Aspects of curriculum	Arts	6	20	16	53.33	7	23.33	1	3.33	30	100
	Science	15	40.54	20	54.05	2	5.40	0	0	37	100
	Commerce	3	33.33	5	55.55	1	11.11	0	0	9	100
	Total	24	31.57	41	53.94	10	13.15	1	0	76	100

**Figure-1** Shows the percentage scores of the opinion of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students,



The percentage scores of the opinion of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students, was calculated. Table (1) revealed that 20% of Arts teachers Strongly Agree, 53.33% Agree, 23.33% disagree and 3.33% strongly disagree. Among the Science teachers 40.54% Strongly Agree, 54.05% Agree, and 5.4% disagree. 33.33% among the Commerce teachers Strongly Agree, 55.55% Agree and 11.11% teachers disagree.

It is clear that majority of the teachers of all the three discipline either strongly agree or agree that the curriculum of their respective subjects provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students. There is less disagreement and almost low less strong disagreement about the above mentioned employability aspects.

However the Science teachers are more positive in the opinion (Strongly Agree= 40.54%, Agree=54.05%) about the aspects of curriculum provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students. Followed by Arts PG

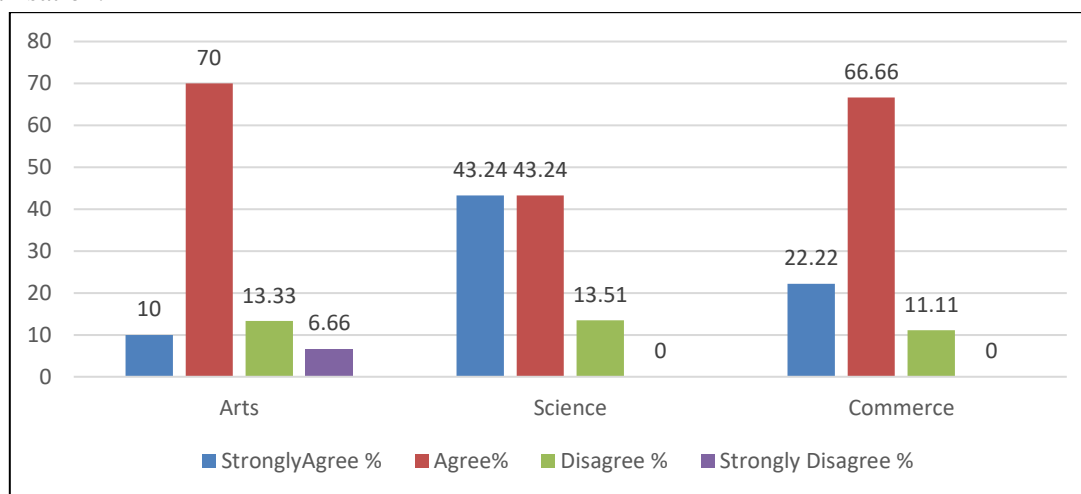
Teachers (Strongly Agree= 20%, Agree=53.33%) and Commerce PG Teachers (Strongly Agree= 33.33%, Agree=55.55%).

It is further observed from the opinion of the PG teachers regarding includes curriculum provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students, seems to be more agreement with regard to the Science teachers followed by Arts teachers compared to that of Commerce teachers. This can be observed from the Figure-1.

**2. The postgraduate curriculum is creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation.**

Group Statistics	Discipline	Responses									
		Strongly Agree		Agree		Disagree		Strongly Disagree		Total %	
		N	%	N	%	N	%	N	%	N	%
Employability Aspects of curriculum	Arts	3	10	21	70	4	13.33	2	6.66	30	100
	Science	16	43.24	16	43.24	5	13.51	0	0	37	100
	Commerce	2	22.22	6	66.66	1	11.11	0	0	9	100
	Total	21	27.63	43	56.57	10	13.15	0	0	76	100

**Figure: 2.** Shows the percentage scores of the opinion of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum provides is creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation.



The percentage scores of the opinion of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum provides is creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation, was calculated. Table (2) revealed that 10% of Arts teachers Strongly Agree, 70% Agree, 13.33% disagree and 6.66% strongly disagree. Among the Science teachers 43.24 % Strongly Agree, 43.24% Agree, and 13.51% disagree. 22.22% among the Commerce teachers Strongly Agree, 66.66 % Agree and 11.11% teachers disagree.

It is clear that majority of the teachers of all the three discipline either strongly agree or agree that the curriculum of their respective subjects provides is creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation,. There are less disagreement and almost low less strong disagreement about the above mentioned employability aspects.



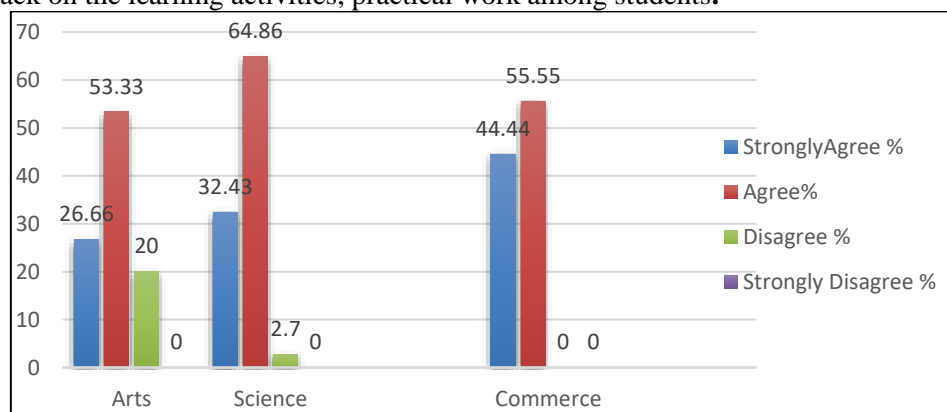
However the Science teachers are more positive in the opinion (Strongly Agree= 43.34%, Agree=43.34%) about the aspects of curriculum creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation. Followed by Commerce PG Teachers (Strongly Agree =22.22%, Agree=66.66%).and Arts PG Teachers (Strongly Agree= 10%, Agree=70%).

It is further observed from the opinion of the PG teachers regarding includes curriculum creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation., seems to be more agreement with regard to the Science teachers followed by Arts teachers compared to that of Commerce teachers. This can be observed from the Figure-2.

### 3. The PG curriculum design has given a chance for self-evaluation and Feed-back on the learning activities, practical work among students.

Group Statistics	Discipline	Responses									
		Strongly Agree		Agree		Disagree		Strongly Disagree		Total %	
		N	%	N	%	N	%	N	%	N	%
Employability Aspects of curriculum	Arts	8	26.66	16	53.33	6	20	0	0	30	100
	Science	12	32.43	24	64.86	1	2.70	0	0	37	100
	Commerce	4	44.44	5	55.55	0	0	0	0	9	100
	Total	24	31.57	45	59.21	7	9.21	0	0	76	100

**Figure- 3:** Shows the percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum design has given a chance for self-evaluation and feedback on the learning activities, practical work among students.



The percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum design has given a chance for self-evaluation and feedback on the learning activities, practical work among students, was calculated. Table (3) revealed that 26.66% of Arts teachers Strongly Agree, 53.33% Agree and 20% disagree. Among the Science teachers 32.43% Strongly Agree, 64.86% Agree and 2.70% disagree. 44.44% among the Commerce teachers Strongly Agree, 55.55 % Agree and no teachers disagree.

It is clear that that majority of the teachers of all the three discipline either strongly agree or agree that the curriculum of their respective subjects regarding design has given a chance for self-evaluation and feedback on the learning activities, practical work among students. There are less disagreement and almost no strong disagreement about the above mentioned employability aspects.

However the Commerce teachers are more positive in the opinions (Strongly Agree= 44.44%, Agree=55.55%) about the aspects design has given a chance for self-evaluation and feedback on the learning activities, practical work among students, of in the curriculum. Followed by Science PG

Teachers (Strongly Agree=32.43%, Agree=64.86%) and Arts PG Teachers (Strongly Agree= 26.66%, Agree=53.33%).

It is further observed from the opinions of the PG teachers regarding design has given a chance for self-evaluation and feedback on the learning activities, practical work among students in their curriculum seems to be more agreement with regard to the commerce teachers followed by science teachers compared to that of Arts teachers. This can be observed from the Figure-3.

### Findings of the Study:

1. The percentage scores of the opinion of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students- The 20% of Arts teachers Strongly Agree, 53.33% Agree, 23.33% Disagree and 3.33% Strongly Disagree; the Science teachers 40.54% Strongly Agree, 54.05% Agree, and 5.4% Disagree; the 33.33% Commerce teachers Strongly Agree, 55.55% Agree and 11.11% teachers Disagree.
2. The percentage scores of the opinion of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum provides is creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation - The 10% of Arts teachers Strongly Agree, 70% Agree, 13.33% Disagree and 6.66% strongly Disagree; the Science teachers 43.24 % Strongly Agree, 43.24% Agree, and 13.51% Disagree; the 22.22% Commerce teachers Strongly Agree, 66.66 % Agree and 11.11% teachers Disagree.
3. The percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum design has given a chance for self-evaluation and feedback on the learning activities, practical work among students -26.66% of Arts teachers Strongly Agree, 53.33% Agree and 20% Disagree; the Science teachers 32.43% Strongly Agree, 64.86% Agree and 2.70% Disagree; the 44.44% Commerce teachers Strongly Agree, 55.55 % Agree and no teachers Disagree.

**Conclusion:** The findings encourage the use of experiential learning as an effective and inclusive solution for enhancing the employability and employment outcomes of postgraduate students. The opinion of the PG teachers regarding includes curriculum provides first-hand experience of the workplace to help exploration of career opportunities and expand their network to students, seems to be more agreement with regard to the Science teachers followed by Arts teachers compared to that of Commerce teachers. It is further observed from the opinion of the PG teachers regarding includes curriculum creating opportunities to students acquire the skills in the apprenticeship and volunteering conducted by formal & non formal organisation., seems to be more agreement with regard to the Science teachers followed by Arts teachers compared to that of Commerce teachers. The opinions of the PG teachers regarding design has given a chance for self-evaluation and feedback on the learning activities, practical work among students in their curriculum seems to be more agreement with regard to the commerce teachers followed by science teachers compared to that of Arts teachers. Experiential learning opens doors and facilitates more equal access to greater careers, it enables educational institutions to roll out expertise student's gain in the development of curriculum.

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## EFFECTS OF YOGA ON B.ED COLLEGE STUDENTS

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### Abstract

Now a days modern man became machine, he is working from morning to night. Almost all the sections of the population have become mechanical machines. College students experience very high levels of stress and often lack the time or resources to manage their stress effectively. Hence there is way to get relief of mind stress, and control on many diseases like diabetes, heart diseases, and many other. Yoga is a holistic system of mind - body practices for mental and physical health involving multiple components such as physical postures and exercises to promote strength and flexibility, breathing exercises to enhance respiratory functioning, deep relaxation techniques to cultivate the ability to mentally and physiologically release tension and stress, and meditation/mindfulness practices to enhance mind - body awareness.

In order to analyze the importance of yoga in one's life a survey is conducted and presented in the present paper. The survey comprises of 30 male and female student teachers of B.Ed College. A questionnaire was provided to them and their opinion was collected. The opinion was then analyzed and results were concluded. Survey shows the importance of yoga to college level students. Practicing Yoga daily makes man healthier. All the participants found yoga advantageous in their life as it helps them to attain inner peace, productive mind, strong immunity and balanced work life as well. Thus it can be concluded that, practicing yoga makes life healthy and cherishable. Yoga, Meditation and pranayama kriyas mudras and bhandas are a scientific discipline of removing stress and tension at its source. Meditation and Yoga reduces the effects of stress among the students.

**Key Words:** Yoga, health, hatayoga.

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### Introduction

**“Yogena Chittasya Padena Vacha**

**Malam Sharirasya Cha Vaidya Kena**

**Yopakarotham Pravaram Muninam**

**Patanjalim Pranjali Ranatosmi”**

Now a day's modern man became machine, he is working from morning to night. Almost all the sections of the population have become mechanical machines. College students experience very high levels of stress and often lack the time or resources to manage their stress effectively. Hence there is way to get relief of mind stress, and control on many diseases like diabetes, heart diseases, and many other. Yoga is a holistic system of mind - body practices for mental and physical health involving multiple components such as physical postures and exercises to promote strength and flexibility, breathing exercises to enhance respiratory functioning, deep relaxation techniques to cultivate the ability to mentally and physiologically release tension and stress, and meditation/mindfulness practices to enhance mind - body awareness. Yoga gives us a dynamic and balanced lifestyle. Yoga affects the lifestyles of many individuals ranging from child and teen to senior.

**“Samadosha, samagnischa samadhatumala kriyaha prasanna atmenindriya manaha swasthya ityabhidheeyate”**

Ayurvedic Definition of Health – Susruta has described the features of a healthy person in the above quote. It follows that the doshas must be in equilibrium, the digestive fire must be in a balanced state and the tissues (dhatus) and malas (wastes) must work in a normal state. The sensory and motor organs and mind, atma must be also in a pleasant state. Such a person is called a healthy person or Swastha.

Yoga helps us to keep dosha are in equal, and keeps digestive fire in active and it helps to remove our body wastages, if our body is healthy, fit definitely a healthy soul is in that body.

Hatha yoga practices, like asanas (i.e., postures), pranayama (i.e., breathing practice intended to influence vital forces), kriyas (cleaning processes), mudras (i.e., certain interval attitudes), and

bandhas (i.e., neuromuscular locks) are mostly taught as physical practices. While various meditational techniques work at the mental level, all these practices are intended to develop a certain type of awareness within oneself, which in turn brings about a change in emotional and visceral functions, and through them, a change in intellectual and somatic functions of the individual takes place

### Objectives of the study

1. To study the effects of practicing yoga on male and student teacher of B.Ed College.
2. To study the effects of practicing yoga on female student teacher of B.Ed College.

### Hypothesis of the study

1. There is no significance difference between opinion of male student teacher and female student teacher about Yoga practice
2. The both male student teacher and female student teacher had positive attitude of yoga practice.

### Methodology

#### Design of the study

The study is conducting in survey method. The survey involved planned questionnaire involving selected questions necessary for the survey. The questions are regarding daily life routine, and it has 10 questions about practicing yoga

**Sample:** The 30 male and female teacher trainees of B.F.Yaligar college of Education Munavalli of savadatti taluk selected as sample by simple random method.

### Analysis of the study

Researcher collected the opinion of participants and item analysis is made by researcher to find the result

#### Questions of the survey and its analysis

1. Do you practice yoga postures daily?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	14	13	27	90

The question about practicing yoga, 90% student teacher was said yes, Yoga has become the most crucial activity in one's life when consideration to medical and physical fitness is given. It has gained immense importance in the entire world. It makes the mind calm, relieves stress, makes the body physically fit and keeps the person active throughout the day.

- 2 Do you feel active, when you do yoga?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	12	12	24	80

The 80% student teacher answered that they will feel good, and active when they doing yoga. Practicing yoga is very important in order to enhance the mental state and as well as physical state.

3. Do you face any difficulties, when you doing Asanas?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	5	7	12	40

40% student teacher were answered that they were face some difficulties when they doing yoga, some Asanas are little bit difficult.

4. Practicing daily Yoga, is it effect positively?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)

1.	13	12	25	83
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Practicing daily Yoga is effect positively.. 83% of student teacher answered. Yoga practice makes the mind calm, relieves stress, makes the body physically fit and keeps the person active throughout the day. Practicing yoga in one's life is very important in order to achieve the healthy life and improve mental state. Therefore, yoga should become everyone's habit in order to achieve success in life.

5. Do you practice pranayama daily?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	11	10	21	70

90% student teacher gave their opinion that they practice pranayam daily. Breathing exercises to enhance respiratory functioning, deep relaxation techniques to cultivate the ability to mentally and physiologically release tension and stress,

6. Do you feel difficulties , while practicing pranayama?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	6	6	12	40

40% student teacher were answered that they were face some difficulties when they doing pranayama, some pranayam activities like kapalabhati pranayama is little bit difficult.

7. Is Yoga helps you become calm, quite and healthy?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	13	14	27	90

90% student teacher are gave positive response. practicing yoga in one's life is very important in order to achieve the healthy life and improve mental state. Practicing yoga for at least once a day makes one's body so enthusiastic that accomplishing a task becomes possible. Therefore, yoga should become everyone's habit in order to achieve success in life.

8. Do you practice jala neti kriya once in a week?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	10	8	18	60

60% student teachers are practice this jala neti kriya. This kriya cleans nose and gives good respiratory system, and more benefits to health.

9. Do you practice vamanadouti kriya once in a month?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	10	8	18	60

60% student teachers are practice this vamanadouti kriya. This kriya cleans the liver, intestine body and gave more benefits to health.

10. Is Yoga changed your life style?

Sl.No.	Male student teacher opinion	Female student teacher opinion	Total	Percentage (%)
1.	13	14	27	90

90% student teacher are answered that yoga changed their life style. Though yoga is beneficial to live a healthy life.. Yoga has gained importance from past few years as it provides improved mental state boost immunity. Yoga gives mental peace and strong immunity. Yoga also improves cognitive function. Doctors too have indicated that yoga could increase cognitive efficiency.

### Result of the study

Practicing yoga daily is most important in human life. one of the best benefits of yoga is how it helps a person manage mental health. Most importantly, yoga helps anyone deal with stress, which is known to have devastating effects on the body and mind

All participants agree that the yoga practice changed their living style. Yoga is rightly called a science to live in harmony with self and the world. It is not only for keeping our body fit but also helps us to keep our mind and soul active. The practice blend the body, mind, and soul together and keeps us happy, peaceful. Yoga makes us more positive , optimistic and cheerful.

### Importance of Yoga

Yoga, Meditation and pranayama, kriyas, mudras and bhandas are a scientific discipline of removing stress and tension at its source. Meditation and Yoga reduces the effects of stress among the students and induces a feeling of calm and peacefulness, combats depression and anxiety, counteracts helplessness and weakness, and thus increases self - esteem and internalized. Pranayama is good exercise for good respiratory system, it strengthens the lungs. And kriyas are the ways to cleaning the body. Now a days most of people including children are facing the obesity problem to avoid this zumba yoga is very famous. Zumba yoga is body exercises with music. This is very effective for weight loss.

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## IMPORTANCE OF PHYSICAL EDUCATION FOR DEVELOPING THE QUALITY OF SCHOOL EDUCATION

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### **Abstract**

*Physical Education for children has been linked to positive self-esteem, skill development, skeletal and cardiovascular health, and general healthy development. It is now widely established that childhood is the best time to establish positive attitudes and behaviour relating to physical activity and a healthy lifestyle. Physical Education is an all-encompassing term, including fitness, skills, movement, dance, recreation, health, games and sport plus the appropriate values and knowledge of each. The skills developed through a good physical education programme are critical in ensuring that students have success in many of the sport and leisure activities common to the community. Physical Education has a major role to play in the development of young people. It is an integral part of the total education of any child and is closely linked to other creative and learning experiences and skill acquisition. It makes a significant contribution to the all - round harmonious development of the mind and body. The program also helps students develop the competencies and beliefs necessary for incorporating regular physical activities into their lives. Through involvement in a well-taught physical-education program, students can achieve physical and personal benefits.*

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**Definitions:** Physical Education is an all-encompassing term, including fitness, skills, movement, dance, recreation, health, games and sport plus the appropriate values and knowledge of each. The skills developed through a good physical education programme are critical in ensuring that students have success in many of the sport and leisure activities common to the community. Physical Education has a major role to play in the development of young people. It is an integral part of the total education of any child and is closely linked to other creative and learning experiences and skill acquisition. It makes a significant contribution to the all - round harmonious development of the mind and body. The program also help students develop the competencies and beliefs necessary for incorporating regular physical activities into their lives. Through involvement in a well-taught physical-education program, students can achieve physical and personal benefits. Therefore, the planning and management of the Physical Education Curriculum in Schools should always have children as the focus of attention, with the overall purpose of providing rich and varied experiences.

Physical Education also includes sport education. Physical Education is also the process through which sport, outdoor adventure activities, dance, gymnastics, aquatics and games are used by physical educators to help students learn motor skills and to learn about and achieve physical fitness where this is possible. Physical Education activities also assist the school to develop personal and social skill in students. Physical education promotes fitness, both physical as well as mental. Read on to know in detail the importance of physical education in schools. For the overall development of a child, along with academics, which develop his mind, a child should participate in physical activities such as sports and exercises as well. Although, researches in the field have shown that physical education should be made mandatory in schools as it develops positivity, improves the attitude and fitness of the students, yet, due to various constraints, many schools are not really able to implement this. Lack of funds, increased emphasis on academics to up the scores in order to avail government funding; there are various reasons behind this policy of the schools for not making physical education compulsory. The following Buzzle article will perhaps help such school authorities, to have a fresh look at this topic. Physical education is an important part of every school curriculum and a class every pupil awaits. Physical education is that segment of the daily timetable that every student eagerly waits to attend, as it is the only official time when the students can be on the grounds, engaged in their favourite sports. One of the main objectives of physical education is to bring in this element of joy to

the academic orientation of schools. Physical education aims at dedicating a daily time for some physical activity for the students.

The physical training class, as it is also called, involves sports, games, exercise and most importantly, a break from the sedentary learning indoors. One of the other important objectives of physical education is to instil in students the values and skills of maintaining a healthy lifestyle. Daily physical activity promotes an awareness of health and well-being among students. It boosts them to engage in physical activities on a daily basis. It promotes them to lead a healthy life in adulthood. Physical education classes constitute programs to promote physical fitness in students, train them in sports, help them understand rules and strategies in playing and teach them to work as a team. A very vital factor in physical education is to develop interpersonal skills in children. Sports aim at making them team players, developing a sportsman spirit in them and enhancing their competitive spirit. Sports that form a part of physical education classes help the students invest time in fruitful and competitive activities. Physical education is intended to inculcate in the minds of students, the importance of personal hygiene and cleanliness. Physical education classes aim at teaching the students, the habits of personal cleanliness and the importance of the maintenance of personal hygiene in life. They are also used to impart sex-education to students, help them clarify their doubts and find answers to all the questions that occur to them.

#### ***Importance of Physical Education:***

***Fitness:*** Obesity is a very common problem faced by numerous American kids, which if not taken care of in time, can lead to many lifestyle diseases such as heart disease, cancer and diabetes in the long run. Engaging in physical activities help to burn calories and lose fat. Regular exercising builds muscles, makes the immune system strong and improves upon a child's stamina. This increases the fitness levels and keeps various diseases and health conditions in check.

***Self-esteem:*** Physical activities help to keep a child active and focused. When a student participates in physical activities, he becomes fit and attractive, which helps to boost his self-esteem. After all everyone wants to look their best, regardless of age, isn't it?

***Life Lessons:*** By participating in various sports, a student gets to learn so many things about life. A student wins some games and loses some, this makes him understand that winning and losing are a part of life and should be accepted with grace. When a student participates in team games, he learns that co-operating with others is very important if goals are to be achieved. Likewise, sports can teach so many life lessons to students and thus, help them evolve mentally.

***Healthy Eating:*** During the theoretical physical education classes, a student is taught the importance of healthy eating. He gets to know how harmful some of his favorite foods such as pizzas, burgers, cakes and aerated drinks can be. A student is also made to understand that if he does not make healthy food choices, he can face many health problems in the future. Equipped with this knowledge, many students inculcate healthy eating habits, by giving up high sugar and fast foods and replacing them with healthy foods like fruits, vegetables and nuts.

***Hygiene:*** Physical education classes lay great emphasis on maintaining hygiene. They teach students how to remain clean and germ-free at all times. Sex education is sometimes part of this curriculum too. The safe practices taught in these classes, if followed by the students throughout their life, will save them from many diseases.

***Stress Management:*** Often times, students, particularly in their adolescent years, face various kinds of pressure and experience stress and anxiety. Participation in physical activities can act as a stress buster for them. Researches have shown that when a person exercises, the levels of cortisol, a stress hormone, get reduced. Moreover, a person who exercises every day, is able to sleep better, thus giving enough time to his body to repair and restore. This proves that by making an exercise routine, a student can remain stress-free, relaxed and concentrate more on his studies and other important things.

**Productivity:** Researches show that students who participate in physical activities have high energy levels and are more alert than those who led sedentary lifestyles. Due to these very reasons, the productivity of such students in various spheres of life, including their studies, improves considerably. As can be seen, physical education contributes so much towards making a child grow into a healthy, intelligent, confident and level-headed adult. It can be rightly said that it's not just for individual growth, but for the improvement of the whole society, physical education should be made an important part of the school curriculum.

**Conclusion:**

The very important objective of physical education is to encourage the upcoming sportsmen and women of the crowd. Physical education gives the budding sportspersons a platform to exhibit their talent. Those with a flair for sports get an opportunity to display their talent. Their small steps on the school playground can eventually turn into a huge leap in the field of sports. Moreover, sports refresh the students' minds. Physical education class becomes enjoyable for the kids while proving to be helpful for their overall growth and development. Physical education is indeed one of the most fruitful activities of a school schedule

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## ESSENTIAL OF YOGA FOR PHYSICAL FITNESS DEVELOPMENT OF ATHLETES

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### Abstract

*Yoga is part of physical education And Sports. As a union of mind, body and spirit, yoga helps its devoted followers achieve better flexibility, balance and elasticity in our joints and maximum functional range of motion. But does yoga belong in your arsenal of tools for training athletes? Yes, when yoga is specifically designed for sport. Athletes' yoga is geared toward the unique needs of athletes, taking into consideration the repetitive stresses they place on their bodies during sport. Yoga is important role in sports. In yoga, Asana, Pranayama, Suryanamaskara, and Meditation are usually performed by Athletes for various purpose in Sports. Yoga improve their concentration. It helps in developing physical fitness and it is also good for relaxation, good for rehabilitation after injury. Athletes needs four basic qualities: Speed, Skill, Strength, and Stamina. To achieve these in professional sports, the daily life of a sports person calls for discipline in training, a balanced diet, a balanced lifestyle, and an inner focus and determination. Yoga is a holistic system – teaching skills which many Athletes seek, such as control over the mind, control over the body, good breathing habits, relaxation under pressure, highly developed concentration skills, and the ability to focus on the present. Asanas, Pranayama, and Meditation unite the forces of body and mind, so that they are not at odds with one another. They help to develop greater body awareness and build up vitality and concentration. Yoga plays an important role in sports. In yoga, Asana, Pranayama, Suryanamaskara, Meditation and kayotsarga are usually performed by sportsperson for various purpose in Sports. Yoga improves their concentration. It helps in developing physical fitness and it is also good for relaxation, good for rehabilitation after injury.*

*Yoga is just for gentle relaxation, think again. Today more athletes are learning the many dimensions of performance that can be improved by adding yoga to their training. Yoga and sport are often seen in opposition, by nature of the quiet approach in yoga in contrast to the competitiveness of sport. In sporting events viz Athletics, Gymnasts, Rugby, Soccer and others, the successful performance depends upon the perfection with which different phases of the event are performed, On the other hand for successful participation in the various games requires different combinations of fitness physical and mental and skill execution. Yoga like other sports demands tremendous integrity, self-discipline and awareness to take us beyond existing level of physical, motor, skill and other types of qualities related to a particular sport.*

**Keyword:** *Yoga, Paranyama. Meditation, Asana & Suryanamaskara*

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### BENEFITS OF YOGA

1. Improves concentration - some yogasana [balancing pose], Pranayama like anulom-vilom, bhramari etc., Meditation helps to increase concentration.
2. Weight control - Sportsmen often gains weight during off-season. This can easily be prevented by practicing all yoga techniques.
3. Increase immunity - Yoga also increase the immunity.
4. Improves all systems - Yogasana, Pranayama and suryanamaskar improves all body systems.
5. Improves glandular function - Daily practice of yoga improves glandular function.
6. Develop fitness - Yoga asana, pranayama, suryanamaskar develops high level of physical fitness especially flexibility and endurance.
7. Tone up muscular and nervous system
8. The breathing exercises of yoga helps to control the breath which is very important for sportsperson.
9. Meditation, relaxation poses and some pranayama cure stress and anxiety.
10. It cures all components of physical fitness like speed, strength flexibility etc.

### YOGA HELPS ATHLETES

Yoga helps a sports person to feel, and understand, the body processes more accurately; thereby learning what the body needs. By understanding this, an athlete can work on areas that need attention, with confidence. Yoga is useful for all types of sports to help prevent injuries. One gets

extra agility, which helps to avoid damage, provides more strength, and improves a player's ability to react to a situation. In competitions – athletes, at all ability levels, tend to have a fear of losing, of other competitors, or of developing mental deterrents to excellent performance. Yoga trains us to be our best every single moment, to hold ourselves at our highest standard, and to go beyond our pre-conceived limitations. Yoga postures work all around a limb and help to knit the muscle fibers; thus, building resilience to injury. By anticipating areas of the body that are subject to stress, one can use Yoga effectively to pre-strengthen areas of concern. Due to long-term sports training, muscular imbalance can develop in the body, which can lead to damage and injury. Yoga's practices are ideal in this respect because integration, balance, and harmony are keywords of Yoga. These practices correct the one-sided effect of training, by promoting general harmonious development of the body, and by improving the whole physical system. Yoga practices offer the natural remedy because Asanas are based on the gentle stretching of muscles, which induces relaxation and increases the blood supply. These also release residual tension and speed up regeneration. It is a natural counterbalance to the muscular effort of training and competing. Sports' training tends to be very intensive over an extended period of time. This, again, can lead to a form of imbalance, where muscles, or the body as a whole, becomes weak through over exertion. Regeneration is a remedial process for regaining strength and for the prevention of injuries. Yoga regeneration exercises are based on the principle that, after contracting for a specific time period, in an isometric movement, against specific resistance, muscles will release and relax. However, all this would be effective – only if done consciously.

### **YOGIC PRACTICES**

Any prolonged or repetitive activities relating to work or sport can create muscle imbalances. Dependent on the activity, certain muscles are shortened, while others are lengthened and weakened. These imbalances can cause a strain on joints and result in injury. The yoga for athletes system was created to reduce these muscle imbalances. The practice of yoga increases strength, flexibility, balance and stamina to improve overall sport performance, reduce injuries, enhance posture and overall function. In addition, it improves digestion, organ function, metabolism, body awareness and proprioception. Many athletes suffer from flexibility deficits. Since most sports involve the same repetitive motions, an athlete's body becomes biased to those directional movements and positions. As a result, they become at risk of injury if they are challenged out of their available range of motion. Traditional stretching programs are uni-planar, meaning they only stretch the muscle groups in a single plane of motion. Each muscle in the body functions in three planes of motion. They have a dominant plane - for example, the hamstrings function primarily in the sagittal plane, yet this muscle group also functions in the frontal and transverse planes as well. The flexibility component of yoga is very dynamic. It stretches multiple muscles at the same time in all three planes of motion. It involves opening the entire kinetic chain, thus simulating the motions and creating flexibility that is sport-specific for the athlete. Athletes report fewer injuries after participating in a yoga program. Their dynamic balance, flexibility and strength have all improved. They report an improvement in their mental acuity and overall focus on the field. Overall, athletes experience an improvement in their entire sport performance. Overwhelmingly, athletes who were most doubtful about yoga quickly catch on and incorporate it into their daily lives. They feel invigorated and report a much healthier outlook on their performance.

### **BENEFITS OF YOGA FOR ATHLETES:**

The benefits of yoga are unlimited. The obvious is the increased flexibility throughout the muscular system, but there is so much more. The athlete can benefit by increasing mobility in the joints, thus increasing range of motion for overall enhanced performance. The athlete will be able to reach farther, fall harder while preventing and minimizing injuries because their muscles have a memory (like a rubber band) from the deep stretching obtained in practicing yoga on a regular basis.

Many athletes are having more injuries that require surgery because of the increased focus on strength training with weight resistance. This method for increasing strength and muscle mass is highly effective and efficient, yet it dramatically decreases flexibility. However, if yoga or other types of prolonged stretching are practiced in combination with strength training and practical application exercises (using the body in a way that mimics the movements of their particular sport, while performing a balancing or core movement), injury can be minimized during engagement in other competitive sports that call for the athlete to be more spontaneous with their bodies, calling for overextended reaches, lunges, falls, etc., all of which increase the odds of injury, opposed to the safety of controlled mechanical motion used in weight room workouts. With yoga, the athlete will not only increase flexibility but also increase poise and balance from the practice of the yoga holding/balancing poses. This type of balancing will enhance athletic performance by enabling the athlete to prevent falls because of his heightened awareness of his body's center place. When balancing poses are mastered the athlete is then conditioned to unconsciously recover from any imbalances their body may experience, staying centered in action, moment by moment during play. This is when the athlete begins to perform miraculous stunts. He is able to use his body in ways he never thought possible while remaining centered and injury free. Yoga also helps strengthen connective tissue, break down adhesions (tiny scar tissue) from old injuries and over-training, that have tightened as we age thus helping create mobility of the joints and an anti-aging posture.

### Conclusion

Yoga is a powerful, easy to learn, and portable method of attaining peak performance. Regular practice, when integrated with your current Functional Integrated Yoga can be taught to groups in a class format, which helps facilitate athletes in learning and internalizing its unique movements and transitions between postures. However, Bo's diverse background in sport performance enables her to weave this innovative and therapeutic form of yoga directly into an athlete's training program (during workouts) and to individualize programs for athletes within the team setting, targeting interventions to their specific needs in order to maximize their performance capacity. A consistent training schedule, will improve your mental and physical game.

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## TEACHING DURING COVID 19 LOCK DOWN: PERSPECTIVES OF TEACHERS

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### **Abstract**

*Over the past five years, schools have urged teachers to become adept with ways and means of blending technology with face to face teaching and explore the feasibility of online or virtual classes. The use technological devices such as smart phones, tablets, multimedia, educational software, and online teacher tool kit is the new kind of literacy that has embarked generation gap between digital immigrants and digital natives. However, this mode has created certain challenges which the teachers of the 20<sup>th</sup> century are facing in their attempt to immigrate to this new world of teaching. Teachers have shifted to online mode for imparting knowledge, skills. This has been a time testing period challenging the commitments of teachers as this immigration is not smooth. Achieving this goal is critical because the teacher's role is one of the most important factors contributing to high-quality education and successful student learning.*

**Keywords:** *Opinion, Online teaching mode, Secondary School Teachers*

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### **INTRODUCTION**

Education is the background of any progressing nation and the teachers are the pivot in any system of education as he has a key role to perform in the whole process. The success of an educational process depends to a large extent, on the character and ability of teacher, who is the cornerstone of the arch of education. Education is considered to be the role substantial of life in any country both advanced and backward alike. No country can dream of increasing the socio-economic status of its population in the absence of a strong educational system. Hence, there is need for improving the quality of education system of the nation.

Although education is the joint responsibility of the philosophers, politicians and economists, it entirely depends on the skills, resourcefulness and favorable attitudes of the teachers, the teacher is the focal point around which the whole education system revolves and if the teacher is competent and devoted, other short comings do not stand in the way of a country's progress. It may be stated "All progress depends on education and education depends on the quality of teachers". COVID 19 pandemic has drastically changed the educational landscape of the nations with over 1.5 billion children home bound, education has gone online school and college level continues to be carried out through this mode. At this point, it may note that many teachers have to immigrate digitally to this online area of teaching. This has envisaged upon the need for training teachers in teaching through this mode.

To cope up with the changing society, education must also change in order to accommodate new concepts with technological precision and perfection. In this context, the teacher has a more challenging role to play in order contribute to the social progress and change. The manifold responsibilities continue to exist with respect to planning, preparation, content delivery, evaluation and assessment, thus increasing the complexity of the teacher's role.

In more recent time's teacher's role in keeping with the level of differentiation of the educational system have become more specialized. Although teachers are still viewed as moral guides for children & youth, they are no longer expected to be the fountain of all knowledge due to availability of information in multiple platforms and in varied formats. However within the context of the learning modes of students with additional woes of parental interference the jobs of the teacher have attained additional attention.

### **Ubiquitous Teaching-Learning and Opinion of Teachers**

Effective Teaching denotes the manner in which the teacher supports and facilitates his/her students to achieve educational goals and learning needs. Over the past five years, schools have urged

teachers to become adept with ways and means of blending technology with face to face teaching and explore the feasibility of online or virtual classes.

There has been mixed response shared on online teaching-learning processes. According to some teachers, poor planning and preparation on the part of teachers, lack of strong infrastructure such as insufficient bandwidth and dearth of training has impacted the effectiveness of learning negatively. Others have opined that this hybrid model of education will open new vistas and avenues for sustained, self and technology supported learning.

### **Literature Review**

In the Indian context, there are many challenges to overcome. Students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within states of the nation. Teachers who make use of advanced technologies in classroom such as WebEx need training, and institutional support to achieve progress beyond beginning point in a totally new ecosystem so as to become adept with different teaching approaches (Cavanaugh, 2013). Ongoing professional development programs should be made available to enable the teachers to sustained learning experiences for the teachers to scaffold, reflect and coach technology related inputs new novice teachers. (Novak, 2018). Similarly, educators who have emphasized on content of the online and digital learning arenas have reflected that they are entering a new space and prefer contextualized and customized delivery modes suiting their skill and student learning ability. Those who are responsible for providing professional development programme are attempting to integrate online practices into the teaching systems. This has facilitated the availability of research-based national quality standards for in-service teachers with respect to blending classroom teaching practices with online teaching (Quality Matters, 2019). If the future of secondary school teaching system is more computer based, there should be greater opportunities of providing online pedagogy and experience in professional development programs so that educators and their students are benefitted irrespective of the mode in which they are taught. In this context, it can be observed that technology should not only be mastered by teachers but alongside should be used for bringing a paradigm shift in their teaching approaches. This task can create threat and intimidation in teachers as there is a dearth of good models that can be emulated to effectively integrate technology and curriculum. (Bitner & Bitner, 2002). During recent times, teacher educators devised Teacher Moments simulations for the purpose of easy use in their classrooms (Hillaire et al., 2020). They claimed that they had authored “Trauma -Bored and Tired,” in which the user practices managing a classroom containing a student affected by trauma. This simulation focused on the learning experiences of two pairs of class V students who were learning to use the computational animation program, Scratch, in their English Language Arts class. During these simulation lessons, the participants were provided with scenarios that familiarized them with each other they are asked how they would respond to the various situations of the two pairs. One of the scenarios included a student with post traumatic syndrome putting her head down on her desk thereby showcasing disengagement from the activity. The spread of the pandemic (COVID-19) worldwide in the dawn of 2020, has forced K-12 institutions from across the globe to transit from in-person to distance teaching and learning. This change is expected to negatively impact on the vulnerable students most, including young adolescents with challenges with respect to physical and mental abilities and the socio-economically and racially as well as ethnically margin alised groups.. The student population gripped in the crutches of poverty as a result of which they and their families have poor access to the most essential services of the era, the ‘Internet’ and the ‘Digital devices’, and added to that, their parents may not be in a position to actively support their children’s learning at home (Reich et al., 2020).

The Academic Communities of Engagement (ACE) framework devised by Borup, Jenson et al, was a theoretical structure that could offer help to the community members to develop an

awareness of their responsibilities towards their communities and offer support to them and in turn receive support from them. (Borup et al., 2020). Two schools that had established a impactful coaching culture were chosen for this purpose which enabled them to harness their existing pedagogical expertise in an extremely successful manner that facilitated an easy shift to remote teaching. This model was followed by coaches in the district as they began to develop online professional development that could be offered during the upcoming months that would include instruction with the support of effective technology tools facilitating effective online and blended teaching endeavors. A key argument proposed of the ACE framework was that it promoted the feasibility for each student to work independently according to one's own ability and engage in purposeful learning that made use of three environments: student's characteristics, his personal background and course the structure. As explained by the innovative learning coach, "There are vastly different levels of support from a student's personal community ranging from negative (discouragement and abuse) to extremely supportive." This brought to the forefront the fact that School districts should carefully consider a student's personal environment when planning and providing supports. This mechanism also provided opportunity for school districts and colleges of education to develop partnership in teacher preparation to meet the new unforeseen challenges. This partnership could also benefit colleges of education and prospective teachers. The shift to online teaching in response in the pandemic times was hasty and unplanned process. While the phrase "ubiquitous teaching" was widely used to describe this instructional pivot, experts created the terminology, "emergency remote teaching" to more precisely represent the realities and challenges connected to it (Lederman, 2020, para.10; Milman, 2020, para. 3). Initial considerations for making as shift to the online teaching modes would require need to include taking into consideration, the local access and equity issues, policies of the land that are in place and the influence of the institutions in tackling the teaching challenges during these times (Cochran-Smith et al. 2016). The unforeseen challenges created by COVID-19 present a potential for future research opportunities associated to the process and implications felt by experienced by the organizations and associations connected to collaborative school improvement, Remote Learning Community being one of its kind (Chapman & Muijs, 2014). Next layers of steps in research that emerge out of this panorama could be the examination of their sustainability and exploration of ways and means of sustaining them, one such endeavor bring the iterative analysis of RLCs, including the survey of faculty to ascertain continuing professional development needs. In addition, the challenges that have emerged and demands that have arisen on faculty could be linked with faculty burnout and also institutional effectiveness. The urgency of the impact of the virus abrupt outbreak and spread of the pandemic has caused academic trauma apart from causing emotional distress and economic slump. Teachers have developed endurance for making suitable shifts in their work/life balance, which further merits future research. As events unfold, additional research implications will become strikingly evident and warrant further exploration and analysis.

**Scenario across Globe:** In countries like USA, the trend of online education has been a familiar and accepted practice unlike India where crisis has forced the system to explore the feasibility on this practice. Education in online and blended settings, particularly at the elementary and secondary school levels, is growing and gaining acceptance as a viable supplement or replacement for traditional, face-to-face learning. Gemin, Pape, Vashaw, and Watson (2015) have indicated through their study that all the 50 states and the District of Columbia offer some form of online learning experiences for K-12 students. This has been a consistent fact of the past 5-6 years, and the expansion has been a continuous process as the districts find it advantageous in many ways such as offering coursework online, providing opportunities for credit recovery and creating advanced placement possibilities apart

from addressing other crucial concerns such as accommodating for scheduling conflicts, and pressure alleviation for students with sickness, teen pregnancy, or other medical and health related needs. As online learning becomes popular, professionally competent teachers who are adept at creating conducive learning environments are essential components to the quality of instruction. Since teacher education programs play a significant role in teacher preparation and have onus of producing effective educators, there is a strong urge for the adaption of providing online teaching experience apart from the inclusion of usual traditional, face-to-face and field experiences. (Kennedy & Archambault, 2012). In spite of serious measures taken for evolving and transforming teacher education, only insignificant changes have been felt and realized in this field. This incites a move to reflect upon the way practical, hands-on components, also known as a field experiences are structured. Earlier researches done in 2010, exclusively examined how teacher education programs addressed K-12 online learning through their field experiences. The authors of this report found that among those who responded, only 1.3% demonstrated evidence of a hands-on, practical experience in an online or blended educational setting (Kennedy & Archambault, 2012). This growth has necessitated qualified online teachers who are prepared to teach and support students reside remotely. While teachers may receive professional development prior to or during their online teaching, there can be a wide variation in its quality and duration (Oliver & Parker, 2016). Much unlike traditional delivery modes of teaching where educators are mostly prepared at the university level in either a four- or five-year degree program, online teacher preparation does not have a stable sustained and structured approach to be viewed as systematic (Kennedy & Archambault, 2012). In comparison to practical, hands-on field experiences, this area has been deprived of the due consideration in terms of making it a reliable and valid mode. . This study was devised to examine how U.S. teacher education programs evolved since the last systematic look (Kennedy & Archambault, 2012) to prepare pre-service teachers for K-12 online learning, particularly when it comes to field experiences. The team focused upon facilitating teachers to develop and implement issues-based learning experiences with a special emphasis on student learning of science ideas and engagement in scientific practices such as modeling (Hayes, & Sadler, 2019). COVID-19 ushered the kind of complex, societal challenge well-suited to serve as a basis for issue-based learning, but its recency meant that available instructional materials were limited (Esch, & Pasley, 2017). In response to this challenge, the team partnered with a group of teachers for professional development (PD) activities that led to collaborative curriculum design of instructional materials for teaching about COVID-19.

### **Research Findings from the Current Study**

#### **Opinion of Teachers about Online Teaching**

<b>Sl. NO.</b>	<b>Areas of teaching with respect to online learning</b>	<b>Yes %</b>	<b>No %</b>
1.	Challenges with respect to navigation with technology tools	64	36
2.	Parental interference with their wards during online learning	88	12
3.	Time Consuming	75	25
4.	Inattention on the part of the students	53	47
5.	Lesser interaction levels when compared to face to face mode	85	15
6.	Difficulty in gauging the interest levels of the students	92	8
7.	Difficulty in testing the student's outcome	89	19
8.	Connectivity issues	66	34
9.	Lack of skills with respect handling technology	75	25

10	Difficulty in falling in line with the prescribed syllabus	83	17
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After the analysis of the data obtained for the present study, the results indicated that majority of secondary school teachers did have a favorable opinion on online teaching mode. Most of the teachers felt that they will be able to overcome the problems of online teaching in the due course and training in this area would have been of great help to them. Digital native teachers were more comfortable in online teaching when compared to their immigrant counterparts. There is a serious concern of equity which has arisen out of the fact that all children do not have reliable access to digital devices. Also the health hazards associated with screen time ill effects on young students' eyes have also been contemplated by teachers apart from impacting their minds and behavior of students of online classes with the uncertainty remaining as to how well they have learned. Some parents have referred to online classes as 'Poor imitation of physical classes'.

**Conclusion:** Ubiquitous online teachings have proven a phenomenal model for resource-crunched country like India, and teachers should look forward to adapting to learning newer methods of teaching. Some states in India have adopted teaching through media platforms such as Television and Radio. States with poor connectivity due to mountainous landscape are sending physical copies of online material to students. A state called Bihar has its government teachers going to houses of students to demonstrate the use of content available in digital links. Innovative E platforms of the Union government such as Diksha,

**Implications for the Future:** Vidyaan, PM E-Vidya and Swayamprabha have embraced digital technology in a big way to scale up the convergence between the education system and community. With everything going digital, there is a need to assure efficiency in learning methods too. The schools with government partnership can come on regulations of Online teachings will promote self-development and effective teachers are being able to realize it. The positive prospects, however, outweigh the negative implications and we should be ready to acclimatize with the prospective advancements and the advantages it has to offer for the teaching-learning community. Software manufacturers have converted this crisis into a genuine opportunity by creating digital technologies that have enabled that has enabled schools and teaching fraternity to re-imagine learning beyond physical setting. There is an intense need for further experimentation and innovation instead of completely clamping down on online classes increasing the probability of outcome-based learning and quick deployment of knowledge.

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## A STUDY ON EMERGING ISSUES IN INDIAN ACCOUNTING

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### Abstract

*In this digital era plenty of new accounting technologies are emerging, like, Cloud-based Accounting, Data Analytics & Forecasting Tools, Mobile Technologies, Automated Accounting Processes, Cloud computing platforms Block Chain, and Forensic Accountancy, so it's important for company management to keep update on new trends and tools in order to enhance their financial decision-making abilities. Now tools like artificial intelligence and cloud computing have become an integral part of the Today's accounting system. Digital accounting solutions have emerged as a result of technological advancements, allowing expanding businesses to better handle transactions, satisfy consumer needs, and increase staff efficiency. Now days the business environment has become extremely dynamic due to the rapid changes in the information technology field, driven by competition and performance. The accounting field is subject to this new era of change. The accountants need to develop new skills to work efficiently with emerging technologies such as cloud platforms, Big Data, data analytics and mobile technologies.*

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### 1.1 INTRODUCTION

#### 3.1 INTRODUCTION OF INDIAN ACCOUNTING:

1. Accounting is the system of recording financial transactions with both numbers and text in the form of financial statements. It provides an essential tool for billing customers, keeping track of assets and liabilities (debts), determining profitability, and tracking the flow of cash. The system is largely self-regulated and designed for the users of financial information, who are referred to as stakeholders: business owners, lenders, employees, managers, customers, and others. Stakeholders utilize financial statements to help make business, lending, and investment decisions.
2. Accounting has several specialized fields and roles. Private (internal) accounting generally refers to accountants who work within a single business entity. Small business accountants may assume general roles which require preparing the records (bookkeeping) and performing bank reconciliations. Accounting professionals are generally divided into three fields: tax, audit, and advisory. The tax field focuses on federal, state, and local tax filings. Audit roles test the validity of financial statements and internal controls. Advisory services perform general financial consulting. Public accounting firms have several different clients, whereas private accounting refers to working for one specific business entity.

In this digital era plenty of new accounting technologies are emerging, like, Cloud-based Accounting, Data Analytics & Forecasting Tools, Mobile Technologies, Automated Accounting Processes, Cloud computing platforms Block Chain, and Forensic Accountancy, so it's important for company management to keep update on new trends and tools in order to enhance their financial decision-making abilities. Now tools like artificial intelligence and cloud computing have become an integral part of the Today's accounting system. Digital accounting solutions have emerged as a result of technological advancements, allowing expanding businesses to better handle transactions, satisfy consumer needs, and increase staff efficiency. Now a days the business environment has become extremely dynamic due to the rapid changes in the information technology field, driven by competition and performance. The accounting field is subject to this new era of change. The accountants need to develop new skills to work efficiently with emerging technologies such as cloud platforms, Big Data, data analytics and mobile technologies.

Emerging challenges in accounting practice are transforming the day-to-day work of accountants and impacting the professional lives of millions of people around the world. With the speed of technological progress, this phenomenon is becoming more and more prominent. Rapid advances in technology, globalization, easier control over communications over the Internet, and changes in legislation are some of the factors that have contributed to the change. Austin Mwangi and Moses Chansa (2022), The study explores that, As a result of blockchain technology, there is a need for a new generation of accounting professionals with the necessary skills to function in the new blockchain environment. With the introduction of blockchain, the role of auditors will change, but internal controls will remain. Historically, accountants have been very receptive to new technologies, but the fundamental potential of accounting technology can only be fully realized through a fundamental accounting revolution in philosophy. Technology is evolving the way accountants serve their clients. Trends like this make accountants' jobs easier, not harder. Technology often allows accountants to do what they do best: provide professional accounting, auditing, and consulting services. Accountants and accounting firms need to understand industry trends and their strengths and weaknesses, both now and in the near future, as these changes take hold.

### **1.2 Concept of the Study**

This Study involves New Trends in Accounting, It includes Analyzing issues like the adoption of Indian Accounting Standards, International Financial Reporting Standards and Generally Accepted Accounting Principles. Importance, Needs, Objectives and Limitations Accounting. This study concentrates major Emerging issues in Indian Accounting.

### **1.3 Research Gap**

The main purpose of this research is to have a study on emerging issues in Indian accounting. From the above extensive Literature Review, It has been observed that there are various studies made on Emerging Trends in Accounting, Emerging Issues in Accounting, New trends in Accounting and various Emerging Issues related studies is there, but none of the studies not concentrated on the “A Study On Emerging Issues In Indian Accounting”

### **1.4 Statement of the Problem**

The field of accounting faces a dynamic landscape marked by rapid technological advancements, evolving regulations, and shifting economic model. This research seeks to identify and analyze the emerging issues in accounting, including the impact of blockchain technology, sustainability reporting, and the adoption of International Financial Reporting Standards (IFRS). We aim to understand the challenges these developments pose to traditional accounting practices, assess their implications for financial reporting accuracy and transparency, and propose strategies for effectively addressing these emerging issues to ensure the continued relevance and reliability of accounting in a changing global business environment.

This paper is the result of a literature review on emerging accounting issues. This paper provides essential knowledge as business organizations seek to adapt to the new accounting regime. Knowledge and skills acquired by outlining major emerging issues in accounting. This study, through its findings, contributes to key determinants in choosing some of the new methods of performing accounting and financial functions.

### **1.5 Need of the Study**

Overall, a study on emerging issues in Indian accounting helps ensure transparency, consistency, and effectiveness in financial reporting, benefiting businesses, investors, and the economy as a whole. To conduct a comprehensive study on these emerging issues, it would be important to gather data from a variety of sources, including financial statements, regulatory documents, and surveys of professionals in the accounting field. Additionally, the study should

consider the international context to understand how Indian accounting practices compare to global standards and trends.

### **1.6 Objectives of the Study**

1. To know the level of Awareness among sample respondents about various Trends in Accounting.
2. To know what are the new changes in Accounting.
3. To understand the Principles and Practices of Accounting in India.
4. To understand the Perception of Accountants, Auditors, Tax Practitioner and Commerce Professors.
5. To Examine the Perception of Accountants, Auditors, Tax Practitioner and Commerce Professors towards IFRS and GAAP.

### **1.7 Hypothesis of the Study**

H<sub>1</sub> There is no Impact of Socio-Economic Profile on the Awareness about Indian Accounting of Beneficiaries.

H<sub>2</sub> The Impact of new changes in Brief Accounting is insignificant.

### **1.8 Research Methodology**

1.8.1 Sources of Data: The required data for the study is collected through both primary and secondary sources. Primary data is collected by distributing questionnaire to the Accountants, Tax Practitioner, Auditors and Commerce Professors and other respondents who are required for collecting data.

The secondary data or information has obtained from books, articles issued by different authors, journals and websites.

#### **1.8.2 Sampling:**

- Sample size: A total number of 100 respondents selected for the collection of information related to A study on Emerging Issues in Indian Accounting.
- Sample: I have sample of Accountants, Tax Practitioner, Auditors and Commerce Professors in the selected area of study.
- Sample Size: 100 Respondents are taken for the Study. Out of 100 Respondents 24 are Accountants, 9 are Tax Practitioner, 15 are Auditors and Remaining 52 are Commerce Professors.
- Research Instrument: Questionnaire is the data collection instrument used in the study. All the questions in the questionnaire are organized in such a way that all the relevant information is covered that is needed for the study.

### **1.9 Tools and Techniques of the Study**

1.9.1 Statistical tools: The data collected from various sources have been analysed and interpreted by using SPSS software. The statistical analysis used included Percentage and interpreted through tables.

1.9.2 Sample techniques: Simple Random sampling technique is used to collect the necessary information required for the study.

### **1.10 Scope of the Study**

The present study is mainly focused on “A Study on Emerging Issues in Indian Accounting” so, the study required data for analysis and the required data is collected or taken from the Accountants, Tax Practitioner, Auditors and Commerce Professors Located in Karnataka. The study also covers the Awareness towards the Emerging Trends in Indian Accounting.

#### **1.11 Limitations of the Study**

1. The study is limited to 100 Respondents.
2. This study has been concentrated majorly Towards Emerging Issues in Indian Accounting.

## DATA ANALYSIS AND INTERPRETATION

### 1.11 INTRODUCTION:

This chapter result of the primary field data has been analyzed and presented in different sections. Data analysis is considered to be important step and heart of the researcher in research work. After collection of data with the help of relevant tool and techniques i.e. from structured questionnaire that next logical step is to analyze and interpret data with a view to arriving at empirical solution to the problem. Those data will help to understand more about respondent and guide towards better decision for investment. For understanding and analyzing the project problem clearly, the researcher has made a survey by selecting 100 Respondents. A simple statistical tool, Random sampling method has been followed. With the help of collected primary data percentage analysis has been done with the help of different Tables by using SPSS software. The result obtained from survey is analyzed and interpreted as follows.

**Table No 4.10: Classification based on Uses of Accounting information and financial indicators use IND AS**

Particulars	Frequency	Percent
Analysis	11	11.0
Shareholders	22	22.0
Rating agencies	3	3.0
Institutional Investors	35	35.0
Fund Managers	3	3.0
Government entities	26	26.0
Total	100	100.0

**Source:** Primary data

**Interpretation:** From the above table examine that what respondents said that Uses of Accounting information and financial indicators use IND AS . Out of 100 respondents, 11% respondents stated that Analysis , 22% respondents stated that Shareholders , 3% respondents stated that Rating agencies , 35% respondents stated that Institutional Investors , 3% respondents stated that Fund Managers and 26% respondents stated that Government entities.

Here interpreted that the majority 35% of the respondents stated that Institutional Investors uses of accounting information and financial indicators use IND AS.

**Table No 4.11: Classification based on monitor the Environmental issues**

Particulars	Frequency	Percent
Energy consumption	20	20.0
Water usage	18	18.0
Stationery	11	11.0
Paper Recycling	-	-
Paper usage	16	16.0
Recycling (e.g. Plastics, bottles, tyres)	17	17.0
Pesticides	10	10.0
Paint and solvent usage	8	8.0
Total	100	100.0

**Source :** Primary data

**Interpretation:** From the above table depict that how respondents monitor environmental issues . Out of 100 respondents, 20% respondents stated that Energy consumption , 18% respondents stated that Water usage , 11% respondents stated that Stationery , 16% respondents stated that Paper usage , 17% respondents stated that Recycling, 10% respondents stated that Pesticides and 8% respondents stated that Paint and solvent usage.

Here interpreted that the majority 20% of the respondents stated that they are monitor Energy consumption.

**Table No 4.12: Classification based on view of Environmental Accounting**

Particulars	Frequency	Percent
An accounting system which qualifies water and energy usage	9	9.0
An Accounting method which covers all areas of accounting that may be affected by the business response to environmental issues	30	30.0
The provision of recycling facilities and energy saving measures in the workplace	23	23.0
An information system which separately reports resource usage e.g. energy, water, wood	19	19.0
Project appraisal technique for assessing the environmental impact of new investment	19	19.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Source :** Primary data

**Interpretation:** From the above table explore that respondents view of Environmental Accounting. Out of 100 respondents, 9% respondents stated that An accounting system which qualifies water and energy usage, 30% respondents stated that An Accounting method which covers all areas of accounting that may be affected by the business response to environmental issues , 23% respondents stated that The provision of recycling facilities and energy saving measures in the workplace , 19% respondents stated that An information system which separately reports resource usage e.g. energy, water, wood and 19% respondents stated that Project appraisal technique for assessing the environmental impact of new investment.

Here interpreted that the majority 30% of the respondents view about Environmental accounting is An Accounting method which covers all areas of accounting that may be affected by the business response to environmental issues.

**Table No 4.13: Classification based on Forensic Accounting is fraud detection tool**

Particulars	Frequency	Percent
Yes	66	66.0
No	34	34.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Source :** Primary data

**Interpretation:** From the above table define that Forensic Accounting is a fraud detection tool. Out of 100 respondents 66% stated that Yes and remaining 34% stated that No.

Here interpreted that, majority 66% of the respondents says that Yes Forensic accounting is fraud detection tool.

**Table No 4.14: Classification based on respondents management is manage the human rights and working conditions issues**

Particulars	Frequency	Percent
Yes, we have an internationally recognized certified management system	26	26.0

Yes, we have a nationally recognized certified management system	29	29.0
Yes, but the system is uncertified	22	22.0
No	23	23.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Source :** Primary data

**Interpretation:** From the above table examine that respondents management is manage the human rights and working conditions issues. Out of 100 respondents, 26% respondents stated that Yes, we have an internationally recognized certified management system , 29% respondents stated that Yes, we have a nationally recognized certified management system , 22% respondents stated that Yes, but the system is uncertified and remaining 23% respondents stated that No.

Here interpreted that the majority 29% of the respondents stated that Yes, we have a nationally recognized certified management system.

**Table No 4.15: Classification based on Health safety policies and laws**

<b>Particular</b>	<b>Frequency</b>	<b>Percent</b>
Yes	64	64.0
No	36	36.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Source :** Primary data

**Interpretation:** From the above table shows that respondents institute have a formal written health and safety policy, which complies with local law, institute requirements and institutional standards. Out of 100 respondents 64% stated that Yes and remaining 36% stated that No.

Here interpreted that, majority 64% of the respondents says that Yes respondents institute have a formal written health and safety policy, which complies with local law, institute requirements and institutional standards.

### **1. 12 Findings:**

- Most of the respondents belongs to the age group of 20-30 years.
- Most of the respondents are male
- In Educational Qualification majority of the respondents having post graduation.
- In Proficiency majority of the respondents' profession is Commerce Professor.
- In experience the majority of the respondents have experience in 5 years and bellow.

In terms of Majority Respondents Awareness about Emerging trends in Indian Accounting is Highly Aware about Indian Accounting Standards and Aware about Social Auditing

### **1.13 Suggestions:**

- Because of AI so many traditional Accounting practices are changing, so it is better to adjust our mindset to accept anything.
- Environment Accounting must be Mandatory.
- Government should take promotional measures to encourage the companies to Green Accounting in their Accounting practices.
- Keep abreast of the latest updates in Indian Accounting Standards (IND AS) and ensure compliance with the latest amendments. Regularly review financial reporting processes to align with these standards.
- Embrace technology and automation in accounting processes. Explore options like cloud-based accounting software, AI-driven data analytics, and blockchain for enhanced efficiency and accuracy.



### 1.3 CONCLUSION

The rapid advancement of technology, including AI and blockchain, is transforming the accounting profession. Automation is streamlining routine tasks, allowing accountants to focus on higher-value analysis and advisory roles. As data becomes increasingly digitized, data security and privacy have emerged as critical concerns. Accountants must ensure compliance with data protection regulations and safeguard sensitive financial information. There's a growing emphasis on sustainability reporting. Companies are expected to disclose environmental and social impact data, which accountants must incorporate into financial reporting. The convergence of accounting standards (e.g., IFRS and GAAP) continues to be a topic of discussion. Harmonizing these standards would simplify financial reporting for multinational corporations. Accountants should invest in ongoing education and training to stay updated on technological advancements and changes in accounting standards.

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## STRATEGIES OF LIFE SKILLS AND SOFT SKILLS TO GLOBAL TEACHERS FOR KNOWLEDGE SOCIETY

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### Abstract

Generally speaking, 21<sup>st</sup> century skills can be applied in all academic subject areas, and in all educational, career, and civic settings throughout a student's life. The term global skills refers to a broad set of knowledge, skills, work habits, and character traits that are believed by educators, school reformers, college professors, employers, and others to be critically important to success in today's world, particularly in collegiate programs and contemporary careers and workplaces. Teachers play a pivotal role in developing the future generations. Therefore they have to be properly guided to enhance their competencies. Life skills & Soft skills are not a domain, or a subject, but cross cutting applications of knowledge, values, attitudes and skills, which are important in the process of individual development and lifelong learning. Life skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. Soft skills are character traits and interpersonal skills that characterize a person's relationships with other people. In the workplace, soft skills are considered a complement to hard skills, which refer to a person's knowledge and occupational skills.

**Keywords:** Strategies, life skills, soft skills, global, teachers, knowledge. Society.

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### Introduction: Concept of Life skills and 'Soft Skills'

- The Dakar Framework referred to "life skills", advocating not only the capability of generating or adding value to an economic product but also the skills individuals need for a fulfilling and healthy life and full participation in society".
- Wikipedia defines soft skills as "associated with a person's 'EQ' (Emotional Intelligence Quotient), the cluster of personality traits, social graces, communication, language, personal habits, friendliness, and optimism that characterize relationships with other people."
- Soft skills are "our work ethic, your attitude, your communication skills, your emotional intelligence and a whole host of other personal attributes.
- Skills concept is motivated by the belief that teaching students the most relevant, useful, in-demand, and universally applicable skills should be prioritized in today's schools, and by the related belief that many schools may not sufficiently prioritize such skills or effectively teach them to students.

### Common Traits of 21st Century Skills:

- ✓ Civic, ethical, and social-justice literacy
- ✓ Economic and financial literacy, entrepreneurialism
- ✓ Scientific literacy and reasoning, the scientific method
- ✓ Research skills and practices, interrogative questioning
- ✓ Global awareness, multicultural literacy, humanitarianism
- ✓ Environmental and conservation literacy, ecosystems understanding
- ✓ Creativity, artistry, curiosity, imagination, innovation, personal expression
- ✓ Perseverance, self-direction, planning, self-discipline, adaptability, initiative
- ✓ Oral and written communication, public speaking and presenting, listening
- ✓ Leadership, teamwork, collaboration, cooperation, facility in using virtual workspaces
- ✓ Health and wellness literacy, including nutrition, diet, exercise, and public health and safety
- ✓ Critical thinking, problem solving, reasoning, analysis, interpretation, synthesizing information
- ✓ Information and communication technology (ITC) literacy, media and internet literacy, data interpretation and analysis, computer programming

### Categorisation of Life Skills

- ✓ Life skills
- ✓ 21st century skills
- ✓ Non-cognitive skills
- ✓ Non-academic skills
- ✓ Character skills
- ✓ Soft skills
- ✓ Social and Emotional Learning (SEL)

**Table 1 Health Designates Skills:**

<b>Communication and Interpersonal skills</b>	<b>Decision making and critical Thinking Skills</b>	<b>Coping and self-management skills</b>
Interpersonal Communication skills Negotiation/refusal skills Empathy building Cooperation nad teamwork Advocacy skills	Decision making /Problem solving skills Critical thinking	Skills for increasing personal confidence and abilities to assure control, or bring about change Skills for managing feelings Skills for managing stress

**Table 2 Life Skills As Defined By Different Organisations**

<b>Hilton-Pellegrino framework</b>	<b>World Health Organisation (WHO)</b>	<b>Collaborative for Academic, Social and Emotional Learning (CASEL)</b>	<b>Character Lab</b>	<b>Partnership for 21<sup>st</sup> century</b>
<b>Cognitive.Competencies:</b> Cognitive Processes Knowledge Creativity and Innovation <b>Intra personal Competencies:</b> Work Ethic Positive Self Evaluation Intellectual Openness <b>Inter-personal Competencies:</b> Teamwork and Collaboration Leadership	<b>Decision making</b> Problem-solving Creative thinking Critical thinking Communication Interpersonal skills Self-awareness Empathy Coping with emotions Coping with stress	<b>Self-awareness:</b> accurately assessing one's feelings, interests, values and strengths <b>Self-management:</b> regulating one's emotions to handle stress, and controlling impulses <b>Social awareness:</b> being able to take the perspective of and empathise with others <b>Relationship skills:</b> establishing and maintaining healthy and rewarding relationships, resisting inappropriate social pressure, resolving conflict	<b>Curiosity</b> -Gratitude - Zest -Optimism - Social Intelligence -Self-ontrol - Grit	<b>- Learning Skills:</b> - Critical Thinking - Creative Thinking - Collaborating - Communicating <b>- Literacy Skills:</b> -Information Literacy - Media Literacy -Technology Literacy <b>- Life Skills:</b> - Flexibility - Initiative - Social Skills - Productivity - Leadership

		<b>Responsible decision-making:</b> Making decisions, respect for others, applying decision making skills to academic and social situations.		
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### Recommendations to development of Life skill programmes

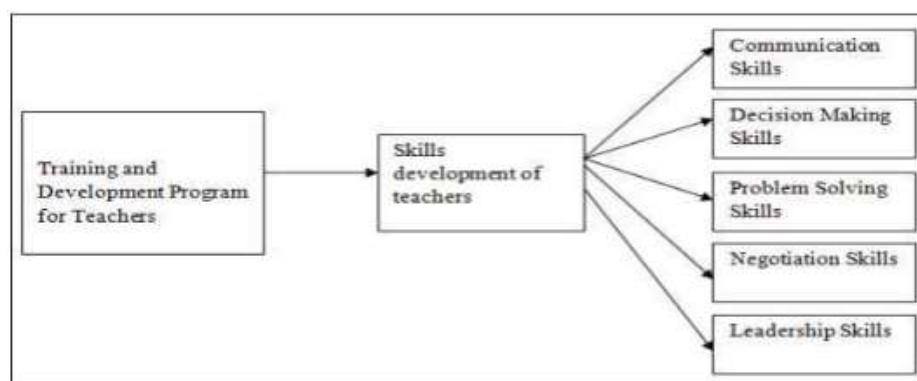
- Life skills-based education for both school environments and for especially vulnerable children and adolescents should learn from each other.
- When placing life skills in a particular curriculum or course, care should be taken to ensure that this does not preclude the application of life skills to issues outside of the curriculum or course's remit
- The development of life skills programming for especially vulnerable children and adolescents should be customised to their vulnerabilities and the risks they confront, as well as their needs and situation.
- life skills messages accurately and unambiguously address the vulnerabilities and risks faced by learners they relate to realistic situations and highlight the protective and positive behaviours required.
- It is to teach values, whose values is it teaching and are they relevant to the learner
- It is issues of social exclusion and marginalisation, which contribute to vulnerability, a part of the life skills programme it involves livelihood or literacy training, is a life skills approach used.

### An effective approach of life skills:

- **Programme content:** Developing relevant information, attitudes, and skills
- **Mechanisms:** Implementing participatory teaching practices, modelling of skills and reinforcement
- **Teacher training:** Building teacher's belief the potential of life skills education and their capacity to impart such skills
- **Commitment:** Advocating for the integration of life skills education in school curriculum

### The Impact of Training and Development Program for Teachers.

It is clear from the above studies that acquisition of soft skills is pertinent for student for that teacher must be provided a training and course to adopt the acquisition of soft skills more effectively in the process of teaching and learning. It was found out that training and development program had enhanced soft skills namely leadership skills, problem solving skills, communication, decision making skills and negotiation skills among teachers.



It should be noted that the “21<sup>st</sup> century skills” concept encompasses a wide-ranging and amorphous body of knowledge and skills that is not easy to define and that has not been officially codified or categorized. While the term is widely used in education, it is not always defined consistently, which

can lead to confusion and divergent interpretations. In addition, a number of related terms—including applied skills, cross-curricular skills, and cross-disciplinary skills, interdisciplinary Skills, transferable skills, transversal skills, no cognitive skills, and soft skills, among others—are also widely used in reference to the general forms of knowledge and skill commonly associated with 21<sup>st</sup> century skills.

### **Traits of Soft Skills.**

- Rules for mastering this skill is not black and white – Unlike hard skills, like math, where the rule for doing it perfectly is always the same, how effective you are at a soft skill changes depends on your emotional state, external circumstance, and the type of people you interact with.
- This skill is portable and valuable to any job/career – Because soft skills are about your inner strength and interpersonal effectiveness, as long as you work with people, these skills are valuable to your career.
- Mastering this skill is an on-going journey – You can reach a level of competency in it but you can always encounter new situations or people that will test your soft skills and push you to learn more.

### **Globally acceptable soft skills**

#### **General Soft skills**

- Communication skills
- Teamwork and collaboration
- Adaptability
- Problem solving
- Critical observation
- Conflict resolution

#### **A) Self-Management Skills**

Self-Management Skills address how you perceive yourself and others, manage your personal habits and emotions and react to adverse situations.

**Self-awareness** – Knowing and understanding what drives, angers, motivates, embarrasses, frustrates, and inspires you. Being able to observe yourself objectively in a difficult situation and understand how your perceptions of yourself, others, and the situation are driving your actions.

- ❖ **Emotion regulation** – Being able to manage your emotions, especially negative ones, at work (e.g. anger, frustration, embarrassment) so you can think clearly and objectively, and act accordingly.
- ❖ **Self-confidence** – Believing in yourself and your ability to accomplish anything. Knowing that all you need is within you now. “Those who believe in themselves have access to unlimited power” – wisdom from Kung Fu Panda
- ❖ **Stress management**– Being able to stay healthy, calm, and balanced in any challenging situations. Knowing how to reduce your stress level will increase your productivity, prepare you for new challenges and supports your physical and emotional health, all of which you need for a fulfilling, successful career.
- ❖ **Resilience** – Being able to bounce back after a disappointment or set back, big or small, and continue to move onward and upward.
- ❖ **Skills to forgive and forget**– Being able to forgive yourself for making a mistake, forgive others that wronged you, and move on without “mental or emotional baggage.” Freeing your mind from the past so you can focus 100% of your mental energy on your near and long-term career goals.
- ❖ **Persistence and perseverance** – Being able to maintain the same energy and dedication in your effort to learn, do, and achieve in your career despite difficulties, failures, and oppositions.

- ❖ **Patience** – Being able to step back in a seemingly rushed or crisis situation, so you can think clearly and take action that fulfils your long term goals.
- ❖ **Perceptiveness** – Giving attention to the unspoken cues and developing cognitive or emotional empathy of other people’s situation and perspective. Often times, we are too busy thinking about ourselves and what we are saying, we leave little room to watch and understand others’ action and intentions

### C). People Skills

People Skills address how to best interact and work with others so you can build meaningful work relationships, influence others perception of you and your work, and motivate their actions. I have split them into two sections – Conventional and Tribal

**Conventional** – List of people skills you can find in most job descriptions and you will be assessed on some or all of these in your performance reviews depending on your level. **“Tribal”** – List of people skills that you will not find in any job descriptions. They are also essential to your career success. I call it tribal because they are more “insider knowledge” that you gain from work experience or from mentors. Some people can go through their entire career and not be aware of some of these skills.

Conventional	Tribal
Communication skills Teamwork skills Interpersonal relationship skills Presentation skills Meeting management skills Facilitating skills Selling skills Management skills Leadership skills Mentoring / coaching skills	Managing upwards Self-promotion skills . Skills in dealing with difficult personalities Skills in dealing with difficult/unexpected situations Savvy in handling office. Influence / persuasion skills Negotiation skills Networking skills

### Education for skills to improve schools:

- Teachers may be more intentional about teaching cross-disciplinary skills in subject-area courses.
- States, accrediting organizations, and schools may require 21<sup>st</sup> century skills to be taught and assessed in courses.
- Schools and teachers may use educational approaches that inherently encourage or facilitate the acquisition of cross-disciplinary skills.
- Schools may allow students to pursue alternative learning pathways in which students earn academic credit and satisfy graduation requirements by completing an internship, apprenticeship, or volunteer experience
- Public schools and teachers have always taught, and will continue to teach, cross-disciplinary skills—they just never gave it a label
- Focusing too much on cross-disciplinary skills could water-down academic courses, and students may not get “the basics.”

### Development and Implementation of Life Skills Programmes.

- life skills programmes will taught in secondary schools.
- The large number of locally offered in-school extracurricular activities.
- government involvement in ownership, sustainability and replication.
- The content of life skills programming will be always relevant or appropriate
- Many programmes new life skills outside of the classroom, with their families or in their communities.



- selection and training of trainers and the provision of in-services
- The participation of learners in programmes should be more.
- Life skills-based education sector.
- Stand-alone life skills curriculum:
- Integrated into an existing curriculum
- Blended programming:

### Measuring behaviour

Having chosen to judge life skills programming success by the “up-take” of protective and positive behaviours, there is a need to articulate and measure behavioural outcomes by Awareness, Attitudes, Skills and Supportive institutions, communities and broader environment.

### Global Collaborative for Academic, Social and Emotional Learning (CASEL)

In order to inform policy and practice around social and emotional learning in the U.S., CASEL has developed a systematic framework used for identifying and evaluating the quality of classroom-based social and emotional learning interventions. CASEL reviews SEL programs annually to identify effective SEL programs that promote student self-awareness, self-control, social awareness, relationship building, and problem solving. The criteria for the review are that the programs: are well-designed and classroom based; must provide repeated opportunities for students to practice new skills and behaviours; must offer training and implementation support; must be evidence-based. These indicators have been widely used to inform educators and policymakers on how to select and implement life skills programmes, with CASEL advocating for every state to develop and implement high-quality standards for SEL, preschool through high school.

### The Teacher Foundation

While CBSE has identified core life skills as a part of CCE and has produced life skills manuals, there are no learning standards for social and emotional development nor are teachers equipped to teach for such standards. The Teacher Foundation (TTF) is currently undertaking a 2.5 year study to understand the status of social and emotional learning in Indian schools and its global prevalence. To be implemented in all Common skills of teacher education.

- Communicative skills.
- Thinking skills and Problem solving skills.
- Team work force
- Life-long learning and Information Management
- Entrepreneur skill
- Ethics, moral and professionalism
- Leadership skills

### SKILLS FOR TEACHERS

Be a Good Communicator /Communicate Effectively	Goal/Target Setting
How-to Be an Organized Teacher	Give feedback
➤ How to Avoid Teacher Burnout	Deal with criticism
How to Identify and Avoid Burnout	Keep discussions from turning into arguments
How to Train a Child	Resolve Conflict
Listen Strategically	Telephone effectively
Strategies to Become an Effective Teacher	Use your voice effectively
Research Based & Effective Teaching Strategies	Have an effective meeting /Conducting meetings
How to Motivate Students / How Do Students Get Motivated?	Have an effective brainstorming session
How to Praise a Student so That They Respond	Mentoring
Types of Incentive Games for students / Student Reward & Incentive Ideas	

Modern Methods of Teaching Listening Skills How to Give Good Feedback for Others Work How to Give Constructive Feedback Win people's cooperation Negotiate	Coaching and Developing People Interpersonal skills / Interpersonal Relations Empowerment Group Discussion Group Dynamics Learning Organization Knowledge Management Objection Handling Problem Solving Public Speaking Team Building Gam es for Teachers
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### Conclusion

To live to the challenge of globalization which is in line with the era of information economy, the strength of a nation is strongly dependent on the ability of its citizen to be highly intellectual and skilful. In today's world, information and knowledge are increasing at such an astronomical rate that no one can learn everything about every subject, what may appear true today could be proven to be false tomorrow, and the jobs that students will get after they graduate may not yet exist. Schools need to adapt and develop new ways of teaching and learning that reflect a changing world. better coordination and cooperation are needed among stakeholders: ministries, civil society organizations, advocates of lifelong learning and schooling. In line with ILO Recommendation 195 and the Shanghai Consensus, greater information on skill provision outside school, and its outcomes, will make future monitoring possible for this essential dimension of education

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## TEACHING THROUGH DRAMATIZATION APPROACH

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### Abstract

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*"Drama - A representation of Human action" (Bharata Muni). Dramatization is an animation by casting roles on a subject using gestures, mimics and historical background of drama. It refers to rich and vibrant history of drama in Karnataka, India and World. This paper explores the concept of teaching through dramatization as a dynamic and effective educational method. This is a teaching and learning strategy that encourages experimentation, fosters informal and flexible environments, and uses nonverbal communication. It is a representation of the events that cannot be experienced by the students as if they can be experienced. Dramatization in teaching and learning does not require specific knowledge of theatre skills; however it will be helpful for practical application. This paper comprehends the evolution of drama, development of skills through drama i.e. Communication skills, collaborative skills, valuable life skills, social interaction and cooperative skills, time management and fear management. This methodology leverages the power of drama to make learning more enjoyable, memorable and impactful. Finally, the main contribution of this paper highlights that the Educational implications of the dramatization method through teaching which imbibed several important activities such as; improving student engagement, increasing student understanding level, enhancing critical thinking skill, improving communication skills, enhanced creativity, imagination and self-confidence. This approach emerges as a promising means to prepare students challenges and opportunities in the future.*

**Key Words:** Dramatization, Drama, Development of Skills and Methods of Drama

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### Introduction:

Traditional education may be summed up the center as curriculum centred outside the child. However, the new movement in education, which has introduced the concept of child centered education, is combined with children's play. It is a fact that the meaning of child centered education is deemed close to children's play rather than subject centered education (Bolton, G. 1985). Moreover, drama is seen as the "play way" to education. Both imagination and play are inherent parts of effective education. Thus, drama is a vital part of education in schools (Ustundag, T. (1988)).

Drama is both a discipline in its own right and a pedagogical approach using the mind, body and senses to make meaning of our lives, the perspectives of others and our roles in an increasingly complex world. This article focuses on the use of drama-rich pedagogy (Ewing, 2019) and engagement with quality children's literature to improve student literacy and meaning-making. Dramatization is a pedagogical approach that uses drama to facilitate learning. It is a versatile tool that can be used to teach a variety of subjects, including history, science, literature, and language arts. Dramatization is based on the principle that learners can better understand and retain information when they are actively involved in the learning process. When students act out scenes, role-play characters, or create and perform their own dramas, they are engaging their cognitive, emotional, and physical faculties. Drama is an ideal way to bring skills of grammar, reading, writing, speaking, listening and pronunciation together in a course where the focus is not on form but rather fluency and meaning (Dodson, 2000). This leads to deeper learning and more durable memories. Dramatization can also help students to develop a number of important skills, including Critical thinking: Dramatization requires students to analyze a story and identify the different elements that make it work. This requires critical thinking skills. Communication: Dramatization requires students to communicate clearly and effectively with their peers and audience (Heathcote, D., & Bolton, G. 1995). This includes speaking, listening, and body language. Creativity and imagination: Dramatization allows

students to come up with new and innovative ideas. This helps them to develop their creativity and imagination. Self-confidence: Performing in front of an audience can help students to develop their self-confidence and self-esteem.

**Meaning of Drama:**

Drama is a form of art that uses dialogue, action, and spectacle to tell a story. It can be performed live on stage, on television, or in film. Drama can be serious or funny, realistic or fantastical.

The word "drama" comes from the Greek word "drama" which means "action" or "deed." Drama is often used to explore human emotions and relationships. It can also be used to examine social and political issues (O'Neill, C. 1995).

Drama is a complex and versatile art form. It can be used to entertain, educate, and challenge audiences. Drama can also be used to explore the human condition and to make sense of the world around us.

**Definitions of Drama:**

**Abhinavagupta:** "Drama is a representation of human action that is motivated by desire and leads to either pleasure or pain".

**Bharata Muni:** "Drama as a representation of human action."

**Kalidasa:** Drama as "a mirror to society."

**Girish Karnad:** "Drama as a way of asking questions."

**Historical Background of Drama:****Drama at Global Level:**

- The earliest known forms of drama can be traced back to ancient Greece, where plays were performed in outdoor theaters as part of religious festivals. These plays often dealt with themes of love, loss, and conflict.
- Drama spread throughout the world through trade and conquest. In India, drama flourished during the Gupta Empire (320-550 CE). Indian plays were often based on religious epics such as the Mahabharata and the Ramayana.
- In China, drama developed during the Tang Dynasty (618-907 CE). Chinese plays were often performed in teahouses and other public spaces. They often dealt with social and political issues.
- In Europe, drama underwent a revival during the Renaissance. Playwrights such as William Shakespeare and Christopher Marlowe wrote plays that explored complex themes such as love, death, and power.
- Drama continued to evolve throughout the centuries. In the 20th century, playwrights such as Samuel Beckett and Bertolt Brecht experimented with new forms of drama.

**Indian Background of Drama:**

- Drama has a long and rich history in India. Some of the earliest known examples of Indian drama date back to the 2nd century BCE. These plays were often performed in temples and other religious spaces.
- During the Gupta Empire (320-550 CE), drama flourished in India. Some of the most famous Indian plays from this period include the *Abhijnanashakuntalam* by Kalidasa and the *Mricchakatika* by Shudraka.
- Indian drama continued to evolve throughout the centuries. In the medieval period, folk dramas such as the *Yakshagana* and the *Kathakali* became popular. These plays often dealt with religious themes and were performed by traveling troupes.
- In the 19th century, modern Indian drama began to emerge. Playwrights such as Girish Karnad and Badal Sircar wrote plays that explored social and political issues.

**Karnataka Historical Background of Drama:**

- Karnataka has a rich tradition of drama that dates back centuries. Some of the earliest known examples of Kannada drama date back to the 10th century CE.
- During the Vijayanagara Empire (1336-1646 CE), drama flourished in Karnataka. Some of the most famous Kannada plays from this period include the Bharata Yuddha by Kumaravyasa and the Soga Vasantha by Sriharsha.
- Kannada drama continued to evolve throughout the centuries. In the medieval period, folk dramas such as the Bayalata and the Sangya-Bayalata became popular. These plays often dealt with religious themes and were performed by traveling troupes.
- In the 20th century, modern Kannada drama began to emerge. Playwrights such as Girish Karnad and Chandrashekhara Kambar wrote plays that explored social and political issues.

**Development of Skills through Drama:****Life Skills.**

- **Confidence:** Drama requires students to take risks and step outside of their comfort zone. This can help them to develop confidence in themselves and their abilities. For example, a student who is shy may be hesitant to speak in front of others. However, through drama, they can learn to overcome their shyness and become more confident in their public speaking skills.
- **Resilience:** Drama productions often involve challenges and setbacks. Students learn how to overcome these challenges and persevere in the face of adversity. For example, a student may forget their lines during a performance. However, they can learn to recover from this mistake and continue with the performance.
- **Problem-solving:** Drama students need to be able to think on their feet and solve problems quickly and creatively. This skill is transferable to many other areas of life, such as academics, work, and relationships. For example, a student may need to come up with a solution to a technical problem during a rehearsal. They can learn to think outside the box and find creative solutions to problems.
- **Decision-making:** Drama students need to be able to make informed decisions about their characters, their performances, and the overall production. This skill is also transferable to other areas of life. For example, a student may need to decide how to interpret a character's motivation. They can learn to gather information, weigh the pros and cons of different options, and make a decision that is best for the character and the production.
- **Teamwork:** Drama productions are typically collaborative efforts. Students learn how to work together effectively with others to achieve a common goal. This skill is essential for success in many different fields. For example, a student may need to work with a team of actors and designers to create a cohesive performance. They can learn to communicate effectively, compromise, and support each other.

**Collaboration Skills:**

- **Listening:** Drama students need to be able to listen carefully to each other in order to build characters and scenes together. They learn to listen for the needs of their fellow actors and to be supportive of each other's ideas.
- **Communication:** Drama students need to be able to communicate their ideas clearly and concisely to others. They learn to speak up for themselves and to listen to the feedback of others.
- **Negotiation:** Drama students often need to negotiate with each other to resolve conflicts and reach agreements. They learn to compromise and to find solutions that work for everyone.
- **Conflict resolution:** Drama students learn how to resolve conflicts in a constructive and respectful manner. They learn to identify the root of the conflict and to work together to find a solution.

- **Empathy:** Drama students learn how to empathize with others and see things from their perspective. This skill is essential for building strong relationships and working effectively with others.

#### **Dialogue Delivery Skills:**

- **Vocalization:** Drama students learn how to use their voices effectively to convey emotion and meaning. They learn to project their voices, enunciate clearly, and use their voices to create different characters.
- **Body language:** Drama students learn how to use their bodies to communicate with others and express their characters' emotions. They learn to use facial expressions, gestures, and posture to create a believable performance.
- **Eye contact:** Drama students learn how to make eye contact with their audience and create a connection. This helps to engage the audience and make the performance more immersive.
- **Pace and rhythm:** Drama students learn how to control the pace and rhythm of their dialogue to create a desired effect. They learn to slow down or speed up their delivery depending on the emotional intensity of the scene.
- **Phonology:** Drama students learn how to pronounce words correctly and clearly. This helps to ensure that their dialogue is easy to understand. Communication Skills
- **Oral communication:** Drama students learn how to communicate effectively in front of an audience. They learn to project their voices, enunciate clearly, and use gestures and facial expressions to engage the audience.
- **Written communication:** Drama students often need to write scripts, stage directions, and other materials. They learn to communicate their ideas clearly and concisely in writing.
- **Non-verbal communication:** Drama students learn how to use their bodies and facial expressions to communicate effectively. They learn to read the nonverbal cues of others and to respond appropriately.
- **Interpersonal communication:** Drama students learn how to communicate effectively with others in a variety of settings. They learn to listen actively, communicate their ideas clearly, and resolve conflicts in a constructive manner.
- **Public speaking:** Drama students learn how to speak in front of large groups of people. They learn to overcome their fear of public speaking and deliver their speeches confidently.

#### **Social interactions:**

- **Collaboration:** Drama requires actors to work together to create a cohesive performance. This can help to develop communication and teamwork skills.
- **Listening skills:** Actors need to be able to listen to and respond to their fellow actors in order to create a believable performance. This can help to improve listening skills and build rapport with others.
- **Empathy:** Actors need to be able to understand and empathize with their characters in order to bring them to life. This can help to develop empathy and social skills.

#### **Cooperation skills**

- **Teamwork:** Drama requires actors to work together as a team to create a successful performance. This can help to develop cooperation and communication skills.
- **Conflict resolution:** Drama can be used to explore conflict resolution skills in a safe and controlled environment. This can help actors to learn how to resolve conflict in a constructive way.
- **Leadership:** Drama can help actors to develop leadership skills by giving them the opportunity to take on different roles and responsibilities.



### **Educational Implications of the Dramatization Method through Teaching:**

- **Improved student engagement:** Dramatization is a hands-on and active learning method, which can help to improve student engagement. When students are actively involved in learning, they are more likely to pay attention and retain information.
- **Increased student understanding:** Dramatization can help students to better understand and remember complex concepts. By acting out different scenarios or roles, students can develop a deeper understanding of the material.
- **Enhanced critical thinking skills:** Dramatization can help students to develop their critical thinking skills. When students are involved in creating and performing dramas, they need to think about the different elements of the story and how they all work together.
- **Improved communication skills:** Dramatization can help students to develop their communication skills. When students are acting out different roles, they need to be able to communicate clearly and effectively.
- **Enhanced creativity and imagination:** Dramatization can help students to develop their creativity and imagination. When students are involved in creating their own dramas, they have the opportunity to come up with new and innovative ideas.
- **Increased self-confidence:** Dramatization can help students to increase their self-confidence. When students are able to perform in front of an audience, they learn that they are capable of achieving their goals.

**Dramatization can also be used to teach specific academic subjects in a more engaging and effective way. For example:**

- **Science:** Dramatization can be used to teach science concepts such as the water cycle, the solar system, or the human body. For example, students could act out a scene about the water cycle, using props and costumes to represent the different stages of the cycle.
- **History:** Dramatization can be used to teach historical events and figures. For example, students could act out a scene from the American Revolution or a biography of a famous historical figure.
- **Language arts:** Dramatization can be used to teach literary concepts such as character development, plot, and setting. For example, students could act out a scene from a play or novel.
- **Maths:** Dramatization can be used to teach math concepts such as problem-solving, fractions, and geometry. For example, students could act out a scene about a group of people who are trying to build a bridge.

**Conclusion:** Dramatization is a valuable tool for teachers who want to create a more engaging and effective learning environment for their students. By using dramatization, teachers can help students to develop a deeper understanding of the material, improve their critical thinking and communication skills, and enhance their creativity and imagination. the dramatization method through teaching can be a valuable tool for educators. It can help to improve student engagement, understanding, critical thinking skills, communication skills, creativity and imagination, and self-confidence. It can also be used to teach specific academic subjects in a more engaging and effective way.

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## IMPORTANCE OF YOGA IN EDUCATION

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### Abstract

*The idea of this paper is to explain the importance and benefit of yoga in education. Yoga includes various ways with the aim of achieving psychological, social balance. We are noticing an increase in stress and emotional disorders in children. Practicing yoga can help reduce stress, anxiety, symptoms and depression. By include yoga in curriculums learning become more effective and easy.*

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### Introduction:

Education is becoming one of the challenges in present day situation, surrounded by mobile phones and other forms of modern technology something new every day. Excessive demands and too high expectations that are often put on children result in increasing stress and anxiety. Difficulties in meeting teachers and parents expectations are open a cause of stress in children.

In our present system of education we gave limited to a physical education class. In addition, children are allowed to move during breaks, while during classes movement prohibited of very restricted. Modern research suggests a direct link between physical education and learning.

For all above reasons “yoga” has great importance in present education system. The modern education system emphasizes on science and technology in which the material progress is being achieved, but the education of ethical moral and spiritual values and promotion of healthy life-style are totally neglected. In this context it is an urgent need to integrate yoga in modern education system in order to make all round development relating to body, mind and spirit symphonic ally and there by prevent the erosion of human values. The integration of education in this present system of education can endorse human values to reform attitude and behavior, relieve from stress and strain, build up healthy life-style, shape high moral character and develop refined personality of the students as to make them a complete well-being. Yoga practices can lead students to the attainment of the highest goal of life the – self-realization of the potentialities inherent in them.

### What is ‘YOGA’?

The word yoga comes from Sanskrit and has the original meaning of “Unite” connect. In its original meaning, the word ‘Yoga’ means “an all – pervasive, eternally awake consciousness that keeps the entire universe in balance”.

Yoga refers to the goal, unity and harmony with oneself and others, but also to the methods by which that goal is achieved. We first written sources date according some sources, to around 3000 BC but according to the scriptures, it can be assumed that the knowledge of yoga originates form much earlier, from the time when it was transmitted by the word of mouth.

Yoga can be traced back to the Rig-Veda itself the oldest Hindu text which speaks about yoking our mind and insight to the light of Truth or Reality.

Great teachers of early yoga include the names of many famous Vedic sages like Vasistha, Yajnavalkya and Jaigisavya. The greatest of the yoga is always said to be yogesvara Krishna himself, the propounder of Bhagavad-Gita which is called as yoga sastra an authoritative work on yoga. Lord Shiva is also greatest of the yogis or Adinatha. Yoga has been part of man’s activities directed towards higher spiritual achievements in India. The history of yoga is divided into five kinds.

- Vedic Period
- Pre – Classic Period
- Classic Period

- Yoga in Medieval Period
- Yoga in Modern Times.

### Objectives of Yoga

- To enable the student to have good health.
- To practice mental hygiene.
- To possess emotional stability.
- To integrate moral values.
- To attain higher level of consciousness.

The ultimate aim of yoga is to make it possible for everyone to be able to fuse together the gross material, physical, mental, intellectual and spiritual levels within every being.

Yoga an education could help to equip oneself with basic knowledge about one's personality, to learn to handle oneself. Well in all life situations, to learn techniques of gaining good health, to develop a discriminative mind capable of knowing the real from the unreal and to face the dualities of life with equanimity. yoga education can enhance all the activities of the students, be it academic or sport or social yoga techniques provides improved attention in studies, better stamina and co-ordination for sports and a heightened awareness and balanced attitude for social activity.

### Types of Yoga:

The aim of yoga is the attainment of the physical, mental and spiritual, health pathnjali has recommended 8 stages of yoga discipline.

- Yamas – Internal purification through moral training preparatory to yoga
- Niyamas – Cleanliness, Contentment, Mortification, Study and worship of God
- Asanas – Physical postures of exercises.
- Pranayama – Control of vital energy / Breath control
- Pratyahara – withdrawal of the senses
- Dharana - Concentration of the mind
- Dhyna – Meditation
- Samadhi – Attainment of the super, Conscious state

### Yoga and Education:

Yoga helps the student to uplift meant their concentration level it also trains, strengthens the student in various dimensions. Sitting at a desk for hours a day, going back home and pouring over books to finish the daily homework assignment, studying and facing numerous tests, participating in various extra-curricular activities, etc all cause the body and mind to tense up. To add to these, there are social and family challenges, anxiety bullying and emotional that also take their toll on children.

Yoga an elixir that works on almost every new age predicament such as obesity, depression, diabetes and panic attacks, is not a solution only for grownups also for young children and can help them lead a better lifestyle as they grow up.

- **Reduces stress and anxiety:** Yoga helps them to deal with their stress and bring back some peace of mind. Those who regularly practice yoga not only report lower levels of stress and anxiety and subsequently improved academic performance.
- **Improves memory and attention span:** Yoga helps to improve the memory function in both adults and children a direct benefit of which would be a better academic performance in children. It also helps to improve children's attention span and focus. In fact, yoga aids children suffering from ADHD as well by reducing its core symptoms as inattentiveness, by per activity and impulsivity.

- **Helps to manage weight:** Children spend long hours in sedentary poses and tend to consume a lot of junk food as well, both of which are a by-product of the new age lifestyle. Yoga helps to counter balance this life style.
- **Improves Flexibility, Balance and Posture:** Sitting down to study for long hours at a time and too much screen time can lead to incorrect posture it can develop into major anatomy complication in adult life. The practice of various asanas on a regular basis leads to correction of posture, enhances flexibility and improves balance as it brings equilibrium to the whole body.
- **Promotes Mindfulness:** Mindfulness enables people to become less anxious and more relaxed children can become more mindful using creative and entertaining visualization techniques.
- **Encourages Self-Love and Self-Care:** With self-love, comes self care and Yoga can teach these values at a very young age. The children learn to be comfortable in their own skin and nurture it well.
- **Helps to bring peace of Mind:** The vastness of academic curriculum alone can baffle students and yet, they deal with many other extra-curricular activities and social life as well By practicing pranayama and mindfulness, students really learn how to handle the anxiety and manage the different aspects of life effectively.
- **Improves self control:** Through controlled breathing and controlled movement, yoga teaches people self control. As a result, they do not react impulsively or make hasty decisions even in an emotional state.
- **Reduces Absences and Violence in School:** Because of good health and balanced temperament children are less likely to remain absent from school or pick fights with each other over small issues. Instead, they tend to engage more positively in schools and develop healthy relationship with their teachers and peers.
- **Enhances coping skills:** Yoga teaches children how to correctly cope with the stress, manage it and stay productive. It helps to Boosts Immunity and improves physical appearance of the person.
- **Improves the quality of sleep:** Children should sleep for up to 7-8 hours each night. A good night's sleep allows the body to be healthy, ready and energetic for the next day. As yoga allows the body and the mind to relax, practitioners notice a better quality in their sleep with better sleep. Children can focus better in class play more actively and perform better at examinations. Increases self confidence and Self-Esteem through asanas, children build strength endurance confidence as well as the mind body connection.

**Conclusion:** Yoga is an age old art but is relevant in present times more than ever before yoga offers new learning possibilities to a wider group of students than traditional sports of fitness. Inculcating yoga in education fruiting a better performance of the student. Through the high level of confidence, concentration, student's academic performance also increases. Totally yoga provides such a wonderful healthy life style. It also results in a overall personality development of the student.

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## THE RISE AND DEVELOPMENT OF DIGITAL EDUCATION: A DIMINUTIVE REVIEW

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### Abstract

*An Open, Distance, and Digital Education (ODDE) published in Springer's Major Reference Series. The 3M-Framework covering all important issues related to ODDE at the macro- (ODDE systems, theories, and methods), meso- (ODDE educational management and institutions), and micro- (teaching and learning) levels. Each level is addressed in one volume with two sections. Informed by the historical roots of ODDE, the editors and authors of this handbook are shaping the field of ODDE scholarship, theory, and practice. Remote learning, distance learning, open learning, e-learning, flexible learning, hybrid learning, blended learning, web-based learning, online learning, mobile learning, and technology-enhanced learning – these terminologies may be confusing for many readers. The framework categorizes the major areas of theory, research, and practice along the lines of three broad perspectives, i.e., the macro, meso-, and micro levels: Macrolevel: Open, Distance, and Digital Education (ODDE) systems and theories (the level of national, regional, and global systems); Meso-level: management, organization, and technology in ODDE (the level of educational institutions); Microlevel: teaching and learning in ODE (the level of individual learners and teachers). Here is a brief overview of the content and major issues covered in the six sections: Macrolevel: Theories and Systems; Section 1: History, Theory, and Research in ODDE; Section 2: Global Perspectives and Internationalization; Meso-level: Institutional Perspectives, Management, and Organization; Section 3: Organization, Leadership, and Change; Section 4: Infrastructure, Quality Assurance, and Support Systems; Microlevel: Learning and Teaching; Section 5: Learners, Teachers, Media, and Technology; Section 6: Design, Delivery, and Assessment.*

**Keywords:** Digital education; Web, Artificial Intelligent, MOOCs, Social media,

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### Introduction

Many educational institutions from K-12, higher education, professional and vocational training, and continuing education were forced into the digital world of online teaching and learning without being well prepared for it (Bozkurt & Sharma, 2020; Zawacki-Richter, 2021). In such “emergency remote teaching” (Hodges et al., 2020) situations, teachers had often transferred what they knew from face-to-face teaching directly to the online environment as if there were no differences between them even though ERT had little in common with carefully designed ODDE. As ODDE developed, various theories and models have emerged to understand and explain its different aspects and practices, and many empirical studies have been conducted in a wide range of contexts (ZawackiRichter & Naidu, 2016; Zawacki-Richter & Latchem, 2018). Readers understand the field of ODDE in a more systemic and comprehensive manner, we structure the handbook following the 3M framework proposed by Zawacki-Richter (2009) and Zawacki-Richter and Anderson (2014). Open, distance, and digital education (ODDE) has entered the “mainstream” of education (Xiao, 2018) and even becomes “normalized” during the COVID-19 pandemic (Bond, 2020; Bond, Bedenlier, Marín, & Händel, 2021). The fundamental design principles were as significant as the specific technologies in the development of the web. Berners-Lee (1989) identified that for any such system to succeed it needed to be open, and not a proprietary system owned by any one corporation. For the web and social media there is a lessening of control, while the LMS is a means to explicitly regain that control from the “wild web.” MOOCs are an interesting microcosm of this tension, as the early experimental MOOCs (sometimes referred to as cMOOCs) were much more open in terms of pedagogy, community and technology. The later commercial MOOCs (also known as xMOOCs) are delivered in a much more uniform, linear, controlled manner. Lastly, the combination of these two features – ease of use and control – lead to reflections on openness. Veletsianos and Kimmons (2012) used the term Networked



Participatory Scholarship (NPS) to encompass scholars' use of social networks to "pursue, share, reflect upon, critique, improve, validate, and further their scholarship". Artificial intelligence (AI) was initially applied in education about 50 years ago and only a decade or so after the founding of AI as a research field itself, at a Dartmouth College Workshop, in Hanover, New Hampshire, USA, in 1956 (Moor, 2006). The creation of log data from educational systems and the use of data mining and other analytic techniques have given rise to the thriving field of learner analytics. This in turn has enabled the creation of dashboards for learners, teachers, and administrators to interrogate data at varying levels of granularity.

### **Relevance of ODDE History**

1. **Macro level: Theories and Systems:** The chapters in Sections 1 and 2 examine theories and systems of ODDE from historical, cultural, and global perspectives.

**Section 1: History, Theory, and Research in ODDE:** The first section lays the theoretical foundations of ODDE and provides an overview of the historical development, from correspondence education in the nineteenth century to current forms of digital education and technology-enhanced learning.

**Section 2: Global Perspectives and Internationalization:** This section takes on a global perspective on national systems and networks in the context of the globally occurring digital transformation, resulting in the conceptualization of the different facets of internationalization in the context of ODDE.

2. **Meso-level:** Institutional Perspectives, Management, and Organization:

**Section 3: Organization, Leadership, and Change:** This section discusses practices and changes in various types of ODDE institutions with a special focus on leadership, management strategies, and support systems. The chapters analyze the development and innovations in open universities, nonformal distance teaching institutions, and open and virtual schools around the globe.

**Section 4: Infrastructure, Quality Assurance, and Support Systems:** This section analyzes another important set of institutional issues including organizational and technology infrastructure, quality assurance and evaluation, accreditation, and support systems.

3. **Microlevel:** Learning and Teaching

**Section 5: Learners, Teachers, Media, and Technology:** This section focuses on the profiles of students and teachers and on the media and technologies that are applied to facilitate teaching and learning in ODDE.

**Section 6: Design, Delivery, and Assessment:** The final section starts with an overview of the various delivery modes of ODDE, which differ according to the degree of digitization and the degree of flexibility they allow.

### **Digital Developments**

1. **History, Theory, and Research**

A simplified view of education has prevailed in the education community in recent years, taking education for an issue of transmission of content, hence merely a technological issue (Harasim, 2015). MOOCs are the ultimate in this narrative. Located in the historical context of ODDE, MOOCs, especially the so-called xMOOC, are not a new concept at all (Bates, 2013; Romiszowski, 2013), not to mention small private online courses (SPOCs) championed by Harvard University (Coughlan, 2013).

2. **From Correspondence Education to Online Distance Education**

The first to use the mail for teaching were Isaac Pitman in the United Kingdom (UK), Charles Toussaint in France, Gustav Langenscheidt in Germany, H. S. Hermod in Sweden, and Anna Eliot Ticknor in the United States of America (USA). The prominent role played by government schools in Canadian correspondence education is revealed in a 1968 report, showing 87,692 students in schools



run by the provincial governments compared to 16,048 in university courses (MacKenzie & Christensen, 1971). A film “A Letter to the Teacher” offers an entertaining demonstration of the merits of correspondence teaching for children (NZonscreen, 1957). China’s correspondence education began in the early 1900s when Yuanji Zhang, a publisher, established his Commercial Press Correspondence School (Jiang, 1954, cited by Kang, 2010). In Sweden, Hermods Kerrespondensinstitut, founded by H. D. Hermod in 1898, was the largest correspondence school in Europe in the 1960s enrolling 100,000 students a year. Hermods was Europe’s pioneer of blended learning, which it called the “Robertsfors Method,” with tutorial centers across Sweden to provide face-to-face support of the correspondence lessons. In Russia, there were correspondence programs in the nineteenth century, but after the Soviet revolution, the method acquired strategic importance as a means of mass education and became integrated into the national educational system (ZawackiRichter & Kourotchkina, 2012). The gold-standard for educational radio and television broadcasting was set in the 1970s by the UK’s Open University (OUUK) (see more below) in its partnership with the British Broadcasting Corporation (BBC). Radio broadcasting in the USA fell short of expectations. Between 1910 and 1930, at least thirteen universities offered university credit for classes on radio, and yet by 1940 all had collapsed (Pittman, 1986). The national broadcaster, the BBC, began a Schools Radio service in 1928, and by the 1970s around 90% of schools tuned into its programs (BBC School Radio, 2011). Radio programs for adults were directed at listening groups set up by organizations like the Women’s Institutes, the YMCA, and the public libraries (BBC Yearbook, 1939). Television programming ceased during the Second World War, so television for schools only started in 1957 (BBC, 2021). In China, Tianjin Radio and Correspondence University was founded in 1958, Beijing Television College and Shenyang Television University (TVU) in 1960, and Guangzhou TVU in 1961.

The history of the virtual class can be traced back to the first computer-based educational networks in the early 1980s. These included BITNET (“Because It’s Time Network”), founded by the City University of New York (CUNY) and Yale University, the (US) National Science Foundation Network (NFSNET), Australia’s Academic and Research Network (AARNet), the UK’s Joint Academic Network (JANET), and the China Education and Research Network (CERNET).

Following the invention of the World Wide Web, the Web browser Mosaic, highspeed networks, and handheld communications devices, the 1990s saw a scramble by universities and many school systems to set up their own web-based distance education programs. Some of these succeeded, such as Penn State’s World Campus (2000), Oregon State University (2000), and University of Florida (2001). Others failed. The UK E-University closed in 2004, University of Illinois’ Global Campus in 2009, and Columbia University’s Fathom Knowledge Network in 2012.

The first decade of the twenty-first century also saw the invention of another form of web-based distance learning, Massive Online Open Courses (MOOCs). Most MOOC courses were for technical and professional training and continuing education (Brown, 2013).

The history of distance education research and scholarship owes much to the research centers and scholarly journals that were established during the 1970s and 1980s. Research centers included: the Institute of Educational Technology (IET) at the OUUK; the DIFF at Tübingen, Germany; Central Institute for Distance Education Research (ZIFF) at the FernUniversität, Hagen, Germany; Centre for Distance Education (CDE) at Athabasca University, Canada; and the American Center for the Study of Distance Education (ACSDE) at the Pennsylvania State University, USA.

### **3. The Rise and Development of Digital Education**

Open education is a broad term that has itself undergone evolution and transformation. Weller, Jordan, DeVries, and Rolfe (2018) used a citation analysis method to investigate different clusters of

publications which were associated with open education. This revealed eight distinct categories, namely:

- Distance education
- Open education in schools
- E-learning
- Open Education Resources (OER)
- Massive Open Online Courses (MOOCs)
- Open Practices
- Social Media
- Open Access Publishing

**1. The Web:** By 1990 Berners-Lee had developed four technologies that made the web functional and that still underpin it:

- HTML: Hypertext Markup Language, an easy to use language to produce web documents.
- URI: Uniform Resource Identifier (also known as URL for Uniform Resource Locator), a means of giving any page on the web a unique address so it can be linked to and located.
- HTTP: Hypertext Transfer Protocol, a data transfer method that allows web resources to be retrieved across the internet.
- Web browser: a piece of software that utilizes the previous three technologies to allow a user to navigate the web.

**2. LMS:** Arguably the most successful education technology and the one that has had the biggest impact (for good and bad) is the LMS or Virtual Learning Environment (VLE). The LMS provided an enterprise solution for e-learning for universities. LMS uptake grew significantly over the first half of the 2000s, and by 2005 nearly all higher education institutions had deployed an LMS, but only 37% had a single one, with others operating multiple systems, with the intention to move to a single system (OECD, 2005).

**3. Blogs:** Blogging developed alongside more education-specific developments, and it was then co-opted into ed. tech. In so doing, it foreshadowed much of the Web 2.0 developments, with which it is often bundled. The advent of feeds, and particularly the universal standard RSS (Really Simple Syndication), provided a means for readers to subscribe to anyone's blog and receive regular updates.

**4. Social Media:** Social media such as Facebook, Twitter, WeChat, and KakaoTalk have often achieved an infrastructure-like status for much of the online experience. For instance, for a significant number of users, Facebook is viewed as the entirety of the Internet.

- Social media increases student recruitment. The use of Twitter, Instagram, Facebook, and other social media by universities, students, and staff provides potential students with a good insight into student life and can act as an effective marketing tool (Constantinides & Zinck Stagno, 2011).
- Social media increases student engagement. The use of social media helps blur boundaries between study and other aspects of life and provides an element that 84 M. Weller can be fitted in-between other activities in a way that more concentrated study activities cannot, and as such can improve student engagement (Roopchund, Ramesh, & Jaunky, 2019).
- Social media increases student retention. Students who make social connections tend to stay with their studies (Astleitner, 2000). Conventionally, this is realized through societies and social functions. Social media provides a further means to enhance these bonds, and particularly for distance or part-time students.
- Higher education has a duty to develop expertise in fake news and misinformation. Mike Caulfield (2017), who has done much of the work in exploring the impact of misinformation, has developed an

online book and a wide range of activities to help develop these skills. They are likely to become increasingly significant as the quality of fake videos and sophisticated targeting improve.

**5. MOOCs:** The MOOC phenomenon is an interesting case study in the rise of digital education, particularly how it relates to open education. Such was their growth and hype during 2012 that The New York Times declared it to be “the year of the MOOC” (Pappano, 2012). MOOCs can be viewed as the combination of several preceding technologies: some of the open approach of OER, the application of video, and the revolutionary hype of Web 2.0.

Several problems began to emerge with MOOCs after the initial enthusiasm, leading to the reigning back on some of the ambitions. The key ones were:

- Low Completion Rate – With around only 10% of registered students finishing the course, completion rates have been problematic for MOOCs (Jordan, 2014).
- Learner Demographics – Most successful MOOC learners were already well educated (Christensen et al., 2013), and this finding undermined claims of the MOOC democratizing learning.
- Sustainability – As MOOCs became industrialized and required high-quality media outputs, their costs varied considerably, particularly when staff time, marketing, and support were factored in (Hollands & Tirthali, 2014). Finding sustainable business models that justified this expenditure has proven problematic.

**6. Artificial Intelligence in Education and Ethics:** Artificial intelligence (AI) was initially applied in education about 50 years ago and only a decade or so after the founding of AI as a research field itself, at a Dartmouth College Workshop, in Hanover, New Hampshire, USA, in 1956 (Moor, 2006). The issue of collecting, analyzing, and managing learner data has become more pressing for many reasons, including (i) greater general awareness of data privacy issues, (ii) the sheer quantity of learner data being collected, (iii) the increased use of AI and other methodologies for finding patterns in that data and drawing inferences from them, and (iv) the use of learner (and thus user) data for commercial purposes which have nothing to do with education (Williamson, 2018).

## Conclusion

The history of distance education provides many lessons to guide future practice and research. One is that, recognizing that every learner is different, educators must break free from the ancient preoccupation with the classroom and use well-tested instructional design and communication technologies to address that diversity. In research, the use of blogs, analytics, and Web 2.0 tools have all been significant. For academics and universities responding to the cultural shifts caused by social media, video, and the dark side of the web an understanding of these tools has become strategically important. In summary, the LMS provided a useful means of rapidly developing and unifying e-learning delivery which led to increased uptake of digital education. The five significant technologies for digital education have been considered, namely, the web, LMS, blogs, social media and MOOCs. The creation of log data from educational systems and the use of data mining and other analytic techniques have given rise to the thriving field of learner analytics. This in turn has enabled the creation of dashboards for learners, teachers, and administrators to interrogate data at varying levels of granularity

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## EXPERIENTIAL LEARNING- AN INNOVATIVE PRACTICE

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### *Abstract*

*Experiential learning is a dynamic and innovative educational practice that has gained prominence in recent years due to its unique approach to learning. Experiential learning emphasizes active engagement, where learners participate in real-world experiences, reflective activities, and problem-solving exercises. This paper provides an overview of the concept, innovative teaching approaches of teaching to support experiential learning, benefits, and key elements of experiential learning. This approach enables individuals to acquire knowledge, skills, and attitudes while applying them in authentic contexts. As a result, experiential learning cultivates a deep understanding of subjects, fosters critical thinking, and nurtures personal and professional growth. This paper explores diverse applications of experiential learning, from traditional classroom settings to corporate training and beyond. This paper highlights the importance of reflection as a critical component of this practice, encouraging individuals to analyze their experiences and extract meaningful insights. Experiential learning has proven to be effective in enhancing retention, motivation, and problem-solving skills among learners. It accommodates various learning styles and can be adapted to suit the needs of learners at different levels of education. This paper also underscores the role of technology in advancing experiential learning, enabling virtual simulations, gamification, and other innovative tools to expand its reach and impact.*

*(Key words: Experiential learning, Project based learning, Problem based learning, Active learning, Blended learning)*

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## INTRODUCTION

In the ever-evolving landscape of education and professional development, the quest for more effective and engaging learning approaches has never been more crucial. Experiential learning stands at the forefront of this quest as an innovative practice that redefines the traditional paradigms of education. In a world where knowledge is just a click away, experiential learning takes education beyond the realms of textbooks and lectures, immersing learners in dynamic, real-world experiences that empower them to actively construct their understanding, skills, and attitudes. Experiential learning is more than just a buzzword; it is a revolutionary concept that holds the promise of fostering lifelong learners, equipping them with the adaptability and problem-solving prowess needed to thrive in an ever-changing global landscape.

Experiential learning is a catalyst for personal and professional growth, cultivating individuals who not only possess knowledge but also have the skills and confidence to apply it effectively. Whether in traditional educational settings, corporate training, or emerging online platforms, experiential learning offers a dynamic and transformative path to knowledge and skill acquisition.

## EXPERIENTIAL LEARNING

Experiential learning is an educational approach that emphasizes learning through direct experiences, engagement in activities, and reflection on those experiences. In this method, learners actively participate in real-world situations, experiments, or activities that are relevant to the subject matter they are studying. After engaging in these experiences, learners reflect on what they have encountered, analyzing and making sense of their observations and actions. This process of reflection helps individuals to gain a deeper understanding of the subject matter, develop problem-solving skills, and acquire practical knowledge and skills.

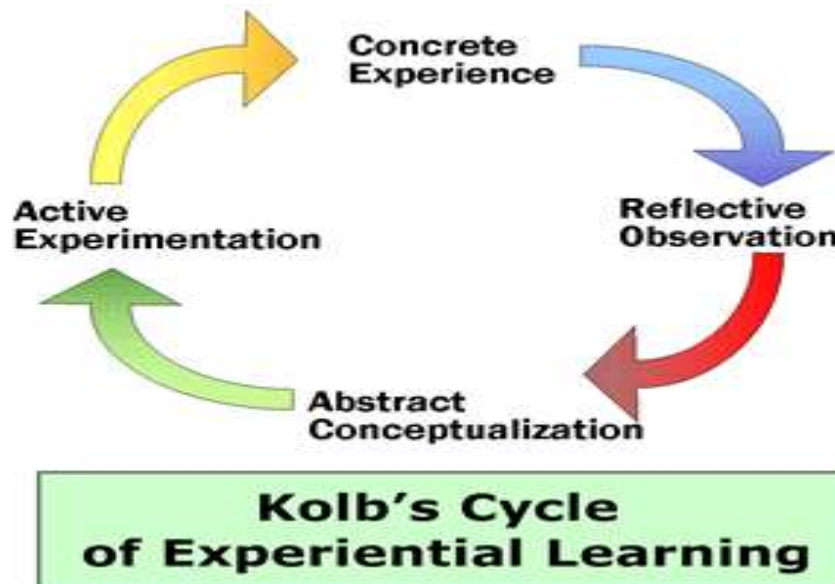
Experiential learning is often contrasted with traditional classroom-based learning, where the primary mode of instruction is through lectures, readings, and assignments. Experiential learning provides a more hands-on, interactive, and holistic approach to education, which is believed to be more effective in promoting critical thinking, creativity, and long-term retention of knowledge. It is used in a variety of educational settings, from schools and universities to corporate training programs,



and can take many forms, including internships, fieldwork, simulations, hands-on projects, and other practical experiences.

### KOLB'S FOUR-PHASE MODEL OF EXPERIENTIAL LEARNING

Kolb identified that the learning will take place in different ways and found four distinct personality types with different approaches to learning. According to Kolb's learning in an individual takes by Concrete Experience or Abstract Conceptualization and Active Experimentation or Reflective Observation. Four distinct personality types can be based on these dimensions. Kolb proposed a cyclical model for experiential learning with four stages:



(Source: <https://serc.carleton.edu/sp/library/enviropjects/what.html>)

### KEY ELEMENTS OF EXPERIENTIAL LEARNING

Experiential learning is a dynamic educational approach that involves hands-on experiences, active engagement, and reflective activities to help learners acquire knowledge, skills, and attitudes. Several key elements characterize experiential learning:

**Concrete Experience:** In experiential learning, the process begins with a concrete experience, such as a real-world activity, experiment, or hands-on project. Learners directly engage with the subject matter or a practical situation.

**Reflective Observation:** After the experience, learners engage in reflective observation. They critically analyze and reflect on their experiences, observations, and the emotions and reactions they encountered during the concrete experience.

**Abstract Conceptualization:** Learners then move to the phase of abstract conceptualization. They extract general principles, theories, or concepts from their reflections. This step involves making connections between the experience and existing knowledge.

**Active Experimentation:** In the final phase, learners engage in active experimentation. They apply the insights and knowledge gained from their reflections to solve new problems, make decisions, or engage in subsequent experiences. This phase completes the experiential learning cycle.

**Engagement:** Learners are actively involved in the learning process. They participate in real-world activities, experiments, or projects, which provides a sense of ownership and relevance to the learning experience.

**Personal Reflection:** Reflection is a critical element of experiential learning. Learners contemplate their experiences, emotions, and reactions, which helps them make meaning from the experience and extract valuable insights.



**Intrinsic Motivation:** Experiential learning often taps into learners' intrinsic motivation, as the activities are engaging, relevant, and encourage a sense of autonomy and self-directed learning.

**Variety of Learning Styles:** Experiential learning accommodates various learning styles and preferences. It allows individuals to learn through doing, reflecting, and applying, catering to the diversity of learners.

**Holistic Development:** Experiential learning promotes holistic development by addressing not only cognitive but also affective and psychomotor domains. It fosters personal and professional growth by nurturing attitudes, values, and practical skills.

**Problem-Solving:** Learners engage in problem-solving and critical thinking, as they encounter challenges and uncertainties during their experiences. This encourages adaptability and resilience.

**Life-Long Learning:** Experiential learning instills the importance of lifelong learning, as it equips learners with the skills and mindset necessary to continue learning and adapting to new situations beyond the classroom.

These key elements of experiential learning underscore its effectiveness in promoting deeper understanding, critical thinking, and the acquisition of practical knowledge and skills. It is a versatile approach that can be applied across various educational and professional settings.

#### **INNOVATIVE TEACHING APPROACHES TO SUPPORT EXPERIENTIAL LEARNING:**

Experiential learning is a dynamic and effective educational methodology that emphasizes hands-on experiences, active engagement, and reflection. To maximize its potential, educators and trainers can incorporate innovative teaching approaches that enhance the experiential learning process. Here are several innovative teaching strategies to support experiential learning:

- **Simulations and Role-Playing:** Utilize realistic simulations and role-playing scenarios that mimic real-world situations. This approach allows learners to apply theoretical knowledge in a controlled and safe environment, fostering problem-solving skills and decision-making abilities.
- **Project-Based Learning:** Encourage students to work on long-term projects that require them to research, plan, execute, and present their findings. This method promotes self-directed learning, collaboration, and a deep understanding of the subject matter.
- **Flipped Classroom:** In a flipped classroom, learners study course materials independently before class and use class time for interactive discussions, problem-solving, and hands-on activities. This approach optimizes in-class time for experiential learning.
- **Service Learning:** Incorporate community service or volunteer work into the curriculum. Students can apply their knowledge and skills to real-world challenges while contributing to the community.
- **Collaborative Learning:** Promote group activities and teamwork to simulate real-world collaboration. This approach helps learners develop interpersonal skills, problem-solving, and adaptability.
- **Outdoor Education:** Take learning outside the classroom by organizing field trips, outdoor experiments, or nature-based activities. These experiences connect learners with their environment and provide a holistic perspective on various subjects.
- **Peer Teaching and Mentoring:** Encourage students to teach and mentor their peers. This not only reinforces their own understanding of the subject but also promotes collaboration and leadership skills.
- **Problem-Based Learning:** Present students with real-world problems and challenges that they must solve collaboratively. This approach fosters critical thinking, creativity, and innovation.

Incorporating these innovative teaching approaches into the educational framework can significantly enhance the effectiveness of experiential learning, making it a more engaging, transformative, and holistic method of acquiring knowledge and skills.

### **EXPERIENTIAL LEARNING THROUGH ONLINE LEARNING ENVIRONMENTS**

Experiential learning can be effectively integrated into online learning environments, offering students the opportunity to engage in practical experiences and reflective activities while leveraging the flexibility and accessibility of online education. Here are some strategies and considerations for implementing experiential learning in the context of online learning:

- **Virtual Simulations:** Use virtual simulations to create realistic, immersive experiences that mimic real-world scenarios. For example, in healthcare education, students can perform virtual surgeries, or in business courses, they can participate in virtual business simulations. These provide a safe space for experiential learning.
- **Virtual Labs:** In science and engineering fields, virtual labs allow students to conduct experiments and explore scientific concepts online. These virtual labs provide a hands-on experience that closely resembles physical laboratory work.
- **Online Internships and Practicum:** Arrange for online internships or practicum experiences where students can work remotely on real projects with organizations or mentors in their field of study.
- **Virtual Field Trips:** Take students on virtual field trips to explore museums, historical sites, ecosystems, or cultural landmarks. Online platforms can provide interactive, multimedia-rich experiences that engage students in exploring new environments.
- **Online Role-Playing:** Implement online role-playing scenarios where students take on different roles or characters to solve problems, make decisions, or engage in real-world situations relevant to their field of study.
- **Discussion Boards and Forums:** Create discussion boards and online forums where students can share their experiential learning experiences, insights, and reflections. Encourage peer feedback and discussions to deepen their understanding.
- **Reflective Journals and Blogs:** Assign students to maintain online reflective journals or blogs, documenting their experiential learning experiences and personal growth throughout the course.
- **Online Mentoring and Feedback:** Provide opportunities for students to connect with mentors or instructors through video conferencing or online meetings. Personalized feedback and guidance can enhance the experiential learning process.
- **Collaborative Projects:** Organize group projects that require online collaboration. Students can work together to address real-world challenges and develop solutions using digital tools and platforms.
- **Interactive Multimedia:** Use multimedia elements like videos, simulations, interactive quizzes, and infographics to make the online learning experience more engaging and interactive.
- **Scenarios and Decision-Making Exercises:** Create online scenarios and decision-making exercises that require students to apply their knowledge in practical situations and make informed choices.
- **Online Portfolios:** Have students create online portfolios to showcase the artifacts and evidence of their experiential learning journey. This can serve as a powerful reflection tool and a tangible record of their experiences.

It's essential to design online courses with clear learning objectives, structured activities, and opportunities for reflection to ensure that experiential learning is effective. Additionally, instructors and mentors should provide guidance, feedback, and support throughout the experiential learning

process in the online environment. When done thoughtfully, experiential learning through online learning environments can offer students valuable, real-world experiences while catering to their unique needs and circumstances.

### **CONCLUSION:**

In a rapidly changing world where adaptability, critical thinking, and practical skills are highly valued, experiential learning stands out as an innovative and transformative practice. This educational approach, which emphasizes hands-on experiences, active engagement, and reflective activities, has the potential to reshape the way we acquire knowledge and skills. Experiential learning's effectiveness is evident in its ability to foster a deep understanding of subjects, encourage lifelong learning, and cultivate adaptable individuals ready to tackle real-world challenges. It goes beyond traditional teaching methods, offering a dynamic and engaging way to learn that resonates with diverse learning styles and preferences.

It can be concluded that, experiential learning- an innovative practice is not limited by age, level of education, or discipline.

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## ANALYSIS OF DIMENSION WISE LEARNING GAIN SCORES OF EXPERIMENTAL AND CONTROL GROUP IN ACHIEVEMENT IN SCIENCE

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### Abstract

*The main objective of the study is to study the Dimension wise Learning Gain Scores of Achievement in Science of Control Group and Experimental Group based on Pre-test, Post-Test and Delayed post test. The study investigates whether any influence of Multimedia learning Package on the achievement in science. The study adopted Experimental design and to collect students dimension wise learning gain scores in science achievement test from both experimental and control group. In this research t test is used to compare the dimension wise learning gain scores. The finding of the study revealed that the students of Experimental group showed higher dimension wise learning gain scores than the control group.*

**Keywords:** Dimension wise Learning gain scores, Multimedia Learning package and traditional teaching.

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### Introduction

Multimedia innovation is a broad concept with many application possibilities; in addition to its applications in the disciplines of medicine, statistics, and database construction, it plays a vital role in educational innovation. One of the sectors that has the most potential for using this breakthrough is the entertainment sector. Connection is the key element in multimedia innovation since collaboration is a major theme in many of its applications. Multimedia projects may thus provide a stronger and more impactful analysis than using each invention separately.

The development of science and technology has affected every facet of modern life. The difference that innovation makes in people's daily lives is immense. Many commonplace tasks have been simplified by the use of technology. Accordingly, many educators believe the current day to be a "digital-world," in which every person is immersed in a variety of digital devices. In today's high-tech environment, even a young child has access to the tools necessary to do a wide range of tasks. These children are referred to as "digital-locals" in the 21st century.

The influence of science and technology is also plain to see in the classroom. In every respect, it has changed the face of education forever. Having opened their eyes to the area of profoundly sophisticated digital world, digital locals are more flexible towards innovation boosted or innovation interfered standards. In this way, innovation is being coordinated in the classroom to improve student outcomes, and it is a growing wonder throughout the globe. For the sake of student learning and student success, several countries are investing significant time and resources into making technology available to students. In particular, personal computers are being used as teaching tools, with positive outcomes compared to more conventional methods. Another word, such as information and communication technology (ICT), has been proposed along similar lines since the introduction of personal computers as the 21st century approached. In this information era, the implementation of ICT in the classroom has progressed, and it has gradually become a phenomenon all over the globe. Among the reforms that have been made to the educational system is the more thorough use of ICT in the classroom.

### Statement of Objective

To find out the dimension wise mean gain scores of students' achievement in Experimental Group and Control Group taught Multimedia Learning Package and Traditional Instructional Teaching.

## Review of Related Literature

Sukhadia (2012) was supervised A study titled "Development and Tryout of Computer Assisted Instruction Programme for 'The Universe' in the Subject of Science and Technology for Standard X". The basic goals of this study were to create a computer-assisted learning (CLA) program on the subject of "Universe," pilot the program with students in grade X, and compare the results to those obtained using the more conventional method of instruction. We used an approach based on trial and error. The research used pre- and post-tests, as well as other standardized procedures, to obtain its results. Male and female understudies from both rural and urban areas were chosen to represent those environments in Standard X. It was shown that students from both rural and urban areas might benefit from a computer-assisted learning program. It was shown that in an exploratory meeting, the average score was much higher than in a controlled meeting. Students using a computer-assisted education program in urban areas outperformed their female peers, whereas students using the identical program in rural areas outperformed their male peers.

Barad (2010) looked at how CAI may help with scientific education in urban areas. The CAI programme was shown to be equally successful in preparing young men and women for careers in science. The CAI programme was more successful in teaching science to high-IQ students than to low-IQ students at the time. The effectiveness of sex as a teaching tool was shown by the post-test mean achievement score. Mean posttest accomplishment scores showed that IQ has practical applications. There was no sex-teaching method interaction seen in the post-test mean performance score. There was no consideration for the 74-point interaction effect of sex and IQ in the final mean accomplishment score. The post-test mean accomplishment score did not show any interaction effects between pedagogical strategy and IQ. The post-test mean accomplishment score did not show any significant interaction between gender, instructional strategy, or student intelligence.

Jain (2011) investigated how ICTs are being used to foster future-ready technological literacy in higher education. Communication and information technologies (ICT), such as radio and television, as well as more recent digital technologies like computers and the internet, were sought for as possible fantastic empowering instruments for educational change and improvement. When properly implemented, emerging ICTs are expected to expand educational opportunities, better prepare students for the increasingly digital workplace, and improve teaching practises.

Serin (2011) were studied the effects of computer-based training on the performance and problem-solving abilities of science and technology understudies. using a pre-test/post-test control collection strategy. A total of 52 participants were analysed, with 26 assigned to the experimental group and 26 to the control group. The control group did not get any scientific or technology training whereas the experimental group received three hours per week on a computer for three weeks. The research found that low-income students who were exposed to science and technology via computer-based education improved significantly in both achievement and problem-solving skills.

Objectives of the study: To find out the dimension wise mean gain scores of students' achievement in Experimental Group and Control Group taught Multimedia Learning Package and Traditional Instructional Teaching.

### Research Design

The study adopted Experimental design to collect student's Achievement in science. The data collected from two state board school located in Hassan city. Among 80 students were from the two private schools. The study considered independent and dependent variables. The study designed to investigate whether the dimension wise mean gain scores of students' achievement in Experimental Group and Control Group taught Multimedia Learning Package and Traditional Instructional Teaching.

### Tool Used in the Study

- In the present research the following tools used to collect the data,

- Achievement in Science (Pre-Test) constructed by the researcher to measure the achievement in Science of the students.
- Achievement in Science (Post-Test) in Science constructed by the researcher to evaluate the achievement in mathematics of the students.
- Achievement in Science (Delayed Post-Test) in Science constructed by the researcher to evaluate the achievement in Science of the students.

### Statistical Techniques

- **‘t’ Test:** To compare the dimension wise mean scores of pre achievement, Post Achievement and Delayed Post Achievement of Control group and Experimental group.
- **One Way ANOVA:** To compare the mean scores of Pre achievement, Post achievement, delayed Post Achievement of Control Group as well as Experimental Group.
- **Graphical Representation:** To present the nature of distribution of data in the form of Bar Graph and Line Graph.

### Analysis and Interpretation of Data

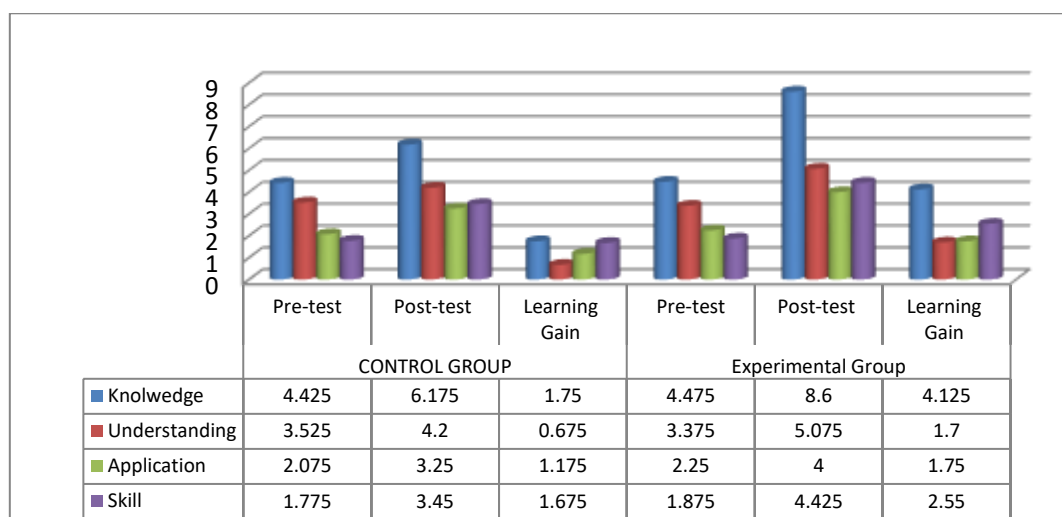
#### Analysis of Dimensions of Pre-test and Post-test wise Learning Gain Scores of Achievement in Science of Control and Experimental Group.

**Table 1: Comparison Dimensions of Pre-test and Post-test wise Learning Gain Scores of Achievement in Science of Control and Experimental Group.**

Domains of Pre-test & Post Test		CONTROL GROUP			EXPERIMENTAL GROUP		
		Pre-test Scores	Post-test Scores	Learning Gain Scores	Pre-test Scores	Post-test Scores	Learning Gain Scores
Knowledge	Total	177.00	247.00	70	179.00	344.00	165
	Mean	4.4250	6.1750	1.75	4.4750	8.6000	4.125
	SD	1.17424	1.37538	0.20114	1.26060	1.27702	0.01642
Understanding	Total	141.00	168.00	27	135.00	203.00	68
	Mean	3.5250	4.2000	0.675	3.3750	5.0750	1.7
	SD	.55412	.60764	0.05352	.80662	.57233	0.2343
Application	Total	83.00	130.00	47	90.00	160.00	70
	Mean	2.0750	3.2500	1.175	2.2500	4.0000	1.75
	SD	.47434	.58835	0.11401	.58835	.22646	0.3619
Skill	Total	71.00	138	67	75.00	177.00	102
	Mean	1.7750	3.4500	1.675	1.8750	4.4250	2.55
	SD	.69752	.63851	-0.059	.51578	.63599	0.12021
Total	Total	472.00	683.00	211	479.00	884.00	405
	Mean	11.8000	17.0750	5.275	11.9750	22.1000	10.125
	SD	1.36250	1.54235	0.17985	2.35870	1.91887	0.4398

From the above table it is seen that the marginal difference observed in the dimensions of mean scores pre-test and post-test scores of control group. The learning gain scores favors post-test, which indicate that much difference is not observed between dimensions of mean scores pre-test and post-test scores of control group. Whereas with respect to experiment group difference observed in the dimensions of mean scores of pre-test and post-test scores of Experimental Group. The learning gain scores favors post-test, which indicate that there is significant difference observed between dimensions of mean scores pre-test and post-test scores of experimental group. Thus, it indicates that the student of Experimental group performed higher as compared to the Control group students with respect all the dimensions of achievement test namely knowledge, Understanding, Application and Skill. It means, student taught through Multimedia learning package able to score higher as compared to counter part the students taught through Traditional Instructional Teaching. Therefore, Multimedia learning package found to be more effective than the Traditional Instructional Teaching in enhancing the Knowledge, Understanding, Application and Skill of students Achievement in Science. The data also reported in the following graph.





**Graph 1: Comparison Dimensions of Pre-test and Post-test wise Learning Gain Scores of Achievement in Science of Control and Experimental Group.**

**Analysis of Dimensions of Pre-test and Delayed Post-test wise Learning Gain Scores of Achievement in Science of Control and Experimental Group**

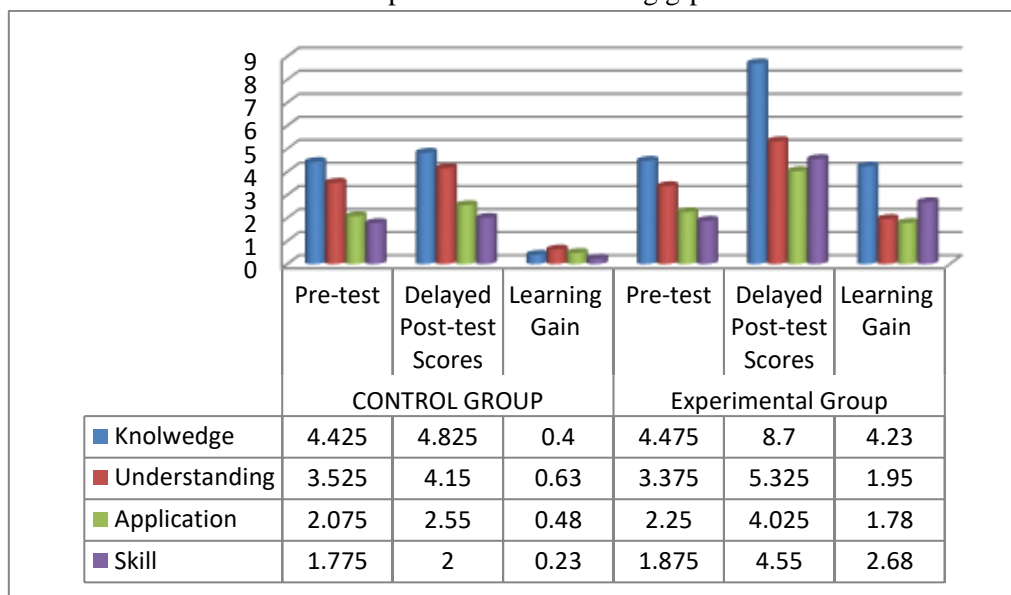
**Table 2: Comparison Dimensions of Pre-test and Delayed Post-test wise Learning Gain Scores of Achievement in Science of Control and Experimental Group.**

Domains of Pre-test & Post Test		CONTROL GROUP			EXPERIMENTAL GROUP		
		Pre-test Scores	Delayed Post-test Scores	Learning Gain Scores	Pre-test Scores	Delayed Post-test Scores	Learning Gain Scores
Knowledge	Total	177.00	193.00	16.00	179.00	348.00	169.00
	Mean	4.4250	4.8250	0.40	4.4750	8.7000	4.23
	SD	1.17424	1.23802	0.06	1.26060	1.26491	0.00
Understanding	Total	141.00	166.00	25.00	135.00	213.00	78.00
	Mean	3.5250	4.1500	0.63	3.3750	5.3250	1.95
	SD	.55412	.69982	0.15	.80662	.61550	-0.19
Application	Total	83.00	102.00	19.00	90.00	161.00	71.00
	Mean	2.0750	2.5500	0.48	2.2500	4.0250	1.78
	SD	.47434	.59700	0.12	.58835	.27619	-0.31
Skill	Total	71.00	80.00	9.00	75.00	182.00	107.00
	Mean	1.7750	2.0000	0.23	1.8750	4.5500	2.68
	SD	.69752	.75107	0.05	.51578	.55238	0.04
Total	Total	472.00	541.00	69.00	479.00	904.00	425.00
	Mean	11.8000	13.5250	1.73	11.9750	22.6000	10.63
	SD	1.36250	1.41399	0.05	2.35870	1.79458	-0.56

From the above table it is seen that the marginal difference observed in the dimensions of mean scores pre-test and delayed post-test scores of control group. The learning gain scores favors post-test, which indicate that much difference is not observed between dimensions of mean scores pre-test and delayed post-test scores of control group. Whereas with respect to experiment group difference observed in the dimensions of mean scores of pre-test and delayed post-test scores of Experimental Group. The learning gain scores favors post-test, which indicate that there is significant difference observed between dimensions of mean scores pre-test and post-test scores of experimental group.

Thus, it indicates that the student of Experimental group performed higher as compared to the Control group students with respect all the dimensions of achievement test namely knowledge, Understanding, Application and Skill. It means, student taught through Multimedia learning package able to score higher as compared to counter part the students taught through Traditional Instrucitonal Teaching. Therefore, Multimedia learning package found to be more effective than the Traditional Instrucitonal

Teaching in enhancing and sustaining the Knowledge, Understanding, Application and Skill of students Achievement in Science. The data also reported in the following graph.



**Graph 2: Comparison Dimensions of Pre-test and Delayed Post-test wise Learning Gain Scores of Achievement in Science of Control and Experimental Group.**

#### Findings of the Study

- From the analysis of comparison of mean scores, it was found that, after intervention the students of Control group scored higher in Knowledge[M=6.1750], Understanding[M=4.20], Application [M=3.25]and Skill[M=3.45] dimensions of Post-Achievment as compared to Knowledge[M=4.4250], Understanding[M=3.5250], Application[M=2.0750] and Skill[M=1.7750] dimensions of Pre-test achievement in Control Group. It means, after intervention the students of Control Group scored marginally higher score in Knowledge [Gain Score = 1.75], Understanding [Gain Score = 0.675], Application [Gain Score = 1.715 and Skill [Gain Score = 1.675] dimensions Post-test compare to dimensions Pre-test.
- From the analysis of comparison of mean scores, it was found that, after intervention the students of Experimental group scored higher in Knowledge[M=8.600], Understanding[M=5.0750], Application [M=4.00] and Skill[M=4.4250] dimensions of Post-Achievment as compared to Knowledge[M=4.4750], Understanding[M=3.3750], Application[M=2.2500] and Skill[M=1.8750] dimensions of Pre-test achievement in Control Group. It means, after intervention the students of Experimental Group scored higher score in Knowledge [Gain Score = 4.125], Understanding [Gain Score = 1.7] Application [Gain Score = 1.75] and Skill [Gain Score = 2.55] dimensions Post-test compare to dimension of pre-test.
- From the analysis of comparison of mean scores, it was found that, after intervention the students of Experimental group scored higher in Knowledge[M=8.70], Understanding[M=5.3250], Application [M=4.0250] and Skill[M=4.5500] dimensions of Delayed Post-Achievment as compared to Knowledge[M=4.4750], Understanding[M=3.3750], Application[M=2.2500] and Skill[M=1.8750] dimensions of Pre-test achievement in Control Group. It means, after intervention the students of Experimental Group scored higher score in Knowledge [Gain Score = 4.125],

Understanding [Gain Score = 1.7] Application [Gain Score = 1.75] and Skill [Gain Score = 2.55] dimensions Delayed Post-test compare to dimension of pre-test.

- From the analysis of comparison of mean scores, it was found that, after intervention the students of Control group scored higher in Knowledge[M=4.825], Understanding[M=4.1500], Application [M=2.55] and Skill[M=2.00] dimensions of Delayed Post-Achievement as compared to Knowledge[M=4.4250], Understanding[M=3.5250], Application[M=2.0750] and Skill[M=1.7750] dimensions of Pre-test achievement in Control Group. It means, after intervention the students of Control Group scored marginally higher score in Knowledge [Gain Score = 1.75], Understanding [Gain Score = 0.675], Application [Gain Score = 1.715 and Skill [Gain Score = 1.675] dimensions of Delayed Post-test compare to dimensions Pre-test.

### Discussion and Conclusion

The study analyzed data with respect domains Knowledge, Understanding, Application and Skill aspect of Pre-achievement, Post-achievement and Delayed Post Achievement of Control Group and Experimental group. From mean comparison it was found that marginal mean difference observed with respect to all domains of Pre-test achievement and Post-test Achievement as well as Post-test achievement and Delayed-Post Achievement of Control Group. It means, Traditional Instruction was not more effective in enhancing the achievements of Control group.

Whereas, concern to experimental group, from the mean comparison it was found that mean difference observed with respect to all domains of Pre-test achievement and Post-test Achievement as well as Post-test achievement and Delayed-Post Achievement. It means, Multimedia Learning Package was more effective in enhancing the achievements of Experimental group.

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## TRENDS AND PRACTICES IN DEVELOPING SPIRITUAL INTELLIGENCE IN TEACHER EDUCATION

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### Abstract

*Education is the weapon to change the world. The success of an education system depends upon the Quality teaching. Quality teaching depends on several teaching related teaching factors that include life style, attitude, interest, teacher effectiveness, emotional and spiritual intelligence and personal well-being etc. A society with high spiritual intelligence adds up to the betterment of the nations which leads to healthy human development making individuals spiritually intelligent. Teacher education institutions play an important role in preparing prospective teachers to become effective educators in the future. Spiritual intelligence helps in making spiritual choices that contribute to well being of an individual ultimately bringing overall healthy human development. From the aspect of the National Education Policy, spiritual intelligence plays a vital role within the realm of education and contributes to the overall development of the nation. Education is viewed as fundamental to nation's overall development. Teachers are entrusted with the development of thousands of innocent impressionable young minds developing into the future citizens of the nation that must eschew conflict, violence, regressive dialogues and anarchy at all cost for sustainable development in the long run. Despite scientific and technological advancement and knowledge explosion, something seems to be lacking in the education system that leads to emergence of conflict, discontent and disharmony despite good education and equitable educational opportunities for all in the country. The role of teacher education emerges as crucial in this context as teacher educators are responsible for grooming future teachers who would develop the future citizens of the nation. So spiritual intelligence as a part of teacher education emerges as an undeniable need of the hour.*

**Key words:** Spiritual intelligence, Teacher education

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## INTRODUCTION

Education cannot be delimited to a certain age, stage or span of life but it is a life long process and encompasses all the motivation and stimuli which act upon an individual during his transit from cradle to the grave. At every moment the association with the environment gives him a new experience, a new teaching. In the words of Tagore, "Education is that which makes one's life in harmony with all the existence and thus, enables the mind to find out that ultimate truth which liberates us from the bondage of dust and gives us the wealth not of things but of inner light, not of power but of love, making this truth it's own and giving expression of it". Thus Spiritual intelligence also one of the way to transform emotions, thoughts, body and mind of an individual and helps in developing holistic approach to life.

### Concept of Spiritual Intelligence

The term "Spiritual Intelligence" was coined and introduced by Donah Zohar in her book rewiring the Corporate Brain: Using the New Science to Rethink How We Structure and Lead Organisations (1997). Spiritual intelligence is an individual capacity to possess a socially relevant purpose in life by understanding 'Self' and to have a high degree of conscience, compassion and commitment to human values.

Zohar and Marshall introduced 12 components of spiritual intelligence which are as follows:

1. **Self-Awareness:** Knowing personal values, motivators and beliefs,
2. **Spontaneity:** Living in and being responsive to the shifting needs of the moment.
3. **Values:** Acting from principles and deep beliefs and living accordingly.
4. **Holism:** Seeing larger patterns, relationships, and connections; having sense of belongingness.

**5. Compassion:** Having the quality of empathy.

**6. Celebration of diversity:** Valuing other people for their differences, not despite them.

**7. Field independence:** Standing against the crowd and having one's own convictions.

**8. Humility:** Having sense of being a player in a larger drama of one's true place in the world.

**9. Enquiry:** Needing to understand things and get to the bottom of them.

**10. Visualization:** Standing back from a situation or problem and visualizing the wider context.

**11. Positivity:** Learning and growing from mistakes, setbacks and suffering.

**12. Sense of vocation:** Feeling called upon to serve, to give something back.

King(2008) proposed 4 core abilities of spiritual intelligence which include the following:

**1. Critical Existential Thinking:** The capacity to critically contemplate the nature of existence reality, the universe, space, time, and other existential issues and also the capacity to contemplate non-existential issues in relation to one's existence.

**2. Personal Meaning Production:** The ability to derive personal meaning and purpose from all physical and mental experiences, and the ability to create and strive towards a purpose of life.

**3. Transcendental Awareness:** The capacity to identify transcendent patterns of the self of others and of the physical world during normal states of consciousness, accompanied by the capacity to identify their relationship to the state of one's inner self and to the physical world.

**4. Conscious State Expansion:** The ability to enter and exit higher states of consciousness like pure consciousness, unity, synthesis and other states of trance as in deep contemplation, meditation, prayer, etc.

Tony Buzan (2000) delineated 10 ways of enhancing spiritual intelligence. They are:

1. Getting the greater perspective

2. Exploring one's own values and principles that leads to understanding of behaviour and exercises a huge impact on the amount of the success one achieves.

3. Clarity of vision and purpose in life that would give life a comprehensible meaning and direction.

4. Compassion and the ability of understanding oneself and others

5. Charity and Gratitude

6. The power to laugh which is important for spiritual intelligence as it helps in reducing the stress making an individual life healthier.

7. Juvenile innocence and joy increase with increase in spiritual intelligence.

8. The power of ritual that provides stability and opportunity for rejuvenation.

9. Peace and synergy achieved through techniques of contemplation and meditation.

Keeping the above dimensions in mind, teacher education at present may strive to promote the following areas conducive to spiritual intelligence that would, in its turn promote a culture of synergy and conflict resolution, crucial for teacher trainees to understand if they intend to develop the future citizens of our nation effectively:

1. Fostering a democratic environment in the classroom

2. Spiritual Intelligence has moral and ethical dimensions and so student-teachers must be encouraged to take part in social welfare activities which will in return create the feeling of empathy, compassion, honesty and social welfare in them. In this way the student teachers would become sensitive to the social problems and their own responsibility in resolving the same.

3. Innovation and creativity must be nurtured in teacher education institutions. A highly spiritually intelligent individual has the quality to being creative and innovative in nature and thus the trainees should be given tasks that call for their creative thinking and innovation capacity. The teacher education institutes should develop an environment where there is ample scope for the trainees to brainstorm through any problem-solving activities.

4. A reflective journal to record personal introspection on teaching practices and thoughts lead to self-analysis and greater in-depth spiritual insight. All teacher education institutions should promote the development and use of self-reflective journals by both the teacher educators and the student-teachers. This also facilitates a clarity of perspective and paves the way to synergy and conflict resolution.
5. Fostering a positive working environment with minimal or no conflict. The administrative hierarchy as well as the students and educators must take active and proactive initiative in maintaining the same.
6. Development and promotion of interpersonal skills that pave the way for clear communication and avoidance of misunderstandings and conflicts.
7. Social construction and reconstruction of knowledge is of paramount importance. Collaborative social knowledge generation and reconstruction by all stake holders in a teacher education institute can ultimately promote spiritual intelligence among the teacher and the taught.
8. Classrooms are essentially subject to a power hierarchy that disrupts or impedes democratic discourse and thus nurtures discontent, sense of privation, inequality and disharmony and rage. Thus, dissolution of hierarchical relation and unequal power distribution in class should be avoided especially in teacher education institutions where future teachers to be entrusted with thousands of innocent lives, are groomed.
9. Sharing of power and responsibility through collaborative activity and participatory decision making can promote spiritual intelligence among the teacher educators and future teachers as a whole.
10. The teacher education curriculum should have spiritual intelligence as an essential part.

#### **Current Practices to develop Spiritual Intelligence in Teacher Education**

According to Vaughan (2002), refining any form of intelligence requires training and discipline and spiritual intelligence is no exception. Teacher Educators must create such a set of activities through which they can enhance spiritual intelligence of prospective teachers and teacher education institutions could also achieve their organizational goals in accordance with emerging vision of 21st Century schools. There are some of the trends and practices which are currently being practiced in teacher educational institutions in order to enhance the spiritual intelligence among their teacher trainees so that they could become effective teachers in future which are as follows:

##### **❖ Democratic Environment in the classroom:**

By creation of democratic environment in the classroom, the teaching learning process can be made effective. By sharing of ideas and respecting personal opinions, stakeholders can enrich and modify the entire learning environment which leads to development of common organizational meaning in line with expectations. Teacher educator resources and methods are student friendly in nature which equip teacher trainees with the knowledge of how to make their classroom student friendly and democratic in nature.

##### **❖ Participation in social activities:**

Spiritual Intelligence has moral and ethical dimensions. Pupil teachers must be encouraged to take part in social welfare activities which will in return create the feeling of empathy, compassion, honesty and social welfare in them. Pupil teachers need to be sensitive about social problems and they should own responsibility towards their society

##### **❖ Nurturing Creativity and Innovation:**

A highly spiritually intelligent individual has the quality of being creative and innovative in nature. Pupil Teacher must be encouraged to think creatively. They need to brainstorm towards any problem-solving activities.

They need to be equipped with the knowledge regarding effective decision making and problem solving. They must innovate in their approach towards teaching in the classroom making the classroom joyful and interesting for students.



**❖ Maintenance of self-reflective Journal:**

A reflective journal is a place to write down your daily reflection entries. It can help you gain deeper understanding of certain situation which an individual encounter in day-to-day life, untangle complex emotions and make better decisions. Pupil teachers can be encouraged by their educators and educators themselves must maintain self-reflective journal in which they can write their activities of entire day and their teaching experience and how they dealt with the situations and with their students.

**❖ Creation of Positive Working Environment at the Teacher Education Institutions:**

There must be positive and conducive environment at the workplace, then only the members working there can work effectively. From administrative level to pupil teachers, there must be maintained.

**❖ Development of Good Interpersonal Skills**

All the individuals working at a particular teacher education institution must maintain good interpersonal relationships with each other which is possible by development of good interpersonal skills. Teacher educators must be trained with such skills so that they can train their pupil teachers which ultimately helps in better communication between students and teachers.

**❖ Proper Construction of Knowledge:**

According to Vygotsky (1978), the mutual construction of knowledge is fundamental to the development of human cognition. The social reconstruction of knowledge also takes place in the classroom in teacher education in which both teacher educators and pupil teachers both take part for better knowledge construction and better understanding of the concepts.

**❖ Sharing of power and responsibilities**

The new paradigm of education system requires experience of power sharing and judicious use of power. This experience of power sharing is provided to teacher educators and pupil teachers by participation in social welfare activities, co-curricular activities, debate competitions, Red Ribbon club, sports club, science club, nature club etc. By being active members in such activities, pupil teachers share responsibility with their teacher educators by organizing events and celebrating important days.

**❖ Making Spiritual Intelligence as a part of teacher Education Curriculum.**

Spiritual Intelligence must be made a part of teacher education curriculum as it makes an individual capable both externally and internally. It helps pupil teachers and teacher educators acquire better intrapersonal and interpersonal relationships. Teachers need to keep their inner peace, self-control, emotional and spiritual well-being in adverse situations at workplace and classroom. In the complex globalized multicultural society, one needs to have spiritual intelligence along with social and emotional intelligence as it helps teachers to teach competently. Spiritual Intelligence must be included in the curriculum so that our society can have better teacher educators in future who can transform our society for its betterment.

**Benefits of Developing Spiritual Intelligence**

- As you incorporate the fact that everything and everyone is connected; that you have the innate ability to access higher sources of wisdom, you will start to connect to your intuition.
- You'll be more present in the now. You will be able to establish deeper and more meaningful relationships with others, and access guidance from a higher plane every time that you need it.
- You will be more resilient. You will understand that life is a benevolent path that guides you to live the higher expression of your soul. And that every challenge and setback is just a way to get you on the right track of what you were meant to live.
- You will feel happier, more at peace, and confident that everyone conspires to help you win. Knowing that love conquers all tribulations, that you are never alone, and that you came into this planet for a very important reason.

- You will know exactly how to help others thrive. You will be able to connect directly to them and have a clearer sense of what they envision for themselves.
- When you develop Spiritual Intelligence, you will be holistically attuned to the world, and you will no longer be constricted by man-made limitations.

#### 5 Ways to Develop Spiritual Intelligence.

Spirituality talks about the fact that there is another aspect to an existence apart from the physical/material realm, and you need to develop certain capacities in order to access it.

Here are 5 ways you can develop your Spiritual Intelligence

#### ▪ **Practice Stillness**

Your Spirit exists in a subtle realm of reality. It's important that you give yourself space to quiet your mind, away from all the noise and movement of the outer world, so you can connect to your Spirit. Your soul "whispers" to you. In order to hear the messages coming from your higher self, it's important that you make room to hear.

You can practice stillness through different practices, from meditation to taking a quiet walk out in nature, to sitting below a tree. Anything that allows your mind to focus inward, instead of figuring out how to deal with the ever-changing elements of the outside world.

Stillness is a place to just be. No judgment, no rush, no guilt. Just a moment in time for you to be aware of who you are.

#### ▪ **Develop Your Self-Awareness**

This is about connecting to your true self, discovering your inner world, and living your life aligned to your soul's purpose.

We are all beautifully diverse, this is what makes our life experience so rich. The best way for you to discover your own path is to explore yourself. What are your values? What are your beliefs? What do you want to learn? What patterns do you want to let go of? What is your greater vision? What is standing in your way?

The moments of stillness will allow you to know yourself at deeper levels, but being self-aware is a practice that you should really focus on. Be aware of the sensations in your body, of the smells around you, of the task you are doing, of the thoughts that roam your mind.

#### ▪ **Live Your Purpose With Intention**

Intention is the way behind everything you do. It's your internal GPS system.

Knowing what you want to create and why it's important for you will fuel your intrinsic motivation and guide your thoughts.

Live your purpose. I believe we come to this planet to live our purpose. Our soul already knows what this purpose is, and all we have to do is remember.

Your intention helps you align to this purpose on a daily basis. Helping your clients find their purpose and consciously attune with it is key for them to be self-accountable.

#### ▪ **Under Every element of creation is intertwined at a cellular level, and everything that we think, do, and say has an effect on our surroundings.**

Everything is made up of energy. We are 4% physical and 96% energy beings.

The tree outside your window, the cat walking down the street, the clouds, everything has energy, and we are always exchanging this energy between one another.

High-vibrational energies, such as love, empathy, compassion, and joy, help raise the energy vibration of everything around you. While low-vibrational energies, like fear, guilt, anger, or shame, do the opposite.

The outside world will always be a reflection of what is going on inside yourself. so in order to change the world, you have to change yourself.

Understanding that everything is connected also increases our personal responsibility and accountability.

▪ **Be Open**

Open your mind to receive new information. Open your heart to give and receive unconditional love to others. Open your senses to learn about the world in different ways.

Being open means your willingness to perceive everything as it comes, not the way you think it should, but the way it is, without judgment.

When you are open, you will also learn to see beyond the surface of every situation.

**The Role of Spiritual Intelligence in Education.**

- Intelligence plays an important role in education; furthermore, Education provides ways and means for achieving the progress of body, intelligence and strength.
- The main leader in this process is the teacher.
- Teachers are to be emotionally and spiritually mature enough to deal with the affecting and spiritual requirements of the students.
- During the pre-service agenda itself, the students-teachers require to be showing to emotional and spiritual development program.
- Teachers do influence on the character of students. Their emotional, logical, social and spiritual realms have profound influence on the development of children.

**Conclusion:** Spiritual intelligence is ability in every human being which can be used for solving problems and deep understanding of issues which are related to life, values and education. There are some neurological processes in brain that leads to solving problem in human's body. Spiritual intelligence motivates individuals to find out relations and unification. It has different degrees in different people. Although there aren't many direct premises to Spiritual intelligence (SI) influence on education but many of psychologists and socio culturists indirectly support the impact of SI on learning. The impact of SI on education will be emphasized by the role of the teachers. Teachers with high spiritual intelligence can elicit progress in student's education.

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## COGNITIVE STYLES OF LEARNING IN EDUCATION

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### Abstract

*Cognitive Style of Learning is a type of learning that is active, constructive, and long-lasting. It engages students in the learning processes, teaching them to use their brains more effectively to make connections when learning new things. Cognitive style/thinking style is a concept used in cognitive psychology to describe the way individuals think, perceive and remember information. In the future, cognitive technology to analyse student data and match it with various methods of conveying course content, helping teachers create highly sophisticated and personalized learning plans. Intelligent tutoring systems are powerful applications of cognitive technology. Cognitive computing uses self-teaching algorithms, data mining, computer vision, and natural language processing to solve problems. These systems are poised to optimize human operations in education as well as other industries. With the help of cognitive computing, teaching is about to become both easier and more exciting, but most of all, more effective. The present study describes the cognitive styles of learning in education and its uses to develop critical thinking of the 21<sup>st</sup> century students. Cognitive learning styles are the information processing habits of an individual, unlike individual differences in abilities, cognition describes a person's typical mode of thinking, perceiving, remembering, or problem solving. Cognitive style is usually described as a personality dimension which influences attitudes, values, and social interaction. For example, ask to how you process experiences and knowledge and how you organize and retain information. Do you need to visualize the task before starting? Do you approach learning and teaching sequentially or randomly? Do you work quickly/ deliberately? These are examples of cognitive learning style of learning in education.*

**Keywords:** Benefits, Cognitive Style, Education, Importance, Learning, Students

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### Introduction

Cognitive learning can help to achieve mastery in your career by highlighting the best ways you learn. Cognitive style is a person's habitual, prevalent or preferred way of thinking and it may involve perceiving information, processing information, and applying information. The term cognitive style is used to refer to a person's habitual way of learning/teaching. The term cognitive style is synonymous thinking style as are the terms decision-making style, problem-solving style, learning style, mind style, perceptual style, and conceptual tempo. Cognitive style differs from intellectual ability and refers to one's manner of performing. In contrast, intellectual ability refers to one's level of performance. Researchers believe that an individual's cognitive style is consistent over time; however, it may vary across situational contexts. For example, an individual may use one cognitive style the majority of the time, but use a different cognitive style to solve a problem or to handle a social situation. Since the 1990's, researchers have recognized three cognitive styles as holistic-analytic, verbal-imagery, and reflection-impulsivity. The holistic-analytic style refers to one's tendency to process information using the whole picture (or general ideas) versus using the individual components/details of the problem. The verbal-imagery style refers to one's tendency to represent information using verbal thought versus mental images. The reflection-impulsivity style refers to one's tendency to either consider more than one possible solution before responding versus acting upon one's first inclination in Favor of a quick response Sternberg and Gigorenko (1997) identified 13 distinct thinking styles and the extent to which cognitive styles vary across cultures has intrigued researchers since the 1950s generally, it is believed that cultures that are more interdependent, less industrially developed, and have political authority concentrated in a small group of political elites tend to be more holistic and less analytic. In contrast, cultures that are more independent, industrially developed, and democratic tend to be more analytic and less holistic and the results of several studies have supported this view, showing that those in East Asian Ancillotie (1984) found that individuals

with an analytic style tend to be more reflective while individuals with a holistic style tend to be more impulsive. The findings are consistent with the observation that eastern cultures appear not only to be more holistic but also to be more reflective, while Western cultures tend not only to be impulsive but also to be more analytic, but rather to the culture taken as a whole. Empirical studies investigating whether cognitive styles vary across ethnic groups suggest that an individuals' cognitive style is similar to that of family members and members of their social group. People who are field-dependent are frequently described as being very interpersonal and having a well-developed ability to read social cues and to openly convey their own feelings. Witkin and Donald Goodenough, in their 1981 book *Cognitive Styles*, explained that this may be due to a lack of separation between the self and the environment/field on some level. Field-dependent people notice a lack of structure in the environment if it exists and are more affected by it than other people.

### **Objectives of the Study**

- ❖ To study the concept of cognitive learning and its importance and benefits
- ❖ To analyse the cognitive learning elements in education
- ❖ To discuss styles of cognitive learning in education

### **Methodology**

The study has been conducted based on the method of document review in accordance with the qualitative approach of research and has been done on the basis of the secondary sources of data like books, research journals, newspaper articles, websites, etc. towards "Cognitive Styles of Learning in Education"

### **Cognitive Learning**

The term "cognitive" refers to "cognition," which the Oxford Dictionary defines as "the mental action/process of acquiring knowledge and understanding through thought, experience, and the senses." Webster's Dictionary defines learning as "the acquisition of knowledge or skills through experience, study, or by being taught." The theory of cognitive learning unifies these two concepts and describes the processes that collaborate when processing information, which moves from sensory input, passes through the cognitive system and finds the response. The brain and its cognitive functions are what shape our learning, and as we have evolved, we have learned new skills and concepts that have helped us to reach new learning thresholds. Ironically, the brain has not become more advanced; we just perfected how we use it. The brain is what guides and directs learning, and as human beings have evolved and advanced, we have learned more and more information, skills, and ideas which have helped to become more intelligent. However, the brain has not become more sophisticated as we advanced over time, but rather, we have changed how we learn. The more scientists learn about the brain, the easier it is to take advantage of how it works and its characteristics and make it easier for us to learn. Cognitive learning is a style of learning that focuses on more effective use of the brain. To understand the process, it's important to know the meaning of cognition. Cognition is the mental process of gaining knowledge and understanding through the senses, experience and thought. Cognitive learning theory merges cognition and learning to explain the different processes involved in learning effectively. The cognitive learning process aims to chart the learning process for optimal thinking, understanding and retention of what we learn. When to master the fundamentals of cognitive learning, it becomes easy to maintain a lifelong habit of continuous learning. Not only can these strategies make a better learner, but they can make you more likely to excel in profession. Cognitive learning is an immersive and active process that engages your senses in a constructive and long-lasting way. It teaches to maximize brain's potential and makes it easier to connect new information with existing ideas, deepening the memory and retention capacity. Instead of emphasizing memorization as in the traditional classroom method of learning, cognitive learning focuses on past knowledge. It trains to reflect on the material and connect it with past knowledge for



more robust learning, this not only makes cognitive learning a more effective way of gaining knowledge, but it also makes a better 21<sup>st</sup> century learner in the long-term.

### **Elements of Cognitive Learning**

- ❖ **Comprehension:** Cognitive learning strategies emphasize comprehension and need to understand the reason for learning the subject in the first place and the role of knowledge plays in your work.
- ❖ **Memory:** Cognitive learning discourages rote learning where to cram materials for memorization. In cognitive learning, the goal is to understand the subject at a deeper level. This creates an immersive effect that helps recall and improves ability to relate new knowledge to past information.
- ❖ **Application:** Cognitive learning strategies encourage you to reflect on the material and how to apply it to current and future situations. With this, can develop improved problem-solving skills, critical thinking skills and visionary leadership traits that can help to see things others cannot see in a clear form.

### **Benefits of Cognitive Learning**

- ❖ In cognitive learning, students learn by doing.
- ❖ Hands-on approach makes learning immersive and promotes comprehension.
- ❖ Can develop a deeper understanding of the material and its application to work and life.
- ❖ Problem-solving skills are critical at any level of leadership.
- ❖ The cognitive learning approach enhances ability to develop this core skill and helps to apply it to every aspect of their job.
- ❖ Cognitive learning can improve confidence in your ability to handle challenges at work.
- ❖ This is because it promotes problem-solving skills and makes it easier to learn new things within a short period.
- ❖ Promote long-term learning as it allows to connect previous knowledge with new materials.
- ❖ It helps to merge old and new information and apply both effectively.
- ❖ Cognitive strategies promote a love of learning by making new knowledge exciting and fulfilling.
- ❖ Encourages to develop a long-term appetite for knowledge acquisition in any environment.

### **Cognitive Style of Learning**

Cognitive style is the manner by which individuals perceive information in the environment and the patterns of thought that they use to develop a knowledge base about the world around them and the concept of styles of cognition, an area under continuing investigation, has been discussed and researched in the psychological community as early as the late 1930s. Knowledge gained concerning cognitive styles provides the opportunity to learn more about individual differences. This knowledge can then be applied to assist teachers, counsellors, and all professionals who are involved in children's learning experiences. There are three very important cognitive styles: levelling-sharpening, field-dependence/field-independence, and reflectivity-impulsivity. Cognitive styles are distinct from individual intelligence, but they may affect personality development and how individuals learn and apply information. And while research has shown that these differences precede environmental shaping, the effects of cognitive styles can be accentuated by many outside factors, such as classroom setting, social experiences, and vocational choices, critical to train educational professionals in methods to address these differences in the 21<sup>st</sup> century classroom.

### **Styles of Cognitive Learning in Education**

**Implicit Learning:** When you learn knowledge and skills without realizing it, this is known as implicit learning, learning is implicit if it does not involve an active intention to gain knowledge. It is a form of accidental and automatic learning as you're not aware of the process but discover later that you've retained the information. Examples of this learning include talking, walking, eating and other things to learn without conscious thoughts, like learn to type without looking at your keyboard.



**Explicit Learning:** It happens when you seek out learning activities and opportunities because you explicitly want to learn something. It involves attempting to become proficient at a new skill/process vital to your work, or going back to school for further studies. Unlike implicit learning which comes to you naturally, explicit learning requires deliberate action and sustained attention to acquiring new knowledge. Cognitive learning helps you to learn more explicitly by giving you exceptional insight into the subject and how it relates to your work now and later. An example is when you enroll in a PowerPoint course to improve your presentation skills.

**Cooperative and Collaborative Learning:** Cooperative learning is learning that takes place in groups. Each member contributes their best skills and qualities and collaborative learning is when one person, usually an educator, provides a concept and helps the group construct meaning around the idea.

**Meaningful Learning:** A form of cognitive learning that utilizes the motivational, cognitive and emotional dimensions and it occurs when a person relates new knowledge with past information and experiences. It encompasses emotional, motivational and cognitive aspects and helps to deepen knowledge and problem-solving skills. An example is when you go for an advanced management course to become a better team leader and have a deeper understanding of past leadership training.

**Associative Learning:** Learning that involves an association between preselected stimuli and exact behavior.

**Habituation and Sensitization:** Is a primitive type of learning that makes it possible for humans to adapt, which is something that we have to do in our day to day lives. An example of habituation would be people living near a noisy highway. Habituation is learning by habit. It involves a reduced reaction to a stimulus after prolonged exposure. For example, habituation prevents you from noticing the noise if you work in an industrial business. Over time, the sound does not bother you anymore because you have learned to ignore the stimulus. The opposite of habituation learning is sensitization because your reaction increases with repeated exposure to the stimulus. For instance, you might be more reactive to the sound of your office telephone ringing, both types of learning are basic and can be adapted to a wide range of situations in life and work.

**Discovery in Learning:** When you go out of way to learn, and actively search for knowledge, that's discovery learning and learn through discovery when you actively seek new knowledge. If you enjoy researching new concepts and processes, thinking deeply about subjects that are not your primary area of specialization or adapting new information to your work, you are practicing discovery learning. For example, learn more about a new workflow app becoming popular in your industry.

**Observation/Imitation of Learning:** When we model our behavior after someone else or something we have seen. This cognitive learning strategy involves imitation. Imitation is an effective learning tool, particularly among children. However, adults can also imitate others to learn the skills and traits they desire. Cognitive learning is an excellent way to achieve mastery in your profession. It helps optimize the use of brain, thoughts, emotions and experiences. Cognitive strategies condense your learning activities into a fully immersive event that builds on past information while applying it to future scenarios and to become an effective learner who enjoys seeking knowledge for a lifetime, practice the cognitive learning strategies above to achieve excellence at work and in every area of life.

**Emotional Learning:** Learning that involves a person's development of emotional intelligence, which we use to control and manage our emotions. This cognitive strategy helps people learn emotional intelligence and other aspects of controlling their emotions and understanding those of others. Whether you are a leader or a junior employee, emotional intelligence plays a crucial role in empathy, and effective communication. For example, emotional learning helps to maintain cordial relations with introverts and extrovert colleagues regardless of their position in the organization. Mastering this learning could improve relationships at work and in your private life.

**Experiential Learning:** The kind of cognitive learning that is a direct result of our experiences. It is incredibly subjective, as individuals experience events and phenomena differently. People often learn best through experience. Experiential learning is a cognitive strategy that allows to take valuable life lessons from interactions with other people. However, experiences are subjective and depend on your

interpretations and the value of experience depends on your level of introspection and reflection and how you can relate it to past events.

**Rote Learning:** This form of cognitive learning involves the memorization of information, without understanding it on a deeper level.

**Receptive Learning:** An utterly passive kind of learning, where the individual only gets the information that they are trying to learn. An example would be a lecture, where the professor lectures and the students passively listen. If you love learning at lectures where a person stands in front and talks about a subject while the audience listens or takes notes, that is a form of receptive learning. This learning strategy is passive for the learner as it involves the active participation of the person who delivers the material. It limits your participation in taking notes and asking questions.

**Conclusion, Discussion and Summary** Cognitive style is a concept used in cognitive psychology to describe the way individuals think, perceive and remember information and it differs from cognitive ability, the latter being measured by aptitude tests or so-called intelligence tests. There is controversy over the exact meaning of the term "cognitive style" and whether it is a single or multiple dimensions of human personality however, it remains a key concept in the areas of education and management. If a pupil has a cognitive style that is similar to that of his/her teacher, the chances are improved that the pupil will have a more positive learning experience. Likewise, team members with similar cognitive styles likely feel more positive about their participation with the team and while matching cognitive styles may make participants feel more comfortable when working with one another, this alone cannot guarantee the success of the outcome. It might differ in preferred elements/activities, such as group work versus working individually, more structured versus less defined activities, visual versus verbal encoding, etc. Other dimensions along which cognitive styles vary include reflection-impulsivity, abstract-attitude versus concrete-attitude-and field dependence versus field independence. The term is also commonly used to refer to the idea that people differ with respect to the mode of learning like instruction, study, etc. that is most effective for them. Indeed, many use the term learning style interchangeably with cognitive style, whereas others use the former more specifically to mean a person's characteristic cognitive, affective, and psychological behaviors that influence his/her preferred instructional methods and interactions with the learning environment. Cognitive learning is a way of learning that helps students use their brains more effectively. This method of learning is active, constructive, and long-lasting. It encourages students to fully engage in the learning process so learning, thinking, and remembering get easier. It isn't about memorization or repetition and it's about developing true understanding; it's about learning how to learn. Cognitive teaching strategies focus on meaningful learning. We don't focus on memorization or repetition. Instead, our tutors teach students the fundamentals of lifelong learning. Some examples of cognitive learning strategies are asking students to reflect on their experience, helping students find new solutions to problems, encouraging discussions about what is being taught, helping students explore and understand how ideas are connected, asking students to justify and explain their thinking and using visualizations to improve students' understanding and recall, etc.

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## FLIPPED LEARNING A NEW EDUCATIONAL PARADIGM

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“Technology will never replace great teachers, but in the hands of great teachers, it’s transformational.” – George Couros

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### Abstract

*A new form of education is worthy enough to be further studied. It is believed that flipped learning has gained the great attention of many researchers as a result of what teachers are implementing in their classrooms. The main objective of the paper is to guide light on four pillars of flipped learning i.e., Flexible Environment, Learning Culture, Intentional Content and Professional teachers. Before one implements the flipped learning strategy in the classroom the teacher should be aware of the steps to be followed in implementing it. There are advantages and challenges involved in the implementation. Flipped learning is the need of the hour to maximize the opportunity to attain knowledge and understanding.*

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### Introduction

A teacher in the classroom gives a lecture and writes on a blackboard. Students quietly listen, take notes and copy down the homework assignment, which consists of reading from a given textbook and answering given questions at the end of the module. Even though the teacher comes to know that many of the students are not able to understand the teacher becomes helpless due to time constraints. As it is very hard to pay individual attention within 40-45 minutes. If the teacher is employing technology in her classroom, it would help her to facilitate the students better. With the use of Flipped Learning, no student is left empty-handed even if the student is absent from the class. Flipped learning is a “pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the teacher guides students as they apply concepts and engage creatively in the subject matter” (The Flipped Learning Network, 2014).

In "flipped learning," the process of lecturing, taking notes, and completing homework assignments is flipped. Instead of students taking notes in class while a teacher drones on about how to derive the area of a rectangle or what comprises a past participle, the student reviews lecture materials at home. These materials can take multiple forms, including videos designed by the classroom teacher or by another expert on the subject. The materials can also include textbooks, podcasts, workbooks, or any other materials that will introduce key concepts of a subject to the student. The student thereafter returns to the classroom and works on projects that will allow the teacher to assess the student's actual comprehension and understanding of these key concepts, and that will also necessitate more individualized attention on students of varying degrees of understanding.

Flipped learning is based on four pillars.

1. **Flexible Environment:** Flipped Learning allows for a variety of learning modes; teachers often physically rearrange their learning spaces to accommodate a lesson or unit, to support either group work or independent study. They create flexible spaces in which students choose when and where they learn. Furthermore, teachers who flip their classes are flexible in their expectations of student timelines for learning and in their assessments of student learning.

2. **Learning Culture:** In the traditional teacher-centred model, the teacher is the primary source of information. By contrast, the Flipped Learning model deliberately shifts instruction to a learner-centred approach, where in-class time is dedicated to exploring topics in greater depth and creating rich learning opportunities. As a result, students are actively involved in knowledge construction as they participate in and evaluate their learning in a personally meaningful manner.
3. **Intentional Content:** Flipped Learning teachers continually think about how they can use the Flipped Learning model to help students develop conceptual understanding, as well as procedural fluency. They determine what they need to teach and what materials students should explore on their own. teachers use Intentional Content to maximize classroom time to adopt methods of student-centred, active learning strategies, depending on grade level and subject matter.
4. **Professional teachers:** The role of a Professional teacher is even more important, and often more demanding, in Flipped learning than in a traditional one. During class time, they continually observe their students, providing them with feedback relevant to the moment, and assessing their work. Professional teachers are reflective in their practice, connect to improve their instruction, accept constructive criticism, and tolerate controlled chaos in their classrooms. While Professional teachers take on less visibly prominent roles in a flipped learning classroom, they remain the essential ingredient that enables Flipped Learning to occur.

#### Steps to be followed in the implementation of the flipped learning

Jeff Dunn (2014) has written a short piece on “The 6-step guide to flipping your classroom”, in which it is described that one has to follow 6 steps to implement flipped learning.

1. **Plan:** Figure out which lesson, in particular, you want to flip. Outline the key learning outcomes and a lesson plan.
2. **Record:** Instead of teaching this lesson in person, make a video. A screencast works. Make sure it contains all the key elements you’d mention in the classroom. In Bergmann and Aaron Sams book (2012), they also pointed out that do not make a video just for the sake of making a video. Only do so when you feel these are appropriate and necessary. It all depends on the educational goal of your lesson.
3. **Share:** Send the video to students. Make sure it is engaging and clear. The video’s content should be discussed in the classroom.
4. **Change:** Students who have viewed the lesson, they are prepared to go more in-depth than ever before.
5. **Group:** An effective way to discuss the topic is to separate into groups where students are given a task to perform. Write a poem, a play, or to make a video, etc.
6. **Regroup:** Get the class back together to share the individual group’s work with everyone. Ask questions, and dive deeper than ever before.

#### Advantages of Flipped Learning

There are many advantages to flipped learning classes it not only enhances the opportunity to gain knowledge but also develops communication skills among the students. It keeps the students busy even outside the classroom. Slow learners can learn at their own pace. The students will be able to pause and rewind the lecture. This method increases the interaction between students and the teacher in the classroom so that the teaching-learning process becomes more active. As the interaction period increases the teacher will know his students better. In the traditional teaching-learning process only students and teachers were the active participants but in flipped learning, even parents will be actively involved in the student’s learning process. Many times, students won’t be able to attend

classes regularly due to various reasons. Such students are not left empty-handed as there is an opportunity to acquire basic knowledge of subjects at their own pace. Along with the acquisition of basic knowledge in respective subjects, students also achieve digital literacy.

### Challenges involved in the Flipped Learning

As every strategy has advantages and challenges, flipped learning is no exception. As it is time-consuming, the students may skip the lecture materials. Which leads to a gap in the process of construction of knowledge. Some students may not achieve mastery of a sub-topic that is essential for academic advancement. Since the classroom consists of a heterogeneous group of students a common material may not be sufficient to cater for the needs of all the students. Absent students will not benefit from applied knowledge exercises and experiential learning, which are key components of flipped learning. First-generation learners may not get adequate assistance from their parents.

### Conclusion:

The flipped classroom may very well be the future of education. While videos and lectures have been available on the internet for decades, teachers have been now not been able to take full advantage of class time to engage individual students with applied learning activities. With the flipped learning classroom, such individual attention is not only a possibility, but it is also a necessary element, without which a flipped classroom model will simply fail. The peer instruction and active learning of a flipped classroom ensures that each student, irrespective of their level of understanding of a specific lesson, will improve their knowledge base. Because class time is not used to cover materials that are otherwise available outside of class, the students can use the time with the instructor to apply the knowledge and therefore develop a deeper understanding of the subject. This more independent and interdependent method of learning conserves time and maximizes knowledge and understanding.

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## BLENDING LEARNING: BRIDGING THE GAP BETWEEN TRADITIONAL AND ONLINE EDUCATION

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### Abstract

*In the rapidly evolving landscape of education, the concept of blended learning has gained prominence as a transformative approach to instruction. This paper presents a conceptual view of blended learning, elucidating its significance in bridging the gap between traditional face-to-face education and online learning modalities. Blended learning seamlessly integrates the strengths of both these paradigms, fostering a holistic educational experience that leverages technology while preserving the value of in-person interactions. It examines the benefits of this hybrid approach, such as increased flexibility, personalized learning, and enhanced engagement. Moreover, the paper highlights the challenges and considerations educators and institutions must address when implementing blended learning models, emphasizing the need for effective teacher training and robust infrastructure. In sum, this conceptual view of blended learning provides a comprehensive understanding of its transformative potential in modern education, offering educators, policymakers, and researchers a foundation for informed decision-making and further exploration of this dynamic pedagogical approach.*

**Keywords:** Blended Learning, Traditional Education, Online Education,

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### Introduction:

In recent years, the field of education has witnessed a significant transformation, driven by advances in technology and changing learning preferences. This transformation has given rise to a concept known as "blended learning," which seeks to combine the best elements of traditional classroom education with the advantages of online learning. In this conceptual view, we will explore the key principles and components of blended learning, its benefits, and its potential to bridge the gap between traditional and online education.

Blended learning is the term given to the educational practice of combining digital learning tools with more traditional classroom face to face teaching. In a true blended learning environment, both the student and the teacher should be physically located in the same space.

### Understanding Blended Learning

Blended learning sometimes referred to as hybrid learning, combines' elements of traditional classroom instruction with online learning platforms. The goal is to harness the strengths of both approaches to create a more well-rounded and effective educational experience. In a blended learning environment, students typically attend physical classes while also engaging in online activities such as discussions, assignments, and assessments.

Blended learning, also known as hybrid learning, is an educational approach that integrates face-to-face instruction with online learning experiences. It is a holistic strategy that leverages both traditional classroom settings and digital platforms to create a dynamic and effective learning environment. Blended learning can take various forms, with the balance between in-person and online elements varying depending on the educational institution and the specific needs of the learners.

"Blended learning, also known as hybrid learning, is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods."

### Defining Blended Learning:

Some of the definition of Blended learning given by eminent scholars



**Garrison and Kanuka (2004):** "Blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences."

**Graham (2006):** "Blended learning systems combine face-to-face instruction with computer-mediated instruction."

**Picciano (2009):** "Blended learning is the integration of classroom face-to-face learning experiences with online learning experiences."

**Vaughan et al. (2013):** "Blended learning refers to the thoughtful integration of classroom face-to-face learning experiences with online learning experiences."

**Horn and Staker (2015):** "Blended learning is a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home."

**Bonk and Graham (2012):** "Blended learning is an approach that combines multiple delivery media that are designed to be synergistic, non-redundant, and complementary."

These definitions offer different perspectives on what blended learning entails, but they all emphasize the integration of traditional face-to-face instruction with online or digital learning experiences to enhance the educational process.

Blended learning is very important for the below:

1. **Evolution of Education:** Education has undergone a significant transformation in recent years, with the emergence of online learning and digital technologies. Blended learning is at the intersection of traditional and online education, making it essential to understand its conceptual framework and potential benefits.
2. **Enhancing Learning Outcomes:** Blended learning combines the strengths of both traditional and online learning methods. Research in this area can help educators and institutions design effective blended learning environments that can potentially enhance student learning outcomes.
3. **Meeting Diverse Learning Styles:** Students have diverse learning styles and preferences. Blended learning can cater to these differences by offering a mix of in-person and online activities, making it crucial to study how this approach can accommodate various learners.
4. **Adaptation to Technological Advancements:** Technology continues to advance rapidly, and educational practices need to adapt accordingly. Studying the conceptual view of blended learning helps educators and institutions stay current with the latest trends and innovations in education.
5. **Cost-Effectiveness:** Blended learning can be a cost-effective alternative to purely traditional or purely online education. Understanding the concept can help institutions make informed decisions regarding resource allocation and budget management.
6. **Student Engagement:** Student engagement is a critical factor in learning. Research on blended learning can explore how this approach can foster greater student engagement by combining the benefits of face-to-face interactions and online resources.
7. **Faculty Development:** Implementing blended learning effectively requires faculty to acquire new skills and pedagogical strategies. A conceptual view of blended learning can guide faculty development efforts and help educators become more proficient in this approach.
8. **Educational Equity:** Access to education is a significant concern, and blended learning has the potential to address some of the equity issues in education. Research can help identify how blended learning can be used to reach underserved populations and bridge the digital divide.
9. **Data-Driven Decision-Making:** Blended learning environments generate data that can be analyzed to improve instructional strategies and make data-driven decisions. Understanding the conceptual framework of blended learning can guide the collection and analysis of relevant data.

**10. Continuous Improvement:** Education is an ever-evolving field, and continuous improvement is essential. Research on blended learning provides insights into best practices, challenges, and opportunities, allowing institutions to refine their educational models.

Finally, studying the concept of blended learning and its role in bridging the gap between traditional and online education is important for educators, institutions, and policymakers. It offers the potential to improve the quality and accessibility of education while addressing the evolving needs of learners in a rapidly changing technological landscape.

#### **Advantages of Blended Learning**

- **Flexibility:** Blended learning provides students with the flexibility to choose when and where they engage in learning. They can attend in-person classes for some portions of the curriculum while accessing digital content and resources at their own pace.
- **Personalization:** By utilizing technology, instructors can tailor lessons to meet individual learning styles and needs. This personalized approach enhances student engagement and understanding.
- **Enhanced Learning Resources:** Blended learning provides access to a wide range of digital resources, including videos, simulations, and interactive quizzes, enriching the learning experience.
- **Collaboration and Interaction:** Blended learning encourages collaboration among students through online forums and discussion boards, fostering a sense of community and peer learning.
- **Immediate Feedback:** Online assessments and quizzes can provide instant feedback to students, enabling them to gauge their progress and make necessary adjustments to their study habits.

#### **Challenges of Blended Learning**

1. **Technology Barrier:** Not all students have equal access to technology or a reliable internet connection, which can create disparities in their learning experiences.
2. **Instructor Training:** Educators may require additional training to effectively integrate technology into their teaching methods.
3. **Time-Consuming:** Designing and maintaining online components of a blended course can be time-consuming for instructors.
4. **Student Self-Discipline:** Blended learning demands a higher level of self-discipline from students, as they need to manage their time effectively and stay motivated.
5. **Resistance to Change:** Both instructors and students may resist the shift from traditional teaching methods to blended learning, resulting in resistance and challenges in implementation.

#### **Bridging the Gap between Traditional and Online Education**

Blended learning serves as a bridge between traditional and online education by combining the strengths of both approaches while mitigating their weaknesses. It enables educational institutions to adapt to changing student needs and technological advancements. Here's how it bridges the gap:

- **Combines the Best of Both Worlds:** Blended learning maintains the valuable face-to-face interactions and engagement of traditional education while harnessing the flexibility and efficiency of online platforms.
- **Adapts to Diverse Learning Styles:** Blended learning allows for a variety of teaching methods, catering to different learning styles, preferences, and abilities.
- **Preparing for the Future:** In an increasingly digital world, blended learning equips students with digital literacy skills and familiarity with online tools, which are essential for success in many careers.

- **Increased Access:** It can extend access to education by allowing students to participate in courses or programs that they might not have been able to attend in person due to geographic, scheduling, or other constraints.
- **Enhanced Engagement:** Blended learning often incorporates multimedia and interactive online resources, which can engage students in ways that traditional lectures alone may not. It can make learning more dynamic and interactive.
- **Assessment and Feedback:** Online platforms can provide immediate feedback and assessment opportunities, allowing students to track their progress and address areas where they need improvement.
- **Cost-Efficiency:** Blended learning can be cost-effective for institutions, as it reduces the need for physical facilities and can serve a larger number of students without increasing the physical classroom capacity.
- **Professional Development:** Teachers can use blended learning to enhance their own professional development. They can access online resources, participate in webinars, and collaborate with colleagues from around the world.
- **Adaptive Learning:** Some blended learning models incorporate adaptive learning technology, which uses data to personalize the learning experience for each student, helping them progress at their own pace.
- **Blending Pedagogical Approaches:** Instructors can blend different pedagogical approaches, such as flipped classrooms (where students learn content online before class) or project-based learning, to suit the needs of the subject matter and the students.
- **Social Interaction:** While online learning can be isolating, blended learning allows students to maintain some level of social interaction through in-person meetings, group projects, and discussions.
- **Lifelong Learning:** Blended learning models can be particularly well-suited for adult learners who need to balance education with work and family responsibilities.
- **Preparation for the Digital Age:** Blended learning equips students with digital literacy skills and prepares them for the digital demands of the workforce.

To implement successful blended learning, it's important for educators to carefully plan the integration of online and in-person components, provide adequate support and training for both teachers and students, and continually assess and adjust the model based on feedback and performance data. Blended learning can be a powerful tool for modernizing education and addressing the diverse needs of learners in the 21st century.

**Conclusion:** Blended learning represents a crucial evolution in education, providing a conceptual bridge between traditional and online methods. Its flexible nature, personalization, and innovative use of technology make it a powerful tool for educators and students alike. While it presents challenges, these can be overcome with careful planning and investment. As the educational landscape continues to evolve, blended learning will likely play an increasingly important role in shaping the future of learning and bridging the gap between traditional and online education. The concept of blended learning represents a significant advancement in the field of education, offering a bridge between traditional and online teaching methods. This innovative approach combines the strengths of both modalities while addressing their respective weaknesses, ultimately creating a more flexible, effective, and engaging learning experience. Blended learning recognizes the importance of face-to-face interaction in traditional classrooms, allowing for personalized instruction, real-time feedback, and social connections among students. Simultaneously, it harnesses the potential of online resources and technology to enhance learning, providing access to a wealth of educational materials, fostering self-directed learning, and accommodating diverse learning styles. This conceptual view of blended learning underscores the need for thoughtful planning, pedagogical expertise, and adaptable

instructional design. It is not simply a matter of combining traditional and online elements haphazardly but rather a strategic approach that tailors the mix to the specific needs of the learners, the subject matter, and the desired learning outcomes. Furthermore, blended learning's flexibility and scalability make it well-suited for a wide range of educational contexts, from K-12 to higher education and even corporate training. It has the potential to promote lifelong learning and prepare individuals for a rapidly changing, technology-driven world. However, challenges and considerations remain. Effective implementation requires investment in infrastructure, teacher training, and ongoing support. Moreover, ensuring equitable access to technology and online resources is crucial to prevent the digital divide from widening. In conclusion, blended learning offers a promising path forward in education, one that leverages the best of both traditional and online approaches to create a more adaptable and effective learning environment. As technology continues to evolve and our understanding of pedagogy deepens, the concept of blended learning is likely to remain at the forefront of educational innovation, empowering learners of all ages to reach their full potential.

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## MENTAL WELLBEING AND ACADEMIC ACHIEVEMENT – A CONCEPTUAL ANALYSIS

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### Abstract

*In the present paper an attempt has been made to discuss the concepts of mental wellbeing and academic achievement. The paper also throws light on the relationship of mental wellbeing and academic achievement of secondary school students. Conceptual analysis of the concepts of mental wellbeing and academic achievement reveal that, mental well-being and academic achievement are interconnected, and various factors influence each other. Therefore, the paper finds it essential for individuals, families, educators, and institutions to recognize the importance of maintaining good mental health to support academic success and vice versa. Strategies to promote mental well-being and provide resources for those facing mental health challenges can contribute to improved academic outcomes.*

**Key words:** *Mental wellbeing, academic achievement, mental health challenges etc.*

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### Introduction

Mental wellbeing and academic achievement are two critical facets of an individual's life, closely intertwined and mutually influential. They represent integral components of personal development and success, with each exerting a profound impact on the other. Mental wellbeing encompasses emotional, psychological, and social aspects of one's mental health, while academic achievement pertains to the pursuit of knowledge, learning, and educational success.

This dynamic interplay between mental wellbeing and academic achievement underscores the significance of understanding their relationship and the profound implications it holds for individuals, educational institutions, and society as a whole. In this exploration, we delve into the intricate connection between these two dimensions, exploring how positive mental wellbeing can foster academic success, how academic pursuits can affect mental health, and the broader implications of this relationship in promoting holistic well-being and educational excellence. By comprehending and addressing this relationship, we can embark on a journey toward a more balanced and supportive approach to education, one that nurtures both the minds and mental health of learners, ultimately leading to enhanced personal growth and societal progress.

Studying the relationship between mental wellbeing and academic achievement is of paramount importance for several reasons. Studying the relationship between mental wellbeing and academic achievement is crucial for creating a supportive, effective, and inclusive educational system. It can improve the overall well-being of students, reduce stress and academic pressure, and contribute to their long-term success and happiness.

### Concept of Mental Wellbeing

Mental wellbeing, also known as mental well-being or mental health, refers to an individual's emotional, psychological, and social state of being. It encompasses various aspects of an individual's life and can be understood as a state of balance and contentment in one's mental and emotional life.

It is important to note that mental wellbeing is a dynamic state that can fluctuate throughout one's life. Everyone experiences periods of stress, sadness, or anxiety, but good mental wellbeing involves the ability to navigate these challenges effectively. Additionally, promoting mental wellbeing often involves de-stigmatizing mental health issues and creating a supportive environment for individuals to seek help and support when needed.



Mental wellbeing is of paramount importance because it significantly influences an individual's overall quality of life, productivity, and ability to cope with life's challenges.

Mental wellbeing is not just the absence of mental illness; it is a positive state of emotional, psychological, and social well-being. It has far-reaching implications for an individual's life and the broader society. As such, it is essential to prioritize mental health and take proactive steps to promote and maintain good mental wellbeing throughout one's life.

### **Characteristics of Mental Wellbeing**

Mental wellbeing, also referred to as mental health or emotional health, is a state of well-being in which an individual can effectively cope with the normal stresses of life, work productively, maintain healthy relationships, and make informed decisions. It encompasses emotional, psychological, and social well-being, and it is essential for overall health and quality of life. Key concepts related to mental wellbeing include:

**Emotional Resilience:** Mental wellbeing involves the ability to bounce back from adversity, cope with stress, and adapt to life's challenges. Resilience is the capacity to maintain mental and emotional stability in the face of adversity.

**Positive Emotions:** Experiencing positive emotions such as happiness, joy, gratitude, and contentment are vital for mental wellbeing. Cultivating positive emotions can enhance overall psychological health.

**Self-awareness:** Understanding one's own thoughts, feelings, and behaviors is crucial for mental wellbeing. Self-awareness helps individuals identify and manage their emotions effectively.

**Self-esteem and Self-worth:** Having a healthy sense of self-esteem and self-worth contributes significantly to mental wellbeing. A positive self-image and self-acceptance are essential components.

**Social Connections:** Healthy relationships and social support systems are fundamental to mental wellbeing. Social connections provide emotional support and a sense of belonging.

**Stress Management:** Effective stress management techniques, such as relaxation exercises, mindfulness, and time management, play a pivotal role in maintaining mental wellbeing.

**Coping Skills:** Developing adaptive coping skills helps individuals handle life's challenges and setbacks. These skills include problem-solving, resilience, and seeking help when needed.

**Work-Life Balance:** Balancing work, personal life, and leisure activities is essential for mental wellbeing. Overwork or an imbalanced lifestyle can lead to stress and burnout.

**Purpose and Meaning:** Having a sense of purpose and meaning in life can contribute to a greater sense of mental wellbeing. This can involve pursuing meaningful goals and engaging in activities that align with one's values.

**Seeking Help:** Recognizing when one needs professional help for mental health issues is a critical aspect of mental wellbeing. Therapy, counselling, or medication may be necessary for individuals facing more severe mental health challenges.

It is important to note that mental wellbeing is a dynamic and individualized concept. What contributes to one person's mental wellbeing may differ from another's. Additionally, it can change over time based on life circumstances, experiences, and personal growth. Promoting and maintaining good mental wellbeing is an ongoing process that requires self-awareness, self-care, and attention to one's emotional and psychological needs.

### **Concept of Academic Achievement**

The concept of academic achievement refers to the level of success or accomplishment that a student attains in their educational pursuits. It is a measure of how well a student has met the goals, standards, and expectations set by an educational institution, curriculum, or system. Academic achievement can encompass a wide range of areas, including:



**Grades and Grade Point Average:** One of the most common ways to measure academic achievement is through the grades students receive in their courses. GPA is often used as a cumulative measure of academic performance.

**Standardized Tests:** Performance on standardized tests like the SAT, ACT, GRE, or other subject-specific exams can be used to assess academic achievement.

**Class Ranking:** Some educational institutions rank students based on their academic performance relative to their peers.

**Course Completion:** Successfully completing required courses and earning credits is a fundamental aspect of academic achievement.

**Honors and Awards:** Recognition in the form of academic honors, scholarships, or awards can be a reflection of outstanding academic achievement.

**Research and Publications:** In higher education and graduate studies, research productivity and publications can be indicators of academic achievement.

**Skills and Knowledge Acquisition:** Beyond grades and tests, academic achievement can also be measured by the acquisition of knowledge, critical thinking skills, problem-solving abilities, and other competencies gained through education.

**Graduation and Degrees:** Attaining a degree, whether it's a high school diploma, bachelor's degree, master's degree, or doctorate, is a significant academic achievement.

**Educational Goals and Personal Growth:** Achieving one's educational goals, such as mastering a particular subject or gaining a deeper understanding of a field, is a form of academic achievement. Personal growth and development through education are also important aspects.

It is important to note that academic achievement can vary significantly from one individual to another, as it depends on various factors, including a student's effort, abilities, resources, support systems, and the rigor of the educational institution or program. Additionally, academic achievement is just one aspect of a person's overall development, and success in education should not be the sole measure of a person's worth or potential.

### **Relationship between Mental Wellbeing and Academic Achievement**

The relationship between mental well-being and academic achievement is complex and multifaceted, with various factors influencing each other. The following paragraphs throw light on the relationship between the two.

**Bi-directional Influence:** Mental well-being and academic achievement can influence each other in a bi-directional manner. Good mental health can positively affect academic performance, while poor mental health can negatively impact it. Similarly, academic success or struggles can impact an individual's mental well-being.

**Stress and Anxiety:** High levels of stress and anxiety can be detrimental to both mental health and academic performance. The pressure to excel academically can contribute to stress and anxiety, which, if left unmanaged, may hinder a student's ability to focus, retain information, and perform well in exams or assignments.

**Coping Strategies:** An individual's ability to manage stress and cope with challenges can significantly impact their mental well-being and academic achievement. Effective coping strategies, such as time management, seeking support, and practicing self-care, can help students maintain their mental health while succeeding academically.

**Support Systems:** A strong support system, including friends, family, teachers, and counselors, can play a crucial role in both mental well-being and academic achievement. Having someone to talk to, seek advice from, or provide emotional support can help students navigate the challenges of academics.

**Motivation and Engagement:** Positive mental well-being often correlates with motivation and engagement in academic activities. Students who are emotionally well tend to be more motivated to

learn, participate in class, and complete assignments. Conversely, students experiencing mental health issues may struggle to find motivation and engagement in their studies.

**Physical Health:** Physical health is closely linked to mental well-being and academic success. Adequate sleep, a balanced diet, and regular physical activity can improve cognitive function, mood, and overall well-being, which can positively impact academic performance.

**Mental Health Disorders:** Some students may have preexisting mental health disorders, such as depression, anxiety disorders, or ADHD, which can impact their ability to succeed academically. Proper diagnosis and treatment are essential for managing these conditions and mitigating their impact on academic achievement.

**Resilience:** Resilience, the ability to bounce back from adversity, can play a significant role in both mental well-being and academic success. Resilient individuals are better equipped to handle academic setbacks and challenges without them negatively affecting their mental health.

**Cultural and Socio-Economic Factors:** Cultural background and socioeconomic status can also influence the relationship between mental well-being and academic achievement. Students from marginalized or disadvantaged backgrounds may face additional stressors and barriers that can affect both their mental health and academic success.

**Prevention and Intervention:** Schools and institutions can play a role in promoting mental well-being among students through programs focused on stress reduction, mental health education, and access to counseling services. Early intervention for mental health issues can also help prevent academic problems from escalating.

**Conclusion:** To sum up it can be concluded that, mental well-being and academic achievement are interconnected, and various factors contribute to this relationship. It is essential for individuals, families, educators, and institutions to recognize the importance of maintaining good mental health to support academic success and vice versa. Strategies to promote mental well-being and provide resources for those facing mental health challenges can contribute to improved academic outcomes.

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## SECONDARY SCHOOL TEACHER'S ATTITUDE TOWARDS CREATIVE TEACHING

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### *Abstract*

*The study examined the attitude towards creative teaching of secondary school teachers in Shimoga city. It is a descriptive research and survey method was used. The sample consisted of 100 teachers who are working at secondary schools. Stratified simple random sampling technique was used to select the sample. Standardized questionnaire for creative teaching by Dr. R.P. Shukla was employed to analyze the attitude of teachers towards creative teaching. Specific objectives formulated were: 1. To study the attitude of secondary school teachers towards creative teaching. 2. To find whether there is any significant difference between male and female secondary school teachers in their attitude towards creative teaching. 3. To find whether there is any significant difference between more experienced and less experienced teachers in their attitude towards creative teaching. The data obtained from the survey was analyzed using percentage analysis and 't' test. Findings of the study were: A majority of secondary school teachers that is 70% of them are found to possess highly favorable attitude towards creative teaching and only 30% of the secondary school teachers are found to possess less favorable attitude towards creative teaching. 2. No significant difference was found between male and female secondary school teachers with respect to their attitude toward creative teaching. 3. No significant difference was found between more and less experienced secondary school teachers with respect to their attitude toward creative teaching.*

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### **Introduction:**

Education determines the level of prosperity and welfare of the people of any nation. Education provides an individual with an insight into life affairs and teaches him/her to act justly and rightly. The system of education forms the back bone of a developing country and India being in the forefront of such nations, should consider its teachers to be the pivot around whom the entire educational system would develop. In this context, the job of a teacher is the most important and challenging one. It is the teacher who is the embodiment of knowledge and the one who can help and guide the young mass.

The teacher as an independent variable is more active in this function. He has to diagnose the entering behavior of the learner. There is need to have attitude towards creative teaching among teachers because if they have positive attitude towards creative teaching then only they can create supportive environment through effective strategies that will help the students to grow. Attitude is characteristics of personality that illustrates the likes and dislikes of an individual. Attitude may be instinctive or acquired. It may be learned in environment in course of development. The kind of environment in which an individual grows has an impact on his attitude.

Creativity is a phenomenon whereby something new and valuable is created (such as an idea, a joke, an artistic or literary work a painting or musical composition a solution, an invention etc.). According to UNESCO, "the encouragement of creativity from an early age is one of the best guarantees of growth in a healthy environment of self-esteem and mutual respect - critical ingredients for building a culture of peace." Every child is born with creative potential, but this potential may be stifled if care is not taken to nurture and stimulate creativity. Young children are naturally curious. They wonder about people and the world. Even before they enter primary school, they already have a variety of learning skills acquired through questioning, inquiring, searching, manipulating, experimenting, and playing. Children need opportunities for a closer look; they need time for the creative encounter.

### **Creative Teaching:**

The act of teaching in a novel and useful way that promotes student growth related to the development of original thought and action. Creative teaching focuses both on the methods a teacher

uses to deliver learning and the overall effect those methods have on students and the outcomes produced. Creative teaching has been variously defined.

The **ERIC Thesaurus** defines creative teaching as “the development and use of novel, original, or inventive teaching methods”

**Kanter (1996)** proposed that creative teaching is the teacher’s independent ability to conceive of novel ideas or adapt the ideas of others into their context.

**Sternberg and Lubart (1995)** observed that creative teaching occurs when teachers collect relevant teaching materials through creative teaching activities, draw up creative teaching plans, and improve creative teaching strategies, thereby improving students’ learning effectiveness.

**Sawyer (2011)** noted that creative teaching includes the teacher’s use of imagination and trendy methods to form the value of originality and judgment.

**Rankin and Brown (2016)** demonstrated that creative teaching can make learning invigorating and deeply experiential, thus furthering the professional knowledge and social and emotional skills of students.

Finally in the process of creative teaching, the teacher inspires learners’ interests in learning material, and then leads students to find the problem by themselves creatively, or present specific problems and ask learners to apply all sorts of available resources to find the best satisfying solution creatively.

#### **Creative Teaching Methods:**

In the process of creative teaching, the teacher inspires learners' interests in learning material, and then leads students to find the problem by themselves creatively, or present specific problems and ask learners to apply all sorts of available resources to find the best satisfying solution creatively.

1. **Project-based learning:** Project-based learning is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems. *Project-based learning* creates exercises that require students to identify a real-world problem and then devise a solution. In *project-based learning*, students identify a real-world problem and come up with a solution. This method emphasizes research, critical thinking, and problem solving abilities. *Project-based learning* is an effective method that helps students drive their own learning journey.
2. **Brainstorming:** Brainstorming is a group creativity technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members. Brainstorming is the best and most effective tool that helps the student to think of new and creative ideas by strengthening the brain. Brainstorming, a useful tool to develop creative solutions to a problem, is a lateral thinking process by which students are asked to develop ideas or thoughts that may seem crazy or shocking at first. Participants can then change and improve them into original and useful ideas. Brainstorming can help define an issue, diagnose a problem, or possible solutions and resistance to proposed solutions.
3. **Concept Mapping:** Concept maps represent knowledge graphic form. Networks consist of nodes, which represent concepts, and links, which represent relationships between concepts. Concept maps can aid in generating ideas, designing complex structures, or communicating complex ideas. Because they make explicit the integration of old and new knowledge concept maps can help instructors assess students’ understanding.
4. **Exaggeration:** Exaggeration includes the two forms of magnify (or “stretch”) and minimize (or “compress”), part of the SCAMPER heuristic. This method helps in building ideas for solutions. It is useful to illustrate a problem, by testing unspoken assumptions about its scale. It helps one think about what would be appropriate if the problem were of a different order of magnitude.

5. **Fishbone:** The fishbone technique uses a visual organizer to identify the possible causes of a problem. This technique discourages partial or premature solutions and demonstrates the relative importance of, and interactions between, different parts of a problem.
6. **Jigsaw:** A jigsaw puzzle is a tiling puzzle that requires the assembly of often irregularly shaped interlocking and mosaicked pieces, each of which typically has a portion of a picture. When assembled, the puzzle pieces produce a complete picture. The *jigsaw* technique is a “tried and true” cooperative learning strategy that helps students create their own learning.
7. **Cooperative learning:** Cooperative learning is an educational approach which aims to organize classroom activities into academic and social learning experiences. There is much more to cooperative learning than merely arranging students into groups, and it has been described as “structuring positive interdependence. “Teamwork makes the dream work.” A *cooperative* teaching method is where the teacher groups students and encourages collaborative *learning* within the groups. *Cooperative learning* involves a lot of group work. To ensure that learning ... One frequently used *cooperative learning* technique is “Think-Pair-Share. In these kinds of innovative teaching strategies, students are responsible for each other's learning.
8. **Design thinking:** Design thinking refers to the set of cognitive, strategic and practical procedures used by designers in the process of designing, and to the body of knowledge that has been developed about how people reason when engaging with design problems. *Design thinking* is the process of finding meaningful ideas to solve a particular real-world problem that exists in a community or an organization.
9. **Visual-Based Learning:** Visuals help anyone to remember things for a longer period. In school, visual learning can help teachers light up dull subjects that may seem less interesting for students. This teaching method will help keep the students engaged in learning the subjects better with better knowledge retention. Examples of visual-based learning are the incorporation of mind maps, maps, charts, diagrams, lists, study cards or flashcards as well as the use of audiovisual aids.
10. **Competency-Based Learning:** Competency-based learning is a method where students progress through learning objectives at their own pace. The main characteristic of this model is that only when a student has mastered a topic are they allowed to continue to the next.
11. **Flipped Classroom:** A modern pedagogy strategy that has gained popularity among educators worldwide, a flipped classroom is a blended learning strategy that directs the students to be self-dependent learners at home and test what they have learned in the classroom with live problem-solving sessions.
12. **Kipling Questions or Preliminary Questions Method:** This method simply asks the Who? What? When? Where? Why? and How? when problem-solving or decision-making.
13. **Laddering:** Laddering or the “why method” involves toggling between two abstractions to create ideas. Laddering techniques involve the creation, reviewing and modification of hierarchical knowledge. In a ladder containing abstract ideas or concepts, the items lower down are details or sub-sets of the ones higher up, so one moves between the abstract and concrete. Laddering can help students understand how an expert categorizes concepts into classes, and can help clarify concepts and their relationships.
14. **Negative (or reverse) Brainstorming:** Negative brainstorming involves analyzing a short list of existing ideas, rather than the initial massing of ideas as in conventional brainstorming. Examining potential failures is relevant when an idea is new or complex or when there is little margin for error. Negative brainstorming raises such questions as: “What could go wrong with



this project?” Reverse brain-storming is valuable when it is difficult to identify direct solutions to a problem.

15. **Role-playing:** In most role-playing exercises, each student takes the role of a person affected by an issue and studies an issue or events from the perspective of that person.
16. **SCAMPER:** SCAMPER is a check list that promotes ways to think about an existing product/issue/problem to create a new way to think about it. The method uses action verbs to stimulate ideas and creative thinking.
17. **Post-up:** Post-up can gather ideas from large groups, numbering from the dozens to the hundreds. Participants are given slips of paper (or Post-it notes) and asked to write down ideas which are discussed or evaluated. Instructors may collect a large number of ideas swiftly and creates a sense of participation and/or ownership at the same time.
18. **Story-boarding:** Story boarding can be compared to spreading students' thoughts out on a wall as they work on a project or solve a problem. Story boards can help with planning, ideas, communications and organization. This method allows students to see the interconnections, how one idea relates to another, and how pieces come together. Once the ideas flow, students become immersed in the problem and tag-team off other ideas.
19. **Reversal:** The reversal method takes a given situation and turns it around, inside out, backwards, or upside down. Any situation can be “reversed” in several ways. Looking at a familiar problem or situation in a fresh way can suggest new solutions or approaches. It doesn't matter whether the reversal makes sense or not.

No matter how effective these innovative teaching methods are teacher's first need to be trained well in order to be able to implement them well. Teachers need to be equipped with the proper knowledge and implementation skills. The 5 Ps of the Creative Process is **Perception, Practice, Perseverance, Patience, and Passion was very helpful to implementing these techniques in the classrooms.**

#### **Need and Significance of the Study:**

Creativity is a phenomenon whereby something new and valuable is created (such as an idea, an artistic or literary work or painting or musical composition a solution, an invention etc.) The idea or concept, so conceived can then manifest themselves in any number of ways, but most often, they become something we can see here, small touch, or test. Therefore, Creative teaching inspires imaginations of new ideas and lead directly to teaching for creativity. Teaching is considered as a creative process. When teachers are creative, they can achieve an integration of pillars of teaching learners Saphier and Gower (1987) saw teaching skills as a set of performances that should be available in the teacher in order to be able to implement the teaching process successfully and effectively. The planning skills of teaching include formulating the behavioral objectives of the lesson, determining the introduction to the lesson, identifying the range of references for the lesson, formulating the elements of the lesson, identifying the educational tools that will be used during the implementation of the lesson, and preparing questions to evaluate it. These skills become evident in the preparation of an effective plan for the lesson, along with the skills of lesson implementation, classroom behavior management, and verbal and non-verbal interaction in classroom.

Creative teaching skills have emerged from the prevailing environment in the society in general and the availability of administrative, technical, and physical circumstances and conditions in the school which encourage creativity and the nature of the school's curriculum. Also, creative teachers understand the nature of creativity in light of their abilities and the abilities of their students at the same time which is a major contributing factor to the choice of teaching materials, method of submission, and configuration of appropriate teaching-learning situations. Modern generation students respond to practical work very actively. Thus, this leads the teachers to be more competent in creative



thinking. So this study is the need of the hour and an analysis of attitude of teachers towards creative teaching to help the children to grow as creative teaching takes full advantage of the availability of educational attitudes and directs them in line with the preparations and potential capacities of the learners. Therefore there is a need to conduct a research in this area. The review of related literature has revealed that there are fewer attempts to study the creative teaching of teachers in shimoga. Hence this investigation is a modest venture in this direction.

### Methodology:

It is a descriptive research and the survey design was used in the study. The population of the study comprised secondary schools teachers in shimoga city. A total of 100 secondary school teachers worked at secondary schools were formed the sample of the study. Stratified simple random sampling technique was used to select the sample. Standardized questionnaire for creative teaching by Dr. R.P. Shukla was employed to analyze the attitude of teachers towards creative teaching. The data which were collected and analyzed using percentage analysis, and 't' test statistical techniques. The hypotheses formulated were tested at 0.05 and 0.01 level of significance.

### Purpose of the study:

The purpose of the study was used to study the attitude of secondary school teachers towards creative teaching. It was also find out the significant difference between male and female secondary school teachers in their attitude towards creative teaching. The study would also find whether there is any significant difference between teachers belonging to more experienced and less experienced teachers in their attitude towards creative teaching.

### Research hypotheses of the study:

The following are the hypothesis of the study.

1. There is no significant difference in attitude towards creative teaching of male and female secondary school teachers.
2. There is no significant difference between the teachers belonging to more experienced and less experienced in their attitude towards creative teaching.

### Analysis and Interpretations of the Results:

The analysis of data interpretation and discussion of the results are presented below:

**Objective 1:** To study the attitude of Secondary School teachers towards Creative Teaching.

Analysis related to objective 1 is presented in table no. 1

**Table No. 1: Table showing the percentage of secondary school teachers with respect to favorable and unfavorable attitude towards creative teaching.**

Secondary School Teachers	Attitude towards Creative Teaching		Total
	Highly Favorable Attitude	Less favorable Attitude	
frequency	70	30	100
Percentage	70	30	100

Table no.1 reveals that a majority of secondary school teachers that is 70% of them having highly favourable attitude towards creative teaching. It is also seen that only 30% of the secondary school teachers having less favourable attitude towards creative teaching.

**Ho 1: There is no significant difference in attitude towards creative teaching of male and female secondary school teachers.**

't' test was calculated to test the hypothesis 1. The results are presented in table no. 2

**Table No 2: summary table of 't' test of attitude towards creative teaching of male and female secondary school teachers.**

Gender	N	Mean	SD	't' value	df	Level of Significance
Male	39	70.57	7.82	1.31	98	NS
Female	61	67.77	6.98			

NS-Not Significant

Table no. 2 shows that the obtained 't' value of 1.31 is less than the tabled 't' value of 1.67 at 0.05 level of significance for degrees of freedom 98. Therefore the null hypothesis stating that there is no significant difference between male and female secondary school teachers with respect to their attitude towards creative teaching is accepted and it is concluded that there is no significant difference between male and female secondary school teachers with respect to their attitude towards creative teaching.

**Ho 2: There is no significant difference in attitude towards Creative teaching of More and Less experienced secondary school teachers.**

't' test was calculated to test the hypothesis 2. The results are presented in table no. 3

**Table No 3: summary table of 't' test of attitude towards creative teaching of more and less experienced secondary school teachers.**

Teaching Experience	N	Mean	SD	't' value	df	Level of Significance
More experienced	48	68.85	9.13	0.018	98	NS
Less experienced	52	68.81	4.41			

NS-Not Significant

Table no. 3 shows that the obtained 't' value of 0.018 is less than the tabled 't' value of 1.67 at 0.05 level of significance for degrees of freedom 98. Therefore the null hypothesis stating that there is no significant difference between secondary school teachers with more and less teachers in their attitude towards creative teaching is accepted and it is concluded that there is no significant difference between secondary school teachers with more and less experienced teachers in their attitude towards creative teaching experience.

### **Findings of the study:**

It is found that

1. A majority of secondary school teachers that is 70% of them are found to possess highly favorable attitude towards creative teaching and only 30% of the secondary school teachers are found to possess less favorable attitude towards creative teaching.
2. No significant difference was found between male and female secondary school teachers with respect to their attitude toward creative teaching.
3. No significant difference was found between more and less experienced secondary school teachers with respect to their attitude toward creative teaching.

**Educational Implications of the Study:** The following educational implications could be drawn from the findings of the study:

1. Adequate creative teaching aids, modern Textbooks, should be provided in every school. Hence the creative learning activity of teachers will help them to update their knowledge and effective to the students.
2. This study can help to understand the reasons of positive attitude of teachers towards creative teaching. If the teachers are creative, they can achieve a creative interaction between the

teacher and learner as well as learning environment & learning material. Creative teachers understand the nature of creativity in light of their abilities of their students.

3. Government, NCERT, CTE and DIET should organize special training for the in service teachers regarding various methods of creative teaching such as Project-based learning, Brainstorming, Design thinking, flipped classroom, Blended learning or hybrid learning, Cooperative learning, Storytelling, Jigsaw puzzle, and Personalized learning and other various methods. Hence secondary school teachers should update themselves and use these various activities based techniques to create interest among students.

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## CHALLENGES AND SUGGESTIONS OF YOUTH EMPOWERMENT IN HIGHER EDUCATION

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### Abstract

*Present education system in India mainly comprises Primary education, secondary education, senior secondary education and high education. Elementary education consists of eight years of education. Each of secondary and senior secondary education consists of two years of education. Higher education in India starts after passing the higher secondary education or the 12<sup>th</sup> standard, depending on the stream doing graduation in India can take three of five years. The higher education system in India is one of the largest in the world. However, it is the fast integrating world economy and corresponding rise of student's mobility that have made studying in India an attractive option. There is large number of Indian as well as foreign students who apply every year to Indian universities and colleges. Since we have got independence we are facing challenges to establish a great and strong education system. Various governments came and gone. Off course they tried to establish new education policies in the system but this is very sad to dictate that they were not sufficient for our country. Responsibility of youth, role of youth and challenges facing by youth and role of youth in various area and suggestion for youth empowerment of higher education cooperation and help and involvement for the youth force. To respect others faiths and beliefs in the religious cultural and social spheres and different schools of thought and to neither exploit nor be instrument in the exploitation of fellow citizens and other persons especially women. To extend respect to teachers' elders' parents and family in consonance with our cultural norms and traditions. The challenges facing today's youth have a tremendous impact on their quality of life. Their reactions will affect their families and communities and the countries and regions in which they live.*

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### INTRODUCTION

Present education system in India mainly comprises Primary education, secondary education, senior secondary education and high education. Elementary education consists of eight years of education. Each of secondary and senior secondary education consists of two years of education. Higher education in India starts after passing the higher secondary education or the 12<sup>th</sup> standard, depending on the stream doing graduation in India can take three of five years. The higher education system in India is one of the largest in the world. However, it is the fast integrating world economy and corresponding rise of student's mobility that have made studying in India an attractive option. There is large number of Indian as well as foreign students who apply every year to Indian universities and colleges. Since we have got independence we are facing challenges to establish a great and strong education system. Various governments came and gone. Off course they tried to establish new education policies in the system but this is very sad to dictate that they were not sufficient for our country..

*Responsibility of youth, role of youth and challenges facing by youth and role of youth in various area and suggestion for youth empowerment of higher education cooperation and help and involvement for the youth force*

To respect others faiths and beliefs in the religious cultural and social spheres and different schools of thought and to neither exploit nor be instrument in the exploitation of fellow citizens and other persons especially women. To extend respect to teachers' elders' parents and family in consonance with our cultural norms and traditions. The challenges facing today's youth have a tremendous impact on their quality of life. Their reactions will affect their families and communities and the countries and regions in which they live.

Present education system in India mainly comprises Primary education, secondary education, senior secondary education and high education. Elementary education consists of eight years of education. Each of secondary and senior secondary education consists of two years of education. Higher education in India starts after passing the higher secondary education or the 12<sup>th</sup> standard, depending on the stream doing graduation in India can take three of five years. Past graduate courses are generally of two to three years of duration, after completing post-graduation, scope of doing research in various education institutes also remains open. The higher education system in India is one

of the largest in the world. However, it is the fast integrating world economy and corresponding rise of student's mobility that have made studying in India an attractive option. There is large number of Indian as well as foreign students who apply every year to Indian universities and colleges. For all those who wish to study in India, it is very important to get prior and correct information about the courses that you would like to undertake, the universities you want to apply to and how to go about the application procedure. As of now, India has 44 central universities, 285 state universities, 130 deemed universities, 5 institutions established and functioning under the state act and 13 institutes, which are of national importance. Other institutions include about 18,000 colleges in India. Higher education has grown very rapidly in India over the last 30 years; with the proportion of those who attend tertiary institutions to the relevant age group raising from 6% in 1983 to around 20% by 2011 this growth has been greatly compressed into only a few areas. First most of the growth has accrued primarily in professional fields especially engineering and management. United States unlike china, however, India has the advantage of English being the primary language of higher education and research. India educates approximately 11 percent of its youth in higher education as compared to 20 percent in china. The main governing body at the tertiary level is the university grants commission (India). Which enforce its standards, advises the government and helps coordinate between the centre and the state? Universities and its constituent colleges are the main institutes of higher education in India. At present in 2011 there are 227 government recognized universities in India. Out of them 20 are central universities. 109 are deemed universities and 11 are open universities. Most of these universities of India have affiliating college where undergraduate courses are being taught. Some institutions of India, such as the Indian institutes of technology have been globally acclaimed for their standard of education. The IITs enroll about 8000 students annually and the alumni have contributed to both the growth of the private sector and the public sectors of India. Higher education is extremely diverse and the challenges and issues faced by higher education institution are just as diverse. The process of education is not merely digesting books. It is also about doing several co-curricular and extra-curricular activities that give a broader meaning to life in general and education in particular. I believe that opportunities for such holistic development are not enough in india. Facilities for the same are lacking or not easily accessible in India. Even where facilities exist, there is a lack of information about the same.

### **Objectives.**

- To focus the role of youth development.
- To understand the need to youth in quality of higher education.
- To study the challenges faced by youth.
- To understand benefits of nation development.
- To analyze the contribution of youth in promoting social responsibility.
- To assess role of youth in enriching social responsibility.
- To focus the role of youth development.
- Review of the position of youth in India.

**Youth empowerment in India:** India is a young country with two percent of people below the age of 35 years. It is this young population which constitutes for India a potential demographic dividend which needs to be properly addressed and harnessed towards positive constructive and purposeful activities by imparting quality education greater political participations of youth gaining access to information and communication technology and urgent attention to improving their quality of life. Youth empowerment is achieved through participation in youth empowerment programs there are numerous models that youth empowerment program use that help. Youth achieve empowerment is focused on creating greater community change on the development of individual capacity.

**Challenges of present higher education system in India:** Since we have got independence we are facing challenges to establish a great and strong education system. Various governments came and gone. Off course they tried to establish new education policies in the system but this is very sad to dictate that they were not sufficient for our country. Still we are facing lot of problems and challenges in our challenges system. India recognizes that the new global scenario poses unprecedented challenges for the higher education system. The universities grants commission has appropriately stated that a whole range of skills will be demanded from the graduates of humanities, social sciences, natural sciences and commerce, as well as from the various professional disciplines such as agriculture, law, management, medicine or engineering.

### **Responsibility of youth**

- To respect others faiths and beliefs in the religious cultural and social spheres and different schools of thought and to neither exploit nor be instrument in the exploitation of fellow citizens and other persons especially women.
- To extend respect to teachers elders parents and family in consonance with our cultural norms and traditions.
- To contribution to scrotal. Family and self-development and to promote social and intergenerational understanding as well as gender equality
- To promote and practice appropriate standards of ethical conduct in individual and social life to maintain honesty and integrity of characters and be committed to fight against all forms of corruptions social evils and practices.
- To preserve and protect the environment.
- To commit themselves to creating a discrimination and exploitation free environment and to devote their times and energy in nations building actives.

### **Role of youth in various areas:**

- Take up responsibility in government institution I.A.S, I.P.S, I.R.S etc.
- Take technology to grass root through innovations-social scientist.
- Become a social entrepreneur
- Join politics-perform duties with all most transparency
- Become a social leader- initiate movements and organizations to involvecommunities in development activities.
- Employees-work part time in NGO's supports them financially

### **Challenges facing by youth**

The challenges facing today's youth have a tremendous impact on their quality of life. Their reactions will affect their families and communities and the countries and regions in which they live.

- Youth are unemployed: - approximately two million young people are unemployed worldwide
- Youth are poor (about 85% of the world's youth live in poor countries.
- Youth are - education:- In the developing world nearly one third of youth are illiterate.
- The numbers of youth is growing. At 1.1 billion, the world today has the largest number of youth ever, and this number is increasing.
- The small family system where they don't learn accommodation or adjustments.
- Substance abusers like smoking or drug addiction
- Early maturity due to advent of satellite televisions.
- Inadequate employment opportunities.
- The brain washes of the terrorist activities.
- Well designed and well run youth development programs promote youth leadership by involving implementation and evaluation
- Youth practices self-management and responsibility decision-making that reflects healthy choices.
- Youth demonstrate the ability to make informed decisions for themselves.



## SUGGESTIONS FOR YOUTH EMPOWERMENT IN HIGHER EDUCATION

- Co-operations and involvement of the youth force.
- Our government should large amount of funds under various schemes and programs with the objective of developing the personality and leadership qualities of the youth.
- Provide moral education proper education.
- To provide need based job-oriented courses
- International cooperation.
- To mobile resources.
- Proper education system and good political situation is necessary.
- Industry and academic connection
- Incentives to teachers and researchers.
- Student-centered education and dynamic methods.
- Public and private partnership
- Innovative practices
- Coming of information age.

**Conclusion:** After independence, there has been tremendous increase in institution of higher learning in all disciplines. But with the quantitative growth has it been able to attend to the core issue of quality. India is today one of the fastest developing countries of the world with the annual growth rate going above 9%. In order to sustain that rate of growth, there is need to increase the number of institutes and also the quality of higher education in India. To reach and achieve the future of the youths requirements there is an urgent need to relook at the responsiveness.

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## IMPORTANCE OF ASSESSMENT IN COMPETENCY BASED TEACHING AND LEARNING

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### Abstract

*Competency-based learning and assessment is pedagogical and cultural challenge in the background of teacher centered methods. we need to foster a culture of competency-based learning and assessment among your learners and educators. It allows the assessor to work with a learner to collect evidence of competence from the learning outcomes of the programme. This means promoting a learner-centered and self-directed approach to learning; encouraging a growth mindset and a lifelong learning attitude; fostering collaboration and communication among learners and educators; providing recognition and motivation for learning achievements; and creating a supportive and inclusive learning environment. This paper examines competence assessment, the principles, methods and procedures for assessment of competences in a Competence Based Teaching and learning context. Understanding of the principles, assessment methods and appropriate assessment procedures is emphasized for adherence of quality teaching and learning. The NEP 2020 calls for a 'shift in assessment system that is summative and primarily tests rote memorization skills to one that is more regular and formative, is more competency-based, promotes learning development for our students, and tests higher-order skills, such as analysis, critical thinking and conceptual clarity.*

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**What is Competency-Based Education (CBE)?** Competency-based education (CBE) is an approach to teaching, learning, and assessment that focuses on the student's demonstration of learning outcomes and attaining proficiency in particular competencies in each subject. Teaching which uses a CBE methodology works to empower students and provide them with a meaningful and positive learning experience. It places the learner at the center and actively engages them in the learning process. It emphasizes real-world applications of knowledge and skills and the authenticity of the learning experience. Assessment of competencies is crucial in competence based teaching and learning. Competence-based teaching and learning approach requires learners to be assessed based on the skills and knowledge that they are practically expected to demonstrate. This approach is currently emphasized after a shift from content based teaching and learning (Meyer - Adams et al. 2011, Baughman, et al., and 2012). Competence assessment determines whether the students have mastered the competencies specified in the school curriculum. It is expected to measure students' ability to integrate, synthesize, and use knowledge and skills in the real life experiences. Competence assessment is an ongoing process in which knowledge and skills are continuously built and assessed. It allows learners to think and act in terms of attitude, skills and knowledge with the aim of developing learners who are confident, critical, creative and innovative thinkers (Leutner et al. 2017). Hence in teaching and learning context, the competences are expected to extend as the learners grow. The learners can demonstrate mastery of the competencies as they keep on learning and re – learn them. Therefore assessment of competencies is emphasized in teaching and learning as it plays a key role in optimizing educational processes and improving the effectiveness of educational systems in provision of quality education. `

**Principles and Methods for competence assessment:** The important principles to be adhered in order to ensure quality in assessment of competencies. According to Gravells (2015) the following are some of the principles for competence assessment.

**Validity:** The frequency of assessment determines the accuracy in assessing competencies. Assessment of competence must be done more than one time in order to ensure validity of teaching and learning. Assessment instruments must be prepared according to the specific purpose in order to ensure that they measure what they are intended to measure.

**Relevance:** Assessment should relate directly to the programme aims and learning outcomes. It is also expected to cover all required competencies and enables learners to develop various competences. Hence, it involves selection of the most relevant methods appropriate to the kind of performance being assessed.

**Feedback:** Timely feedback is important in the assessment of competencies. It facilitates and promotes teaching and learning. Learners must demonstrate what they know or can do. That is, learners may be asked to develop and explain various procedures according to their subject areas such as development of project report, business proposal etc.

**Sufficiency and authenticity:** Assessment should cover all the required competences at a given time and levels. It also involves application of knowledge and skills in a real environment. Hence, it should be clear, accurate, consistency and timely information on assessment tasks and procedures.

**Assessment of Competencies in teaching and learning:** Competence based learning emphasize application of knowledge rather than the ability to recall the knowledge and it can be assessed through various approaches. One of the approach is Diagnostic assessment. It provides information about learner's prior knowledge, skills and attitudes. It helps to determine learner's strength and weaknesses. Furthermore, it enables the teacher to develop an effective learning according to the learners needs. In competence based teaching formative assessment is also emphasized rather than summative assessment. It is argued that learners have shared responsibility to their learning in competence based learning and teaching. Hence, they have to demonstrate what they know through formative assessment as part of assessment process (Meyer - Adams et al. 2011). Formative assessment also referred to as assessment as learning, allows learners to be assessed as the teacher continues to teach. The teacher uses learner's knowledge and skills to improve their teaching (Heritage, 2010). It therefore uses various assessment methods such as oral questions, class test, individual assignments, practical exercises, portfolio and project work. It allows learners to reflect, regulate and monitor their learning progress, evaluate their own learning and get feedback. On the other hand according to Wynne, (2007) summative assessment (assessment of learning) allows learners to be assessed at the specific point of the learning cycle such as the end of the term or year of study and learners are ranked. It is therefore implies that demonstration of skills and the learner active participation in teaching and assessment process is limited. Moreover, in competence based teaching and learning assessment of competencies can be done in different ways (Drisko, 2014, Voorhees & Bedard, 2015). It can be assessed through direct observation of competencies. That is through presentations, Projects, internship, field practice, teacher evaluations. It can also be assessed indirectly where less tangible competences for example interpretation can be assessed through written tests and exercises. In addition, evidence of prior learning can be assessed through portfolio, log book, referees and qualifications. Furthermore, knowledge application can be measured by allowing students to demonstrate competency in terms of skills and abilities rather than memorization through short answer questions, true or false. In addition, it is emphasized that assessment of competencies can be done through appropriate activities to be done by all learners as a class and assessment done in individual or groups Competence can therefore, be assessed through different ways depending on what is expected to be assessed. However, it is emphasized that the teacher is expected to assist learners who have difficulty in achieving competences that have been targeted in the curriculum and syllabus. Hence teacher's skills in special education and guidance and counselling are important in assisting learners

**Conclusion and Recommendations:** In the competence based learning and assessment, the learner had the responsibility for learning the materials and demonstration of mastery of competences. Hence, provision of learning materials and assistance to students who require additional assistance is emphasized. Schools and educational authorities should therefore, support teaching and learning in order to ensure that the expected outcomes are attained as targeted in the curriculum. Assessment of competences is performance-based it rarely have right and wrong answers hence it requires subjective evaluation. Teacher competence in teaching and assessment is therefore, emphasized and recommended for effective measurement of students performance of the competencies. Understanding of the principles, assessment methods and appropriate assessment procedures is emphasized for adherence of quality teaching and learning. Therefore, various assessment methods are recommended for validity and effective assessment of competences.

## ATHLETE'S STRESS MANAGEMENT

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### Abstract

*The world is full with vital things, including stress management. Stress comes in many forms and can affect everyone, including young people, sportsmen, and businesses. The current paper emphasizes stress management, signs of stress, causes of stress, and methods for coping with stress. Recently, stress has been identified as a very long-lasting illness that slowly but surely kills people. Athletes experience both tension and despair as well. Stress is a state of mental strain that affects specific people who are addressing issues related to their social and environmental well-being, which can result in a variety of illnesses. They are anticipated to lead the society. When a As a youngster reaches adolescence, they not only adjust to a new way of life and environment, but also become acquainted with an abundance of new acquaintances and friends. They are under a great deal of life stress. Therefore, it is crucial to identify the sources of anxiety among individuals and how they might handle it.*

*The author of the current study discovered that stress is most common before and, in some circumstances, after competitive sports such as Olympics, national contests, and state-level competitions, along with in interpersonal relationships, relationship issues, life changes, and job exploration. Typically, such stress can result in behavioral, bodily, and psychological issues. The reasons for anxiety among athletes are discovered in this study. After identifying the factors, the researcher advises placing more emphasis on the transition from childhood to adolescent. They need to grow up in a positive environment. The importance of outside activities should be increased, and stressors should be kept to a minimum to foster a hostile learning environment. Athletes, individual pupils, scholars, professional guidance, personality enhancement, and counseling facilities will all benefit from the findings.*

**Key Words:** *Sports, athletes, athletes' symptoms, stress management.*

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## INTRODUCTION

Stress is a typical physical reaction to circumstances that make you feel threatened or disturb your equilibrium in some other way. The body's defenses ramp up quickly and automatically in a process known as the "fight-or-flight reaction," also known as the stress reaction, when you perceive danger, whether it is real or imagined. Your body's defense mechanism is the major goal of the stress reaction. When functioning properly, it aids in maintaining your focus, enthusiasm, and awareness. Stress might help you defend yourself or make you smash on the brakes in order to prevent an accident, which may save your life in an emergency. A researcher's mind has been flooded with several thoughts & questions and viewpoints after studying the lifestyle of the current athlete. Understanding the causes of a particular marvel and the numerous perspectives surrounding it are crucial. The goal of the current study is to provide a glimpse into the research that has been conducted thus far on stress management approaches, factors, and techniques. Modern living has an unavoidable side effect of stress. There are many distractions, objectives, barriers, and demands in modern life. Stress has permeated the lives of countless people. Not all stress is negative. When used sparingly, it can motivate you to perform well under pressure. However, your mind and body suffer when you're constantly operating in emergency mode. Controlling your stress is crucial. Today, stress reduction is essential to everyone's existence. It is necessary for long, joyful existences with fewer future difficulties. Learning the psychological factors behind or generating the stress entails developing strategies to deal with, alleviate, or decrease the stress. By examining problems positively, acting, organizing, planning, and coming up with solutions, you can reduce your stress.

## **STRESS MANAGEMENT FOR ATHLETES**

Managing your ideas, emotions, schedule, surroundings, and problem-solving approach is the key to managing stress. If you're stressed out, attempt to make some adjustments to your routine to reduce tension. Speak with your teammates, physical trainers, or coaches. Tell them the truth about you feel. What can you do collectively to lessen or manage your stress? Not all stress is negative. You may remain focused, energetic, and prepared to take on fresh obstacles in your profession with a small amount of stress.

## **ANXIETY (STRESS) DISORDERS**

Sport psychology is the study of how to deal with stress in sports. Stress is a factor in a number of illnesses. However there are those that are more specialized stress disorders as well, general stress disorder is frequently diagnosed in athletes. Obsessive-compulsive disorders (OCD), depressive disorders, and traumatic brain injury (PTSD) are only a few of these conditions. Those that have OCD may experience stress because they are so fixated on their rituals. Whether it's the amount of times they have to switch off a light or how often they must wash their hands, if they don't do it exactly right, they will feel stressed and their thoughts will be consumed until they are able to go and correct it. Stress can lead to depressive disorders as someone will grow preoccupied with the thing that is pointing out them out, begin concentrating only on that, and soon stop finding enjoyment in their daily activities. This will have an accumulate effect and only get worse unless they seek help. Although posttraumatic stress disorder rarely affects athletes, it occasionally does, particularly after a horrific vehicle accident or significant injury. PTSD is a highly dangerous illness that may lead to further issues including suicidal thoughts.

This is a serious issue, so if the athlete exhibits any symptoms, they must be sent to a counseling facility for the necessary care. There are a variety of specific sorts of stress illnesses, and many of them require specialist care. The athlete has to make up an appointment with a counseling facility so they can receive the necessary treatment and resources to assist with lower their stress level if an athletic trainer feels that the player's stress level is getting too high and unmanageable. 2020 (Fullerton)

**Athletes must primarily deal with two sorts of stress.**

### **1.Pre-season stress**

### **2.Post-season stress:**

**1. Pre-season stress:** Athletes frequently experience pre-season stress, which is brought on by the pressure of competition. Before the start of the season, athletes experience nervousness and trembling due to their worries of performing.

**2. Post-season stress:** Post-season stress is brought on by the outcome of a sporting event. During the sporting event, many spectators anticipate that an athlete will pursue a career that is dependent on the outcome; as a result, if they lose the match, these expectations or their career are negatively impacted. Many athletes are unable to handle the stress and fall into depression. A select few athletes have quit competing because they began using pharmaceuticals to cope with the stress that was affecting their performance. Here are a few well-known athletes who battle depression.

## **RONDA ROUSEY**

WWE fighter and ex UFC champ Ronda Rousey struggled with depression and regarded taking her own life after suffering two terrible losses in the octagon. In a 2018 interview with The Guardian, she admitted, "I did a whole lot of crying, isolating myself," adding that her husband Travis Browne had assisted her in getting through a depressive episode that lasted two years. Rousey advises, "Time is a great teacher," and she bases this on her conviction that "time passes even bad times."



**DELONTE WEST**

Delonte West, a former professional basketball player, disclosed that he was dealing with depression and had been given a bipolar illness diagnosis in 2008. In an interview with Cleveland.com in 2008, he stated, "Self-destructive conduct has been haunting me my entire life. "I'm feeling the worst when everything is going well." In recent years, news about West's mental health has continued to make headlines, including when images of him out late at night in a hospital gown and without shoes surfaced on social media. 2020 (Gillespie)

**MICHAEL PHELPS**

With an all-time high of 28 medals, retired Olympic swimming gold medalist Michael Phelps is one of the most prestigious and decorated Olympian ever, but that didn't make himself immune to sadness. Phelps, who has acknowledged to using drugs to self-medicate and thinking about suicide, said in a 2018 interview with CNN that "I think I fell into a major state of depression after every Olympics." Through the Boys & Girls Clubs of America and the Michael Phelps Foundation, he now uses his experience to benefit others.

**SERENA WILLIAMS**

Even though Serena Williams was a multiple-time world tennis champion, her athletic prowess couldn't shield her from despair. Williams admitted in 2011 that she began struggling with depression ever since she won Wimbledon the year before, as a result of injuries and medical issues. "I bawled nonstop. In a chat with The Telegraph in 2011, She claimed to have was unpleasant to be around. After the delivery of her baby girl Olympia in 2017, Williams also spoke up about postpartum depression.

**Behavior-Related Signs:**

- Getting too little or too much sleep.
- Self-isolation from other people.
- Relaxing with beer, smokes, or drugs.

**Psychological (Emotional) Signs:**

- Anxiety or a quick temper
- Anger and an inability to unwind
- A feeling of isolation and loneliness

**Stress symptoms and signs Cognitive Signs:**

- Memory issues
- Lack of focus
- Continuous anxiety

**Physical Signs:**

- Pains and aches
- Constipation or diarrhea
- Chest discomfort and a fluttering heart

**Additional Sources of Stress:** Stressors are the things that cause stress, and they can be anything from bad weather to family problems. Relationships and financial management are included.

**Monetary (Finances):** A lot of wealthy athletes—almost all of them—were on the verge of bankruptcy due to poor money management. When they became renowned, they receive hundreds of thousands of money to sign contracts with well-known businesses, to participate in events, or for their appearances, but owing to a lack of expertise about handling finances, they went bankrupt very quickly. They are simply athletes that only focus on their sport from an early age. They strive to maintain their quality of living and fulfill their desire for a luxurious lifestyle, but tension arises when they fall short of their goals.



**Partnerships (Relationships):** Another significant source of anxiety in an athlete's life is relationships. Many athletes filed for divorce because they were unable to devote enough time to their spouses or because of outside circumstances. Stress might be brought on by issues of this nature.

**Mike Tyson's** career is the ideal illustration of both circumstances: Tyson gained notoriety quickly as a young man thanks to his fighting prowess. At 20 years old, he was the title's youngest fighter to date. In his early years, Tyson went by the monikers Iron and Kid Dynamite. He then adopted the moniker The Baddest Man on Earth. He receives a billion dollars to compete in fights, but later it was revealed that his accountant had manipulated his records for personal gain. As a result, Tyson dismissed the accountant. Additionally, Robin Givens, Tyson's wife, applied a divorce on October 1988 after accusing him of using violence. Tyson's life is very stressful the outcome of this kind of circumstance.

**Recommendations for managing stress:** There is no way to totally escape stress. It is a necessary component of life and, in moderation, helps the body stay alert to external cues. There are quite a few methods to combat stress that must be understood in an effort to avoid or lessen its consequences. There are many ways to deal with stress, such as becoming more aware of it, avoiding people or situations that are known to be stressful, engaging in physical activity or sports, managing your time effectively, increasing your motivation and self-respect, and using methods of relaxation like meditation and breathing exercises as well as positive thinking. Players who may be experiencing stress or anxiety can choose from a range of coping strategies. Each athlete must determine which one suits them the most, and this may take some time as they must test out each mechanism to see if it is effective for them. Numerous techniques are accessible, such as "hypnosis, relaxing gradually, visualizing, biofeedback, or autogenic training, mediation, and cognitive stoppage, and confidence enhancement" (Hann, 2000). According to Reilly and Williams (2003), an athlete may need to change seven various demand categories to lower their levels of stress and worry. The following are some of these categories: "Physical requirements, psychic demands, and demands from the environment, hopes and tension, problems with relationships, life path worries and uncategorized stress sources." Reilly and Williams provided several kinds of coping strategies that the athlete can employ in each category to lessen tension and worry in that area. For physical challenges, they recommend "rational relating to others, pre-competition psychological preparation, switching to healthy behaving behaviors and mindsets, and practicing hard and smart." When it came to psychological needs, they advised "pre-competition mental conditioning, stress oversight, favorable attention and perspective, and being trained hard and smart." 2020 (Fullerton)

**CONCLUSION:** Because stress is a natural part of life, it cannot be avoided. But it should be reduced in whatever way possible. Reducing your stress may not only improve your immediate well-being but also safeguard your long-term health. One of the main health issues of the twenty-first century, according to the World Health Organization, is stress. Despite the well-documented health benefits of exercise and sports engagement, more athletes than others battle with these disorders. Even some athletes occasionally experience emotional, psychological, and behavioral issues. Athletes must learn stress-reduction techniques, which they should include into their everyday lives. Good stage tension encourages them to perform well to that point. After a certain point, stress starts to impact their personal and professional lives.

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## ROLE OF SECONDARY SCHOOL TEACHERS IN PROMOTING HEALTH LITERACY

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### Abstract

*This conceptual paper examines the evolving and pivotal role of secondary school teachers in promoting health literacy among students in the contemporary educational setting. With health literacy emerging as a critical skill for navigating an increasingly complex healthcare environment, it is imperative to understand how educators can contribute to enhancing students' health literacy. The paper explores key concepts and recent trends in health education, highlighting the multidimensional nature of health literacy and its importance beyond the classroom. This paper delves into the changing setting of health education in secondary schools, acknowledging the growing need for educators to adapt to emerging concepts and trends. It explores innovative pedagogical approaches, such as experiential learning, technology integration, and interdisciplinary, which enable teachers to engage students effectively in health literacy development. Additionally, the paper discusses the role of secondary school teachers as health literacy facilitators, emphasizing their responsibilities in fostering critical thinking, digital literacy, and informed decision-making in the context of health. It highlights the importance of teacher professional development to ensure educators are well-equipped to address the evolving health literacy needs of their students. Overall, this paper underscores the significance of secondary school teachers in promoting health literacy and calls for continued research and collaboration among educators, researchers, and policymakers to advance the field of health education. By embracing new concepts and trends, educators can empower students to make informed health-related choices and contribute to healthier communities.*

**Keywords:** Health Literacy, secondary, school, teachers

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### Introduction

Health literacy is a fundamental concept that holds immense significance in contemporary society. It refers to an individual's ability to acquire, comprehend, evaluate, and utilize health-related information effectively for making informed decisions about their health and healthcare. In today's complex healthcare landscape, health literacy is a critical skill that empowers individuals to navigate the intricacies of the medical world, manage their health, and advocate for their well-being.

### Importance of Health Literacy in Present Scenario

The importance of health literacy cannot be overstated in the 21st century. In an era marked by an overwhelming abundance of health information from diverse sources, including the internet, social media, and healthcare providers, health literacy serves as a safeguard against misinformation and confusion. It empowers individuals to:

- **Access Healthcare Services:** Health-literate individuals can efficiently access healthcare services, schedule appointments, and understand the complexities of health insurance, thereby ensuring timely and appropriate care.
- **Make Informed Decisions:** They are better equipped to make informed decisions about their health, from choosing healthy lifestyle behaviors to evaluating treatment options and participating in shared decision-making with healthcare providers.
- **Manage Chronic Conditions:** For those with chronic conditions, health literacy is essential for understanding medication instructions, adhering to treatment plans, and recognizing warning signs of worsening health.

➤ **Advocate for their Health:** Health-literate individuals can advocate for their health needs, ask relevant questions during medical appointments, and engage in discussions with healthcare professionals to clarify doubts and seek clarification.

### **Role of Secondary School Teachers in Shaping Students' Health Literacy**

Secondary school teachers play a pivotal role in shaping the health literacy of students. They serve as educators, influencers, and role models who can empower the next generation with the knowledge and skills needed for a lifetime of informed health decision-making. In this context:

➤ **Educators:** Teachers are responsible for delivering health education curricula that cover a wide range of health topics, from nutrition and physical activity to sexual health and substance abuse prevention. Through well-structured lessons and classroom activities, teachers can foster a solid foundation of health knowledge among students.

➤ **Influencers:** Teachers have the unique ability to influence students' attitudes, beliefs, and behaviors related to health. By promoting the value of health literacy and modeling healthy choices, they can inspire students to take an active interest in their well-being.

➤ **Advocates:** Teachers can advocate for comprehensive health education programs within their schools and districts, emphasizing the importance of health literacy as an essential life skill. They can collaborate with school nurses, counselors, and parents to create a supportive environment for students' health education.

In essence, secondary school teachers are not only academic educators but also health literacy advocates who have the potential to shape a healthier and more informed society by equipping students with the essential skills to navigate the complexities of healthcare and make informed choices about their health and well-being.

### **Understanding Health Literacy**

Health literacy is a multifaceted concept that encompasses a person's ability to obtain, process, understand, and use health information to make informed decisions about their health and healthcare. It involves various cognitive, social, and functional skills that enable individuals to navigate the complex healthcare system effectively. Below, I'll provide definitions and models of health literacy, as well as an explanation of its components: functional health literacy, interactive health literacy, and critical health literacy.

### **Definitions of Health Literacy**

The Institute of Medicine (IOM): In the 2004 report "Health Literacy: A Prescription to End Confusion," the IOM defines health literacy as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions." World Health Organization (WHO): The WHO defines health literacy as "the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health."

### **Models of Health Literacy**

The Three-Component Model: Health literacy can be divided into three components:

➤ **Functional Health Literacy:** The ability to read, write, and understand basic health information, such as medication labels or appointment instructions.

➤ **Interactive Health Literacy:** The capacity to communicate effectively with healthcare providers, ask questions, and actively participate in healthcare decision-making.

➤ **Critical Health Literacy:** The skills to critically analyze health information, evaluate the credibility of sources, and make informed choices about health-related behaviors.

➤ **The Health Literacy Framework:** This framework focuses on the interplay between individual skills and the demands of the healthcare system and information environment. It considers factors like culture, language, and communication channels that influence health literacy.

Health literacy is not a static concept but a dynamic skill that can be improved through education, better communication practices, and improved healthcare access. Understanding these definitions and models can help healthcare providers and policymakers develop interventions to improve health literacy and promote better health outcomes.

#### **Impact of Health Literacy on Public Health Outcomes:**

Health literacy has a significant impact on public health outcomes at both the individual and population levels. Below are some key ways in which health literacy affects public health:

➤ **Access to Healthcare Services:** Individuals with limited health literacy may struggle to navigate the healthcare system, leading to delayed or missed healthcare appointments, decreased use of preventive services, and inadequate management of chronic conditions.

➤ **Medication Adherence:** People with low health literacy may have difficulty understanding medication instructions, dosages, and potential side effects, which can lead to medication errors and poor adherence to prescribed treatments.

➤ **Health Decision-Making:** Limited health literacy can hinder an individual's ability to make informed decisions about their health, including lifestyle choices and participation in preventive measures such as vaccinations or cancer screenings.

➤ **Health Disparities:** Health literacy is closely linked to health disparities. Populations with lower health literacy tend to experience poorer health outcomes, higher healthcare costs, and reduced access to quality care.

#### **Teacher's Role in Promoting Health Literacy**

➤ **Designing a Comprehensive Health Literacy Curriculum:** A comprehensive health literacy curriculum should encompass a range of topics, including understanding health information, effective communication with healthcare providers, critical appraisal of health sources, and decision-making skills. It should be tailored to the needs and literacy levels of the target audience.

➤ **Aligning Curriculum with Health Literacy Competencies:** Curriculum development should align with established health literacy competencies, which outline the skills and knowledge individuals need to be health literate. These competencies often include tasks related to reading and understanding health information, navigating healthcare systems, and making informed health decisions.

#### **Teaching Strategies for Health Literacy**

**Experiential Learning Methods:** Experiential learning engages students in practical, hands-on activities that help them apply health literacy skills in real-life situations. Role-playing, case studies, and interactive workshops are examples of experiential learning methods that promote active engagement and skill development.

➤ **Utilizing Technology in Health Education:** Technology can enhance health literacy education by providing multimedia resources, interactive simulations, and online platforms for self-paced learning. Educational apps, virtual reality, and telehealth are examples of technology-driven tools that can support health literacy.

➤ **Encouraging Critical Thinking and Decision-Making:** Health literacy education should focus on developing critical thinking skills, enabling individuals to evaluate the quality and reliability of health information. Encouraging critical thinking helps learners make informed decisions about their health and healthcare. Health educators play a vital role in shaping the health literacy of individuals and communities, and adopting these strategies can enhance their effectiveness in promoting health literacy.

#### **Professional Development for Teachers**

**The Importance of Ongoing Professional Development:** Ongoing professional development is crucial for educators in the field of health literacy. Health information and communication strategies are continually evolving, and teachers must stay updated to effectively equip students with the necessary skills. Additionally, professional development enhances educators' abilities to adapt to diverse learning needs and engage students effectively.

### **Resources and Programs for Teacher Training**

- **Health Literacy Training Workshops:** Many organizations and universities offer workshops and training sessions specifically designed to enhance teachers' knowledge and skills in health literacy education. These workshops cover various aspects of health literacy, including curriculum development, teaching strategies, and assessment.
- **Online Courses and Webinars:** Online courses and webinars provide convenient options for teachers to receive training in health literacy. These resources often include interactive modules, expert-led sessions, and opportunities for networking with other educators.
- **University Certificate Programs:** Some universities offer certificate programs in health literacy education. These programs are designed to provide educators with in-depth knowledge and skills in health literacy, often with a focus on curriculum development and research.
- **Government Initiatives:** Government agencies often support initiatives and provide resources for health literacy education. These resources can include toolkits, guidelines, and training materials.
- **Community-Based Programs:** Some community organizations and nonprofits offer teacher training programs in health literacy. These programs may focus on serving specific populations, such as low-income communities or non-native English speakers.

Ongoing professional development opportunities in health literacy empower teachers to stay current with best practices, innovative approaches, and emerging trends in the field. These resources and programs contribute to the continuous improvement of health literacy education and ultimately benefit students and communities.

**Conclusion:** In conclusion, teachers play a vital and transformative role in promoting health literacy among students. They are at the forefront of equipping the next generation with the essential skills and knowledge needed to make informed decisions about their health and navigate the complex healthcare landscape effectively. Teachers serve as educators who impart critical health information, from understanding health concepts to decoding medical terminology. They are communicators who facilitate open dialogues about health topics, encourage questions, and address misconceptions. Teachers act as advocates, empowering students to take control of their health, access healthcare services, and make informed decisions. They play a pivotal role in shaping students' attitudes, behaviors, and beliefs about health, influencing lifelong health outcomes. Health-literate students are equipped with the skills to navigate healthcare systems, effectively communicate with healthcare providers, and critically evaluate health information. Health-literate individuals contribute to improved public health outcomes, reduced healthcare costs, and a more knowledgeable and empowered society. By promoting health literacy among students, teachers are helping to build a healthier and more informed future generation. In the ever-changing landscape of health education, teachers stand as key agents of change, guiding students toward a future of health literacy, informed decision-making, and improved health outcomes. Their dedication to continuous learning, collaboration, and innovative teaching approaches is essential in shaping a healthier and more informed society.

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## A STUDY EFFECT OF YOGA ON PERSONALITY DEVELOPMENT IN B.ED STUDENTS

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### **Abstract**

*Personality development is mainly concerned with the maintenance of the health of human mind. Along with physical health to maintain a balance state of mind is very important. Today keeping up Personality development is one of the serious problems of the entire world. Due to rapid growth of industrialization and modernization, an individual often fails to maintain a balance himself and his social circumstances. "Personality development is the full and harmonious functioning of the whole Personality development" (Hadfield). Yoga is one of India's most amazing gifts to mankind. It is the science of yoga which helps to develop a person in all the aspects of life such as physical, mental, emotional, moral, spiritual development etc. This chapter summarizes the recent research evidence based on effects of yoga on Personality development of the B.Ed students. Present chapter highlights the meaning of yoga, different yogic practices, importance of yoga to maintain a healthy lifestyle, benefits of yoga. These research reviews give an idea about several areas where yoga may be beneficial for the student as well as for the people of the society. More research article is required urgently on this relevant topic.*

**Keywords:** *Yoga, Personality development, B.Ed students.*

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### **INTRODUCTION**

Due to changes in the society such as globalization, modernization, industrialization influence the human being and the present situation has become highly competitive, and B.Ed students and youth have to face this competition at every sphere of their life. So today a student is not free from stress, overload, anxiety, depression in their daily life style. A student more or less lives a light rope existence where he trying to cope up with the tremendous pressures form his family, parents or society. As a result, those B.Ed students suffer various psychological problems which create challenges for the physical health and specially for mental well-being of the B.Ed students.

The report of World Health Organization suggests that nearly half of the world's population are affected by Mental illness with an impact on their self-esteem, relationship and ability to function in everyday life.

The role of Personality development in human life is very important because it influence not only in individual's life but also it influences to maintain peace and harmony in societies as well. A healthy person is not only physically fit but also mentally healthy. If a person is physically fit, emotionally sound, well-adjusted in different circumstances of life, balanced mature Personality development, desirable social and moral values then only he is considered as mentally healthy person. In recent few times much, emphasis has been given on the physical and mental wellbeing of the B.Ed students and promote overall development of the society.

Personality development is a basic factor which is responsible for developing good physical health, intellectual development, emotional stability, social development, moral development, developing adjustment capacity, satisfaction, happiness, realization of goals, development of integrated Personality development etc.

Yoga plays a very important role in promoting mental well-being of an individual. Practicing yoga is not only popular in India but it is also popular in western countries as method for overcoming with the serious problems of life that is stress and improves the quality of life. Yoga is not an exercise only but it is a way to develop all round health-physical, social, mental, emotional and spiritual.

### **CONCEPT OF YOGA**

Thousands of years ago the concept of yoga was originated in India. It is considered as the oldest system of personal development in the world encompassing body, mind and spirit. The word yoga

comes from the root YUJ which means to join or unite. It is restraint of the activities of the mind, and is the union of the individual soul with the supreme soul. Yoga is one of the oldest known sciences of self-development, originated in ancient India. Yoga is a science which enables one to learn to unite his jeevatma (individual soul) with the paramatma (universal soul) and the final union is the fulfilment of 'yoga'. Even the techniques which promote one's progress towards realization of the supreme are called "yoga" (Chakrabarti and Sahana's 1984).

Maharishi Patanjali, was known as the father of modern concept of yoga and he was a great physician, in the 300 BC defined yoga as the complete mastery of mind and emotions. Theoretically the yoga system is based on the same tenets of Samkhya philosophy and also incorporates some of the teaching of Vedanta. There are various schools of yoga among which karma yoga (action), bhakti yoga (devotion), jnana yoga (self-study), and raja yoga (will-power) are especially well known. The eight components of the yoga system are as follows: Yamas (restraints), niyamas (observances), asana (posture), pranayama (breath control), pratyahara (sense withdrawal), dharmadharma (concentration), dhyana (meditation) and Samadhi (spiritual absorption). These are so interrelated that without one the other is irrelevant and ineffective.

The yoga and yogic practices are among one of the most popular contribution which has a significant role in the whole world. As we all know that the main aim of yoga itself is an integration of Personality development in its all aspects of life. In order to achieve such development various techniques were employed by the people. These techniques or practices enjoyed in yogic literature and handed down in different traditions also go under the name of yoga (Gharote, 1976). The yoga and yogic practices are very effective today not only to treat physical and mental disorders but also to maintain, preserve and promote a healthy happy and successful life.

Owing to the importance and usefulness of yoga and yogic practices for the people, the United Nations (UNO) has declared June 21 of each year as International Yoga Day.

### **YOGIC PRACTICES ARE CLASSIFIED UNDER THREE CATEGORIES**

**A. Asanas:** It is one of the most important systems of physical culture ever invented. It is the main yogic tool for balancing the physical body. It refers to special patterns of postures which stabilize the mind and the body through stretching. Its aim is to establish the proper rhythm in the neuromuscular tonic impulses and improve the general muscle tone.

**B. Pranayama:** It was considered as a science of breath control. It consists of series of exercises especially intended to meet the body's needs and keep it in vibrant health. The main purpose of Pranayama is to gain control over the autonomic nerve system through it influence the mental function. It provides deep relaxation to the body and mind, strengthen the nervous system as well as respiratory system, improves concentration, relieves stress, depression etc.

**C. Meditation:** It is the practice which involve the control of the mental function which starts from the initial withdrawal of the senses from external objects to the complete oblivion of the external environment. The basic principle of meditation is to develop internal awareness. Meditation improves physical, mental and emotional health of an individual.

All these yogic practices are psycho physical in nature. Some practices emphasize on the direct control of mental process and other practices are more physical or psychological.

### **IMPORTANCE OF YOGA**

Yoga is a complete science of life and it is considered the oldest system of personal development in the world encompassing body, mind and soul. The art of practicing yoga helps an individual in a multiple way.

- a. It is rightly said that, "Health is not everything, but without health everything is nothing".
- b. Exercises of yoga have a physical health benefit and it helps to bring a balance between body, mind and soul. Practicing yoga helps an individual to maintain a good physical health.

c. Along with good physical health to have a good Personality development condition is very much important. Yoga helps to develop a balanced and peaceful condition of the mind and promote and develop Personality development of an individual. Different yogic practices help to deal with various mental disorders, tensions, frustration etc.

d. It develops social health also. Social health means the ability to be happy within oneself and to be able to make others happy. Simply it is the ability to relax and experience life in all its beauty.

e. Practicing yoga help to develop positivity among the people's mind so that they can work for the benefit of the society, work to preserve their nature and environment etc.

f. It also helps in the process of intellectual development of the individual by improving the functions of the brain.

g. Yoga is very important for spiritual development of an individual. Yoga helps an individual to understand the responsibility of every individual to protect life and respect the individuality and independence of all forms of life. It develops positive thinking, tolerance, concentration,

h. principle of non-violence which ultimately leads to spiritual health development.

i. It helps the people in the process of self-realization. Yoga helps the people to realize their real nature and inner self, God. Practicing yoga helps to develop self-control, self-mastery, self-confidence, develop independent judgement, develop pure love and helps the people in realization of the divine within themselves.

j. Yoga helps an individual to manage stress. According to National Institutes of Health, scientific evidence shows that yoga supports stress management, Personality development, mindfulness, healthy eating, weight loss and quality sleep.

k. It helps in the attainment of perfect equilibrium and harmony.

#### **EFFECTIVENESS OF YOGA ON PERSONALITY DEVELOPMENT OF B.ED STUDENTS**

According to World Health Organization (WHO, 2014), Personality development is not just the absence of mental illness. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. There are many benefits of yoga such as physical benefit, mental benefits and spiritual benefits. Various research studies were already done who found that yoga helps an individual in their physical as well as Personality development.

**Beddoe A. E and Murphy S. O (2004)** studied on meditation and yoga decrease stress and foster empathy among nursing B.Ed students and results of the study shows that favorable trends were observed in a number of stress dimensions including attitude, time pressure and total stress. Findings of the study further suggested that being mindful may also decrease tendencies to take on other's negative emotions.

**Singh T and Kaur, P. (2004)** conducted a study on effect of meditation on self-confidence of student teachers in relation to gender and religion and found that both male and female and both Hindu and Sikhs (religion) student-teachers have equally benefitted from meditation when pre-self-confidence and general intelligence were statistically controlled.

**Ray U.S et al., (2007)** conducted a study on effect of yogic exercises on physical and Personality development of young fellowship course trainees and found that there was improvement in various psychological parameters like reduction in anxiety and depression and a better mental function after yogic practices.

**Sharma et al., (2010)** in his study, yoga and cognitive behavior techniques for academic stress and mental wellbeing among school B.Ed students found that certain specific Asanas, Mudras and Pranayams of yoga were combined with some specific techniques of cognitive behavior therapy to reduce the academic stress and to enhance the mental wellbeing of the selected group of school

children and the results have shown a significant relief from academic stress and significant improvement in the mental wellbeing of these children.

**Woodyard C (2011)** exploring the therapeutic effects of yoga and its ability to increase quality of life and found that yoga is superior in its favorable effects for mitigating the effects of anxiety, stress and depression.

**Menezes et al., (2015)** reviewed the emotion regulation potential of yoga practice and found that yoga produces improvements in emotional functioning in healthy subjects and people who suffer from some physical illness, particularly in psychological self-reported variables. In the conclusion summarizes that yoga may help foster healthier psychological responses, indicating its potential as an emotion regulation strategy.

**Gupta et al., (2016)** in his article, does yoga influence happiness and mental balance: a comparison between yoga practitioners and non-yoga practitioners? Shows that yoga practitioners showed higher levels of happiness and mental balance compared to non-yoga practitioners. Participants with yoga experience had high level of happiness and mental balance compare to non-yoga practitioners.

**Tiwari, G.K (2016)** discussed on yoga and Personality development an underexplored relationship and describe the real meaning of yoga and assess the role of yoga and yogic practices in achieving, preserving and promoting Personality development. Further the study concludes that yoga and yogic practices have sufficient capacity to help maintain, improve, cultivate and nurture health and happiness in the lives of individuals, societies and communities. The future research work on these related issues was emphasized urgently.

**Rajkumar, M (2017)** in his study find that Personality development, self-concept and achievement motivation level were significantly improved due to the influence of yoga and meditation therapy among school B.Ed students.

**Singh A.P (2017)** in his review paper entitled, Yoga for Personality development: opportunities and challenges summarize that yoga can empower individual's positivity to take charge of their own psychological wellness and save a large expenditure for treatment and prevention of Personality development problems. It can offer immense help in sustaining wellness, addressing concerns related with increasing suicidal tendencies, anxiety, deal with frustration and conflicts in society and to opt career choices with full awareness of one 'sown abilities and potentialities.

**DISCUSSION AND CONCLUSION:** These reviews suggest a number of areas where yoga may be beneficial, but more research work is needed to understand in detail about yoga and different yogic practices. Different research study concludes that yoga enhances happiness, deals with mental issues, helps physical, mental, moral, spiritual wellbeing of an individual, reduces psychological disorders, improves self-awareness, maintain emotional stability, it seems suitable in dealing with the type of issues faced by adolescents. Yoga is a complete science which harmonies our growth and helps in the development of all the areas such as physical health, Personality development, emotional development, promote peace and harmony etc. thus yoga is a practice of recognizing and re-educating habitual patterns of thinking by cultivating positive thoughts and values. There are different yogic practices which helps an individual to maintain balance, flexibility, strengths, focus, relaxation, awareness and self-confidence. These reviews prove that yoga and yogic practices have the ability to help maintain, improve, cultivate and nurture health and happiness in the lives of an individual, society as well as communities. Education system, psychology researchers need to play an important role to increase the level of awareness regarding different forms of yoga and its importance in one's life and bust negative stereotypes related to yoga.

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## ROLE OF SELF-CONCEPT IN INFORMATION PROCESSING APPROACH

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### Abstract

*The self and self-concept are important concepts for communication researchers. In the 1970s and 1980s, theorists recognized the role of individuals in the communication process. The self-concept was identified as a mechanism that gives regularity to interpersonal communication. Research investigated self-concept and self-esteem in public-speaking situations, ethnic identities, self and the use of technology, individual level variables such as communication apprehension, and the role of speech in the development of self-concept. This research and theorizing revealed that variables related to the self and self-concept mediate communication and information processing. The information processing approach emphasizes that children manipulate information, monitor it, and strategize about it. Central to this approach are the processes of memory and thinking. According to the information-processing approach, children develop a gradually increasing capacity for processing information, which allows them to acquire increasingly complex knowledge and skills (Halford, 2008). Self-concept plays an important role in information processing by facilitating the processing of self-relevant information, enhancing retrieval of relevant information, and influencing interpretations of information. As the more comprehensive construct, "self" includes identity, relationships, roles, personality, and the physical body, as well as notions of agency and consciousness. "Self-concept" refers to one's personal identity or the body of knowledge that an individual holds about himself or herself, including self-esteem or self-evaluation. Varying attributes and conceptions of the self can explain differing responses in social situations.*

**Key words :** Self, Self-Concept, Information Processing Approach

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### Introduction:

Concern with the self and self-concept is generally traced to the symbolic interactionists of the early 1900s. In Human nature and the social order, Cooley (1902) introduced the notion of the "looking glass self," which arises in response to the opinions of others about the self. In constructing a self, the individual imagines his or her image in the mind of another person, imagines the other's judgment of the self, and responds emotionally in a positive or negative way. George Herbert Mead, author of Mind, self, and society (1934), argued that the structure of the self is a reflection of social processes. Each interaction partner calls forth a different "self" as a result of the unique responses that are communicated by the other. An individual's self-concept is, at least in part, a function of how the individual believes that others view him or her. In Identities and interactions (1966),

### Information Processing: Self-Concept

Self-concept plays an important role in information processing by facilitating the processing of self-relevant information, enhancing retrieval of relevant information, and influencing interpretations of information. As the more comprehensive construct, "self" includes identity, relationships, roles, personality, and the physical body, as well as notions of agency and consciousness. "Self-concept" refers to one's personal identity or the body of knowledge that an individual holds about himself or herself, including self-esteem or self-evaluation. Varying attributes and conceptions of the self can explain differing responses in social situations.

### Self concept:

Self-concept is not self-esteem, although self-esteem may be a part of self-concept. Self-concept is the perception that we have of ourselves, our answer when we ask ourselves the question "Who am I?" It is knowing about one's own tendencies, thoughts, preferences and habits, hobbies, skills, and areas of weakness



Self-concept is all the behaviors, beliefs, and abilities one has about him or herself and what is understood from the responses of others. Self understanding is the ability of the individual to understand his or her own behaviors, actions, and reactions.

### **Self-Schemas and Self-Categorizations**

Two competing views of self-concept are self-schemas and self-categorizations. The concept of self-schema is rooted in schema theory; a self-schema is a collection of memories or a knowledge structure about the self that allows individuals to understand their social experiences (Markus 1977). Individuals are “schematic” with respect to a trait if they perceive the characteristic to be true of them and important to their self-definition. Thus, a self-schema is a relatively stable structure composed of characteristics that are most important to an individual’s self-definition. More recent formulations of the self-schema incorporate a working self-concept in addition to the self-schema. The working self-concept is more variable and influenced by situational constraints whereas the self-schema is a more stable and chronically accessible self-definition.

In contrast to the self-schema approach, the self-categorization approach (Turner 1987) draws a distinction between personal identity and social identity. Personal identity refers to the characteristics that define an individual when compared to other members of the same group (e.g., a woman perceives herself as competitive compared to other women). Social identity refers to the characteristics that define an individual when compared to members of a relevant “outgroup” (e.g., as a woman, she sees herself as less competitive than men). According to this formulation, self-concept is the identity (personal or social) that is salient at any given time; it is dependent on situational cues rather than simply a function of a stable knowledge structure about the self. The self-categorization approach has roots in social identity theory, which assumes that individuals strive to evaluate themselves positively. Because individuals are members of groups, they generally assign positive values to their groups in order to achieve a positive social identity. Individuals are inclined to favor their own group and, under certain conditions, discriminate against out groups.

Self-construal (Markus & Kitayama 1991) is another dimension of the self that may be implicated in information processing. Underlying the concept of self-construal is the idea that individuals have multiple selves that concern their relationships with others and their individuality. According to this approach, the cultural dimension of individualism–collectivism is manifested in the self-construals of independence and interdependence. Individuals with independent self-construals view themselves as unique and autonomous. These self-construals are associated with individualistic cultures, such as that of the US. In contrast, individuals with interdependent self-construals define themselves in terms of their reference groups. Interdependent self-construals are associated with collective cultures, such as those in Asia. Research examining this concept has provided mixed results, most likely because of problems with measuring self-construals (Levine et al. 2003).

### **The Role of Self-Esteem**

Self-esteem is one of the most highly investigated components of the self-concept. Self-esteem refers to an individual’s affective evaluation of the self as positive (high self-esteem) or negative (low self-esteem) (Baumeister et al. 2003). Self-esteem is relatively stable (a trait dimension) but fluctuates around a baseline in response to success and failure (a state dimension). Self-esteem is positively related to self-reported communication competence. Individuals with higher self-esteem are happier and more satisfied with their lives than those with low self-esteem, who experience more depression. Individuals with high self-esteem report better interpersonal relationships than individuals with low self-esteem, but objective measures do not provide evidence for their assessments. Self-esteem is positively related to academic success; it appears to be a consequence of success rather than a cause of it. Individuals seek out relational partners and contexts consistent with their self-evaluations. Psychological research reveals that high self-esteem can have negative consequences, such as a



greater susceptibility to ego threats. Individuals with high self-esteem become less likeable when threatened, seemingly because they become more independent. High self-esteem is also associated with higher levels of prejudice and derogation of out-group members. In response to ego-threats, individuals with low self-esteem become more likeable, perhaps because they become more interdependent following a threat.

Research on self-esteem is complicated by the diversity of individuals with high self-esteem. The category includes narcissists and individuals with defensive self-esteem as well as those who genuinely accept their shortcomings as well as their strengths. In addition, the effects of self-esteem on ego threats may depend on the bases for self-esteem. One approach to the bases of self-esteem suggests that individuals with contingent self-esteem ground their appraisals on meeting external expectations or standards; their self-esteem is fragile and associated with conflict and anxiety. Noncontingent self-esteem reflects unconditional self-acceptance and is associated with intrinsic motivation and effective coping following failure.

Another approach to the bases of self-esteem suggests that individuals base their appraisals on specific domains or contingencies of self-worth (e.g., on academic competence or God's love), and that these contingencies vary from internal (e.g., virtue) to external (e.g., approval from others) (Crocker et al. 2006). Individuals are motivated to validate themselves in the domains or contingencies of their self-worth, but the motivation may also be a source of stress and actually undermine their success. Communication research examining self-esteem has not incorporated concerns with negative consequences or explored the complex nature of self-esteem.

### **Information processing approach**

Information processing approach is an approach to cognitive development studies that aims to explain how information is encoded into memory. It is based on the idea that humans do not merely respond to stimuli from the environment.

The information processing approach emphasizes that children manipulate information, monitor it, and strategize about it. Central to this approach are the processes of memory and thinking. According to the information-processing approach, children develop a gradually increasing capacity for processing information, which allows them to acquire increasingly complex knowledge and skills (Halford, 2008).

Behaviorism and its associative model of learning was a dominant force in psychology until the 1950s and 1960s, when many psychologists began to acknowledge that they could not explain children's learning without referring to mental processes such as memory and thinking. The term *cognitive psychology* became a label for approaches that sought to explain behavior by examining mental processes. Although a number of factors stimulated the growth of cognitive psychology, none was more important than the development of computers. The first modern computer, developed by John von Neumann in the late 1940s, showed that inanimate machines could perform logical operations. This suggested that some mental operations might be carried out by computers, possibly telling us something about the way human cognition works. Cognitive psychologists often draw analogies to computers to help explain the relation between cognition and the brain (Robinson-Riegler & Robinson-Riegler, 2008). The physical brain is compared with the computers hardware, cognition with its software. Although computers and software aren't perfect analogies for brains and cognitive activities, nonetheless, the comparison contributed to our thinking about the child's mind as an active Information-processing system.

### **Cognitive Resources: Capacity and Speed of Processing Information**

As children grow and mature, and as they experience the world, their information-processing abilities increase. These changes are likely influenced by increases in both capacity and speed of

processing (Frye, 2004). These two characteristics are often referred to as *cognitive resources*, which are proposed to have an important influence on memory and problem solving.

Both biology and experience contribute to growth in cognitive resources. Think about how much faster you can process information in your native language than in a second language.

As children grow and mature, important biological developments occur both in brain structures, such as changes in the frontal lobes, and at the level of neurons, such as the blooming and pruning of connections between neurons that produces fewer but stronger connections (Kuhn, 2008; Nelson, 2009). Also, as we discussed in Chapter 2, myelination (the process that covers the axon with a myelin sheath) increases the speed of electrical impulses in the brain. Myelination continues through childhood and adolescence (Spear, 2007).

Modern information-processing psychologists argue that an increase in capacity also improves processing of information (Mayer, 2008). For example, as children's information-processing capacity increases, they likely can hold in mind several dimensions of a topic or problem simultaneously, whereas younger children are more prone to focus on only one dimension. Adolescents can discuss how the varied experiences of the Founding Fathers influenced the Declaration of Independence and Constitution. Elementary-age children are more likely to focus on simple facts about the founders' lives. What is the role of processing speed? How fast children process information often influences what they can do with that information. If an adolescent is trying to add up mentally the cost of items he is buying at the grocery store, he needs to be able to compute the sum before he has forgotten the price of the individual items. Children's speed in processing information is linked with their competence in thinking (Bjorklund, 2005). For example, how fast children can articulate a series of words affects how many words they can store and remember. Generally, fast processing is linked with good performance on cognitive tasks. However, some compensation for slower processing speed can be achieved through effective strategies.

### **Influence of the Self on Information Processing**

The self and self-concept influence information processing in several specific ways. First, information that is relevant to the self-concept is retrieved more rapidly and successfully than other information. Second, the self-concept is used as a frame in person perception. Traits that are important to the self are used in judging others. Third, individuals actively seek situations and relational partners who provide feedback consistent with their self-concepts. Fourth, individuals interpret information in a way that is consistent with their self-concepts and personalities.

Individuals are motivated to maintain their self-concepts because the self is central to their understanding of the world. They do so using a combination of behaviors and cognitions called self-verification processes (Swann 2005). Research on self-verification reveals that social actors maintain their sense of self by seeking out interaction partners who perceive them the way they perceive themselves. For example, individuals with negative self-views prefer partners who give them negative feedback. When their interaction partners do not confirm their sense of self, individuals engage in behaviors designed to shape the perceptions of the partners so that those perceptions will be consistent with the social actor's own view of self. Finally, if social actors are unsuccessful at conveying their self-concepts to their interaction partners, they may withdraw from the situation. College students, for example, are more likely to leave roommates who do not validate their self-conceptions.

### **Conclusion:**

The information-processing (IP) approach to perception and cognition arose as a reaction to behaviorism. This reaction mainly concerned the nature of explanation in scientific psychology. The "standard" account of behavior, phrased in strictly external terms, was replaced by a "realist" account, phrased in terms of internal entities and processes. An analysis of the theoretical language used in IP psychology shows an undisciplined state of affairs. A great number of languages is simultaneously in

use; no level of analysis is unambiguously referred to; and basic concepts such as information and processing remain largely undefined. Nevertheless, over the past 25 years the IP approach has developed into a disciplined and sophisticated experimental science. A look at actual practice hints at the basic reason for its success. The approach is not so much concerned with absolute or intrinsic properties of the human information processor, but with what can be called its relative or differential properties. A further analysis of this feature of the IP approach in terms of the formal language of a logical system makes explicit the basis of its success. The IP approach can be regarded as developing an empirical difference calculus on an unspecified class of objects, phrased in terms of a simulated “theory-neutral” observation language, and with operators that are structurally analogous to logical operators. This reinterpretation of what the IP approach is about brings a number of advantages. It strengthens its position as an independent science, clarifies its relation with other approaches within psychology and other sciences within the cognitive science group, and makes it independent of philosophical subtleties. Whereas much research on self-concept focuses on the content of the self-definition (e.g., as outgoing or a member of a particular group), the concept of self-complexity is concerned with the structure of the self-concept. Self-complexity refers to the extensiveness of the self-concept, conceptualized as the number of unique characteristics used to define the self. Individuals who are more sensitive to feedback are higher in self-complexity (Edwards 1990), and most groups of teenagers who watch high levels of television are lower in self-complexity (Harrison 2006). Self-complexity is implicated in information processing by serving as a buffer against stressful events (Linville 1987).

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## ASSESSING THE IMPACT OF LEARNING STYLE ON SCIENCE ACHIEVEMENT OF 8<sup>TH</sup> STANDARD PUPILS: A PILOT STUDY FOR DEVELOPING CONSTRUCTIVISTS LEARNING DESIGN

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### Abstract

*The investigators objective is to study impact learning styles on achievement of science of 8<sup>th</sup> standard pupils. Learning takes place in different intervals at each and every interval the pupils learn in diverse techniques. The possessed learning style plays a dynamic role in deciding their level of achievement in science. This study employed two instruments for research in gathering the information regarding the characteristics of learners. 70 pupils of 8<sup>th</sup> standard served as a sample for the study. Purposive sampling method was used in selecting the sample for study from the existing population. After administering the VAK questionnaire the results of the survey revealed that 50 or 71% of the respondents are kinesthetic learners, 15 or 22% are audio learners, 5 or 7% are visual learners. The second instrument administered to student's respondents was Honey and Mumford Learning Style Questionnaire, it was revealed that 30 or 43% are Pragmatists learners, 20 or 29% are Theorist Learners, 12 or 17% are Activist learners and 8 or 11% are Reflector learners. Results indicates that there is significant difference between the achievement of learners when grouped based on VAK learning modalities. From the finding the investigator recommended that teachers should assess the learning styles and modalities of pupils, to develop instructional materials that best suit the learning needs of the learners.*

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**Keywords:** Learning styles, Science achievement, Constructivists Learning Design.

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### Introduction:

In school, learning is the major objective of the pupil and it takes place in the individual's mind. During the process of acquisition of knowledge, skills the students face a lot many problems to understand the concept because of the teaching style of the teacher. The teacher should know the learning style of the students then only she can prepare a good instructional package to make science learning effective. So understanding of learning style plays a very important role in teaching learning process.

### 1.Review of related literature:

By knowing and accepting the learning styles of pupils, teachers can use strategies better suited for the pupils. This improves the quickness and excellence of learning. Various individuals have discussed that style is important in teaching. Teaching style represents those permanent personal qualities and behaviours that appear when teachers conduct lessons. It is something that defines guides and directs the instructional processes, and that has effects on students and their ability to learn (Amin & Rajaei, 2013).

The struggle of teachers in all subjects of education is to confirm that students not only understand the concepts and skills that they are taught, but also that they can analyse and apply those learning into diverse circumstances that arise in their lives. Education is a continually changing discipline, new researches are constantly considering new methods to improve student gains in the classroom and increase overall knowledge retention. Pupils will be successful in school and in life, when teachers repetitively revise their teaching strategies based on new methods to increase their academic achievements (Lamina, 2020).

### 2.Learning Styles:

Learning style is a person's ideal type of acquiring knowledge. It is a person's distinctive strategy to learning, based on his power, limitation, and liking. Learning styles referred to individual's natural,

habitual, and preferred way of acquiring or absorbing, processing, retaining, and retrieving new information and skills (Felder and Henriques, 1995; Reid, 1995). In the present study, learning style is defined as a set of feature, actions, and approach that facilitate learning for an individual in a given situation.

### 3.Objectives

- To find out significant difference in the achievement of learners based on O'Brien's VAK learning style modalities.
- To find our significant difference in the achievement of learners based on Honey and Mumford Learning Style Instrument

### 4. Hypotheses

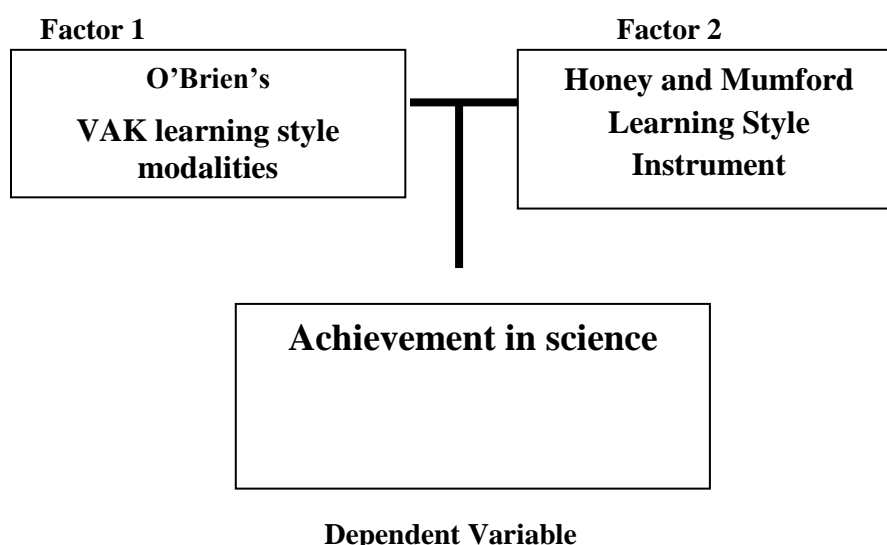
- There is no significant difference in the achievement of learners based on O'Brien's VAK learning style modalities.
- There is no significant difference in the achievement of learners based on Honey and Mumford Learning Style Instrument

### 5.Method Adopted in the Present Study

The study is exploratory. The descriptive survey method was adopted for the present study using correlational-comparative research design. The survey is a procedure in which data were systematically collected from a population through some direct questionnaires. The study is expected to provide information to guide any planned interference to control the learner characteristics to improve the achievement upon finding the variables studied.

#### Conceptual Paradigm

The conceptual Paradigm was adapted involves two variables ,the independent and dependent variable Factor 1 and factor 2 are independent variable and achievement in science of the pupils is dependent variable. The dependent variable is a variable that is affected by the independent variable or criterion variable.



**Figure 1 The Conceptual Paradigm of the study**

### 6.Tools Used in the Present Study

The investigator used the following tools for collecting data that were very useful for fulfilling various objectives of the study.

#### Honey and Mumford Learning Style Instrument

Instrument is developed by Honey and Mumford in the 1986.it as a 80 items that was used to evaluate the learning style of the pupils. The pupil's respondent to the instrument by ticking the right mark for the statement which they agree and cross mark if they disagree. Be sure mark each item with a tick or cross. Score of one point for each item you tick and no scores for crossed items. According to Honey

and Mumford learning style instrument there are four learning style that defines a based on how they perform in school and the way they perceived learning styles as Activist learner, Reflector learner, Theorist learner, Pragmatist learner.

### VAK Learning Modalities

The VAK is used to describe three modalities of students learning that were described in 1985 by O'Brien's. These learning styles are identified as visual, auditory and kinesthetic .The simplified VAK learning style was used in this study; it is composed of 30 items with the three categories ranging from Never applies to me (1), Sometimes applies to me (2), Often applies to me (3).

### 7. The population of the Study

The population of the study consists of eight standard students of SDM English Medium School Ujire. The investigator has used a Purposive sampling technique in selecting the participants for the study from the present school. 70 students are selected for the study. The study was conducted in the first quarter of the school year. The attributes of the participants in the table below

**Table 1: Demographic attributes of Participants**

Section	Frequency
Section A	35
Section B	35
Sex	
Male	40
Female	30

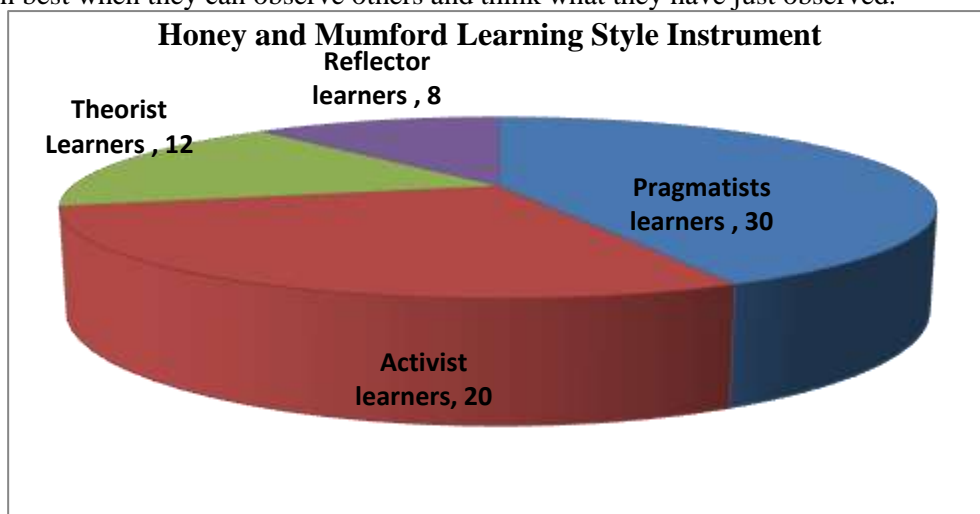
### Data Analysis

The gathered data were grouped, tabled and carefully organised and interpreted by the investigator for drawing the conclusion. The raw data gathered were statistically analysed using MS EXCEL software. Descriptive and inferential statistics were used to analyse the data for interpretation. The Analysis of variance was used to compare the achievement in science of the student respondent across VAK learning modalities and Honey and Mumford Learning Style Instrument. All the test of relationship and differences were evaluated at 0.05 level of confidence.

### 8. Findings and Discussion

#### Learning style of the respondents Based on the Honey and Mumford Learning Style Instrument

After administering the Honey and Mumford Learning Style Instrument to the two different sections of 8<sup>th</sup> standard it was revealed that 30 or 43% are Pragmatists learners are the students who likely to take as new idea they have learned and immediately try to put it into practice, meanwhile 20 or 29% are Activist learners prefer to tackle problems using brain storming sessions, 12 or 17% are Theorist Learners prefer to learn best by understanding the theory and 8 or 11% are Reflector learners are those who learn best when they can observe others and think what they have just observed.

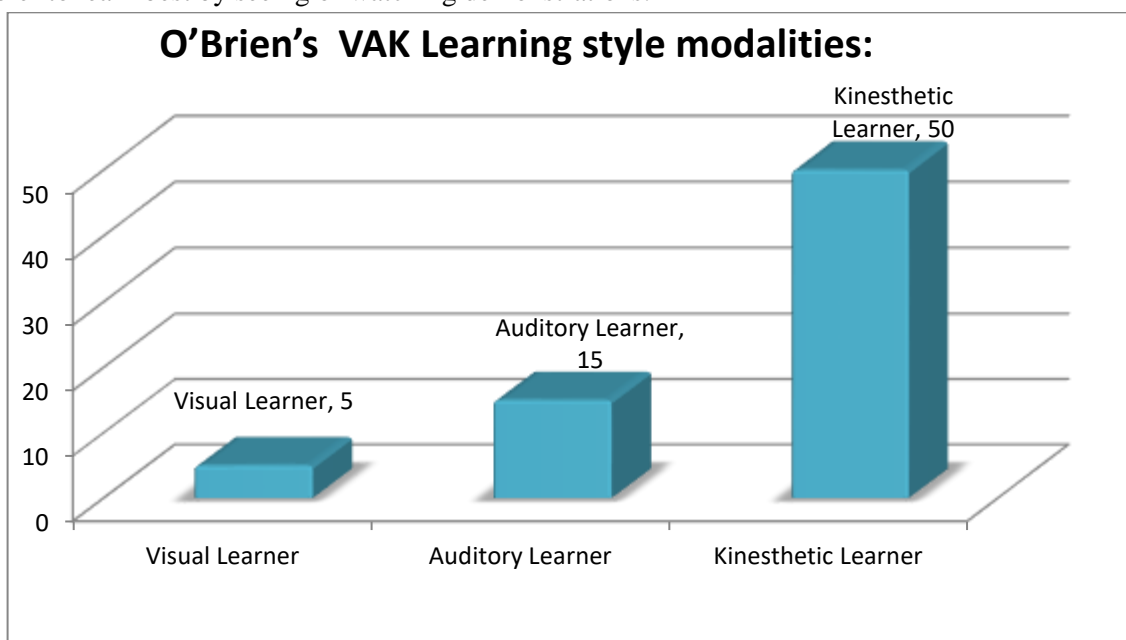


**Figure 2. The Learning Style of Respondents**



### Learning style of the respondents based on the O'Brien's VAK learning style modalities:

After administering the O'Brien's VAK Learning Style modalities to the two different sections of 8<sup>th</sup> standard it was revealed that 50 or 71% of the respondents are kinesthetic learners are the students who likely Learn by doing and direct involvement and Tries things out, touches, feels or manipulates., meanwhile 15 or 22% are audio learners prefer to Enjoys dialogue and plays; avoids lengthy descriptions and also through verbal instructions from self or others., 5 or 7% are visual learners prefer to learn best by seeing or watching demonstrations.



**Figure 3. The Distribution of VAK Learning Modalities of the Respondent Learners' Achievement with Respect to Learning Style and Learning Modalities**

**Table 2 Final Score in science and with respect to Learning Style Instrument**

Learning Style	N	Achievement		Mean	Standard Deviation
		Minimum	Maximum		
Activists	20	92	95	93.5	1.5
Pragmatist	30	90	96	93	3
Theorists	12	93	97	95	2
Reflector	8	95	95	95	0
<b>Total</b>	<b>70</b>	<b>93</b>	<b>96</b>	<b>94.13</b>	<b>1.625</b>

Table 2 represents the frequency counts of the students based on the Honey and Mumford Learning Style Instrument, the highest and lowest final scores in science and descriptive statistics. As presented in the table the highest score in the class was obtained by theorists student and lowest score obtained was from a Pragmatist student. The overall mean score of the students is 94.13 and the standard deviation 1.63

**Table 3 Final Score in science and with respect to VAK learning modalities**

Learning Style	N	Achievement		Mean	Standard Deviation
		Minimum	Maximum		
<b>Visual</b>	<b>5</b>	<b>93</b>	<b>96</b>	<b>94.5</b>	<b>1.5</b>
<b>Auditory</b>	<b>15</b>	<b>92</b>	<b>97</b>	<b>94.5</b>	<b>2.5</b>
<b>Kinesthetic</b>	<b>50</b>	<b>90</b>	<b>95</b>	<b>92.5</b>	<b>2.5</b>
<b>Total</b>	<b>70</b>	<b>92</b>	<b>96</b>	<b>94</b>	<b>2.16</b>

**Table 3 represents the frequency counts of the students based on the VAK learning modalities, the highest and lowest final scores in science and descriptive statistics. As presented in the table the highest score in the class was obtained by an auditory student and lowest score obtained was from a kinesthetic student. The overall mean score of the students is 94 and the standard deviation 2.16.**

**Table 4 One Way Analysis of Variance (ANOVA) of Students' Achievement with respect to Learning Style Instrument**

Source of variation	DF	SS	MS	F statistic	P-value
Between Groups	1	179.2	179.2	2.242	0.138
Within the groups	68	5435.08	79.922		
Total	69	5614.28	81.36		

**Table 4** shows the summary of statistics for the one-way analysis of variance to determine if there is significant difference across the learning style of students and their achievement in standard 8 science students. As shown in table, the computed f-value is 2.242, which is more than the F-critical of  $\alpha = 0.05$ . This clearly indicates that there is a significant difference between the achievements of learners when grouped based on the Honey and Mumford Learning Style Instrument. This implies that the learning style of students have a no effect on their achievement.

**Table 5 One Way Analysis of Variance (ANOVA) of Students' Achievement with respect to VAK learning modalities**

Source of variation	DF	SS	MS	F statistic	P-value
Between Groups	1	36.98	36.98	3.748	0.056
Within the groups	68	740.002	9.866		
Total	69	776.98	10.22		

**Table 5** shows the summary of statistics for the one-way analysis of variance to determine if there is significant difference across the learning style of students and their achievement in standard 8 science students. As shown in table, the computed f-value is 3.74, which is more than the F-critical of  $\alpha = 0.05$ . This clearly indicates that there is a significant difference between the achievements of learners when grouped based on the O'Brien's VAK Learning Style modalities. This implies that the learning style of students have an effect on their achievement.

### Conclusion:

Based on the findings the corresponding conclusion were drawn

1. There is a significant difference between the performances of the pupil respondents when grouped according to their learning style.
2. Honey and Mumford's Learning Style Instrument revealed that there is no effect on the student's achievement in science because they did not perform significantly different among each other as revealed by the test conducted.
3. The learning modalities of Pupil revealed by the VAK questionnaire has a effect on the student's achievement in science because they did perform significantly different among each other as revealed by the test conducted.

### Educational Implications:

Teachers with the aim to facilitate kinesthetic pupils can draw on successive strategies

- Focus on practical work rather than theory.

- Illustrate information by means of diagrams and video.
- Arrange activities such as dance, athletics, drawing and drafting.
- Inculcate role playing drill work, field trips and other physical activities.

**Recommendations:**

1. Teachers should evaluate the learning style and modalities of their pupils to be able to create a teaching learning plan that best suit the need of learners.
2. Teacher must consider learning acquisition of pupils and give instructions and activities and learning materials to pupils must be different.
3. Teachers should know their pupils in order to plan how to teach the pupils or the different ways to present the subject in interesting manner.

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## ROLE OF PHYSICAL FITNESS IN AVOIDING SPORTS INJURIES

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### Abstract

*Physical fitness can be defined as a set of attributes that allows the ability to perform physical activity. The attributes or components of fitness were identified by testing large numbers of individuals on physical performance tests and using statistical techniques to find tests that seem to share common performance requirements. These studies identified strength, muscular endurance, cardiorespiratory endurance, coordination, balance, flexibility, and body composition as important fitness components. Military studies have clearly shown that individuals with lower levels of cardiorespiratory endurance or muscular endurance are more likely to be injured and that improving fitness lowers injury risk. Those who are more fit perform activity at a lower percentage of their maximal capability and so can perform the task for a longer period of time, fatigue less rapidly, recover faster, and have greater reserve capacity for subsequent tasks. Fatigue alters movement patterns, putting stress on parts of the body unaccustomed to it, possibly increasing the likelihood of injury. Soldiers should develop and maintain high levels of physical fitness, not only for optimal performance of occupational tasks but also to reduce injury risk.*

**Keywords:** *Sports, Injuries, Physical Fitness & Exercise, Science.*

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### Introduction

Today, there is a growing emphasis on looking good, feeling good and living longer, increasingly, scientific evidence tells us that one of the keys to achieving these ideals is fitness and exercises.

Physical Fitness is important that all athletes be in the appropriate physical condition prior to participating in their particular sport. Being physically ready for sport reduces the chance of being injured.

General fitness should be achieved before participating in most sports. For more specificity, physical fitness.

➤ We have become a mechanically mobile society, relying on machines rather than muscles to get around. In addition, we have become a nation of observers with more people (including children) spending their problem leisure time pursuing just that – leisure

Consequently, statistics show that obesity and over weight, the problems that come with high blood pressure, diabetes, cardiac arrest, injuries, etc. are on the rise.

The decision to carry out a physical fitness program cannot be taken lightly. It requires a lifelong commitment of time and effort. Exercise must become one of those things that you do without question, like bathing and brushing your teeth.

➤ We are convinced of the benefits of fitness and the risks of unfitness (sports injuries), you will not succeed. It has been realized that fitness adds not only years to one's life, but life to one's years.

➤ In the following section you will find the basic information you need to begin and maintain a personal physical fitness programme. These guidelines are intended for the Athletes. It tells you what your goals should be a how often, how long and how hard you must exercise to avoid sports injuries

**Meaning:** "The ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well-being."

### Components of Physical Fitness:

▶ **Endurance** – the ability to deliver oxygen and nutrients to tissues, and to remove wastes, over sustained periods of time. Long runs and swims are among the methods employed in measuring this component.

► **Strength** – the ability of a muscle to exert force for a brief period of time. Upper-body strength, for example, can be measured by various weight-lifting exercises.

► **Speed** – the quickness of movement of limb, whether this is the leg of a runner or the arm of the shot putter.

► **Flexibility** – the ability to move joints and use muscles through their full range of motion. The sit and reach test is a good measure of flexibility of the lower back and backs of the upper legs

► **Agility**: is the ability to be quick and graceful. You might have agility on the basketball court or in the courtroom, or even with your gaming remote. The noun agility can be used for both mental and physical skills in speed and grace.

### **Benefits of Physical Fitness:**

► Exercise or fitness is not just for Olympic hopefuls or supermodels. If you are committed, exercise in combination with a sensible diet can help to provide an overall sense of well-being and can even help to prevent chronic illness, disability and premature death. Some of the benefits of increased physical activity or physical fitness are:

#### **Improved Health:**

- Increased efficiency of heart and lungs
- Reduced cholesterol levels
- Increased muscle strength
- Reduced blood pressure
- Reduced risk of major illnesses such as diabetes and heart disease
- Weight loss

#### **Increased Stamina:**

- Increased productivity
- Increased physical capabilities
- Improved immunity to minor illnesses.

#### **Improved Sense of Well-being:**

- More energy
- Less stress
- Improved quality of sleep
- Improved ability to cope with stress
- Increased mental sharpness

#### **Improved Appearance**

- Weight loss
- Toned muscles
- Improved posture

#### **Enhanced Social Life**

- Improved Self-image
- Increased opportunities to make new friends
- Increased opportunities to share an activity with friends or family members
- Sports injuries not only play a large role in individuals that play sports, but in individuals that are non-athletic as well. The ability for a physical injury to alter the quality of life can be devastating to the individual and effect their physical and mental capabilities and outlook.
- It is important that each individual "listen to" and be "in tune" with their body and understand the difference between "good" pain and "bad" pain. In other words, there can be pain when performing a physical activity that is to be expected and there can be pain that is not normal and is a sign that an injury is occurring or has occurred.

➤Most Common Sports Injuries: Abrasion, Achilles Tendon Rupture, Sprains, Blisters, Clavicle fracture, Muscle Soreness, Knee Pain, Muscular Cramps, Tennis Elbow and Other.

**Conclusion:**

Scientific evidences tell us that one of the keys to achieving looking good, feeling good and living longer is fitness and exercises. All athletes should be inculcating endurance, strength, speed, and flexibility according their sports activities. They should understand the difference between good pain and bad pain. Players who are physically fit have lower risk of injury than those who are not. Researches show that over active men and women have a higher injury rate during sports. While inactive adults report more injuries during non-sport and non-leisure time. The dose-injury relation for specific activities is unknown and likely differs by activity and individual anatomic and behavioural characteristics. Hence, it is important for people to be engaged in physical activity safely

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## IMPORTANCE OF YOGA IN EDUCATION

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### Abstract

*Yoga is a holistic system of varied mind-body practices that can be used to improve mental and physical health and it has been utilized in a variety of contexts and situations. Educators and schools are looking to include yoga as a cost-effective, evidence-based component of urgently needed wellness programs for their students. The aim of this paper is to explain the possibilities of applying yoga in education. Yoga involves various techniques with the aim of achieving psychosocial balance. We are witnessing an increase in stress and emotional disorders in children; children are becoming more sedentary, and are preoccupied with the multitude of stimuli that come constantly via cell phone, computer, and television. By examining a series of research effects of yoga, we can conclude that yoga has proved to be effective in treating a variety of conditions and diseases. Practicing yoga can help reduce stress, anxiety symptoms, and depression. It examines the possibilities of introducing yoga as part of the school curriculum for healthy children and children with disabilities. Results have so far shown possible contributions of yoga in schools in the form of attention improvement, self-regulation and reduction of tension.*

**Keywords:** yoga, education, schools, health.

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## INTRODUCTION

Education is increasingly becoming a challenge in the world we live in. Surrounded by mobile phones and other forms of modern technology that bring something new every day, accustomed to speed, frequent activity changes and bombarded with stimuli, children come to schools where the most common method is listening and transcribing from the blackboard while sitting at a desk for six hours.

Excessive demands and too high expectations that are often put on children result in increasing stress and anxiety. Difficulties in meeting teachers and parents' expectations are often a cause of stress in children. At the same time, those same parents and teachers are often under stress themselves. We teach children, for example, about the reproduction of annelids, while no one teaches them how to breathe properly and thus reduce stress. There is an urgent need for an education reform that would create a more conducive climate for learning in school and result in better outcomes. The aim of this paper is to describe the effects of practicing yoga on health through a review of research, and to analyze the applying possibilities and role of yoga in education for healthy students, but also for students with disabilities.

Yoga in modern education system in order to make all-round development relating to body, mind and spirit symphonically and thereby prevent the erosion of human values. The integration of Yoga education in the present system of education can endorse human values to reform attitude and behavior, relieve from stress and strain, build up healthy life-style, shape high moral character and develop refined personality of the students so as to make them a complete well-being.

## 2. WHAT IS YOGA?

The word "yoga" comes from Sanskrit and has the original meaning of "unite, connect" (Paramhans Swami Maheshwarananda, 2006). In its original meaning, the word "yoga" means "an all-pervasive, eternally awake consciousness that keeps the entire universe in balance" (Paramhans Swami Maheshwarananda, 2006, 11).

Yoga refers to the goal, unity and harmony with oneself and others, but also to the methods by which that goal is achieved. The first written sources date, according to some sources, to around 3000 BC, but according to the scriptures, it can be assumed that the knowledge of yoga originates from much earlier, from the time when it was transmitted by the word of mouth (Kumar, 2008).

One of the fundamental works of the philosophy of yoga is “Yoga Sutra of Patanjali”. Patanjali shaped the eight degrees of yoga: yama, niyama, asana, pranayama, pratyahara, dharana, dhyana, samadhi (Paramhans Swami Maheshwarananda, 2012). Yama and niyama relate to learning self-control and discipline, pranayama is a breathing exercise, pratyahara is a sensory withdrawal exercise, dharana are concentration exercises, dhyana is meditation, and samadhi is a state of unity consciousness. In accordance with Patanjali’s “Yoga Sutras”, it is still practiced all over the world today. In a broader sense, yoga is a lifestyle that involves practicing awareness and achieving harmony using a variety of methods. Meditation is a part of yoga. According to Patanjali, dharana, a concentration exercise, precedes dhyana, a meditative state. Meditation can be described as the intentional regulation of attention to the present moment. It encompasses concentration, relaxation, altered states of consciousness, interruption of thought, and achieving the attitude of the self-observer (Paramhans Swami Maheshwarananda, 2012).

### **3. OBJECTIVES OF YOGA EDUCATION**

The main objectives of Yoga education are as follows:

1. To enable the student to have good health.
2. To practice mental hygiene.
3. To possess emotional stability.
4. To integrate moral values.
5. To attain higher level of consciousness.

Yoga education could help to equip oneself with basic knowledge about one’s personality, to learn to handle oneself well in all life situations, to learn techniques of gaining good health, to develop a discriminative mind capable of knowing the real from the unreal and to face the dualities of life with equanimity. Yoga education can enhance all the activities of the students, be it academic or sport or social. Yoga techniques provide improved attention in studies, better stamina and co-ordination for sports and a heightened awareness and balanced attitude for social activity.

### **4. TYPES OF YOGA**

The aim of Yoga is the attainment of the physical, mental and spiritual health. Patanjali has recommended eight stages of Yoga discipline. They are:

Yamas- (internal purification through moral training preparatory to Yoga)

- Niyamas- (cleanliness, contentment, mortification, study and worship of God)
- Asanas- Physical postures or exercises
- Pranayama- (Control of vital energy/ Breath control)
- Pratyahara- (Withdrawal of the senses/ making the mind introspective)
- Dharana- (Concentration of the mind)
- Dhyana- Meditation
- Samadhi- Attainment of the super conscious state

### **5. IMPORTANCE OF YOGA EDUCATION**

The importance of Yoga in Education is too enormous to ignore. Today’s education is mostly information concerned with and it needs to qualitative changes in physical, mental, spiritual development of the students in a balanced way. The education with Yoga would improve mental faculties, develop positive health, inculcate higher values, provide peace and tranquility and build up moral character which can lead us to attain highest goal of life as well as education. The main benefits of Yoga in Education are discussed below:

1. Physical health
2. Balancing both hemisphere of the brain
3. Develop values

4. Healthy emotional development
5. Academic performance 6. Sharpen memory
7. Healthy living
8. Develop cognitive and affective domain 9. Improve senses
10. Integrated personality development.

## **6. THE IMPACT OF YOGA ON PSYCHO-PHYSICAL HEALTH**

A review of available research indicates that practicing yoga can improve the general physical condition, posture, strengthen immunity, and reduce and eliminate certain symptoms. Yoga can be an anti-stress technique and help reduce anxiety and depression, as well as affect psychological well-being which will now be briefly documented by available research.

By practicing asanas and pranayama, internal organs are being regenerated, the epidermal, digestive, and cardiovascular systems are being cleansed of toxins and wastes, the nervous and endocrine systems are being balanced, and brain cells nourished (Khalsa, 2007).

The potential effect of yoga on reducing stress, anxiety and depression, which are increasingly present in adults, but also in children, has been studied in several papers. Some research included self-assessments as a measure of emotional states, and some included physiological indicators.

## **7. YOGA AND COGNITIVE FUNCTIONS**

Many studies confirm the effects of yoga practice on cognitive functions in both adults and children. Improvements in attention, perception, and memory have been confirmed, and some research indicates the possibility of influencing the speed of problem-solving and executive functions. One of the first studies on the effects of yoga on attention in children was in the 1970s (Hopkins, Hopkins, 1979). The study involved 34 children aged 6 to 11. The children were divided into groups; one group exercised for 15 minutes, the other group had psychomotor exercises during that time. Concentration was measured through the score of one concentration game. Both groups significantly improved concentration. The disadvantage of the research is that there was no control group that did not do anything during that time.

## **8. YOGA AND SELF-REGULATION**

The effects of yoga on executive functions, such as planning, learning regulation, and self-monitoring, which play a very important role in the learning process, were also studied. In a study by Manjunatha and Telles (2004), there was an improvement in planning, task-solving speed, and memory in a group of children who practiced yoga, while there was no improvement in a group of children who engaged in other physical activity.

Ramadoss and Bose (2010) found significant improvements in self-control in a group of 190 high school students who practiced yoga, compared to the control group. Similar results were obtained by Khalsa et al. (2012) and Noggle et al. (2012); groups of high school students who practiced yoga were significantly better at controlling anger.

## **9. YOGA IN SCHOOLS.**

Based on the review of research on the effects of yoga so far, it can be assumed that yoga could be very much welcome as part of the school curriculum helping to achieve the planned outcomes. Yoga is already a part of the curriculum in nine thousand US schools. More than 5,400 yoga instructors have been trained for conducting yoga programmes in schools (Khalsa, Butzer, 2016).

**10. CONCLUSION:** Yoga offers new learning possibilities to a wider group of students than traditional sports or fitness curriculum, making it a valuable addition to any educational program. Additionally, adding yoga to a school's curriculum will help provide a quality physical education program as modification of traditional physical education yoga in sports as important as other think it

helps us in different ways and different levels in a sports men life. Yoga can play a key role in cultivating mind control and concentration which helps a sportsperson to perform at their game. It offers children and adults an opportunity to experience success in physical activity, which can help build a foundation of strong of life. However, curriculum specialists, teachers, trainers and students should know and analyze seriously the real challenges of yoga education in classroom settings and real life as well.

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## DIGITAL EDUCATION IN PROMOTING DIGITAL CITIZENSHIP AND ETHICAL VALUES

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### *Abstract*

*Digital education is essential for preparing students to thrive in the digital age. By integrating digital literacy, critical thinking, and ethical considerations into the curriculum, digital education can help students to develop the skills and knowledge they need to navigate the digital world responsibly and ethically. Here are some specific ways in which digital education can promote digital citizenship and ethical values are discussed. As a teacher we promote digital citizenship and ethical values in the classroom by providing various activities. By following these activities students become responsible, ethical, and engaged digital citizen.*

**Technical Terms:** Digital

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### INTRODUCTION

Digital education refers to the use of digital technologies and resources to enhance teaching and learning processes. It encompasses various aspects, including online learning platforms, educational apps, digital content, and interactive tools. Digital education plays a crucial role in promoting digital citizenship and ethical values among students. Internet have been evolved in the early 1990s, and since then the digital world has become increasingly integrated in our daily lives. Whether they're browsing the web on a computer or playing games on their parent's smartphone, many children use technology on a regular basis. That's why teaching digital ethics is important to educate students how to use the Internet responsibly. A broad definition of digital citizenship is the ability to use technology and the Internet in an appropriate manner.

Digital citizenship is the responsible and ethical use of digital technologies and the internet. It is an essential skill for all citizens in the 21st century, as technology plays an increasingly important role in our lives. Digital citizenship skills give students the right tools to engage with the digital world in ways that promote healthy online communities

### IMPORTANCE

The importance of digital education lies in its ability to prepare students for the digital age and equip them with the necessary skills to thrive in a technology-driven society. It enables students to develop digital literacy, critical thinking, problem-solving, collaboration, and creativity. Digital education also fosters global awareness, cultural understanding, and empathy by connecting students with diverse perspectives and experiences. Digital education helps students to stay safe online. Students learn about the dangers of the internet, such as cyberbullying, online predators, and malware. They also learn how to protect their privacy and security online. Digital citizenship education helps students to be responsible digital citizens. Students learn how to use technology in a way that is respectful of others. They also learn about the importance of copyright and intellectual property. Digital citizenship education helps students to be effective digital citizens. Students learn how to evaluate information online. They also learn how to create and communicate their own ideas online. Students from under-resourced or marginalized communities often have fewer digital experiences in comparison to their peers. They do not have the same level of access to technology at home. Teaching digital literacy and other citizenship skills can also help bridge digital equity gaps (or the "digital divide") between students.

### NEEDS

The rapid advancement of technology has created a need for digital education to keep pace with the changing demands of the digital world. Students need to acquire digital skills and competencies to succeed in their personal and professional lives. Additionally, the COVID-19

pandemic has accelerated the adoption of online learning and highlighted the importance of digital education in ensuring continuity of education. The needs of digital citizenship education vary depending on the age and stage of development of the students. However, there are some common needs that all students have. Students need to learn about the basic skills of using technology, such as how to use a computer, how to access the internet, and how to use different software applications. Students need to learn about the dangers of the internet and how to stay safe online. Students need to learn about the rights and responsibilities of digital citizens. Students need to learn how to use technology in a responsible and ethical way.

## **TRENDS**

Trends in digital education include:

1. Online Learning: The shift towards online learning platforms and virtual classrooms has become more prevalent, offering flexibility and accessibility to learners.
2. Personalized Learning: Digital education allows for personalized learning experiences tailored to individual student needs, preferences, and learning styles.
3. Gamification and Immersive Technologies: Gamification techniques and immersive technologies, such as virtual reality (VR) and augmented reality (AR), are being used to enhance student engagement and learning outcomes.
4. Data-Driven Instruction: The use of data analytics and learning analytics helps educators gain insights into student progress and adapt instruction accordingly.
5. Blended Learning: A combination of online and face-to-face instruction, known as blended learning, is being widely adopted to provide a balanced learning experience.

There are a number of trends in digital citizenship education. One trend is the increasing use of project-based learning. Project-based learning allows students to learn about digital citizenship in a real-world context.

Another trend is the use of social media in digital citizenship education. Social media can be a powerful tool for teaching students about the dangers and opportunities of the online world.

## **SKILLS**

Digital education fosters the development of various skills that are essential for students to become responsible digital citizens. These skills include:

1. Digital Literacy: The ability to find, evaluate, and use digital information effectively and responsibly.
2. Critical Thinking: The capacity to analyze and evaluate information, solve problems, and make informed decisions.
3. Cybersecurity Awareness: Understanding the importance of online privacy, data protection, and safe online behavior.
4. Media Literacy: The ability to critically evaluate and interpret media messages and understand their impact on society.
5. Collaboration and Communication: The skills to work effectively in teams, communicate ideas, and collaborate with others using digital tools.
6. Creativity and Innovation: The ability to think creatively, generate new ideas, and use digital tools for creative expression.

The skills that students need to be effective digital citizens include:

- Basic technology skills, such as how to use a computer, how to access the internet, and how to use different software applications
- Internet safety skills, such as how to protect their privacy and security online
- Information literacy skills, such as how to evaluate information online
- Media literacy skills, such as how to create and communicate their own ideas online



- Ethical reasoning skills, such as how to make responsible decisions about their online behavior.

### **PROBLEMS IDENTIFIED**

Despite the many benefits of digital education, there are some preconceptions and problems that need to be addressed:

1. **Technological Barriers:** Limited access to technology and internet connectivity can create inequalities in accessing digital education.
2. **Information Overload:** The abundance of digital information can overwhelm students, making it challenging to discern reliable sources and navigate through vast amounts of content.
3. **Digital Divide:** Socioeconomic disparities can result in unequal access to digital devices, internet connectivity, and digital literacy training.
4. **Digital Distractions:** The presence of digital distractions, such as social media and online games, can hinder students' focus and attention during learning.
5. **Privacy and Security Concerns:** The collection and use of personal data in digital education raise concerns about privacy and data security.

There are a number of problems that can be identified with digital citizenship education. One problem is that not all students have access to technology. Another problem is that not all teachers are trained to teach digital citizenship education. In addition, there is a lack of standardized curriculum for digital citizenship education. This can make it difficult for teachers to know what to teach and how to teach it.

### **BENEFITS AND CHALLENGES**

Implementing digital education brings several benefits, including:

1. **Enhanced Learning Outcomes:** Digital tools and resources can improve student engagement, motivation, and learning outcomes.
2. **Flexibility and Accessibility:** Online learning platforms provide flexibility in terms of time, location, and pace of learning, making education accessible to a wider range of learners.
3. **Cost Savings:** Digital education can reduce costs associated with traditional classroom-based instruction, such as textbooks and physical infrastructure.
4. **Real-World Relevance:** Digital education can bridge the gap between classroom learning and real-world applications, preparing students for future careers.

The benefits of digital citizenship education outweigh the challenges. However, there are a number of challenges that need to be addressed.

However, there are also challenges to consider, such as:

1. **Teacher Training and Support:** Educators need adequate training and support to effectively integrate digital tools and resources into their teaching practices.
2. **Digital Equity:** Ensuring equal access to digital education for all students, regardless of their socioeconomic background or geographical location, is a significant challenge.
3. **Quality Assurance:** Maintaining the quality of digital educational content and ensuring its alignment with curriculum standards require careful evaluation and monitoring.
4. **Digital Citizenship and Ethics:** Educating students about responsible digital citizenship and ethical use of technology is crucial but can be challenging to address effectively.

One challenge is that digital citizenship education is a relatively new field. This means that there is a lack of research on the best ways to teach it.

Another challenge is that the technology landscape is constantly changing. This means that digital citizenship education needs to be constantly updated to reflect the latest trends and technologies.

### **STRATEGIC PLANNING AND QUALITY SYSTEM**

A quality system for digital citizenship education promotes digital citizenship and ethical values in digital education, strategic planning and quality systems are essential. This includes:

1. Curriculum Design: Developing a curriculum that integrates digital literacy, critical thinking, and ethical considerations into various subject areas. When developing a digital citizenship education curriculum, it is important to consider the following:

- The needs of the students
- The skills that students need to be effective digital citizens
- The resources that are available
- The technology landscapes

It is also important to involve stakeholders, such as teachers, parents, and community members, in the development of the curriculum.

2. Professional Development: Providing ongoing professional development opportunities for educators to enhance their digital pedagogical skills and knowledge.

3. Digital Citizenship Education: Incorporating digital citizenship education into the curriculum to teach students about responsible online behavior, digital rights, and ethical considerations.

4. Quality Assurance: Implementing quality assurance mechanisms to ensure the quality and relevance of digital educational content and platforms.

5. Parent and Community Engagement: Involving parents and the wider community in discussions and initiatives related to digital education and promoting digital citizenship.

Digital education has the potential to greatly impact the promotion of ethical values. **Promoting Ethical Principles through AI Ethics Education**

According to UNESCO, online courses and digital resources focused on AI ethics education can play a crucial role in promoting ethical principles and values. By providing accessible education on the ethics of artificial intelligence, individuals can develop a better understanding of the ethical challenges and considerations associated with AI technologies.

#### **Public Understanding and Civic Engagement**

UNESCO emphasizes the importance of promoting public understanding of AI and data through open and accessible education. By providing digital skills training and AI ethics education, individuals can engage in informed discussions and decision-making processes related to ethical issues in AI. This can lead to a more ethically conscious society.

#### **Personalized Learning Platforms and Automated Assessment**

AI has been utilized in educational applications such as personalized learning platforms and automated assessment systems. These technologies can promote students' learning and provide tailored educational experiences. However, it is crucial to address the ethical challenges associated with AI in education to ensure fairness, transparency, and accountability.

#### **Digital Citizenship Education and Empathy**

Digital citizenship education plays a significant role in promoting ethical values in the digital realm. It emphasizes responsible and ethical behavior online, including empathy and respectful communication. Empathy, in particular, is an important ethical value that can be fostered through digital education, as it influences how individuals perceive, understand, and respond to others and life events.

#### **Ethical Guidelines for Educators**

The Ethical Guidelines on the Use of Artificial Intelligence and Data in Teaching and Learning for Educators, developed as part of the digital education initiatives, provide educators with guidance on ethical considerations related to the use of AI and data in educational settings. These guidelines aim to ensure that educators promote ethical values and principles while utilizing AI technologies.

## CURRICULUM

Teaching digital citizenship to students is an important aspect of education. It helps students learn how to use technology responsibly and safely. Indian government need to develop this kind of detailed guidance to provide digital citizenship.

Here are some resources that help to teach students about digital citizenship:

Digital citizenship education teaches students how to use technology safely, responsibly, and ethically. It also teaches them about the rights and responsibilities of digital citizens. The International Society for Technology in Education (ISTE) outlines nine elements of digital citizenship to help students navigate online resources. The curriculum covers topics such as digital access, etiquette, commerce, rights and responsibilities, literacy, law, communication, health and wellness, and security. The Social Emotional Learning (SEL) in Digital Life Resource Center has everything that is needed to get started with social and emotional learning in the digital world. In the resource center, Collaborative for Academic, Social and Emotional Learning (CASEL)-aligned short activities, teaching guides, professional development resources, and family engagement materials. The Social Emotional Learning (SEL) framework developed by the Collaborative for Academic, Social and Emotional Learning (CASEL) is widely used by educators as a resource to help bring SEL to their classrooms and schools. Some states, such as Wisconsin, (USA) have drafted a statewide framework and guidance for teaching SEL.

All of the resources created by Common Sense Education, including our SEL in Digital Life activities, are aligned to the CASEL framework and five core competencies for social and emotional learning:

- Self-Awareness
- Self-Management
- Responsible Decision-Making
- Relationship Skills
- Social Awareness

## RECOMMENDATIONS

A set of policy recommendations drafted by the Committee for Children suggests it is important to align digital citizenship to ongoing SEL initiatives and to make clear how SEL strategies are foundational to how digital citizenship is taught to students.

**Digital Well-Being Lesson Collections:** These research-based lesson collections—one set for middle and one for high school—address SEL and digital well-being at the same time. Because so much of young people's lives are online, these lessons are a focused way to get at critical issues, like how devices can reinforce negative thinking and how to center your values while using technology.

• Middle School Collection	• High School Collection
• My Values & Tech	• My Values & Tech
• Digital Media and Your Brain	• Design Tricks
• Thinking Traps	• Thinking Traps
• Positive Tech Habits	• Tech Habits Challenge

**SEL in Digital Life Resource Center:** If you want CASEL-aligned quick activities for each grade band, family conversation starters, and professional development resources all in one place, this is it! Plus, we have SEL-related movie guides with active viewing printables. Address concepts like responsible decision-making, relationship skills, and social awareness with these activities.

**Online Safety + Social and Emotional Learning:** Wisconsin's Department of Public Instruction developed a useful infographic, as well as a curriculum crosswalk that outlines the connection between SEL and the state's information and technology literacy standards.

**Ed Web: Social Media Literacy and Mental Health:** This recorded webinar, based on the latest research, covers the intersection of social media use and well-being.

## CONCLUSION

Digital education plays a vital role in promoting digital citizenship and ethical values among students. It equips them with the necessary skills to navigate the digital world responsibly and prepares them for the challenges and opportunities of the digital age. By providing AI ethics education, fostering public understanding, promoting digital citizenship education, and developing ethical guidelines for educators we can empower students to become responsible citizens. Digital education and digital citizenship contribute a ethically conscious society.

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## THE EFFECT OF MODERN EDUCATION IN PHYSICAL EDUCATION

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### *Abstract*

*Towards the process of modernization in India, the enhancement of the individual quality of modern builders and people's own modernization are especially important. The full, free and comprehensive development of ability is the core of the modernization of people. Combined with the ability structure of modern people, we found that physical education has a unique role. School sport modernization does not only play an important role in promoting the modernization of education and the process of sports modernization, it also clears its connotation from the modernization of school physical education ideas and concepts, the modernization of education content and education method, the modernization of the team, the modernization of management, the modernization of conditions, the modernization of evaluation system and so on; it also seizes from value orientation and evaluation basis, the value orientation of national development, the value orientation of individual development, the value orientation of democratic development and the value orientation of efficiency development, etc. It is conducive to the further implementation of the moderate advance, balanced development and coordinated development strategy of the modernization in school sports and the full realization of the modernization of school sports.*

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### **Introduction**

The modernization of the world began in the 17th century in Western Europe, and then spread to the rest of Europe and North America. Since the 20th century, almost all countries and regions of Asia, Africa and Latin America also successively started or tried to start the modernization process, and gradually involved in all walks of life, which had a far-reaching influence on sports. On one hand, social modernization has promoted the modernization of sports; on the other hand, the realization of sports modernization has driven the social modernization to move forward. They are mutually dependent, mutual influence and promote each other. It can be said that the perfect modern society must include the sports modernization, and the society without sports modernization is not the perfect modern society. With the development of education, school sports gradually became the important content and methods of education to promote students' physical and mental health development. The rich and advanced culture and traditional culture education of school sports became an important way to cultivate students' humanistic spirit, which has increasingly prominent and important status and role of education. Moreover, the school physical education is also an important link for students to carry out modern life style education, which is a joint for students and nature, school and the society. School physical education is the important link to promote international cooperation and exchange. The development of the society and the times force sports and education must realize modernization, and sports modernization and education modernization also require the modernization of the school physical education. Therefore, school sports modernization does not only play an important role in promoting the modernization of education and sports, it is also very important in the complete realization of Indian social modernization.

### **The Unique Role of Physical Education in the Process of Human Modernization**

With the International Competitions is increasingly warming in India, sports more and more in people's lives occupies important position in carrying out quality education, especially in the process of modernization we found that sports have a rich and unique value.

Physical education is the basis of modern people's body. According to the research, regular exercise can increase bone blood supply, promote bone growth, and have a very important significance to the growth and development of young people; Exercise can also enhance muscle



strength, endurance and coordination; Exercise also has a good promoting role for the nervous system and digestive system function.

Sports can cultivate the sense of competition of modern people. Modern society is inseparable from the competition, no matter the state, enterprise, collective, or ordinary worker is in intense competition for survival and development. Competition is the soul of modern sports. The competition education in sports activities is better than any other activities, it can enable participants to experience the atmosphere of intense competition in sports

Sports help to promote the intelligence development and improve learning efficiency of modern people's. Physiology tell us often participating in sports activities can improve the human central nervous system, improve the cerebral cortex excitatory and inhibitory role of coordination and strength the nervous system excitatory and inhibitory alternation process, so as to improve the balance and accuracy of the cerebral cortex of the nervous system, promote the development capabilities of human perception and improve and increase thinking flexibility, coordination and reaction speed.

#### The Advantages of Modern Education in Physical Education

Provide visual material and can improve the motor skills of students. The most important task of physical education is to let the students master sports skills, cultivate students' comprehensive quality. And the use of new media means to carry out junior middle school sports teaching can achieve the visual effect from the image required by teachers and improve the efficiency and quality of physical education, as well as help students master more sport skills and learn more physical movements.

Can effectively stimulate students' learning interest and enthusiasm. The so-called interest and enthusiasm is the key factor in the process of learning. Only under the guidance of spontaneous interest, students can learn themselves and profoundly master physical knowledge and skills. The use of new media teaching means make teachers can show students rich, colorful and vivid teaching material contents and images, in order to attract students' attention.

Use modern technology to explain and improve the quality of teaching. In the traditional sports teaching, due to the complexity of the most technical actions, explain the technical essentials and demonstrate the technology action shall be done separately. New media is advantageous to improve the comprehensive ability of students to analyze problems and solve problems. By means of new media teaching, teachers can repeatedly show students the actions and parts which are different and easy to make mistakes, let students have an in-deep experience, carry out discussion these problems and correct mistakes.

#### The Promotion Strategy of College Sport Modernization

The content of college physical education is related to the effect and quality of college physical education. The modernization of the content of college physical education is the materialized reflect of the core and core concept of college sports modernization. The contents of college physical education refer to the teaching contents and experience materials used by teachers and students, mainly including the modern curriculum system, teaching material content, and teaching methods and means.

Grasp the value orientation of school sports modernization Whether the value orientation is correct or not directly determines the people's thinking, the success or failure of an action. The value orientation of the physical education in schools in our country can help us to dialectically and objectively understand the judgment of gains and losses and summary of experience of the school sports development, initially establish a standard of the school physical education system and value orientation which adapts to social development and lay a solid foundation for the further reform and development of school sports in the new century.

Moderate advance strategy The modernization of the thought and the concept are the forerunner of school sports modernization and is in global, basic and leading status in promoting the process of



modernization of school sports. And the advance of the thought and the concept of school sports education is the premise of realizing the modernization of school sports. 3. Balanced development strategy At the present stage, the advanced concept of physical education in our country slowly transfers to practice. Education investment and resource allocation is not reasonable. The conditions for running schools and teachers are unbalanced. Competitive sports occupy a large number of sports resources. Compulsory and non compulsory education development is not balanced and school sports development environment and supporting legal system is not perfect. 4. Coordinated development strategy The coordinated development of the internal and external of college sports modernization of mainly refers to make college sports coordinately develop with lifelong sports, community sports as well as competitive sports. College physical education bears the task of college education and shall lay the foundation for lifelong sports. College sports provide guidance, counseling, planning and training for community sports, community sports provide curriculum resources, education environment and other conditions. College physical education lays a foundation for the improvement of the level of sports in the course of the socialization and club. National high level sports provide a platform for the balanced development of the two.

### Conclusion

College sports modernization plays an important role in promoting the modernization of sports and the process of education modernization. The connotation of school sports modernization mainly includes the modernization of the school physical education thought and idea, the modernization of education content and method, the modernization of team, the modernization of management of school sports, school the modernization of school sport condition and the modernization of school sports evaluation system. The value orientation of the country's development, the value orientation of individual development, the value orientation of democratic development and the value orientation of efficiency development provide an important guiding role for the implementation of the school sports modernization strategy. The implementation of the moderate advance, balanced development and coordinated development strategy of school sports modernization provides the reference of the development ideas for the comprehensive promotion of school sports modernization.

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## INFLUENCE OF MENTAL HEALTH ON ACADEMIC ACHIEVEMENT AMONG URBAN AND RURAL PUC ARTS STUDENTS

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### Abstract

*The girls, urban, aided PUC arts students having good mental health compare to their counterpart influence more on their academic achievement scores. It shows that the girls are having a well balanced and adjustable personality and having a challengeable vision to achieve highest peak of success exhibit good mental health. Which is in lined with findings of Zakia (2011), Mania (2014), Zing (2014), whereas the urban students exhibit good mental health scores influencing more on academic achievement, which shows that proper healthy environment at home and school, transportation facilities, teachers facilities, proper teaching learning process which keeps them sound mind which are in lined with findings of Deepa (2012), Anderson (2010), Manisha (2014). Aided PUC arts students exhibit more mentally healthy scores and influences more on academic achievement which is in lined with Allen (2008), Chaman (2016), Chung (2016). The mental health scores of rural, aided, boys and govt. PUC arts students have poor mental health scores and influence on their negatively influence on their academic achievement scores which are in line with the research findings of Tianshu Chu (2015), Xin Liu (2014), Hiro Kishimoto (2014), Castaneda (2021).*

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### Introduction:

Education is the part of human life it is very essential and valuable phenomenon. The knowledge can generate the good person. Today's education system is mainly focus on the success. Education has the Emotional, Psychological and Social aspects of the student which are important stages of academic psychology. Today education lead a student enrollment in right manner. The education help students positive, attitude toward learning it help to improve the intelligence which is dominated over the education.

### Operational Definition of Variable: (MENTAL HEALTH)

Good behavior and good communication shows the well Mental Health. It is a state of an individual with emotional stability, appropriate perception of oneself, overall adjustment with society or surroundings and environmental competencies in their life. The good Mental Health indicates high achievement of an individual.

### Review of Related Literature:

#### A) Indian studies

**Bndhana and Darshana (2010)** Home Environment, Mental Health and Academic Achievement among Higher secondary school. The study was conducted on 12th grade higher secondary school students and the sample consisted of 300 participants, 150 of whom were females and 150 were males. The data was collected by Home environment Inventory by Dr. Karuna Shankar Misra and Mental Health Battery by Arun Kumar Singh and Alpanasen Gupta. Data collected was analyzed using mean, SD, and three way ANOVA (2\*2\*2 factorial design), The result showed that mean value of mental health of girls was more in comparison to boys and there was no significant interaction among sex, home environment and academic achievement among higher secondary school students with mental health.

**Vaghela (2012)** examined Mental Health of primary level school students in relation to their gender and residential area. Results of the study indented that significant difference was observed in Mental Health level of cast area and west area students of primary level school in Ahmadabad city. Further, a significant difference was found in Mental Health level of boys and girls students of primary level school.

#### B) Foreign Studies:

**Patrick, Chamot and Thomas (2004)** conducted a study on perceived stress, internal resources and social support as determinants of mental health. The sample size was 2000 university students. Result revealed that the mental health was negatively associated with stress and positively associated with internal resources and social support. Intiman resources and stress mediated the positive impact of social support on mental health. Annual income of the family has no influence on the Menu a significant influence of Type of the school on Mental Health of the students. Residential School students perceiving more Mental Health problems when compared to the Non residential school students. There is no influence of the class on the Mental Health of the student. Higher class students perceiving more Mental Health problems when compared to the lower class students.

**Walter et al. (2006)** conducted a survey to identify the opinions of teachers about the need of mental health services in primary schools. A sample of 119 teachers from Midwestern United States was selected. The study was designed to know opinions of teachers about the prevalence of problems related to mental health and main obstacles in overcoming of the problems. Further the study aimed to investigate teacher's preferences for the items related to mental health to be included in in-service education programs. Teachers were categorized on the basis of their qualification, tenure of work, their knowledge and attitude. Respondent reported that their schools were facing mental problems and the main obstacles in overcoming of these problems were lack of knowledge and proper training. It was also revealed by the results of the study that disruptive behavior disorders and implementing behavior plans were the main preference of the teachers to be included as contents in the in-service training programmers. In spite of little qualification and knowledge related to mental health problems, most of the teachers dealt students with mental health problems. It was suggested by the investigator that proper education, training and consultation should be provided to teachers from mental health professional.

#### **Research Gap Analysis:**

The present study intends to study the Higher Secondary Arts students in connection with the selected variables. The studies shown that the Mental Health plays vital role in academic performance of students, and studies revealed that, the positive correlation between Mental Health & Academic Achievement of students which are in line with the studies of S C Marques-2011, Dr. Bandhana-2010, S Nangaiyarkarasi-2019, R Periasmy-2021, which are not clear in studies of A Arabian M K Khodapanabi-2005, Sara Agnafors-2021, Sean R Hogan-2018 which enhanced the selecting the variables for the present study.

So the present study created the curiosity to know to what extent the selected variable are affecting on the Academic Achievement of the student. The Review of Related Literature are main foundation to choose this study and became the enthusiastic in selecting the problem. Hence the researcher selected the present problem as a study to examine the influence of Mental Health on academic achievement.

#### **General Objective of study**

Influence of Mental Health on Academic Achievement among Urban and Rural Higher Secondary School Students.

#### **Specific Objectives of study:**

- 1.To study the influence of Mental Health on Academic Achievement among Urban Higher Secondary School Arts Students.
- 2.To study the influence of Mental Health on Academic Achievement among Rural Higher Secondary School Arts Students.

#### **Tools used in the Study:**

To test the Hypothesis formulated in the study data is collected with the help of following tool:

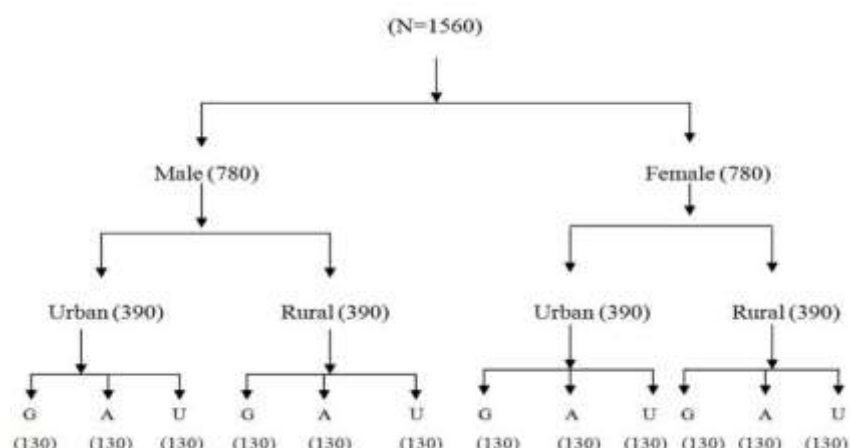
#### **Mental Health:**

**Sushma Telesara and Akhtav Bano, Mental health scale (MHS-TSBA)**

#### **Academic Achievement:**

Investigator shall collect the previous year's academic Scores of the Higher Secondary School students of Vijayapur District.

### Sample of the Study:



### Statistical Analysis:

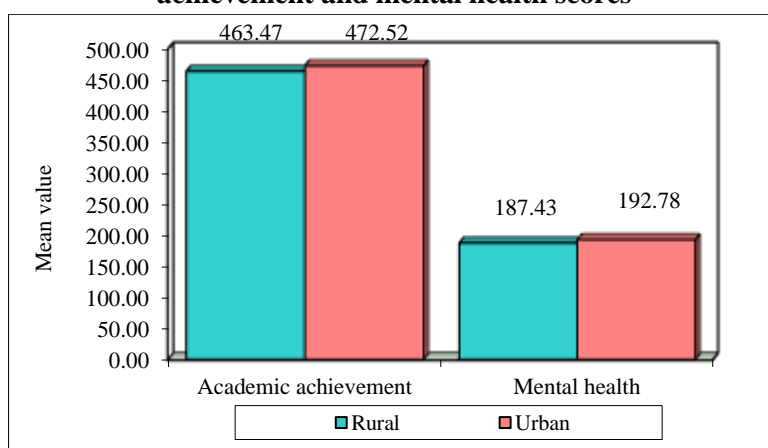
**Null hypothesis:** There is no significant difference between rural and urban PUC arts students with respect to academic achievement and mental health scores

To test this hypothesis, the independent t test was performed and the outcome of the results are presented in the following table.

**Table: Results of t test between rural and urban PUC arts students with respect to academic achievement and mental health scores**

Variable	Location	n	Mean	SD	SE	t-value	P-value	Signi.
Academic achievement	Rural	674	463.47	81.04	3.12	-2.2580	0.0241	S
	Urban	926	472.52	77.77	2.56			
Mental health	Rural	674	187.43	36.69	1.41	-2.8036	0.0051	S
	Urban	926	192.78	38.33	1.26			

**Figure: Comparison of rural and urban PUC arts students with respect to academic achievement and mental health scores**



The above table and graph reveals that, the students of pre-university arts college of vijayapura taluka with good and poor mental health had different academic achievement scores. Therefore the null hypothesis is rejected and alternative hypothesis is accepted. The urban students with good mental health scores influence more on their academic achievement scores compare to rural pre-university arts college students with p-value 0.005. This shows that the urban students having good mental health due to adequate family climate, healthy atmosphere at home and proper transportation facilities to the schools and with respect to this their academic achievement is progressive compare to rural counterpart.

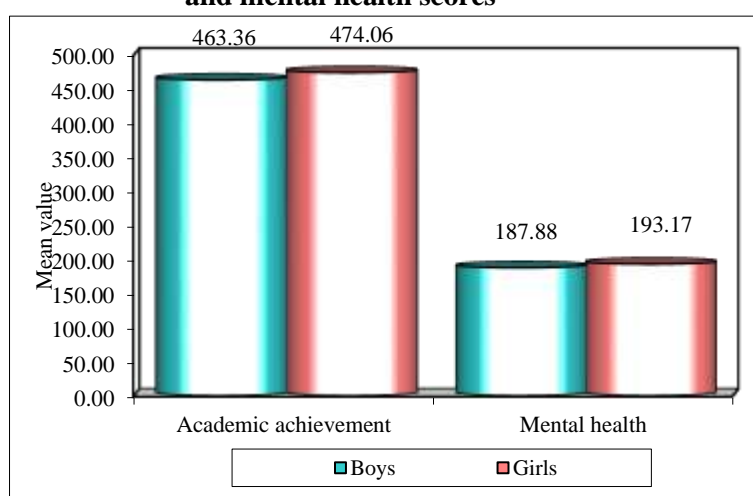
**Null hypothesis:** There is no significant difference between boys and girls PUC arts students with respect to academic achievement and mental health scores

To test this hypothesis, the independent t test was performed and the outcomes of the results are presented in the following table.

**Table: Results of t test between boys and girls PUC arts students with respect to academic achievement and mental health scores**

Variable	Gender	n	Mean	SD	SE	t-value	P-value	Signi.
Academic achievement	Boys	800	463.36	79.47	2.81	-2.7041	0.0069	S
	Girls	800	474.06	78.75	2.78			
Mental health	Boys	800	187.88	35.88	1.27	-2.8128	0.0050	S
	Girls	800	193.17	39.34	1.39			

**Figure: Comparison of boys and girls PUC arts students with respect to academic achievement and mental health scores**



The above table and graph reveals that girl's mental health influences more on their academic achievement scores. Girl students tend to more accumulative and adjustable both at home and school and are able to visualize their challenges adequately. Their vision of high achievement without having disturbed mind in spite of their casual health issues tends to become more studious. Whereas boys exhibit poor mental health. Hence null hypothesis is rejected and alternative hypothesis is accepted.

**Null hypothesis:** There is no significant difference between aided, unaided and government PUC arts students with respect to academic achievement scores

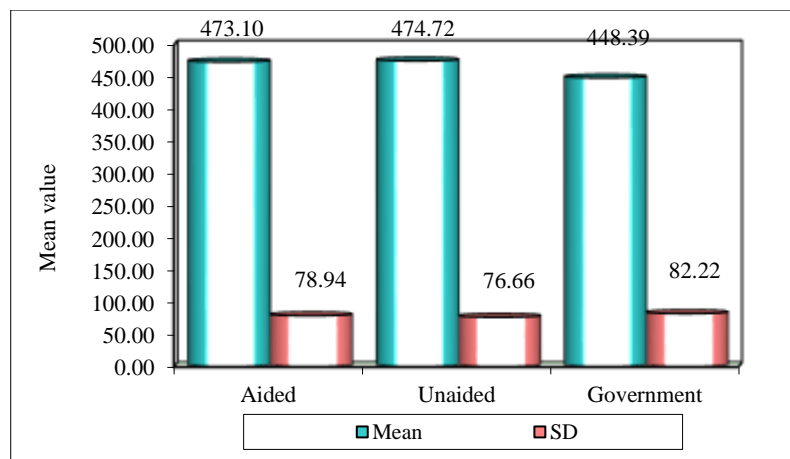
To test this hypothesis, the one way ANOVA test was performed and the outcome of the results are presented in the following table.

**Table: Results of ANOVA test between aided, unaided and government PUC arts students with respect to academic achievement scores**

Sources of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F-value	p-value	Signi.
Between groups	2	173138.26	86569.13	14.0021	0.0001	S
Within groups	1597	9873605.26	6182.60			
Total	1599	10046743.52				

**Table: Pair wise comparison of government, aided and unaided PUC arts students with respect to academic achievement scores by Tukeys multiple posthoc procedures**

Managements	Aided	Unaided	Government
Mean	473.10	474.72	448.39
SD	78.94	76.66	82.22
Aided	-		
Unaided	P=0.9298, NS	-	
Government	P=0.0001, S	P=0.0001, S	-

**Figure: Comparison of government, aided and unaided PUC arts students with respect to academic achievement scores**

The above table and graph reveals that the unaided students with good mental health scores influence more on their academic achievement scores. This interprets that the performance of unaided PUC arts students are well accommodated due to healthy teaching learning environment with good infra structure facilities . Though there is hike in the fee structure of the institution whereas the aided PUC arts students stood second in their mean scores influencing on their academic achievement scores. This reveals that the proper infrastructure facilities and remarkable teaching learning facilities motivate them to adjust mentally and personally in academic activities of the institution. The govt. PUC arts students stood third in place compare to aided and unaided PUC arts students in their mean score which depicts that the govt. PUC arts students having poor mental health due to lack of proper infrastructure facilities and frequent transfer of teachers and transportation facilities which leads to poor mental health. Hence the null hypothesis is rejected and alternative hypothesis is accepted.

**Null hypothesis:** There is no significant difference between government, aided and unaided PUC arts students with respect to mental health scores

To test this hypothesis, the one way ANOVA test was performed and the outcome of the results are presented in the following table.

**Table: Results of ANOVA test between government, aided and unaided PUC arts students with respect to mental health scores**

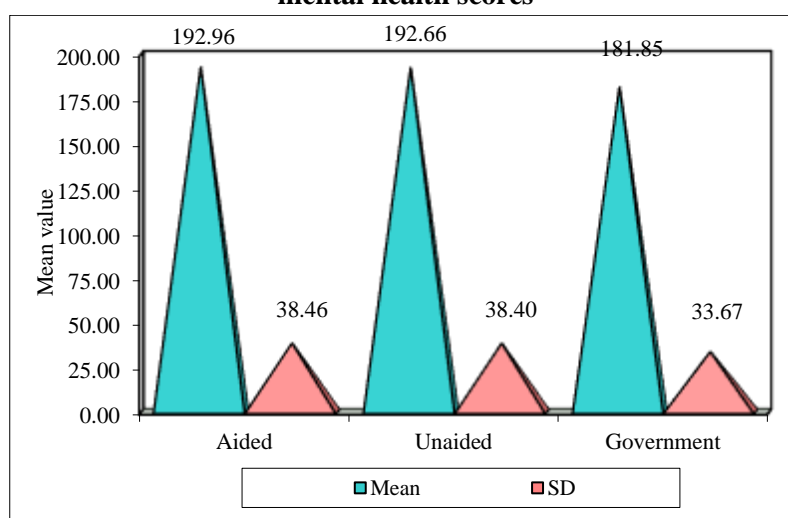
Sources of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F-value	p-value	Signi.
Between groups	2	31474.13	15737.06	11.1957	0.0001	S
Within groups	1597	2244790.77	1405.63			
Total	1599	2276264.90				



**Table: Pair wise comparison of government, aided and unaided PUC arts students with respect to mental health scores by Tukeys multiple posthoc procedures**

Managements	Aided	Unaided	Government
Mean	192.96	192.66	181.85
SD	38.46	38.40	33.67
Aided	-		
Unaided	P=0.9888, NS	-	
Government	P=0.0001, S	P=0.0001, S	-

**Figure: Comparison of government, aided and unaided PUC arts students with respect to mental health scores**



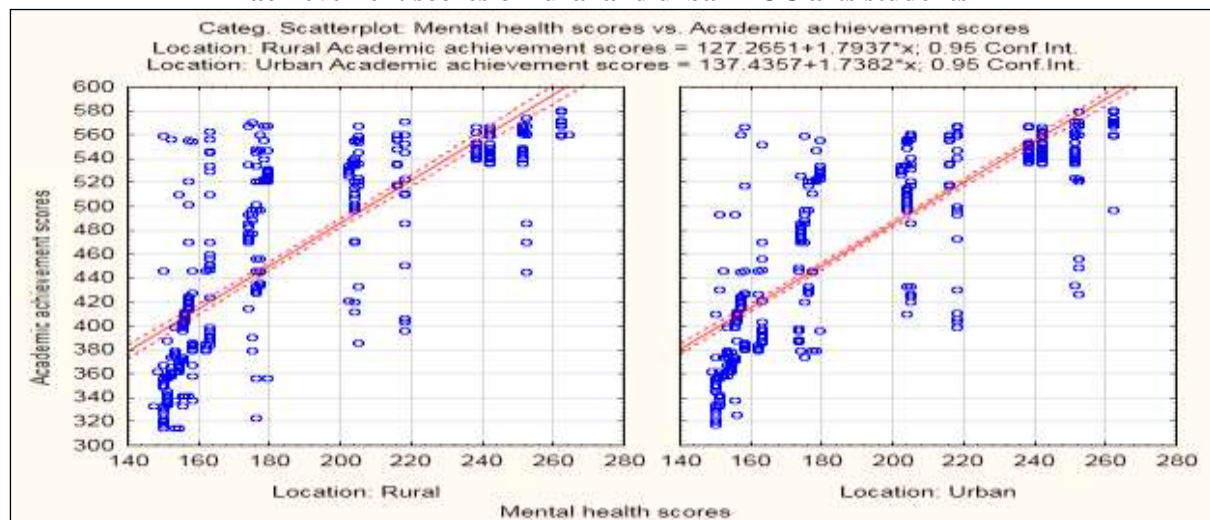
When tukeys multiple posthoc procedure applied it is found that the govt. PUC arts students' mental health scores are poor compare to aided and unaided PUC arts students. It reveals that the proper and adequate infra structure facilities, transportation facilities from home to school and vis-a-versa also influence on their academic achievement scores. Whereas the aided PUC arts students exhibit a slight good mental health scores compare to unaided PUC arts students due to infra structure facilities. Hence null hypothesis is rejected and alternative hypothesis is accepted.

**Null hypothesis:** There is no significant relationship between academic achievement and mental health scores of rural and urban PUC arts students To test this hypothesis, the Karl Parsons correlation coefficient method was performed and the outcomes of the results are presented in the following table.

**Table: Results of Karl Parsons correlation coefficient between academic achievement and mental health scores of rural and urban PUC arts students**

Location	Correlation coefficient between academic achievement with mental health scores of				
	r-value	Degrees of freedom	t-value	p-value	Signi.
Rural	0.8120	672	36.0653	0.0001	S
Urban	0.8568	924	50.5032	0.0001	S

**Figure: Simple linear regression analysis of influence of mental health in prediction of academic achievement scores of rural and urban PUC arts students**



The above table and graph reveals that the urban PUC arts students with good mental health scores with t-value 50.5032 whereas rural students with mental health mean scores of having t-value 36.0653 exhibit poor mental health. Hence null hypothesis is rejected and alternative hypothesis is accepted.

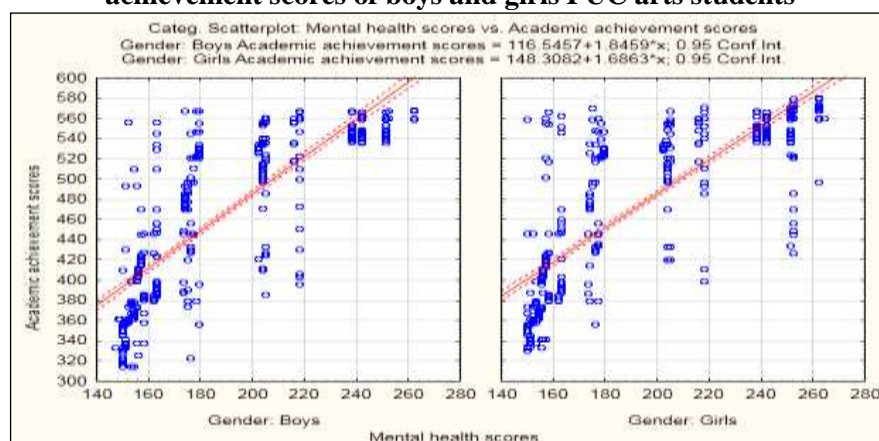
**Null hypothesis:** There is no significant relationship between academic achievement and mental health scores of boys and girls PUC arts students

To test this hypothesis, the Karl Pearson's correlation coefficient method was performed and the outcomes of the results are presented in the following table.

**Table: Results of Karl Pearson's correlation coefficient between academic achievement and mental health scores of boys and girls PUC arts students**

Gender	Correlation coefficient between academic achievement with mental health scores of				
	r-value	Degrees of freedom	t-value	p-value	Signi.
Boys	0.8334	798	42.5956	0.0001	S
Girls	0.8424	798	44.1616	0.0001	S

**Figure: Simple linear regression analysis of influence of mental health in prediction of academic achievement scores of boys and girls PUC arts students**



The above table and graph reveals that PUC arts girl students with r-value 0.8424 and t-value 44.1616 exhibit good mental health compare to boys. Hence null hypothesis is rejected and alternative hypothesis is accepted.

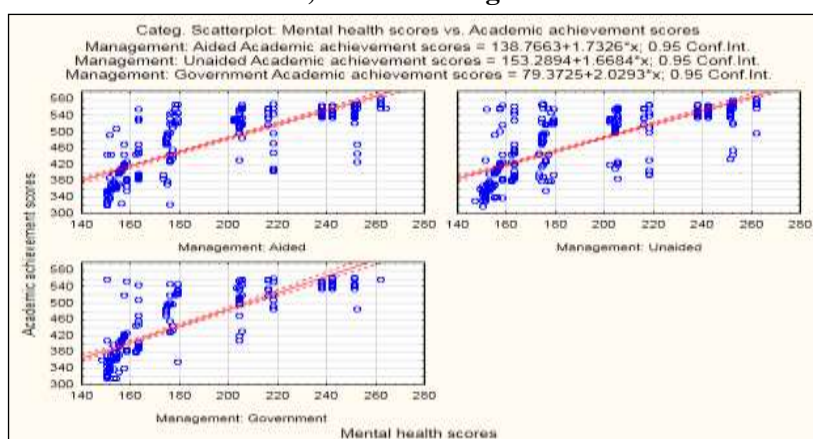
**Null hypothesis:** There is no significant relationship between academic achievement and mental health scores of aided, unaided and government PUC arts students

To test this hypothesis, the Karl Parsons correlation coefficient method was performed and the outcomes of the results are presented in the following table.

**Table: Results of Karl Parsons correlation coefficient between academic achievement and mental health scores of aided, unaided and government PUC arts students**

Management	Correlation coefficient between academic achievement with mental health scores of				
	r-value	Degrees of freedom	t-value	p-value	Signi.
Aided	0.8442	554	37.0649	0.0001	S
Unaided	0.8357	711	40.5714	0.0001	S
Government	0.8309	329	27.0892	0.0001	S

**Figure: Simple linear regression analysis of influence of mental health in prediction of academic achievement scores of aided, unaided and government PUC arts students**



The above table and graph reveals that the aided PUC arts students exhibit good mental health scores compare to unaided and govt. PUC arts students whereas govt. PUC arts students have poor mental health scores with t- value 27.0892. Hence null hypothesis is rejected and alternative hypothesis is accepted.

**Conclusion:** The study reveals that the girls, urban, aided PUC arts students having good mental health compare to their counterpart influence more on their academic achievement scores. It shows that the girls are having a well balanced and adjustable personality and having a challengeable vision to achieve highest peak of success exhibit good mental health. Which is in lined with findings of Zakia (2011), Mania (2014), Zing (2014), whereas the urban students exhibit good mental health scores influencing more on academic achievement ,which shows that proper healthy environment at home and school, transportation facilities , teachers facilities, proper teaching learning process which keeps them sound mind which are in lined with findings of Deepa (2012), Anderson (2010), Manisha (2014). Aided PUC arts students exhibit more mentally healthy scores and influences more on academic achievement which is in lined with Allen (2008), Chaman (2016), Chung (2016).

The above study also reveals that the mental health scores of rural, aided, boys and govt. PUC arts students have poor mental health scores and influence on their negatively influence on their academic achievement scores which are in line with the research findings of Tianshu Chu (2015), Xin Liu (2014), Hiro Kishimoto (2014), Castaneda (2021) This shows that the immediate attention is needed to attend the issue immediately by providing

- 1) Proper infrastructure facilities such as human and material resources
- 2) Transportation facilities
- 3) Motivation classes such as to solve their day to day academic challenges and other family problems, such as daily wages earning family
- 4) Teachers who are dedicated and interest to work at rural areas should be given special remuneration
- 5) The colleges should be provided proper drinking facilities and rest rooms wherever necessary

- 6) The parents should be properly counseled in line with the adequate educating of their wards stress should be avoided and proper family atmosphere should be enhanced and harmonious relationship among family members should be enhanced.
- 7) The teachers should adopt the play way techniques in the teaching learning process and children should be mentally strengthened in connection with studies and co curricular activities by making the groups as the adolescent period needs proper identification which shall be fulfilled.

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## CREATIVE TEACHING METHODS IN EDUCATION

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### Abstract

Advance pedagogy is the way to enhance teaching and learning performance. Different innovative teaching methods are now in use across the globe. Hybrid teaching includes e - learning in addition to the face to face teaching. Use of technology and multimedia is described in details. Use of smart gadgets for different tasks like teaching, designing question papers, assessment of student, feedback and research methodology is discussed. The application of innovative teaching and learning methods is critical if we are to motivate and engender a spirit of learning as well as enthusiasm on the part of students. The role of education is to ensure that while academic staffs do teach, what is taught should also be intelligible to students emanating from culturally and linguistically diverse backgrounds and that they rapidly become familiar with the expected standards. It is more often than not the case that students underachieve because of the fact that they have not grasped an awareness of the level of assessment or what it is that the lecturer expects from them. Lecturers should thus apply themselves to utilizing innovative methods so that the students' learning process is as free-flowing as possible and that the methodology they adopt is conducive to learning. Innovative teaching and learning methodologies such as short lecture, simulation, role- playing, portfolio development and problem-based learning (PBL) are very useful in addressing the rapid technological advances and developing workplaces that will be required in the foreseeable future.

**Keywords:** Innovative teaching and learning, short-lectures, role-play, simulation, problem-based learning

### Introduction

The objective of this work is to incorporate technology in to teaching learning methods to create a rich learning experience for students and a rewarding teaching experience for faculty. The two educational models practiced across the globe are face to face learning and hybrid learning the traditional method of teaching and learning is synchronous and typically involves the employment of a classroom where professor and students interact within time and space. This model of teaching is called synchronous. Interactions with face to face and distance learning techniques to disseminate information to members of a learning community. This type of learning blends technology based asynchronous teaching method and traditional teaching method. The asynchronous or hybrid teaching has following advantages. It motivates the learning process. It offers time flexibility for part time job or other assignment holders. It reduces overcrowded classrooms. Faculty can add more instructions overtime and maximizes student learning. The hybrid teaching model Students perspective is that they can interact better with the faculty and classmates remain engaged. Improvement in students soft skills, critical thinking and problem solving. Compute skill and technical skills of students increase. Faculty perspective is that they accomplish course teaching objective better, can re-evaluate course work material. The effectiveness of in-class activity increases. It encourages out-of-class learning.

### Innovative teaching methods learning

Innovative thinking is a creative thought process used to generate ideas and solutions. It is a complex task that involves finding new methods to approach problems or procedures. Innovative thinking produces results that change or challenge the status.





### Process of innovation

- Preparation.
- Exploration.
- Incubation.
- Insight.
- Prototype and trail.
- Planning and execution.
- Reflection and evaluation.

### *Project based learning (PBL)*



Involves students designing, developing and constructing hands on solutions to a problem. The educational value of PBL is that it aims to build students creative capacity to work through difficult or ill-structured problems commonly in small teams



### Brain Storming



It means to try to solve a problem or come up with new ideas by having a discussion that includes all members of a group.



## Design Thinking



Design thinking is a process for solving problems by prioritising the consumers need above all else. It relies on observing with empathy, how people interact with their environment and employs an iterative hands on approach to create innovative solution.



Fostering creativity can range from simple team-building exercises to complex, open-ended problems that may require a semester to solve. An instructor that presents innovative and challenging prompts will encourage students to work creatively through a problem to a solution. These creative techniques must be done in a supportive course environment with appropriate time allocated for students to discover and develop creative ways to solve a problem. Here are 14 creative ways to engage students in discussions, problem-solving,

### Assumption Busting

Assumption busting is particularly effective when one is stuck in current thinking paradigms or has run out of ideas. Everyone makes assumptions about how the world around us, which in creative situations, can prevent seeing or generating possibilities. Deliberately seeking out and addressing previously unquestioned assumptions stimulates creative thinking. How: List assumptions associated with a task or problem, for example, that a solution is impossible due to time and cost constraints; something works because certain rules or conditions; and people believe, need or think of certain things. Then ask under what conditions these assumptions are not true, continue the process of examination as old assumptions are challenged and new ones are created.

### Brain-sketching

To solve a specific problem, students make sketches and then pass evolving sketches to their neighbors. How: Students sit in a group of 6-8 around a table or in a circle. Questions or problems should be well explained and understood by each student. Each participant privately makes one or more sketches and passes the sketch to the person on the right when it is finished or when a brief set time has passed. Participants develop or annotate the sketches passed to them, or use them to inspire new sketches which are also passed in turn.

### Brainstorming

Brainstorming, a useful tool to develop creative solutions to a problem, is a lateral thinking process by which students are asked to develop ideas or thoughts that may seem crazy or shocking at first. Participants can then change and improve them into original and useful ideas. Brainstorming can help define an issue, diagnose a problem, or possible solutions and resistance to proposed solutions.

How: Define the problem clearly lay out any criteria to be met. Keep the session focused on the problem, but be sure that no one criticizes or evaluates ideas during the session, even if they are clearly impractical. Criticism dampens creativity in the initial stages of a brainstorming session. Ideas should be listed, rather than developed deeply on the spot; the idea is to generate possibilities.

Accordingly, participants should be encouraged to pick up on ideas offered to create new ones. One person should be appointed as note-taker, and ideas should be studied and evaluated after the session.

#### Concept Mapping

Concept maps represent knowledge graphic form. Networks consist of nodes, which represent concepts, and links, which represent relationships between concepts. Concept maps can aid in generating ideas, designing complex structures, or communicating complex ideas. Because they make explicit the integration of old and new knowledge concept maps can help instructors assess students' understanding.

How: Create a focus question specifying the problem or issue the map should help resolve. List the key concepts (roughly 20-25) that apply to the area of knowledge. Put the most general, inclusive concepts at the top of the list, and most specific at the bottom. Build a hierarchical organization of the concepts, using post-its on a wall or whiteboard, large sheets of paper, etc. Revision is a key element in concept mapping, so participants need to be able to move concepts and reconstruct the map. Seek cross links between concepts, adding linking words to the lines between concepts.

#### Exaggeration

Exaggeration includes the two forms of magnify (or "stretch") and minimize (or "compress"), part of the SCAMPER heuristic. This method helps in building ideas for solutions. It is useful to illustrate a problem, by testing unspoken assumptions about its scale. It helps one think about what would be appropriate if the problem were of a different order of magnitude.

How: After defining a problem to be addressed or idea to develop, list all the component parts of the idea or if a problem, its objectives and constraints. Choosing one component, develop ways of exaggerating it and note them on a separate sheet.

How: On a broad sheet of paper, draw a long arrow horizontally across the middle of the page pointing to the right. Label the arrowhead with the title of the issue to be explained. This is the "backbone" of the "fish." Draw "spurs" from this "backbone" at about 45 degrees, one for every likely cause of the problem that the group can think of; and label each. Sub-spurs can represent subsidiary causes. The group considers each spur/sub-spur, taking the simplest first, partly for clarity but also because a simple explanation may make more complex ones unnecessary. Ideally, the fishbone is redrawn so that position along the backbone reflects the relative importance of the different parts of the problem, with the most important at the head.

#### Kipling Questions or Preliminary Questions Method

This method simply asks the Who? What? When? Where? Why? and How? when problem-solving or decision-making.

#### Laddering:

Laddering or the "why method" involves toggling between two abstractions to create ideas. Laddering techniques involve the creation, reviewing and modification of hierarchical knowledge. In a ladder containing abstract ideas or concepts, the items lower down are details or sub-sets of the ones higher up, so one moves between the abstract and concrete. Laddering can help students understand how an expert categorizes concepts into classes, and can help clarify concepts and their relationships.

How: Beginning with an existing idea, "ladder up" by asking, of what wider category is this an example? "Ladder down" by finding more examples. Then "ladder up" again by seeking an even wider category (big picture) from the new examples obtained from step 2.

Generally, "laddering up" toward the general allows expansion into new areas while "laddering down" focuses on specific aspects of these areas. Why questions are ladders up; so-what questions are ladders down.

**Negative (or Reverse) Brainstorming :** Negative brainstorming involves analyzing a short list of existing ideas, rather than the initial massing of ideas as in conventional brainstorming. Examining potential failures is relevant when an idea is new or complex or when there is little margin for error. Negative brainstorming raises such questions as: "What could go wrong with this project?" Reverse brain-storming is valuable when it is difficult to identify direct solutions to a problem.

How: After clearly defining a problem or challenge, ask "How could I cause this problem?" or "How could I make things worse?" As with brainstorming, allow ideas to flow freely without rejecting any. Evaluating these negative ideas can lead to possible positive solutions.

**Role-playing:** In most role-playing exercises, each student takes the role of a person affected by an issue and studies an issue or events from the perspective of that person.

How: Role plays should give the students an opportunity to practice what they have learned and should interest the students. Provide concrete information and clear role descriptions so that students can play their roles with confidence. Once the role play is finished, spend some time on debriefing.

**SCAMPER:** SCAMPER is a check list that promotes ways to think about an existing product/issue/problem to create a new way to think about it. The method uses action verbs to stimulate ideas and creative thinking.

- Substitute: What can you substitute?
- Combine: What can you combine or bring together somehow?
- Adapt: What can you adapt for use as a solution?
- Modify/minify/magnify: Can you change the item in some way? What can you remove? What can you add?
- Put to other uses: How can you put the thing to different or other uses?
- Eliminate: What can you eliminate?
- Rearrange: What can be rearranged in some way?

How: By providing a list of active verbs that may be associated with your problem and hence will create ideas. The verbs are about doing to get students to think about the action.

### **Storyboarding**

Storyboarding can be compared to spreading students' thoughts out on a wall as they work on a project or solve a problem. Story boards can help with planning, ideas, communications and organization. This method allows students to see the interconnections, how one idea relates to another, and how pieces come together. Once the ideas flow, students become immersed in the problem and tag-team off other ideas.

How: Use a cork board or similar surface to pin up index cards or use Post-it notes on a whiteboard. Begin with a set of topic cards, and under each place header cards for general points, categories, etc. Under these, place sub-heading cards that will contain ideas and details generated that support the headers. During a story board session, consider all ideas relevant, no matter how impractical they appear.

**Post-up:** Post-up can gather ideas from large groups, numbering from the dozens to the hundreds. Participants are given slips of paper (or Post-it notes) and asked to write down ideas which are discussed or evaluated. Instructors may collect a large number of ideas swiftly and create a sense of participation and/or ownership at the same time. How: Each student is given a stack or note-pad of at least 25 small slips of paper or Post-it note pad. The pads can contain idea-jogging graphics or be designed so that ideas can be sorted and separated easily. A question or problem is read to the group (e.g., "How do we?" or "What would it take to?"). Students write down one idea per sheet, in any order.

Once the writing begins to slow down students can post their ideas on a wall or flip-chart paper. Then, the students work as a group to discover and explore themes.

*Reversal: The reversal method takes a given situation and turns it around, inside out, backwards, or upside down. Any situation can be "reversed" in several ways. Looking at a familiar problem or situation in a fresh way can suggest new solutions or approaches. It doesn't matter whether the reversal makes sense or not.*

Example: If a room is dark look for ways to make it lighter. Instead of looking for ways of adding light, look for ways to remove the dark — for example by putting mirrors or white paint in darker corners.

**Conclusion :** Wishes to make progress it is necessary to know how to accept and manage this risk. It contributes to a healthier working environment, to better employee performance, to generate more ideas and projects, to a better team work and to have a different vision and mentality.

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## HOPE AND SPORTS

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### Abstract

*Emil Zatopek Quoted that "An athlete cannot run with money in his pockets. He must run with hope in his heart and dreams in his head."*

*Hope can be defined as a psychological state characterized by a desire for a specific outcome or event to occur, an optimistic yearning for circumstances to improve, or the harboring of a particular dream or aim. Cultivating optimism and a positive outlook on the future is essential as it is a crucial protective element in addressing potentially hazardous ideas or intrusive thoughts. The experience of hope has been found to mitigate sensations of helplessness, enhance subjective well-being, alleviate stress, and enhance overall life satisfaction. Hope can be conceptualized as the combination of goal-oriented beliefs influenced by two distinct paths and agency. Pathways indicate the perceived capacity to generate paths toward achieving goals, whereas agency pertains to the sense of one's ability to begin action along these pathways.*

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### Introduction:-

Emil Zatopek Quoted that "An athlete cannot run with money in his pockets. He must run with hope in his heart and dreams in his head."

Hope can be defined as a psychological state characterized by a desire for a specific outcome or event to occur, an optimistic yearning for circumstances to improve, or the harboring of a particular dream or aim. Cultivating optimism and a positive outlook on the future is essential as it is a crucial protective element in addressing potentially hazardous ideas or intrusive thoughts. The experience of hope has been found to mitigate sensations of helplessness, enhance subjective well-being, alleviate stress, and enhance overall life satisfaction. Hope can be conceptualized as the combination of goal-oriented beliefs influenced by two distinct paths and agency. Pathways indicate the perceived capacity to generate paths toward achieving goals, whereas agency pertains to the sense of one's ability to begin action along these pathways.

Sport portrays a dynamic interplay between success and failure, as indicated by the reported outcomes on the scoreboard or the relative performance of an individual compared to other competitors. The athletic endeavor is a difficulty due to the inherent variability of each competition, wherein long-term success is based not only upon an athlete's physical prowess but also upon their attribution of outcomes. In the field of sports, the ability to keep striving for a desired outcome while encountering difficulties is of utmost importance. This is primarily because, in many sporting disciplines, the distinction between victory and defeat hinges upon the accumulation or surrender of points or goals, which can transpire swiftly. By adopting a positive mindset, individuals can promptly attain the necessary objectives or milestones, provided they maintain a sense of hope.

Positive feeling is a fundamental concern within the realm of positive psychology. Individuals who experience happy emotions are likelier to exhibit a cognitive style with increased flexibility and

creativity. Individuals can promptly identify resolutions when confronted with challenges, facilitating the development of a comprehensive and adaptable cognitive approach. Consequently, they acquire the aptitude to amalgamate diverse components (Aliyev & Karakus, 2015; Kim et al., 2019).

Numerous scholarly investigations within the domain of sports psychology focus on examining the detrimental impact of cognitive processes on athletic performance. This article aims to investigate the effect of positive psychology, particularly the construct of hope, on athletic performance, focusing on its beneficial effects instead of the detrimental aspects associated with worry, pessimism, and fear.

The ability to maintain a positive mindset when faced with challenges is of the utmost significance in sports, as the outcome of a game sometimes relies on a narrow margin of points or goals that can be scored or allowed within a short period.

**Meaning of Hope:-**“Hope can be defined as a mental state characterized by optimism when individuals anticipate favorable results concerning various events and situations in their personal lives or on a global scale. The word encompasses multiple meanings, such as expressing a sense of assuredness, having a confident outlook towards an outcome, and nurturing a longing or aspiration with a sense of eager expectation.”

“Hope is the sum of goal thoughts as tapped by pathways and agency. Agency expresses the belief that one can take the initiative to act along these pathways, whereas pathways show the apparent potential to generate target routes”.

#### **Definitions of Hope:-**

**The definition provided by Merriam-Webster** Hope is a “to cherish a desire with anticipation: to want something to happen or be true”.

**Using terminology from the APA's Dictionary of Psychology** Hope is the “expectation that one will have positive experiences or that a potentially threatening or negative situation will not materialize or will ultimately result in a favorable state of affairs. Hope has been characterized in the psychological literature in various ways, including as a character strength; an emotion; a component of motivation that is critical to goal attainment; a mechanism that facilitates coping with loss, illness, and other significant stresses; or an integrated combination of these features”.

#### **Meaning of Sports:-**

Sport is a human activity primarily concentrating on physical exertion and skill, including competition and social interaction. It is characterized by various formally established rules and behavioral norms that regulate the activity, often institutionalized and widely acknowledged as defining a sport.

In common usage, the word "sport" is associated with physical exertion and a set of expected performance levels.

In sports, one person or team battles against another or against other teams for recreation or competition. They need physical effort, psychological commitment, and ability.



**Definitions of Sport:-**

**The Cambridge English Dictionary** says “Sport is a game, competition, or activity needing physical effort and skill that is played or done according to rules, for enjoyment and/or as a job”:

**On the basis of definitions found in the Britannica** “Sport is a contest or game in which people do certain physical activities according to a specific set of rules and compete against each other”.

**Impact of Hope on Sportspeople:-**

- ❖ It provides individuals with a motivating factor for waking from their sleep each morning.
- ❖ Enhances cognitive and emotional wellness.
- ❖ The physical body gets several benefits.
- ❖ It boosts the immune system by mitigating stress levels.
- ❖ Increasing self-worth, self-belief, and confidence are associated with favorable results.
- ❖ Motivates you to make intelligent decisions.
- ❖ It is advisable to cultivate an environment whereby others with similar perspectives and beliefs are present.
- ❖ It has the potential to alleviate feelings of depression and anxiety.
- ❖ Brings about new possibilities.
- ❖ A "defensive pessimism" mentality leads some depressing athletes to work harder since they don't want to fail.
- ❖ Athletes need to know that neither wins nor defeats are final.

Sometimes, persons require assistance changing their perspectives or modifying various aspects of their lives, regardless of the circumstances involved. Various forms of help are available to individuals seeking to develop the courage necessary for accepting the belief that hope is achievable, facilitating transformative shifts in our lifestyles.

**Importance of Hope in Sports:-**

Although the hope is often seen as a biased psychological concept, sports coaching, and psychology scholars have uncovered its potential for practical application. Hope has been demonstrated to be a valuable instrument for coaches and sports psychologists in predicting and comprehending an athlete's performance in competing sports. Individuals with a sense of hope show the mental grit and determination necessary to overcome barriers that impede their achievement of personal objectives rather than surrendering to defeat. This phenomenon can be attributed to the influential nature of agentic cognition, wherein individuals' decision and drive stem from their pursuit of a specific objective. Considering this, it is possible to enhance the individual's difficulty level of goals and aims.

- ❖ In the context of sustained performance, it can be posited that when two athletes possess comparable levels of talent and ability, the individual retaining a more optimistic attitude, characterized by a greater sense of hope, is likely to exhibit superior performance.



- ❖ A few individuals think of hope as just a state of mind, but coaches and sports psychologists can use it to determine how well a player will do. Instead of "throwing in the towel," optimistic people have the strength and drive to get past any problems getting in the way of their goal.
- ❖ When athletes embrace a "Growth Mindset," they recognize their shortcomings and implement modifications in their practice and training regimens to enhance their performance in subsequent competitions.
- ❖ Hope correlates with achieving one's career, academic, and athletic goals.
- ❖ The explanatory style is a predictive factor in determining the performance of athletes and teams with their talent level and ability to execute under pressure.
- ❖ The expression of hope is characterized by an increased degree of consistency in both individual games and the overall duration of the season.
- ❖ It is expected that individuals with hopeful mindsets will show superior performance compared to those with pessimistic views.
- ❖ When athletes experience a sense of hopelessness and underperform relative to their expectations, their subsequent performance in the following competition will probably be poor (tournament game, race at a track meet).
- ❖ Athletes who experience a loss or subpar performance may exhibit decreased levels of driving, leading to a sense of hopelessness.
- ❖ Some "unhopeful" sportsmen have what psychologists call a "defensive pessimism" that pushes them to succeed towards challenges.
- ❖ If you keep a positive attitude and the right frame of mind, you can swiftly accomplish the essential points and goals you require as long as you have optimism and hope.

**Conclusion:** - Hope is not just hoping for something; it is a proactive stance toward life that springs from having a specific desire and a plan to achieve it. Even if progress is slow, we will find a way to reach our destination. Athletes with a greater capacity for hope are more committed to the task at hand, seeking new strategies to improve their chances of success.

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## EMERGING TREND OF E-GOVERNANCE IN EDUCATION: A STUDY ON PATRONS OPINION

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### Abstract

*E-governance in India began modestly with the computerization of government agencies before expanding to include all aspects of governmental operations. By offering new channels of contact through ICT (Information and contact Technology) between educators, students, the government, higher education institutions, parents, and other stakeholders, e-initiatives for governance in education would strengthen education. Transparency and complete clarity in the administration, governing, and admission processes will result from the deployment of E-governance in the education sector. In order to accomplish this, UGC has instructed all universities to set up a 24-hour information helpline. The goal of the present study was to learn what patrons thought about different aspects of the educational process where e-initiatives for better governance could be used. For this study, both primary and secondary data were taken into account. 180 respondents, including students, teachers, and parents, were given questionnaires to complete in order to gather the primary data. The primary data was analyzed and the hypothesis was tested by using percentage analysis and a five-point Likert scale. Reports, papers, websites, and other online resources were used to gather the secondary data.*

*Keywords: E-initiatives, E-Governance, ICT, Higher Education, Stakeholders*

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### INTRODUCTION

The term " E-governance " refers to the use of information and communication technologies (ICTs) for improving governance at various levels of the public sector, the government, and elsewhere. The real-time information processing and knowledge management of an academic institution are made feasible by the installation of E-Governance solutions in every unit. An integrated solution called E-governance makes it easier to process and maintain massive volumes of data - including student, faculty, payroll, staff information, library, transport, asset management, building management, staff management, and student fees among several departments in an academic institution. Computerization and management of processes like registration, admission, student information, classes, timetables, transportation, attendance, libraries, salaries and costs, exams, performance, grades, hostels, security, and reports are some of the possible requirements for educational institutions. Many software vendors give their customers the **LITERATURE SURVEY**

Previous studies relating to E Governance in Education analyzed below:

Information and communication technology (ICT) plays a crucial role in promoting effective, productive administration and management in the education sector (**S.dr.indirjeet, 2016**). The 21<sup>st</sup> century has brought about various challenges in education system: global and local challenges, universal and individual challenges, challenges to competitiveness and equity, extraordinary expansion of information (**Sabir, Rashid, Al-Kake, & Othman, 2019**). Insisting all teachers to build a class web page, attend technology conferences and see what other schools are doing, what other teachers are doing to incorporate technology, and what leaders are doing to enable their schools and classrooms to use technology are the part of E-Governance in education (**Ping et al., 2019**). The different ways in which technology can be implemented in the administration of educational institutions are as follows: sending e-mail notes and agendas to staff rather than printing and circulating them, delivering lesson plans by e-mail, promoting technology development by requesting parents to write e-mail addresses on medical forms(**Sadq et al., 2020**).

## STATEMENT OF THE PROBLEM

The effectiveness of the education sector's numerous systems, which are characterized by a number of difficulties, will be improved via e-initiatives. An examination of the literature sheds light on a number of aspects in the education sector that fall under the general heading of E Governance and difficulties. The present study, titled “**Emerging Trend of E-Governance in Education : A Study on Patrons opinion**” is being conducted to see how different stakeholders are reacting to E initiatives to the processes of the education sector and problems in its implementation.

## OBJECTIVES OF THE STUDY

The present study is based on following objectives

- To know the concept of E Governance in general and in education sector
- To know the benefits and challenges in application of E Governance in education sector
- To analyse the opinion of the patrons in application of E Governance in education sector

## RESEARCH METHODOLOGY

Both primary and secondary data are used to support the current investigation. Students, teachers, and parents made up the three categories of patrons in the education sector from which the primary data was gathered. A total of 180 respondents were chosen for the sample size using the convenience sampling technique. The primary data was analysed using percentage analysis and a five-point Likert scale. Reports, papers, websites, and other online resources were used to gather the secondary data.

## HYPOTHESIS

To give insight into the objectives of the study following hypothesis was framed

**H<sub>1</sub>= There is a significant association between E-Governance in education sector and quality of education**

## CONCEPT OF E GOVERNANCE

UNESCO defines e-Governance as “*Governance refers to the exercise of political, economic and administrative authority in the management of a country's affairs, including citizens' articulation of their interests and exercise of their legal rights and obligations. E- Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.*” E Governance arises when government of any country uses computer and network to perform their task in order to bring efficiency and crystal clarity in work and spread their policies and information to whom they are responsible. It is a two way process and reduces the gap between government and citizen of the nation. People of nation can make aware of government to inform about their issues and problem. This is also very helpful in reducing red-tapism present in bureaucracy.

The Indian government's National e-Governance Plan aims to establish the groundwork and gives E-Government in the nation, the momentum it needs to grow over the long term. The NeGP aims to improve the delivery of government services to citizens and businesses with the following vision. "To make all government services accessible to the common man in his locality, through common service delivery outlets and ensures efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man."

## E-GOVERNANCE IN EDUCATION SECTOR

It is expected that the use of e-government in education will provide fresh perspectives on how to plan and deliver the necessary services. With the emergence of digital technology, the internet, and mobile communication, the relationship between educational administration of the institute and students will eventually improve. The achievement of the ultimate educational goals will result from this improved relationship. E-government implementation in educational institutions will allow for efficient academic standard monitoring.

### BENEFITS OF E-GOVERNANCE IN EDUCATION SECTOR

- Improving efficiency, increasing accountability for educational administration tasks, facilitating faster and more accessible access to services, and lowering administrative expenses.
- Report preparation is made simpler and faster;
- Student harassment is decreased.
- Simple online information, form submission, and payment also become nearly instant.
- The management, teachers, students, and administrative personnel become more easily connected to one another, improving service delivery efficiency through the speedier dissemination of information at a very cheap cost.
- The provision of equal access to information independent of one's physical location or physical disability removes barriers caused by distance.
- Reduces transaction costs, time, space, and labour significantly.

### CHALLENGES BEFORE E-INITIATIVES TOWARDS ENHANCING GOVERNANCE IN EDUCATION

There are a number of potential obstacles to the proper adoption and delivery of e-government solutions to its target population that may arise in educational institutions.

- **Cost:** One of the biggest obstacles to the introduction of e-government is cost, particularly in developing nations like India where the amount of money given for education is frequently insufficient.
- **Resistance to Change:** The phenomena of patrons ' resistance to change can be used to partially explain why constituents are hesitant to switch from a paper-based to a web-based system for communication between students, professors, and administration.
- **Digital Divide:** It typically occurs in educational institutions owing to a lack of sufficient training and internet and computer access.
- **Lack of Trust:** Trust is one of the main barriers preventing the adoption of e-government services, along with financial security. Two levels of trust are necessary for the implementation of administrative activities in educational settings and institutions using electronic governance. The first is user trust, and the second is administration trust.
- **Size and Diversity of Education Sector:** Due to the enormous number of educational institutions and students, even the best technology occasionally falls short. To administer the entire system, a strong and extensive e-infrastructure is required.
- **Lack of understanding:** Lack of understanding among patrons in the education sector makes adopting e-government extremely difficult.

### DATA ANALYSIS

- **Type of patrons:** To analyse the perspectives of patrons on E governance in education sector only three types of patrons namely: students, teachers and parents have been selected. The Table-1 gives information about it.

**Table-1 Type of Patrons**

Type of Stakeholder	Number	Percentage
Students	60	33.33
Teachers	60	33.33
Parents	60	33.34
Total	180	100

Source: Survey Data

As per Table-1 out of 180 respondents, surveyed 60 each were students, teachers and parents.

• **E-initiatives will strengthen the governance in education sector and thereby quality of education**

Respondents were asked opine whether e initiatives will strengthen the governance in education sector and thereby quality of education. The response obtained from respondents given in Table-2.

**Table-2 E-initiatives will strengthen the governance in education sector and there by quality of education**

Response	Students	Teachers	Parents	Total
Yes	55	58	50	163(91%)
No	5	2	10	17(9%)
Total	60	60	60	180(100%)

Source: Survey Data

Out of 180 respondents surveyed 91% felt that there is need for ICT enabled initiatives to strengthen governance in education sector and thereby quality of education. This response indicates that E Governance will improve the quality of education.

• **Perspectives on E initiatives towards Various Processes of Education**

Respondents were further asked to rate their perspectives on E initiatives towards various processes involved in education sector. Likert 5 point scale was used saying - 5 - Strongly Agree, 4 – Agree, 3 - Neutral, 2 – Disagree and 1 - Strongly Disagree and mean scoring was calculated.

**Table 3: Perspectives on E initiatives towards Various Processes of Education**

Processes	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Mean scoring
Admission	121	48	10	1	0	180	4.61
Administration	130	38	11	1	0	180	4.65
Examination	131	36	6	7	0	180	4.62
Scholarships	102	49	21	7	1	180	4.33
Evaluation	128	40	7	5	0	180	4.71
Results	132	35	10	2	1	180	4.75
Feedback	131	43	4	2	0	180	4.87
Teaching and Learning	129	43	5	2	1	180	4.65
Complaints/ Grievances	92	50	21	15	2	180	4.19
Fund Utilization and Budget	90	65	10	13	2	180	4.27
Attendance of students	120	50	5	4	1	180	4.58
Attendance of teachers	121	51	5	2	1	180	4.61
Library Work	129	43	5	2	1	180	4.65

Source: Survey Data

Table-3 shows that mean scoring on E initiatives towards various processes of education is near to either strongly agree or agree. It is evident that majority of the patrons strongly supported E



governance in education sector.

### • Testing of Hypothesis

Table-2 shows that out of 180 respondents surveyed 91% felt that there is need for ICT enabled initiatives to strengthen governance in education sector and thereby quality of education. Again Table-3 shows that mean scoring on perspectives of respondents on E initiatives towards various processes of education is near to either strongly agree or agree. **Thus the hypothesis, there is a significant association between E Governance in Education sector and quality of education is justified.**

### CONCLUSION

The study comes to the conclusion that e-initiatives are necessary for all educational activities. The most crucial processes, however, according to students, teachers, and parents, are admission, administration, examination, evaluation, result, library work and feedback processes, as well as teaching and learning and teacher and student attendance processes. These processes must be strengthened through effective and efficient either. Through transparency and accountability at both the internal and external levels of governance, e-governance has the potential to significantly raise the quality of education. India's educational goals may be attained through cost-effective growth brought on by decreased information transmission costs, processing times, error rates, and complaints, as well as simple accessibility to all stakeholders. However, a number of issues must be resolved for the adoption of e-governance to go smoothly, including the requirement for digital infrastructure, stakeholder support, awareness, cost effectiveness, and other factors. Many of these issues need multi-level solutions, which public-private partnerships can provide. Therefore, the research paper can be succinctly summarised by the wise words of Late Dr. APJ Abdul Kalam, a visionary in the field of e-governance and the former President of India: "E-governance, has to be citizen friendly. The provision of services to the public is thought to be the government's main duty. E-Government should allow for smooth information access and flow between the state and federal governments in a democratic country with a population of over one billion people like India. No nation has yet put into place an e-government system serving a billion people. We have a huge task. Thus, it can be inferred that in order to execute e-initiatives successfully, it is critical to adequately handle the different issues facing the education sector.

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## CREATIVE TEACHING METHODS IN EDUCATION

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### *Abstract*

*Due to the innovations in modern education, innovative teaching methods have come into force rather than the traditional teaching methods. Our India is a country that has shown its greatness in the world by keeping high culture and ideal values from time immemorial. India has given the world the science of discovery under the metaphysics of Vedic Upanishads while the world is learning. Creative teaching methods in education today are helpful in imparting real world knowledge both inside and outside the classroom. It promotes innovative thinking and skillful knowledge in students. Apart from this, this creative learning method encourages students to explore critical, diverse, experiential thinking beyond the traditional, oral, standard learning methods and to develop a personality to identify themselves. Creativity involves being proactive, creating something new, and scientific progress is made possible through creative activities. They should allow themselves to experience things by anticipating things. This method of teaching is very helpful in developing internal knowledge and factual knowledge in students, along with letter knowledge.*

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### INTRODUCTION

Teaching methods in education should be chosen, keeping in mind the objectives of education, the quality of students, the needs of the educational system. Some methods are better for many situations and the creative teaching method is one of them.

This creative teaching method is an innovative teaching method used by educators to enhance students' personal development and learning experiences. Creative teaching methods are essential in modern education because they cater to diverse learning styles and aim to develop critical thinking, problem solving, logical thinking, and creative qualities in students. It helps to develop a deeper understanding of the subject. A creative teaching approach is helpful in preparing students to meet the challenges of the modern world. The approach is focused on understanding and application and is needed to continuously improve learning outcomes. Also, active participation in learning through role-playing lessons, which are valuable in discussions and adaptability.

It develops an individual personality. It helps to identify the gifted student's preferred learning styles and strengths. It develops communication skills through project work. It develops a deep understanding of content. Asking questions, independent exploration, researching are its main functions.

Today, student-centered learning that incorporates interdisciplinary learning, problem-based learning, and technology enables students to take an active role in education, making connections between different fields of knowledge and providing comprehensive understanding of concepts.

Creative teaching methods of education;

- Develops motivation and positive attitude
- Encourages students to think critically, analyze information and develop problem-solving skills.
- Leads to deeper understanding of content material.
- Prepares students for the future with required skills and adaptability.
- Helps them achieve self-sufficiency with personal growth.
- Promotes holistic view of knowledge and builds interrelationship.
- Prepares for diverse interactions in the environment.
- Conveying information makes memorization work for better retention.
- Instills lifelong learning habits.
- Enables global problems to be understood, appreciated and solved.

There are so many types of creative teaching methods:

- **Technical creative teaching method:**

Clarifying the relationship between multimedia computer-based teaching tools using technology and project-based learning is interdisciplinary and student-driven, encouraging students to work on projects that require research thinking and creativity.

- **Artistic creative teaching method:**

Cultivating in the students the art which is compatible with art, music, drama, dance, role playing etc. Exploring and understanding concepts in unique ways should be encouraged through the arts. Artistic and emotional attitudes should be developed in the students.

- **Creative teaching method of culturalism:**

Being a cultural country, we have a teaching method that inculcates many arts in the people, which is to inform about the promotion, history, reality and future of cultural arts. This method of teaching is helpful in developing good qualities through folk arts and performing arts.

- **Social creative teaching method:**

Criticality, inquiry system, social storytelling, poetry rescue, problem identification, mentoring, coaching, field trip, communication skills, research skills trips. These creative arts help in social progress.

- **Logical creative teaching method:**

Open-ended questions, discussions, healthy friendships, life skills, problem posing, conveying information, reflection, use of visualizations are all helpful in developing logical thinking skills in students.

Students freely participate in class discussions to apply what real life is like in the real world. Creative teaching methods are helpful in developing creative qualities in every student, because they understand emotionally about their peers, their environment and other situations.

Creative teaching methods are helpful in inculcating different types of creative qualities in students.

- **Innovation and adaptability:**

Creative teaching encourages both teachers and students to be innovative and flexible, which prepares students for a future that may face new challenges and opportunities.

- **Evaluation and feedback:**

Assessment of creative teaching methods focuses on understanding and application of knowledge rather than rote learning. Continuous feedback is used to monitor and improve learning outcomes.

- **Creative expression and experiential learning:**

It touches on artistic and imaginative assertions, real world experiences, field trips and other practical applications of knowledge.

- **Emotional and social development:**

Creative teaching methods can address the emotional and social aspects of learning and foster such qualities as empathic resilience and emotional intelligence.

- **Critical thinking and problem solving:**

Creative teaching encourages students to think critically, analyze information, and develop problem-solving skills—these skills are essential for success in the real world, which requires innovative solutions to complex problems.

- **Inquiry and exploration:**

Students are encouraged to explore topics independently and conduct research to ask questions which leads to a deeper understanding of the subject.

**■ Demonstrative and reactive teaching:**

Using this study to observe all subjects can be taught through acting, teaching through dialogue and developing their ideas creatively.

**■ Dreaming and planning the use of cinema and plays:**

To make the dream come true, it is taught through lesson plans to make a specific plan and achieve it.

**■ Role-play the lesson with games:**

Incorporate elements of play into lessons to cheat learning, be it educational games, quizzes and over-the-top events, scientific processes, or assigning characters from literature. This approach fosters empathy.

**■ Student-centered learning:**

Creative teaching places the student at the center of the learning process. It recognizes that each student has individual factors, interests and learning styles. Lessons are tailored to meet these specific needs.

**■ Story-telling art and creativity:**

Communicates complex concepts through narratives, incorporating the arts into lessons to foster creativity and expression. Outdoor Education Develops learning through natural outdoor activities.

**■ Gamification and flipped classroom:**

Integrates game elements to make learning fun and interactive includes learning content at home through videos and engaging in interactive activities in class.

**CONCLUSION**

Creative teaching methods are innovative approaches to education beyond traditional lecture style teaching. These approaches aim to engage students to enhance their learning experiences and develop critical thinking and problem solving skills.

In conclusion, creative teaching methods offer a dynamic and engaging approach to education. By moving beyond traditional lecture-style teaching, these methods foster deeper understanding, critical thinking, and a more enjoyable learning experience for students. Whether through project-based learning, gamification, arts integration, or other innovative techniques, these approaches provide opportunities for students to connect with materials, collaborate with peers, and develop essential life skills. Creative teaching methods can be tailored to the specific needs of students and subjects, ultimately enriching the educational journey and preparing learners for future challenges.

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## OPEN EDUCATIONAL RESOURCES IN INDIA: IT'S SIGNIFICANCE

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### Abstract

*Technology plays a much larger role in the digital age than in previous generations and it has become important today that education adapts to this digitalization. Sharing educational resources was traditionally limited in the competitive world of education. Educational institutions keep their educational materials and resources private. Today, an increasing number of institutions and individuals have made such digital resources available for distribution on the Internet by removing legal, financial, and technical hurdles. Open Educational Resources creates the right way to provide free and accessible education to all and access information for the public good. It is important that OER is inexpensive and freely adaptable. The ability to adapt and modify content provides a significant advantage, especially when targeting specific populations such as the disabled or those with special needs. Efforts are being made in India to transform it into a knowledge society. Access, equity and quality are the main focus of new initiatives in education in India. This paper has made an attempt to understand the concept, features, significance and open educational resources in the digital era. Further, this paper focuses on OERs in India.*

**Keywords:** Open Educational Resources (OER), Education, Significance, Digital era.

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### Introduction

Open Educational Resources are those teaching and learning materials that are available to anyone free of cost and under an open license to allow others to retain, reuse, revise, remix and redistribute them with few or no restrictions. The phrase 'Open Educational Resources' was first coined in 2002 at UNESCO's Forum on the Impact of Open Course-ware for Higher Education in Developing Countries. OER are teaching, learning and research resources that reside in the public domain or have been released under an intellectual property licence that permits their free use or repurposing by others. The Organisation for Economic Co-operation and Development (OECD) defines OER as: "digitised materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research. OER include learning content, software tools to develop, use, and distribute content, and implementation resources such as open licences". Technology is the name of tools and devices that make life easier in all areas of life education is changing rapidly. In this changing environment, it is necessary to bring a digital dimension to education. Today, not being able to benefit from technological opportunities in education cannot meet the needs and expectations of the age (Karasar, 2004). The introduction of the Internet into our lives has made it easier to access information. Access to e-books, public and private digital libraries, digital encyclopaedias, articles, blogs, websites and discussion forums where we can exchange information with one click has become easier. This digital transformation fundamentally changes the access and sharing of information. While digital transformation is developing rapidly around the world.

### The concept of Open Educational Resources

UNESCO defines OER as "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.

Open Educational Resources are learning and teaching materials that are freely available online for anyone to use. OERs can consist of full courses, course materials, modules, textbooks, videos, tests, software and any other tools, materials or techniques used to support access to knowledge. OER are freely and publicly available teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-



purposing by others. Open Educational Resources are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others.

The 5R's of the OER format are Retain, Reuse, Revise, Remix, and Redistribute facilitate greater engagement with the curriculum. Teachers can enhance existing learning materials with the use of videos, infographics, exercises, assignments, or any other tool that they deem fit to drive better student engagement.

### **Features of Open Educational Resources**

- Many resources have a review or annotation feature so instructors have more in-depth.
- Knowledge of the resource and its quality quickly.
- Makes learning and teaching more collaborative.

### **Significance of Open Educational Resources**

The use of Open Educational Resources provides various advantages to educational institutions, academics and learners. It is foreseen that the gap between different classes in the society and countries in the international arena will decrease with Open Education Resources, the quality of education will increase and access to information will accelerate. In addition, it is stated that the number of people receiving informal education and lifelong learning tendencies will increase with OER. One of the core values of OER is the universal use of these resources, independently of the education system and national curriculum frameworks. Open Educational Resources and open applications as having more personal learning, good learning experience. In addition, they stated that by increasing the access of individuals to information, it allows more efficient and better use of resources that provide learning equality. Students can access different educational resources suitable for their learning styles through OER.

- To contribute to the lessons of the students who continue their education life and to support their preparation for the exams,
  - To ensure that all individuals who want to follow their developments in the field of science and technology,
  - To pave the way for educators to improve themselves and therefore their teaching methods with accessible course-related resources and sample course teaching methods,
  - To meet these needs of educational institutions that is insufficient in terms of resources.
  - To contribute to making conscious choices by ensuring that students who will enter higher education life have preliminary information about the departments and courses they want to choose.
- By providing a universal information sharing environment, especially at the university level, to ensure that students in any country benefit from the offered by the university anywhere in the world,
- It can be used to serve purposes such as creating a developing discussion environment, especially for students and educators.
- Cost Savings is One of the most significant and immediate benefits of open educational resources is the availability of quality learning material to teachers and students in diverse formats at no cost or very little cost. This makes it the perfect alternative to expensive textbooks. Thus, making education more accessible and affordable for students who cannot afford to purchase course materials.
- Teachers can augment these existing materials as per their understanding of the subject and their students' needs, and then, share it further with the education community. As this process goes on, a collective effort by teachers and education experts can curate high-quality teaching resources. Thus leads to Improved Quality of Education

- Even though open educational resources are not essentially digital resources since many of these programs are designed to be used in the printed format, digital distribution can truly help leverage their optimal potential.
- Better Retention is possible through the collaborative nature of OER fosters a pedagogically sound learning experience. It has a positive impact the students' retention rate of new information and knowledge. Studies have shown that digitized and interactive learning material can elevate students' learning abilities and success.
- OERs give educators an opportunity to browse, customize, and apply educational materials that are innovative, accessible, and affordable. By decreasing the costs associated with higher education, we can create a more equitable and sustainable future that enables an ever-widening community of learners to reach their academic, professional, and personal goals.

### **Limitations of Open Educational Resources**

Quality and reliability concerns in OER materials, language barrier, cultural barriers, technological issues, sustainability issues and limitation of copyright property protection.

### **Open Educational Resources in India**

Knowledge Commission (2007) set up by the Government of India has brought out these aspects very clearly. Nowadays, many institutes are taking initiatives specifically for creating open educational tools and resources that are directed towards basic sciences and engineering education. One significant undertaking in this area is the National Program on Technology Enhanced Learning. It is a joint venture by seven Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc) funded by the Indian Ministry of Human Resource Development (MHRD), to enhance the quality of engineering education in the country by developing curriculum-based video and web courses (<http://nptel.iitm.ac.in>). Another illustrative open education initiative is Eklavya, launched by Indian Institute of Technology, Bombay. The Eklavya project has developed an Open Source Educational Resources Animation Repository (OSCAR) that provides web-based interactive animations for teaching. OSCAR also provides a platform for student developers to create animations based on ideas and guidance from instructors. Funding for the Eklavya and OSCAR project comes mainly from private industries. A third prominent initiative, E-Grid, supported by the MHRD and the Indian Institute of Information Technology (IIIT), provides subject-specific portals that are developed and maintained by subject domain experts. Currently, this programme offers OER only for science and engineering. A Confederation of Indian Industry (CII) has developed a collaborative e-Learning system and portal under its initiative Shiksha India, which will help Indian students search for contents in various topics.

**National Digital Library of India (NDLI)** is a repository of open learning resources searching and browsing facility for the learner community. National Digital Library of India launched in May 2016. It developed, hosted and maintained by the Indian Institute towards Excellence.

**National Programme on Technology Enhanced Learning (NPTEL)** is Massive Open Online Courses was initiated in 2003 by 7 Indian Institutes of Technology, i.e. Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati & Roorkee and Indian Institute of Science Bangalore. It has 235 courses in web and video format covered with five core engineering disciplines, i.e. Civil, Computer Science, Electrical, Electronics and Communication & Mechanical. In phase II, added 600 more web and videos during 2019-14 in all major branches of engineering, physical science and management course at undergraduate and postgraduate levels

**Swayam** is a free online education program initiated by the Government of India. It contains the courses in video formats, downloadable reading materials, quizzes, and assessment and online discussion forums. The courses available for class 9 to post graduation level, accessible by anyone at anytime and anywhere

**Swayam Prabha** is a free DTH channel for education, 34 DTH channels telecasting only quality education programs on a 24X7 basis by using GSAT-15 satellite. The DTH channels cover Higher and School level education. NPTEL, IITs, CEC, IGNOU, NIOS, NCERT and UGC are contents provider for Swayam Prabha.

**Shodhganga** is a reservoir of Indian Theses. It is an open-access digital repository of Indian Electronic Theses & Dissertation, and it has M.Phil. and PhD theses full-text collections and it is set up and maintained by INFLIBNET Centre.

**Open Government Data (OGD)** Platform India is a platform developed by Government of India to support Open Data Initiatives. This portal is joint initiatives of Government of India and US Government. The portal is intending to use for Government Ministries/Departments their organisation to publish dataset, documents, services, tools and application collected by them for public use.

**Vidya-mitra** Integrated e-Content Portal (A gateway to all learners) is web based interface developed by INFLIBNET Centre and funded by Ministry of Education, Government of India under the National Mission of Education through Information and Communication Technology (NME-ICT).

### Conclusion

Open Educational Resources not only helps students, schools, and educators save on money, but it also improves the quality of education by giving thousands of teachers access to a vast resource of high-quality instructional material. It must be realised that mere development of OER and uploading them to the website will not achieve the expected impact. There is a need to create awareness about these resources among the end users. At the same time they need to be convinced that these resources are useful to them. Awareness campaigns and personal contacts are required to spread the movement of OER in India. It is a fact that dedicated Internet connections are not available in many schools in rural areas. The task of providing this facility should be undertaken on a priority basis. It enhances traditional education and learning systems with open education materials and online tools that can be used unlimitedly in standard and online education through objectives that enable collaborative and constructivist learning, critical thinking and exchange of ideas and provides an opportunity to create new knowledge. The culture of designing and using open educational resources in the country would certainly lead to citizens capable of informed decision-making and sustainable problem solving in digital era.

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## IMPORTANCE OF PHYSICAL EDUCATION AND SPORTS IN PROMOTING SOCIAL VALUES AMONG YOUTH

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### *Abstract*

*The purpose of this study is to investigate the impact of physical education and sports in promoting social values among youth. Physical education and sports play a vital role in educating the youth regarding the importance of social values in their life. Reviewed literature investigated that the importance of association in educating both minds and body. Further, it also encourages the social values among youth that allow them to develop the social relations with their community. Moreover, the benefits of physical education and sports can influence both academic learning and physical activity of the youth.*

**Keywords:** *Physical Education, Sports, Social Values, Youth, Academic Learning.*

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In present era, physical education and sports is an essential part of education. It contributes directly to development of physical competence and fitness. It also helps the youth to be aware of the worth of leading a physically active lifestyle. The healthy and physically active youth is more likely to be academically motivated, attentive, and promising. In other words, we can say that physical education and sports is exclusive to the school core curriculum. It is the only programme that provides the opportunities to youth to learn motor skills, progress mental and physical fitness. The benefits of physical gained from physical activity such as disease prevention, safety and injury avoidance, decreased morbidity and premature mortality, and increased mental health. The physical education is only the course where youth learn about all of the benefits gained from being physically active as well as the skills and knowledge to incorporate safe, satisfying physical activity into their lives, in addition, how to interact with others (National Association for Sport and Physical Education, 2001). Moreover, it is observed that physical education sessions should be easy to get from preschool until secondary. It targets to deal with a variety of physical activities and encourage those who are lack of leaning to take up planned competitive sports. This involves discard conventional methods of physical education teaching and focusing more on the individuals' needs and abilities, as an alternative of the Impact of Physical Education and Sports in Promoting Social Values among Youth © The International Journal of Indian Psychology, ISSN 2348-5396 (e)| ISSN: 2349-3429 (p) | 85 enjoyment of physical activity. As time for physical education is generally limited within the school time schedule and curriculum, its content must be valuable and resourceful (Fox and Harris, 2003). Further Gonzalez et al. (2010) believed that curricular physical education within any sport, not only talent development scheme but a high development in social values among youth. Therefore, the purpose of this study is to investigate the role of physical education in promoting social values among youth.

**Physical Education Programme** Physical education curriculum can offer youth with the appropriate knowledge, skills, behaviours, and confidence to be physically active for life. Moreover, physical education is the basis of a school's physical activity programme. In the same vein, participation in physical activity is correlated with academic advantages like improved concentration, memory, and classroom behaviour. According to World Health Organization (2001), it includes development of physical abilities and physical conditioning; motivating the students to continue sports and physical activity; and providing recreation activities.

### **Development of Physical Abilities and Physical Conditioning**

Physical education facilitates to build up and practise physical fitness entails basic motor skills (Barton et al. 1999) and gets hold of the competency to perform various physical activities and exercises. Physical fitness builds mentally sharper, physically comfortable and also able to deal with the day-to-day demands (Jackson, 1985). Further, endurance, flexibility, strength and coordination are

the key components of physical fitness. Moreover, to execute the physical exercises and sport, youth must be developed basic motor skills.

### **Motivating the Students to Continue Sports and Physical Activity**

Teachers always motivate the youth to contribute in sports and physical activities as well as academic education programmes. Further, they always direct and instruct them, sports and physical activity are vital part of academic education. They have also guided the youth; we cannot think wholesome development of human personality without sports and physical education. Moreover, they have also to manage a meeting in which discusses their parents about the importance of sports and physical activity as well as academic education. Further, teachers must engage parent or family members in physical activity, for example, by giving youth physical activity 'homework' which could be performed together with the parent's viz., family walks after supper or playing in the park (WHO, 2001).

### **Providing recreation activities**

Institutions must focus on implementation of physical activity course which facilitate to make enjoyable participation to all youth in physical activity programme which provides the youth with a collection of ideas for active games and activities and the skills and fitness to play them (Fox and Harris, 2003) in order to reduce the stress, anxiety, drug abuses and obesity.

### **Promoting the Social Values among**

Youth Physical education and sports play a vital role in promoting the social values among the youth. Moreover, physical education is considered as a school subject, which facilitate to prepare the youth for a healthy lifestyle and focuses on their overall physical and mental development, as well as imparting important social values among the youth such as fairness, self-discipline, solidarity, team spirit, tolerance and fair play (Bailey, 2005).

### **Discussion And Conclusion**

The present study focuses on physical education and sports helps to promote the social values among youth. Physical education and sports are considered as an essential part of education and culture. It build up the abilities, will-power, moral values and self-discipline of every human being as an entirely integrated member of society. The contribution of physical activity and the practice of sports must be certify that the throughout life by means of a global, lifelong and democratized education. It contributes to the preservation and enhancement of mental and physical health, gives a nourishing leisure-time activity and also helps to an individual to overcome the drawbacks of present stressful living. At the community level, they build up social qualities, social relations and also fair play, which is vital not only to sport itself but also to life in society. Education system must allocate the required position and applicable to physical education and sport in order to create a balance and strengthen between physical activities and other components of education. Physical education and sport course must be intended to suit the requisites and personal attributes of those follow them, as well as the institutional, cultural, socio-economic and climatic conditions of each country. In the process of education in general, physical education and sport programmes must, by virtue of their content and their timetables, help to create habits and behaviour patterns beneficial to full development of the human personality. Further, voluntary people, given appropriate training and supervision, can make an invaluable contribution to the inclusive expansion of sport and promote the participation of the inhabitants in the training and association of physical and sport activities. In addition, it also focuses on adequate and sufficient facilities and equipment which meet the needs of exhaustive and safe participation in both in-school and out-of-school programmes regarding physical education and sport. Physical education as a generic term is linked with socio-cultural, educational and social values, psycho-social qualities, socialization, inclusion, moral codes of behaviour, cognitive and physical development, well-being, healthy diet and other benefits to be derived from



engagement in regular physical activity (Bailey, 2005). To conclude, education in general, and physical education in particular, should respond to the needs of optimally developing individuals' capabilities and provide opportunities for personal fulfilment and social interactions, fundamental in human co-existence. Limitations and Future Research The major limitations of this study are that lack of participation of students in physical activities. In future research, school management should organize the seminar and workshop in which aware the students about the importance of physical activity programmes. Further school management should also make compulsory the physical activity programmes. In future research should also include broader aspects of physical activity and assess the multidimensional nature of self-esteem. Further, this study is conceptual in nature; empirical study should be done in order to improve the generalisability of the findings.

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## CREATIVE TEACHING METHODS IN EDUCATION

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### *Abstract*

*This Article was designed to reveal elements of creativity that support teaching effective and this work provides direction of reviews in get a better idea of creative teaching and enhance effective teaching strategies skills, through the use of technology which gives more benefits in teaching method as well as construction of learner cognitive development.*

**Keywords:** Creativity, Technology, Teaching, Education, Teachers, Effective.

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### **Introduction:**

Creative teaching is defined as educational exchanges facilitated by the teacher that are unique customized and meaningful. Teaching is a creative profession not a delivery system. Great teacher do pass an information but what great teacher also do is mentor, stimulate, provoke, engage.

Creativity as a new way of looking at problems and recombining ideas or seeing new relationship among ideas. Creativity as the tendency to generate as possibilities that may be useful in solving problems.

### **Effective Teaching Strategies:**

- Visualization.
- Co-operative learning.
- Enquiry based instructions.
- Differentiation.
- Technology in the classroom.
- Behavior management.
- Professional development.

### **Creative Teaching Skills:**

- Focus on below average students: Always target below average students, these students understand the subject it means entire success.
- Use simple language : Languages should be simple, easy to understand, do not use difficult words and need to teach slowly.
- Teach with affection: Always a lot of affection on your subject, always have a smiling face.
- Revision is must: Its important to check previous knowledge in everyday class.
- Patience: Should have a lot of patience, your role is like a parents or more like parents.
- Sense of humor: Sense of humor is very important because it may attract students towards teachers and students will like the way of teaching and they will listen to the teachers.
- Remove the fear: Make student comfortable through doing some funny activities, and building good relationship with students.

### **Using Technology for Creative Teaching:**

The success of teaching mainly depends on technology. It is age of technology and technology of teaching comparison on hardware and software methods techniques and strategies.

The national curriculum from work suggested the judicious use of technology in the teaching – learning process. The technology provides numerous opportunities for teachers in make their task easy with a considerable degree of flexibility.

Use of technology create a powerful environment and it transform the teaching – learning process into an active self-directed and constructive way. Hence, teachers must have technology awareness and skills.

**Benefits:**

- Technology improves engagement.
- Technology can encourage a more active participate.
- Technology improves knowledge retention.
- Technology encourages individual learning.
- Learning is more interesting with technology.
- Experiential learning for students.
- Active participation in the classroom.
- Creativity as the tendency to generate or possibilities that may be useful in solving problems.

**Experiential, Creative Learning and Reflections:**

- Roleplay.
- Field trip.
- Film and documentaries.
- Video projects.
- Guest speakers.
- Portfolio.
- Art based activities.
- Group learning
- Games and puzzles.

**Conclusion:** Creativity is an exciting research area in education, creative teaching has been linked to effective teaching that enhances learning. Building of existing knowledge about creative teaching and creative teachers, this work provides direction for future research. Use of technology for creating effective and cognitive development of the learners

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## E-LEARNING AND VIRTUAL CLASSROOMS

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### *Abstract*

*Online learning refers to instruction that is delivered electronically through various multimedia and Internet platforms and applications. It is used interchangeably with other terms such as web-based learning, e-learning, computer-assisted instruction, and Internet-based learning. One of the essential facets of the modern era is the decentralization of knowledge and information. With e-learning and virtual learning, knowledge is no longer confined to the four walls of classrooms but is spread across the globe. Students can access education via the internet anytime and anywhere. E-learning and Virtual Learning are standard terms often used today to represent the modernized form of education. In this paper an attempt has been made to explore the nature and characteristics of E-learning and virtual classrooms and to understand e-Learning platforms can leverage the virtual classroom experience by creating a virtual hub that enables students, teachers, tutors, and trainers to connect in real time over online customizable virtual classrooms.*

**Keywords:** *E-learning, virtual classrooms, multimedia, synchronous and asynchronous learning.*

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### Introduction

E-Learning is a flexible and convenient way for students to learn as they can access courses from any device with an internet connection and often have more control over the pace of the course. It also allows for greater personalization of the learning experience as students can focus on the topics that are most important to them. The computers with their unimaginable working and functioning capacity coupled with a tremendous progress in the field of electronics and communication technology have yielded so much power, abilities and capacities to human beings that we can boast to do anything and everything imaginable or unimaginable on this earth. Teaching and learning that entirely happened to be a domain of the human factors-teacher and students-is now no longer limited to its traditional boundaries or ways and means. It has revolutionized in the field of teaching and learning. Instead of the total dependency on the instructions imparted by the teachers and the subject matter available in the books or other printed publications, the learners are now able to utilize the computer's database and networking facilities not only for seeking information but also for interacting with them on-line in the manner as happens in the real classroom encounters. The future of education and classroom instructions remain to be a great extent in the concept and practices of e-learning and virtual classrooms. Virtual learning is becoming increasingly popular as an alternative to traditional classroom learning, allowing students to access educational material from anywhere with an internet connection. Virtual learning stands out from traditional learning by delivering lessons online rather than in a four-wall room setting. It is carried out on an electronic system which is mostly web-based. Virtual learning is most of the time delivered in real-time, with a teacher instructing the class on a virtual classroom platform. However, it is also possible for it to be a self-paced course with elements of student/teacher communication. Self-paced courses allow students to learn on their schedule, which benefits those unable to attend real-time classes. It also allows students to take as much time as needed to understand the material and allows one-on-one interaction with the teacher.

### Concept of E-Learning

E-Learning is an abbreviation of the term electronic learning. Electronic learning in its literal meaning stands for the type of learning carried out, facilitated or supported by some or the other electronic gadgets, media or resources. It is quite a broader meaning of the term e-learning. Judging in this sense, the learning facilitated by the use of any electronic media or means like microphones and listening devices or audio and video-tapes can be termed as E-learning. In this sense, E-learning may call for the services of the advanced electronic information and communication media and

means like teleconferencing, video- conferencing and computer based conferencing, e-mail, live chat, surfing on the Internet and Web browsing, on-line reference libraries, video game-style simulation, customized E-learning courses, and Web blogs identified.

The term E-learning has entered the realm of teaching and learning in the similar way as other related terms like e-mail, e-banking, e-booking and e-commerce tend to exist with us in our other walks of life. The use of the Internet services and Web technology is must for their functioning. Having a proper look at the nature and use of E-learning dominated by the Internet teaching is a contemporary author, **Rosenberg (2001)** tried to define the term E-learning in this way. E-Learning refers to the use of the Internet technologies to deliver a broad array of solutions that enhance knowledge and performance.

### **Nature and Characteristics of E-Learning**

E-Learning is a generic term used to refer computer enhanced learning. Its use should be strictly limited to "on-line learning" carried out through the Internet or Web-enabled technology. It conveys broader meaning than the terms 'computer-based learning' and 'computer- aided instruction'. It is broader in its meaning than that conveyed through the simple terms like "on-line learning" or "on-line education" that may call for the absolute Web-based learning without any follow-up, communication and interaction between the teacher and students. It should not be taken as synonymous to audio-visual learning, multimedia learning, distance education or distance learning. It is true that the audio-visual and multi- media technology and distance education programs rest heavily nowadays on the use of the Internet and Web services provided through the computers, yet these are not identical but complementary. It should be made absolutely clear that the use of the term E-learning should be restricted to the type of learning carried out, facilitated or supported through Web-enhanced instructions and the Internet-based communication like e-mail, audio and video conferencing, mail list, live chats, and telephony. As a result, all types of non- Internet and non-Web technology should not be included in the domain of e-learning. Taking a clear stand on this issue **Santheesh Kumar and sagy John (Kumar and John, 2008)** says that, though computer is used for instruction and learning, the non-Web technology does not come under E-learning. E-Learning platforms can provide instruction at a comfortable pace for the learner and support those needing extra help and customized E-learning solutions to understand the material. It is an effective and efficient way to learn, facilitating access to various learning materials, resources, and opportunities. It allows learners to take control of their learning and progress at their own pace, which can be especially beneficial for those with busy schedules to increase their L&D efficiency.

### **Modes and Styles**

□ **Support learning:** e-Learning can play a mere supporting role to the teaching-learning activities organized in the class. As a result, a teacher may make its use for his better teaching and a learner for his needed learning, e.g. they may use multimedia, Internet and Web services for their teaching and learning to enhance their classroom activities.

□ **Blended learning:** In this mode, attempts are made for making use of a combination of traditional and ICT enhanced e-learning practices. The programs and activities are so planned and executed as to present a happy combination of both the traditional classroom teaching practices and e- learning-based instruction.

□ **Web-based material:** Web-based material is the most classic type of e-learning process. In this, students can communicate with their tutors and work on their class assignments and tests. Students can use any electronic device, such as a computer, smartphone, tablet, etc., to access the course material whenever they want.

□ **Mobile Learning:** Mobile applications like Course era, edX, BYJU's Learning, Udemy, and more deliver students comprehensive yet short courses in a simple and easy-to- understand format. These

apps are accessible to students as per their flexibility.

□ **Gamified Learning:** Gamification makes it simple to integrate a sense of play into e- learning. It engages learners with game-like strategies, which work best in high-pressure situations. There's a huge impact of gamification on students learning. Gamified learning and teaching incorporate awarding points after every module's completion.

Examples: Duolingo, Kahoot!, Quizlet, and more.

□ **Micro learning :** It offers quick, minute-long, focused learning content bursts that are easy to consume. Microlearning offers quick, minute-long, focused learning content shots that are easy to consume. The knowledge is provided in bits, allowing you to connect it to several different platforms and gadgets, including smartphones and tablets.

Examples: Short videos rich with graphics and animations on platforms like- Youtube, Instagram, and Tiktok, Pop-ups and notifications, Interactive quizzes

□ **Scenario-based e-learning (SBL):** SBL is a model of an interactive e-learning approach where learners are given a situation or a question to analyze and find its solution. As a result, a multi-faceted approach to difficulty resolution can be expected. We can experience scenario-based personalized learning experiences and real-world situations

like boardroom meetings, training sessions, or cafeteria conversations with Augmented Reality (AR) and Virtual Reality (VR) technology.

Examples: Dialogues in scenarios, using real-world scenarios for cover safety training, etc.

### **Advantages of E-Learning**

□ Most of the learners who may not have time and resources for getting access to the traditional class-bound learning experiences may get it now easily at their convenience in the form of E-learning. The learners can access information and educational contents any time, any place.

□ E-Learning has enough potential to make the education, instruction and learning opportunities provided to the learners adaptable to their needs-mental and skill level- local needs and resources at their hands.

□ It has a unique feature of arranging an access to the same quality of the content that a full time student has. The best of the world's educational content, treasury of number of learners especially in the developing and underdeveloped countries.

□ Unlike traditional classroom education, E-learning can cater to different learning styles and promote collaboration among students from different localities, cultures, regions, states and countries.

□ E-Learning can prove an effective media and tool for facing the problems of lack of the trained and competent teachers, paucity of schools and the needed infrastructure and material facilities for providing quality education to the number of students residing in the far and wide corners of the country.

□ E-Learning may make the students more interested and motivated towards learning as they may get a wide variety of learning experiences by having access to multimedia, Internet.

□ The opportunities of having an on-line, offline and live interaction between the students and teachers and among the students themselves may make the task of E-learning a joy and best alternative to the lively face-to-face interaction and real time sharing of the experiences in a traditional classroom setting.

□ E-learning through audio-visual recording technology has a unique advantage of providing learning experiences that can be paused and reversed for observing, learning and imitating at the will and convenience of the learners. Such self-pacing provides a special weightage to the process of learning.

□ It may also provide opportunities for testing and evaluating the learning outcomes of the learners through teachers, peers and auto-instructional devices and software available with the reading material on-line, or through the Internet and mobile phone facilities. It may work for them as a desired source



for the proper feedback along with the needed diagnostic and remedial teaching.

□ Learning experiences via simulated and gaming techniques, may also provide the benefits of getting richer experiences on the useful pedagogical footings of play-way spirit and learning by doing or living.

### **Disadvantages of E-Learning**

□ E-learning requires a sufficient level of knowledge and skills for the use of multimedia, Internet and Web technology on the part of its users. Lack of knowledge and skills on this account may prove futile in taking advantages from the valuable services of E-learning.

□ As a technique and tool on the part of the students e-learning requires that they must have a proper, easy and timely access to the needed resources, tools and equipment like computers, laptops, multimedia facilities, Internet and Web services, mobile learning tools, etc. quite affordable to them in terms of the cost involved. However in most cases, it does not happen so with the individual students and their schools also are not in a position to help them on this account.

□ Our schools are not at all ready, willing and equipped for making use of E-learning in the proper interest of the teachers and students. Most of the schools in our country cannot even imagine for venturing in the area of E-learning or m-learning

□ There is no proper provision of equipping the teachers in their pre-service or in- service programs for getting acquainted with the knowledge and skills required on their part for the use of E-learning at their workplaces.

□ The feeling of isolation experienced by the users of E-learning is one of the major drawbacks quite visible in any system of distance learning including e-learning. They are found to be devoid with the face-to-face interaction and humanistic touch profoundly available in the traditional classroom set-up. Hence, the type of individual attention, diagnostic testing and remedial instruction, warmth of feelings towards each other and timely guidance, supervision and feedback as provided in the real time settings of the prevalent classroom system are hardly available in the E-learning programs. Moreover, the lack of opportunities for co-curricular, social participation and community sharing experiences may prove handicap to the students of E-learning in their proper physical, social and emotional development.

In this way, we can see number of limitations and drawbacks in the adoption of E- learning as a system of school education and classroom instruction.

### **Concept of virtual Classrooms**

Virtual learning provides a better learning experience than E-learning, allowing students to connect more directly with the teacher and the material. It also allows for more personalization, as the learning can be tailored to the individual student's needs. With virtual learning, the student can interact with the teacher and ask questions in real-time, and the teacher can provide immediate feedback and guidance. The student also has control over their learning pace, allowing them to work at their speed, whereas, in e-learning, the student has to stick to a pre-set curriculum.

### **Types of Virtual Learning**

**Synchronous Learning:** In synchronous virtual learning, students must attend online lectures (live-streamed). The teacher streams their study material, presentations, and other subject modules allowing students to ask real-time questions via live chat and webcam for a more robust learning experience.

**Asynchronous Learning:** Asynchronous virtual learning provides students with pre-recorded lectures or doubt solutions. The tutor records the audio or video of the required topic and publishes the file with the lecture notes.

**Hybrid Learning:** A hybrid course will combine online and in-person teaching. Hybrid Learning is most common in classes that also have a lab component. If learner want the freedom to learn when it is convenient for you but also want structured lessons, communication, and blended

learning solutions, considers enrolling in a hybrid learning solution provider.

### **Virtual Learning Platforms**

□ **Coursera:** Coursera is the world's largest virtual learning platform. Millions of students enroll in its individual, certificate, and university-level courses, and it partners with over 200 top universities. In addition to taking free courses, students can purchase paid ones.

□ **Linked-In Learning:** LinkedIn Learning is working great at skilling students around the globe with complex software courses in broken-down learning modules. These modules are easy to comprehend. You can learn and grasp Adobe applications like Photoshop, Illustrator, Premier Pro, and more.

□ **Skillshare:** It is a well-known creative frequently teach courses that rarely last longer than two hours. They are then divided into three to five-minute episodes. Students or learners with free time or a limited time frame can enroll in their choice courses.

Throwing light on the concept of a virtual classroom, Professor **Murray Turnoff** of New Jersey Institute of Technology, USA (2007) has wittingly commented:

Virtual Classroom is a web-based environment that allows you to participate in live training events without the need to travel. We listen to lectures, participate in lab exercises, ask questions, and receive feedback just as we would do in a conventional classroom. It saves the hassle, expense, and travel time to a training site. Based on the above definition, "virtual classrooms", as the name suggests, are the classrooms functioning in a system of virtual reality. These are, in fact, the cyber classrooms, where the teacher and the students can converse in real time. In every sense, a virtual classroom tries to stimulate, in every way it can, the learning platform provided by a conventional classroom. As a definition, therefore, we can understand the virtual classrooms as the classrooms, capable of replacing partially or totally the conventional educational, evaluative and administrative functioning of a regular classroom by adopting the advanced computer and ICT technologies like the Internet, e-mail, on-line chatting, etc.,

### **Advantages of virtual Classrooms**

□ It has provided a great amount of flexibility to the learners in getting the desired learning experiences at the time and place along with the pace of their choice.

□ Since the learners have not to present themselves for their pursuit of an instructional course at a fixed time and place, it does not come in their way of doing a job or engaging in other learning pursuit simultaneously at a time.

□ The facilities regarding receiving instructions or gaining learning experiences are available to the learners during 24 hours of all the 7 weekdays. It cannot be imagined in any other system of regular classroom set-up and hence is quite capable of allowing the learners better utilize their leisure hours without hampering their day-to-day routines.

□ The system of virtual classrooms is quite capable of providing the services of the most experienced and capable faculty belonging to any stream and discipline of the school curriculum which is mostly denied or remains impracticable in the conventional educational set-up. In place of searching for and employing full time faculty.

□ The system of virtual classrooms is quite capable of providing the learners the joy and benefits of the real-time learning through the utilization of the most advanced technologies at its disposal on the part of teachers as well as the learners in the form of Internet, on-line chats, mobile and telephonic conversation, audio and videoconferencing, etc.

□ There are more possibilities of engaging in the useful practice, creative and adventurous pursuits in the knowledge and skill areas of the school learning on the part of the students in the virtual set-up.

□ This system may prove quite advantageous to the students on account of its on-line features related to admission, information about the courses and academic activities, assignments and projects, tests and evaluation, grading and results, faculty available for the interaction, guidance and needed help,

information about the commencement of the public examinations, merit schemes, entry in the vocational and professional streams, etc.

□It saves the valuable energy of the faculty and administrative authorities that is otherwise going to be spent in the conventional school set-up for the day-to-day administrative and management of the affairs like maintenance of the school discipline, school timetable, attendance, regularity and punctuality of the students and staff, organization of the students welfare activities, the handling of mutual conflicts and ego problems of the students and staff, etc.

### **Disadvantages of virtual Classrooms**

□The flexibility of this system to the learners for taking their studies at their will, convenience, comforts and adjustment of the space and timings according to their needs may be mis-utilized and misdirected on the part of the students especially when they are younger in age and are not matured enough in feeling their responsibilities for the building of their career, or are shirkers and lazy by nature.

□In many cases, the organization and working of a virtual classroom or campus is found quite hopeless in terms of its quality of study material and its delivery to the students. The staff employed for providing instructional material, guidance and timely feedback is also very poor in the quality, sincerity and devotion to the work. In such a situation, the students enrolled with the system are bound to suffer adversely and such incidences may give a bad name to all virtual classroom systems in general.

□The dreams and promises of providing real classroom experiences through virtual realities of the virtual classroom system are hard to realize. A virtual cannot be turned into real in to. We cannot provide real time face-to face interactive experiences to our students through virtual classes. The warmth of the teacher- pupil relationships, the charms of the group cohesion and fellowship, and the humanistic touch prevailed in the surcharged social and emotional climate of the conventional classrooms are altogether absent in the virtual classroom system. In such a situation we cannot expect a better environment for the academic and personal growth of the students.

□We aim to develop a wholesome personality of the students with what we teach and do with our students in the schools. Along with the curricular instruction work, the organization of co-curricular activities, student's welfare services, community activities, the interaction with the parents and members of the community, etc. help the conventional system much in seeking the all-round balanced development of the children.

**Conclusion:** E-learning is typically done online and includes courses, webinars, video lectures, and other online materials. On the other hand, virtual learning is more interactive and immersive, using virtual reality and other technologies to create an immersive learning environment. With virtual learning, students can interact with each other and their teachers in a virtual environment and collaborate on projects. It also allows students to learn more interactively by engaging with their surroundings instead of having a passive E-learning experience. We can conclude that, E-learning, characterized as the learning devoid of time and space and carried out through the advanced technologies involving multimedia, Internet, e-mail, website, mobile phone, iPod, etc. may prove a quite effective tool and technique for rendering valuable support, assistance and alternative to the traditional system of school education.

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## YOGA EDUCATION: AN EXTENSIVE OVERVIEW

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### *Abstract*

*This extensive review offers a detailed examination of the diverse field of yoga teaching. It explores the development of yoga historically, clarifies its many advantages, talks about various approaches to teaching yoga, looks at the difficulties encountered, emphasises how important yoga is to holistic education, considers future directions, and ends with a call for more study and advancement.*

**Keywords:** *Yoga, Education, and Development*

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### Introduction

#### A. Background and Significance

The spiritual practises and culture of ancient India are closely linked to the historical roots of yoga (Basavaraddi, 2015). Yoga is a complete discipline including physical, mental, and spiritual components. It is not just a physical workout.

The spiritual practises and culture of ancient India are closely linked to the historical origins of yoga. The fact that yoga education has developed from traditional spiritual practises to cutting-edge teaching is evidence of its ongoing importance.

Yoga is sometimes seen as a modern-day health fad, with pictures of calm practitioners striking different positions against peaceful backgrounds taking over social media and popular culture. But first, we need to explore the rich historical background of yoga in order to fully comprehend its essence and its educational value.

Yoga's roots extend deep into the tapestry of ancient India, dating back thousands of years. Its foundation is firmly grounded in the culture and spiritual practices of this land, making it far more than a mere exercise routine. In exploring the historical underpinnings of yoga, we uncover a profound and intricate legacy that has endured the test of time.

From ancient spiritual practises to contemporary pedagogy, yoga's growth is a crucial aspect of its historical significance. This trip is a reflection of how yoga is timeless and flexible, evolving over time to continue being applicable and transforming for people all around the world.

These days, yoga is more than just a physical workout; it's a whole discipline with mental, spiritual, and physical components. It is a complex discipline that reaches far into the mental and spiritual domains and beyond the boundaries of the physical body. When we examine the evolution of yoga education, we see how it has moved from mystical, antiquated knowledge to a modern, disciplined teaching approach that serves a wide range of international students.

Ancient yogis in India laid the foundation for this profound practice, delving into the inner workings of the human psyche and the connection between the body, mind, and spirit. Their insights into the holistic nature of existence were codified in texts like the Vedas and the Upanishads. These ancient texts and philosophies provided the intellectual framework for the practice of yoga, emphasizing meditation, mindfulness, and self-realization.

As yoga developed further, it adjusted to the demands of the times and the necessities of society. The Yoga Sutras were written by the classical sage Patanjali, who is thought to have lived in the year 400 CE. This groundbreaking text offered a methodical manual for practising yoga, as well as insights into the psychology of the mind and a methodical strategy for reaching spiritual realisation. The Yoga Sutras of Patanjali, which emphasise the mental and spiritual aspects of the practise, are still used as a core text in modern yoga instruction.

Yoga has evolved throughout the ages into a number of schools and traditions, each with its own focus and methodology. As yoga left India, it came into contact with many cultures and worldviews, which prompted more modifications and integrations. This capacity for adaptation and absorption is what has made yoga possible.

The evolution of yoga from a spiritual practise to a formal pedagogy in the modern era is indicative of the desire for an all-encompassing, organised educational system on a worldwide scale. Yoga's acceptance by individuals from diverse cultural backgrounds has made it imperative that it be included into formal educational programmes. Yoga courses are now offered at schools, colleges, and universities, giving students the opportunity to explore the mental, spiritual, and physical aspects of this age-old discipline.

In addition, yoga teacher training programmes have been developed to offer thorough training to those who wish to teaching yoga. These courses provide equal emphasis on the philosophical and spiritual dimensions of yoga as well as its physical postures. Today's yoga instructors should be knowledgeable about the traditional wisdom of the form as well as capable of modifying it to meet the demands of modern students.

Online platforms have revolutionized the dissemination of yoga education, making it accessible to a global audience. Students can now access a wealth of resources, guided classes, and instructional materials, democratizing yoga education and transcending geographical barriers.

The evolution of yoga from an ancient spiritual practice to modern pedagogy exemplifies its ability to adapt, transform, and remain relevant. It underscores the enduring significance of yoga as a holistic discipline that encompasses the physical, mental, and spiritual dimensions of human existence.

## **B. Purpose of the Review**

This thorough review's main goal is to give readers a thorough grasp of yoga education, including its origins, advantages, teaching strategies, difficulties, and possibilities in contemporary education.

## **History of Yoga Education**

The roots of yoga can be found in ancient writings like the Vedas and the Indus Valley Civilization, which flourished thousands of years ago (Basavaraddi, 2015).Yoga education's continuous relevance may be shown in its development from traditional spiritual practises to contemporary pedagogy (Singh & Reddy, 2018).The concept and practices of yoga have been greatly influenced by the writings of great personalities such as Patanjali and the Yoga Sutras (Basavaraddi, 2015).The historical development of yoga in education is a journey that spans centuries, reflecting the enduring significance of this ancient practice in shaping the educational landscape. Yoga's roots are deeply intertwined with the culture and spiritual practices of ancient India (Basavaraddi, 2015). It originated as a holistic discipline that encompassed physical, mental, and spiritual aspects, transcending the boundaries of mere physical exercise. Over the years, yoga evolved from its ancient spiritual origins into a modern pedagogical system.

The classical sage Patanjali, believed to have lived around 400 CE, played a pivotal role in structuring the philosophy of yoga through his work, the Yoga Sutras (Basavaraddi, 2015). These sutras provided a systematic guide to the practice of yoga, emphasizing the mental and spiritual aspects. Patanjali's contributions remain foundational in contemporary yoga education.

As yoga continued to evolve, it diversified into various schools and traditions, each with its unique approaches (Basavaraddi, 2015). As it spread beyond India's borders, it encountered different cultures and worldviews, leading to further adaptations and integrations.

In the modern era, yoga's journey from spiritual practice to formal pedagogy reflects a global demand for structured education (Singh & Reddy, 2018). Today, yoga is not only practiced but also taught in schools, colleges, and universities, offering students a comprehensive understanding of its physical, mental, and spiritual dimensions.



This historical progression underscores the adaptability and enduring relevance of yoga in education, as it continues to empower individuals to lead holistic lives through the integration of its ancient wisdom into modern educational systems.

### **Benefits of Yoga Education**

**A. Physical Health** Yoga is well known for its positive effects on physical health, including enhanced strength, flexibility, and general well-being, according to Malathi and Damodaran (1999). Comprehensive research on the benefits of yoga for physical well-being was carried out in 1999 by Malathi and Damodaran. This traditional practise is well renowned for improving flexibility, strength, and overall well-being. Through a series of postures, stretches, and intentional movements that enhance physical health and foster balance, energy, and vitality, yoga builds physical fitness.

**B. Mental Well-being** Yoga has been connected to better emotional well-being, less stress, and increased mental health (Saoji, 2016). Saoji's (2016) study emphasises the strong connection between yoga and mental health. Yoga is a highly effective strategy for reducing stress and enhancing emotions, and it has been repeatedly linked to better mental health. Yoga combines mindfulness, meditation, and deliberate breathing to help people develop their emotional intelligence and resilience.

**C. Emotional Balance** Yoga promotes emotional intelligence and resilience by assisting people in achieving emotional homeostasis (Sinha & Kumari, 2021). As explained by Sinha and Kumari in 2021, yoga is essential for assisting people in achieving emotional balance. In the end, it facilitates emotional equilibrium by offering an organised framework for examining the emotional terrain. Yoga develops emotional intelligence and resilience by fostering a profound understanding of emotions and how to control them.

**D. Stress Reduction** Yoga's stress-reduction techniques equip practitioners with effective tools to manage life's challenges (Fares & Fares, 2016). Fares and Fares' research in 2016 emphasizes yoga's efficacy in stress reduction. The techniques employed in yoga equip practitioners with valuable tools to effectively manage life's challenges. Through relaxation, mindfulness, and controlled breathing, yoga empowers individuals to cope with stress, leading to enhanced mental and physical well-being.

**E. Improved Concentration** Research conducted in educational contexts has proven the beneficial effects of yoga on attention, concentration, and memory (PP et al., 2018). Yoga has been shown through extensive study to have positive effects on attention, concentration, and memory (PP et al., 2018). Yoga has been found to be very important in educational settings as it improves cognitive capacities. Yoga supports improved learning and academic achievement by enhancing focus and memory retention.

### **Methods of Yoga Education**

**A. Yoga in Schools** It has been demonstrated that include yoga in school curricula can improve students' physical and emotional health (Sinha & Kumari, 2021). According to research conducted in 2021 by Sinha and Kumari, including yoga into school curricula is a promising idea. This method has demonstrated promise in improving the emotional and physical health of kids. Schools enable pupils to acquire critical mental and physical skills that support their overall development by introducing yoga at a young age.

**B. Yoga Teacher Training** To guarantee high-quality instruction and secure practises, yoga instructors must complete extensive training (Yoga, 2018). As stressed by Yoga in 2018, thorough training for yoga instructors is essential to guaranteeing the provision of high-quality instruction and safe practises. To preserve the integrity and safety of the practise, yoga teachers must undergo extensive training. Teachers play a crucial role in assisting students on their yogic journey.

**C. Online Yoga Education** Online platforms offer convenient access to yoga education, catering to a global audience (Joshi & Yusuf, 2018). Joshi and Yusuf's work in 2018 recognizes the convenience and accessibility offered by online platforms in yoga education. The digital age has made yoga



education accessible to a global audience. Online resources, guided classes, and instructional materials have democratized yoga education, allowing individuals from diverse backgrounds to engage in this transformative practice.

**D. Incorporating Yoga in Other Subjects** The integration of yoga into various subjects fosters a holistic approach to education (Khatun et al., 2022). The study by Khatun and colleagues in 2022 explores the integration of yoga into various subjects, fostering a holistic approach to education. By incorporating yoga principles and practices into the broader educational framework, students gain a more comprehensive understanding of how yoga's physical and mental dimensions can complement other areas of learning, promoting a well-rounded education.

### **Challenges in Yoga Education**

**A. Misconceptions and Stereotypes** Yoga education often contends with cultural misconceptions and stereotypes (Naragatti & Therapist, 2018). Naragatti and Therapist, in 2018, shed light on a significant challenge faced by yoga education, which is the presence of cultural misconceptions and stereotypes. Misunderstandings surrounding yoga often stem from its cultural origins and are perpetuated by incomplete or inaccurate information. Overcoming these misconceptions is vital for presenting yoga as an inclusive and accessible practice that transcends cultural barriers.

**B. Lack of Standardization** It is difficult to guarantee consistency and quality in yoga teaching when there are no set standards (Joshi & Yusuf, 2018). According to Joshi and Yusuf (2018), it can be difficult to guarantee consistency and quality in yoga teaching because there are no set standards. The integrity of yoga education may be jeopardised by differences in instruction and curricula brought about by the absence of widely acknowledged standards. To lay the groundwork for a cogent and superior educational system, standardisation is required.

**C. Accessibility and Inclusivity** As always, the goal is to make yoga instruction inclusive and accessible to a wide range of people (Sinha & Kumari, 2021). In 2021, Sinha and Kumari emphasise the continued significance of ensuring that yoga instruction is inclusive and available to a wide range of people. Barriers pertaining to financial level, cultural background, and physical ability must be dismantled in the ongoing efforts. In order to guarantee that everyone can benefit from yoga, regardless of their circumstances, inclusivity is crucial. This promotes a more diverse and equal community of practitioners.

**D. Scientific Research and Evidence** Although there is a wealth of anecdotal evidence, more thorough scientific research is required to validate the advantages of yoga education (Cox et al., 2017). One important finding from Cox et al. (2017) is that anecdotal evidence about the advantages of yoga instruction is widely available. More thorough scientific investigation is desperately needed, even though many personal testimonials attest to its beneficial effects. Empirical research can offer reliable proof of these advantages, advancing our knowledge of the effects yoga instruction has on mental, emotional, and spiritual health.

### **The Role of Yoga in Holistic Education**

#### **A. Mind-Body Connection**

Self-awareness is a fundamental and transformative component of yoga practice, as asserted by Bansal and colleagues in 2013. This cornerstone of yoga empowers individuals to embark on a profound journey of self-discovery and introspection. Through yoga, practitioners delve into the depths of their being, unraveling layers of their own psyche, and gaining insights into their thoughts, emotions, and behaviors. This heightened self-awareness not only fosters a greater understanding of oneself but also facilitates a clearer comprehension of one's role in the broader world. It enables individuals to make conscious choices, align their actions with their values, and contribute positively to their own well-being and the well-being of those around them. Yoga, in this sense, becomes a powerful catalyst for personal growth and a deeper connection to the world at large.

Yoga's emphasis on the mind-body connection underscores its potential as a transformative tool in holistic education (Estevao, 2022).

### **B. Promotion of Values and Ethics**

Yoga, rooted in ancient philosophy, instills values and ethical principles in students

Yoga, deeply rooted in ancient philosophy, transcends the physical postures and breath control techniques commonly associated with it. Beyond the superficial, yoga serves as a powerful vehicle for instilling profound values and ethical principles in its practitioners, particularly when introduced in an educational context.

Ancient yogic philosophy, as articulated in texts like the Yoga Sutras of Patanjali, provides a comprehensive framework for living a life of purpose, integrity, and mindfulness. Central to this philosophy is the Yamas and Niyamas, which are ethical guidelines and moral principles that guide one's conduct and inner attitudes.

The Yamas encompass principles like Ahimsa (non-violence), Satya (truthfulness), Asteya (non-stealing), Brahmacharya (moderation), and Aparigraha (non-possessiveness). These principles encourage individuals to cultivate compassion, honesty, contentment, and self-control. They form the foundation for harmonious relationships with others and oneself.

The Niyamas, on the other hand, delve into personal observances, including Saucha (purity), Santosha (contentment), Tapas (discipline), Svadhyaya (self-study), and Ishvara Pranidhana (surrender to a higher power). These principles promote self-reflection, self-discipline, and a sense of surrender to a greater universal order.

When introduced into educational settings, yoga becomes a holistic practice that not only enhances physical and mental well-being but also encourages the development of moral character. Students who engage with yoga are exposed to these ancient principles, which can help foster empathy, respect, and responsibility. By incorporating these values into their daily lives, students can become more considerate, truthful, and self-aware individuals.

In essence, yoga is a transformative journey that extends far beyond physical flexibility and strength. It serves as a beacon of ethical guidance, allowing students to cultivate virtues that not only benefit themselves but also ripple outward to create a more compassionate and harmonious society. When yoga is integrated into education, it becomes a powerful tool for nurturing not only physical health but also the ethical and moral growth of future generations (Singh & Reddy, 2018).

### **C. Fostering Self-Awareness**

A key component of yoga is self-awareness, which enables people to have a deeper understanding of who they are and where they fit in the world (Bansal et al., 2013). According to Bansal and colleagues (2013), self-awareness is an essential and transformational aspect of yoga practise. This fundamental aspect of yoga enables people to go off on a deep path of reflection and self-discovery. Through yoga, practitioners explore their innermost selves, revealing facets of their own psyche and gaining understanding of their ideas, feelings, and actions. An improved understanding of oneself as well as one's place in the larger world are both facilitated by this increased self-awareness. It empowers people to make deliberate decisions, match their behaviour with their beliefs, and make constructive contributions to their own well-being and the well-being of those around them. Yoga, in this sense, becomes a powerful catalyst for personal growth and a deeper connection to the world at large.

### **Future Directions**

**A. Promoting Research in Yoga Education** There is a growing need for further research to explore the full potential of yoga in education (Khatun et al., 2022).

**B. Integrating Yoga into School Curricula** Efforts to integrate yoga into formal education systems should continue to enhance students' well-being (Sinha & Kumari, 2021).

**C. Professional Development for Yoga Instructors** Continued emphasis on the professional development of yoga instructors will help maintain quality standards in yoga education (Yoga, 2018).

### Conclusion

In conclusion, yoga education has the potential to significantly impact physical and mental well-being, fostering a balanced and resilient generation of learners. However, overcoming challenges, standardizing practices, and conducting further research are vital steps to fully harness its benefits in modern education. In conclusion, the historical roots of yoga are deeply embedded in the culture and spiritual practices of ancient India, and its journey from these origins to modern pedagogy showcases its enduring relevance and adaptability. Yoga is not merely a physical exercise but a profound, holistic discipline that connects individuals with their physical bodies, their minds, and the deepest dimensions of their inner selves. As yoga continues to evolve and spread its wings globally, its historical legacy remains an essential foundation for understanding its profound significance in education and personal development. If yoga has been implemented in schools than Lessens absenteeism and vehemence in school. With regular practice of Yoga, students attain inner tranquility, acquire good health and balanced temperament. As a result, they get motivated to attend school regularly.

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## EFFECTIVENESS OF TWO STAY - TWO STRAY LEARNING MODEL ON SELF-EFFICACY AMONG HIGHER SECONDARY STUDENTS

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### Abstract

*The researcher aims to determine the Effectiveness of Two Stay - Two Stray Learning Model on Self efficacy of 11<sup>th</sup> grade students of higher secondary school of Channarayapatna. The type of this research is a true-experimental design (Parallel group design). The population of this study was the 11<sup>th</sup> grade students of higher secondary school of Channarayapatna. The sample of this research consisted of two classes that were randomly selected, namely 11<sup>th</sup> -A grade as an experiment class and 11<sup>th</sup> - B as a control class. The research instrument used are self-prepared standardized tool consists of multiple-choice questions. Based on the results of the research, it was obtained that average score of the post-test in experimental class is **122.1500** with standard deviation (s) is **7.58727** and after given the treatment, the average score of the post-test in control class is **117.5500** with standard deviation (s) is **11.80385**. According to the observation of the student self-efficacy carried out in two cycles, student self-efficacy is improved. Based on the results of two tail t-test for post-test data in experimental class and control class obtained t value is **2.344**.*

*Therefore, Ho is rejected and the otherwise Ha is accepted. Based on the results of this research, it can be concluded that the cooperative learning model with two stay two stray type enhance the self-efficacy among 11<sup>th</sup> grade students.*

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### Introduction:

Learning is a “process that leads to change, which occurs as result of experience and increase the potential of improved performance and future learning”. The difficulties of learning science are related to learner’s tendency towards remembering science vocabulary and scientific names which are prominent parts of biological science education and to the methods by which science is customarily taught without regard to what is known about children’s learning.

One aim of biological science teaching is to provide students with the optimum conditions for acquiring a grasp of concepts needed to interpret and predict natural phenomena and to solve problems. Thus, the concepts should have wide applicability. The level of understanding of these concepts and the extent of their applicability will of cores vary according to the age of the student and the type of instruction given.

The learning process will be effective when the teachers understand the learning model and their implications in a classroom situation. Teachers should choose the suitable learning model based on the competencies to improve self-efficacy.

Two Stay Two Stray is one of cooperative learning. Lie (2010:29) pointed out that cooperative learning is not same with learning in group. There are some basic elements of cooperative learning that different with dividing group inappropriately. The right procedures of cooperative learning will make the teacher manages the class more effectively.

### Review of related literature:

The research studies conducted on Two Stay - Two Stray learning model, cooperative learning approach and its effects on psycho-social and other academic variables are discussed in this section.

1. **Yusri , Mantasiah , and Jufri (2018)** conducted research on The use of two stay two stray model in English teaching to increase student’s learning outcome The purpose of this study was to determine whether the application of cooperative learning model two stay two stray can increase student’s learning outcome in English learning. Data collection techniques used in this study consists of observation, tests and questionnaires. This study was conducted in two cycles, each cycle is carried

out two meetings. In preliminary tests, the average of learning outcome in pre-test is was 53, 73, the first cycle was 65.4 and in the second cycle was 77.93. From these results it can be concluded that the use of cooperative learning model two stay two stray can increase student's learning outcome in English learning.

2. **Sarfraz Aslam and Muhammad Shabbir Ali** study aimed to investigate the **effect of self-efficacy on students' achievement in science**. The case of secondary school science students' is examined to achieve this task. The study is based on Bandura's Theory of Self-Efficacy, which divides Academic, Social and Emotional self-efficacy in three categories. The Questionnaire 'Self-efficacy Questionnaire for Children (SEQ-C) developed by (Muris, 2001) was adapted in the present study to quantify secondary school students' and was administered to 811 students. The achievements of students in science subjects governed by their academic, social, and emotional self-efficacy were statistically examined to meet the research objectives. Findings revealed that secondary school students have a stronger academic and social self-efficacy. The need to assimilate content for developing emotional self-efficacy among students is highlighted. The study also discovered the significant impacts of parents' job status and the qualifications on children's self-efficacy.

3. **Dintje Fintje Pendong , Femmy H Rogahang (2018)** studied on Comparison of biological learning outcomes, using problem based instruction and two stay two stray model, on the subject of plant structure. Biology is a branch of natural science, the most dynamic. The phenomenon of life in living things, save a lot of interesting problems learned. Problem-based learning makes students centered in learning. Research has been conducted to compare students' learning outcomes by using two stay two stray model and problem-based instruction. The method used in this research is quasi experimental method (quasi-experimental research). From the results of research that has been obtained, it can be concluded that the learning type of problem-based instruction, the keep structure of plants is very effective for students. This model can train students to be independent and can solve biology especially related to the structure of plants, and train students to look at things in an integrated manner. Model of learning problem-based instruction, has a better learning outcomes, compared with the model of learning model two stay two stray.

4. **Adnan and abdol Atif (2018)** conducted a study on exploring the relationship between perceived self-efficacy and academic achievement among a sample of Jordanian secondary stage students and identifying the effect of gender and academic achievement on self-efficacy. To achieve the study aims, the researchers applied the perceived self-efficacy scale on (356) secondary stage students and collected information on students' gender and academic achievement. The results of the study showed that most students hold a moderate level of perceived self-efficacy score and significant effect of academic achievement on perceived self-efficacy in favor of higher achievement students.

5. **B.Indu, and Dr.Ranjit Kaur (2017)** studied the Self-efficacy of senior secondary school students with respect to demographic variables. For this purpose, 500 subjects (male and female) were selected randomly from senior secondary schools situated in four districts of Haryana. Self-efficacy questionnaire (SEQ) developed by Muris (2001) was used to measure the self-efficacy of the school students. Finding of the study indicates significant difference in government and private school students, urban and rural school students, science and arts stream students, male and female students. Age-wise no significant different was found in self-efficacy of different age groups

6. **Bhagat Pooja & Baliya J. N (2016)** conducted a study on self-efficacy and adjustment of secondary school students in relation to their gender and academic achievement. The study was conducted with a sample of 200 secondary school students studying in 9th class of Samba district of Jammu and Kashmir. Self-efficacy scale by Dr. G.P. Mathur and R. K. Bhatnagar and adjustment inventory by A.K.P. Sinha and R.P. Singh were used to collect the data. Result showed that



significant difference was found in the adjustment of male and female secondary school students. Female students were found less adjusted than male students.

### **Theoretical framework:**

#### **Theoretical Perspectives on Co-operative Learning and self-efficacy**

While there is a consensus among researchers about the positive effects of co-operative learning on student achievement, there remains a controversy about why and how they affect achievement and, most importantly, under what conditions they have these effects. Different groups of researchers investigating co-operative learning effects on achievement begin with different assumptions and conclude by explaining the effects in terms that are substantially related.

In earlier work, Slavin (1995, 2009; Slavin, Hurley, and Chamberlain, 2001) identified Motivationalist, Social cohesion, Cognitive developmental and Cognitive-elaboration as the four major theoretical perspectives held by different researchers on the achievement effects of co-operative learning.

The Motivationalist perspective presumes that task motivation has the greatest impact on the learning process, and that the other processes (such as planning and helping) are driven by individuals' motivated self-interest. Motivationalist scholars focus especially on the reward or goal structure under which students operate. By contrast, the social cohesion perspective (also called "social interdependence theory") suggests that the effects of co-operative learning are largely dependent on the cohesiveness of the group. In this perspective, students help each other to learn because they care about the group and its members and come to derive the benefits of self-identity from group membership (Johnson and Johnson, 1989; 1999; Hogg, 1987).

The two cognitive perspectives focus on the interactions among groups of students, holding that these interactions themselves lead to better learning and thus better achievement. The cognitive developmentalists attribute these effects to processes outlined by scholars such as Piaget and Vygotsky.

The cognitive elaboration perspective instead asserts that learners must engage in some manner of cognitive restructuring (elaboration) of new materials in order to learn them; co-operative learning is seen to facilitate that process.

A model of how co-operative learning might improve learning, adapted from Slavin (1995), is depicting the main components of group learning interaction and representing the functional relationships among the different theoretical approaches. The interdependent relationships among the components begins with a focus on group goals or incentives based on the individual learning of all group members. It assumes that motivation to learn and to encourage and help others to do so activates co-operative behaviors that will result in learning. This includes both task motivation and motivation to interact in the group. In this model, motivation to succeed leads directly to learning, and it also drives the behavior and attitudes that foster group cohesion, which in turn facilitates the types of group interactions - peer modelling, equilibration, and cognitive elaboration - that yield enhanced learning and academic achievement.

#### **Cognitive-Developmental Theory**

An early theory of cooperation is cognitive-developmental theory.

The cognitive developmental theories of cooperation include those of Piaget (1950), Vygotsky (1978), and Johnson and Johnson (1979, 2007, 2009a). To Jean Piaget (1950), cooperation is striving to attain common goals while coordinating one's own feelings and perspective with a consciousness of others' feelings and perspective. From Piaget and related theories comes the premise that when individuals co-operate on the environment, socio-cognitive conflict occurs that creates cognitive disequilibrium, which in turn stimulates perspective-taking ability and cognitive development. Cooperation in the Piagetian tradition is aimed at increasing a person's intellectual



development by forcing him or her to reach consensus with others who hold opposing points of view about the answer to the problem. A number of researchers have conducted studies on cooperation from the Piagetian point of view (e.g., Hayek, Toma, Oberle, & Butera, 2014).

### **Theories of Self Efficacy**

#### **Self-Efficacy**

According to psychologist Albert Bandura, self-efficacy is our belief in our ability to succeed in certain situations. The concept plays a major role in Bandura's social learning theory, which focuses on how personality is shaped by social experience and observational learning.

#### **a. Social cognitive theory**

Psychologist Albert Bandura has defined self-efficacy as one's belief in one's ability to succeed in specific situations or accomplish a task. One's sense of self-efficacy can play a major role in how one approaches goals, tasks, and challenges.

The theory of self-efficacy lies at the centre of Bandura's social cognitive theory, which emphasizes the role of observational learning and social experience in the development of personality. The main concept in social cognitive theory is that an individual's actions and reactions, including social behaviours and cognitive processes, in almost every situation are influenced by the actions that individual has observed in others. Because self-efficacy is developed from external experiences and self-perception and is influential in determining the outcome of many events, it is an important aspect of social cognitive theory. Self-efficacy represents the personal perception of external social factors.

#### **b. social learning theory**

Social Learning Theory, theorized by Albert Bandura, posits that people learn from one another, via observation, imitation, and modelling. The theory has often been called a bridge between behaviourist and cognitive learning theories because it encompasses attention, memory, and motivation.

People learn through observing others' behaviour, attitudes, and outcomes of those behaviours. "Most human behaviour is learned observationally through modelling: from observing others, one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action." (Bandura). Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences.

### **TWO STAY - TWO STRAY LEARNING MODEL OF COOPERATIVE LEARNING APPROACH:**

- The synergy generated in Two Stay - Two Stray Learning cooperative settings generate more motivation than do individualistic, competitive environments. Integrative social groups are, in effect, more than the sum of their parts. The feelings of connectedness produce positive energy.
- The members of Two Stay - Two Stray Learning in cooperative groups learn from one another. Each learner has more helping hands than in a structure that generates isolation.
- Interacting with one another produces cognitive as well as social complexity, creating more intellectual activity that increases learning when contrasted with solitary study.
- Cooperation increases positive feelings toward one another, reducing alienation and loneliness, building relationships, and providing affirmative views of other people.
- Cooperation increases Attitude, Creativity and Efficacy not only through increased learning but through the feeling of being respected and cared for by the others in the environment.
- Students can respond to experience in tasks requiring cooperation by increasing their capacity to work productively together, in other words, more the children are given the opportunity to work together, the better they get at it with benefit to their general social skills.

### **OBJECTIVE OF THE STUDY**

The objectives are

1.To find out the Two Stay - Two Stray Learning have any influence on the Self-Efficacy of the learners.

### HYPOTHESIS OF THE STUDY

Based on the above objectives the following hypotheses have been formulated.

1. There is no significant difference between the mean scores of post-test in the self-efficacy among the experimental and control group.

### RESEARCH DESIGN:

In the present study, a true experimental design (parallel group design) will be use used in experimental situation in which it is possible for the researcher to assign subjects randomly to groups. Among randomized Control group, Pre-test - Post-test Design will be adopted for the present study.

E	O1	X	O2
C	O3	-	O4

Where:

E : Experimental class

C : Control class

O1 : Pre-test in experimental class

O2 : Pre-test in control class

X : Treatment for experimental class.

O3 : Post- test in experimental class

O4 : Post -test in control class

### Sampling:

In the present study purposive sampling technique will be used. The sample for the present study consists of the 40 students for the experimental and 40 for the control group of Pre-University studying in Pre-University college in Channarayapatna taluk.

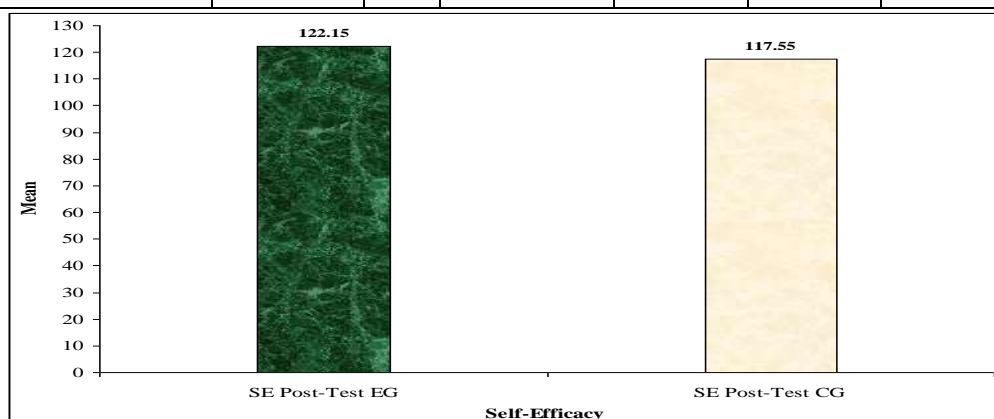
### TOOL FOR THE STUDY:

Self-efficacy standardised tool prepared by the researcher aims at finding out the pre-treatment biological achievement and post-treatment self-efficacy of the control and experimental groups.

### Result:

**Table 4.12. Mean Scores of Post-Test Scores of Self-Efficacy among Experimental and Control Group**

Self-Efficacy	Mean	N	Std. Deviation	Gain-score	t-Value	Significance (@0.05)
SE Post-Test EG	122.150	40	7.58727	4.60000	2.344	Significant
SE Post-Test CG	117.550	40	11.80385			



**Graph 4.12. Mean Scores of Post-Test Scores of Self-Efficacy among Experimental and Control Group.**

The above table and graph reveals that the obtained "t" value of 2.344 is more than the theoretical table value of 1.96 at the 0.05 level of significance. Hence the null hypothesis is rejected,

i.e., "There is no significant difference between the mean scores of post-test in the self-efficacy among the experimental and control group". An alternative hypothesis was formulated and accepted i.e., "There is a significant difference between the mean scores of post-test scores of self-efficacy between the experimental and control groups," was formulated. From the mean values, it is evident that the effectiveness of the conventional method of teaching (control group,  $M = 117.5500$ ) is lower than the experimental method of teaching (experimental group, mean = 122.1500) on self efficacy among higher secondary students.

### Discussion:

it could be concluded that the use of Two-Stay Two-Stray there is a significant difference between the mean scores of pre-test and post-test in the academic achievement of biological science among the experimental group.

Discussions Regarding to the result of the data analysis above, the result showed that the obtained was 7.58727. It meant that the  $t$ -value was higher than  $t$ -critical with the degree of freedom (40) at the 0.05 level. It can be concluded that there was significance effect of using Two-Stay Two-Stray Technique in enhancing self-efficacy in biological science among the experimental group.

Therefore, the alternative hypothesis of this research which stated that the use of Two-Stay Two-Stray Technique is significant enhancing self-efficacy in biological science among the experimental group.

The first meeting with the control group, the researcher found that there were many students who kept silent during the teaching learning process. It was occurred because of the technique that is used to teach the control group students could not attract the students' participation and monotonous. Therefore, the researcher distinguished the treatment between two classes in order to see the effect of the treatment itself towards the student's writing achievement. After that, the researcher would see whether the technique was effective or not to be implemented. Because of the control group students did not accept the treatment, in this case Two-Stay Two-Stray Technique. As the result, only several students gave their participation and most of them still passive. During the second meeting, the researcher explained the material in more detail and the students showed their attention to the teacher and they had a better understanding about the material. After that, in the last meeting, the researcher asked the students to take achievement test. Even though in the pre-test most of them did not complete the test because they did not know what to write and run out of time. But, in the post-test they could write the Achievement test completely.

### CONCLUSION AND SUGGESTIONS

#### Conclusion:

There is a significant effect cooperative learning model with two stay two stray type to the student's self-efficacy in biological science among 11<sup>th</sup> grade students of Channarayapatna.

#### SUGGESTIONS:

Based on the results of the research and discussion as well as conclusions, the authors would like to give suggestions to carry out further research to students at different levels of education units, and by taking a larger sample. Thus, this learning model is expected to be used as one of the important indicators in the preparation of the curriculum, especially in during classes that are even better in the future.

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## A STUDY ON EMOTIONAL INTELLIGENCE AND THEIR RELATIONSHIP WITH JOB SATISFACTION AMONG DEGREE COLLEGE TEACHERS

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### Abstract

*The present study seeks to examine a study of emotional intelligence in relation to Job satisfaction of degree college teachers. The present study was carried out on a sample of 500 degree college teachers (350 male and 150 female) drawn randomly belonging to rural and urban areas of 20 affiliated degree colleges of VSK university Ballari. Emotional Intelligence scale was developed by Investigators' reliability coefficient was found to be 0.75 and Singh's Differential Personality Inventory (DPI) developed by Aashish Kumar Singh and Arun Kumar Singh (2002), inventory had high test retest reliability ranging from 0.70 to 0.90, and Job satisfaction Scale (DJSS) was used from Meera Dixith (1993). The tool was highly reliable for the investigation. Both Tools were used to collect the data. After the analysis of data, so there was exist a significant relationship between Job satisfaction and emotional intelligence of degree college teachers stands partially accepted. The reason may be that a balanced and emotionally strong teachers adjusts in every situation but locality play a significant role. Urban degree college teachers get more facilities and they were emotionally strong.*

**Key words:** Emotional Intelligence, Job satisfaction, Gender, Locality,

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### Introduction

Education plays an important role in the development of the country. Education culturists the individual and helps him in the fulfillment at his needs, all over the world. There is no denying the fact that the future of the nation lies in the hands of the students. Consequently, it becomes necessary to build the foundation of the student's firm and strong personality. Education develops personality of an individual in all fields and aspects, making him intelligent, learned, bold, and courageous and possessing strong good character much in the same way as it contributes to the growth and development of society.

Job satisfaction has some relation with the mental health of the people. Dissatisfaction with one's job may have especially volatile spillover effects. For instance, people feel bad about many things such as family life, leisure activities, sometimes even life itself. Many unresolved personality problems and maladjustments arise out of a person's inability to find satisfaction in his life. Both scientific study and casual observation provide ample evidence that job satisfaction is important for the psychological adjustment and happy living of an individual. Progress of any country depends main on the utilization of the potential of every individual.

### EMOTIONAL INTELLIGENCE

The concept "Emotional Intelligence refers to how intelligently we can control our emotions. It refers to the capacity for recognizing our own feelings and those of others, for motivating ourselves and for managing our emotions well. It is a new concept and no one can yet say exactly how much of the variability of emotional exactly how much of the variability of emotional life from person to person it accounts for. But the data sufficient that it can be powerful and at times more powerful than intelligence quotient and old concept.

Even high intelligence quotient is no guarantee of prosperity prestige or happiness in life, our schools and our culture fixate on academic abilities, ignoring emotional intelligence. A set of traits

that some might call character also matters immensely for personal destiny- emotional aptitude is Meta ability; determine how well we can use whatever skills we have, including raw intellect.

### **JOB SATISFACTION**

Job satisfaction has some degree of positive correlation with physical health of individuals. People who like work are likely to live longer. Here, the logic behind such thinking is that people with greater satisfaction tend to have greater incomes and more education and thus coincidentally enjoy greater benefits which promote longevity. On the other side of the coin, it was contended that chronic dissatisfaction with physicians contend, has been implicated as a contributory factor in the genesis of hypertension, coronary artery disease, digestive ailments and even some kinds of cancer. Therefore, job satisfaction is essential to maintain physical health also.

To mitigate dissatisfaction or to improve job satisfaction, a number of interventions can be undertaken. Some of the most important of them are:

**1.Improving the working conditions:** One simple prescribed solution to increase job satisfaction is to improve those conditions which are organizational sore parts. In one company, job enrichment raised the morale of electronic technicians. Thus, by indentifying the root cause of job dissatisfaction, the management can evolve a strategy for remedial action.

**2.Transferring discontented Workers:** In some cases, it is also possible to mitigate dissatisfaction by transferring the disgruntled employee to another job matching his tastes and preferences. This transfer achieves a better fit between individual job characteristics and promotes job satisfaction. This kind of transfer may not be without certain constraints. The dissatisfied person may be unwilling to move from the existing position or he may be incompetent to hold other challenging jobs.

### **SIGNIFICANCE OF THE PROBLEM**

Emotionally intelligent teachers can handled class room situations in a better way and influence the learning of his students.As modern age, we all know in the age of competition, everybody is worried about his future. An individual's personality is shaped by the experiences received during his education and this period is known as a period of "Emotional up heals" which lead to the psychological problems. A well adjusted and emotionally intelligent person is considered as a symbol of progress. Emotional intelligence is the part of human personality and personality provides the context in which emotional intelligence operates.

Degree College teachers sometimes have misconceptions about many aspects of job. Dissatisfactions stem from the misperceptions about the organization. Degree College teachers may be misinformed about certain issues. The management can change the perceptions of dissatisfied Degree College teachers and restore job satisfaction by furnishing the correct information and because of this the discontent gets subsided over a time. Organization conducts programmes of development wherein morale building becomes a major part. Even the successful organizations also conduct new programmes to keep the morale and job satisfaction at higher level. For instance, in USA, the effective organization from the view point of profitability and having record of good service to public and with high morale among Degree College teachers has introduced a programme called 'Van Pooling' which increased job satisfaction of a larger number of Degree College teachers.

### **OBJECTIVES OF THE STUDY:**

1. To study the emotional intelligence of degree college teachers.
2. To study the Job satisfaction of degree college teachers.
- 3.To study the difference in variable of Emotional intelligence and Job satisfaction on the basis of gender and locality.
- 4.To study relationship between Emotional intelligence and Job satisfaction Emotional intelligence and Job satisfaction of degree college teachers.



### HYPOTHESES OF THE STUDY:

1. There exists no significant mean difference between emotional intelligence of male and female degree college teachers.
2. There exists no significant mean difference between emotional intelligence of male and female degree college teachers belonging to rural and urban areas.
3. There is no significant mean difference between the Job satisfaction of male and female degree college teachers.
4. There is no significant mean difference between Job satisfaction of male and female degree college teachers belonging to rural and urban areas.
5. There exists no significant relationship between the Emotional intelligence and Job satisfaction of degree college teachers.

### DESIGN OF THE STUDY

Research is a purposive, scientific and planned deliberation, it is not haphazard task. The present investigation is essentially descriptive and survey type.

### SAMPLE

Sample was selected randomly from the affiliated degree colleges of VSK university of Ballari, Vijayanagara and Koppal district 500 degree college teachers (350 male and 150 female) was chosen belonging to urban and rural areas.

### TOOLS USED

1. **Emotional Intelligence Scale** developed by investigator. The reliability of the scale reliability coefficient on a sample of 100 subjects, the splithalf reliability coefficient was found to be 0.75 indicated high validity.
2. **Job satisfaction Scale (DJSS)** was Used from MeeraDixith (1993). The tool was highly reliable for the investigation.
3. Personal data regarding the teacher -1. Gender 2. Locality 3. Qualification.

### STATISTICAL TECHNIQUES

The statistical techniques such as mean, standard deviation, t-value and co-efficient of correlation was used to interpret the data. The present study was undertaken with the purpose of finding the relationship between personality and emotional intelligence of degree college teachers.

### TESTING OF HYPOTHESES

#### HYPOTHESIS-1

There exists no significant mean difference between emotional intelligence of male and female degree college teachers.

**Table -1: Mean and S.D. Emotional Intelligence Scores of Male and Female Degree College Teachers.**

Sl.No	Group	N	Mean	S.D	S.E <sub>M</sub>	t-Value	Result
1	Male	350	130.01	13.83	1.884	2.54**	S**
2.	Female	150	134.80	12.79			

\*\*Significant at 0.01 and 0.05 level of significance.

Table-3 shows S.E<sub>M</sub> of emotional intelligence of male and female degree college teachers is 1.884. The ratio comes out to be 2.54. By referring the table, 't' value at 0.05 level is 1.98 and at 0.01 level 2.63 which is lower than calculated value at both levels. Hence there is significant difference. Hypotheses -3 stands rejected. Mean score of female degree college teachers were higher than male degree college teachers; it means female teachers were more emotionally intelligence than male teachers.

**HYPOTHESIS-2**

There exists no significant mean difference between emotional intelligence of male and female degree college teachers belonging to rural and urban areas.

**Table- 2: Mean and S.D. Emotional Intelligence Scores of Male and Female Degree College Teachers Belonging to Rural and Urban Areas.**

Sl. No.	Group	N	Mean	S.D	S.E <sub>M</sub>	t-Value	Result
1	Rural	350	128.52	11.38	1.832	4.29**	S**
2.	Urban	150	136.37	14.36			

\*\*Significant at 0.01 and 0.05 level of significance.

Table-4 shows S.E<sub>M</sub> of emotional intelligence of male and female teachers belonging to rural and urban area is 1.832. The t-ratio comes out to be 4.29. By referring the table, 't'- value at 0.05 level is 1.98 and at 0.01 level is 2.63 which is lower than calculated value at both levels. Hence there is a existssignificant difference. Hypotheses-4 stands rejected. Urban teacher get more facilities and they are emotionally strong. Mean score of urban teachers is more than rural teachers, it means urban teachers is more emotionally intelligent than comparatively rural degree college teachers.

**HYPOTHESIS – 3**

There is no significant mean difference between the Job satisfaction of male and female degree college teachers.

**Table3: Results of t test Between Degree College Male and Female Teachers with Respect to Job Satisfaction Scores.**

Variable	Gender	Mean	SD	SE	t-value	P-value	Signi.
Job satisfaction	Male	179.67	23.89	2.14	5.1087	0.0001	<0.05, S
	Female	159.81	30.64	3.54			

There is a significant difference between male and female teachers of degree colleges with respect to job satisfaction scores ( $t=5.1087$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the female teachers of degree colleges have significant smaller job satisfaction scores as compared to male teachers of degree colleges.

**HYPOTHESIS-4**

There is no significant mean difference between Job satisfaction of male and female degree college teachers belonging to rural and urban areas.

**Table – 4: Influence of locality on the job satisfaction of Degree College teachers.**

Sl.No.	Locality	N	Mean	S.D.	't'-test
1	Rural	350	198.59	11.86	4.398**
2	Urban	150	206.75	16.50	

\*\* indicates significant at 0.01 level

It is found from the **Table – 2** that the computed value of 't' (4.398) is greater than the critical value of 't' (2.58) for 1 and 238 df at 0.01 level of significance, Hence the Hypothesis-1 is rejected at 0.01 level. Therefore it is concluded that the locality has significant influence on the job satisfaction of degree college teachers.

**HYPOTHESIS-5**

There exists no significant relationship between the Emotional intelligence and Job satisfaction of degree college teachers.

**Table-5 : Coefficient of Correlation Between Job satisfaction and Emotional Intelligence of Degree College Teachers.**

Respondents	N	R	Result
Total	500	0.21**	Significant at 0.01 level and no Significant at 0.05 level
Male	350	0.15	
Female	150	0.27**	
Rural	180	0.15	
Urban	320	0.18	

\*\* Significant at 0.01 level

Table-5 shows the coefficient of correlation between Job satisfaction and emotional intelligence of total, male, female, rural and urban teachers as 0.21, 0.15, 0.27, 0.15 and 0.18 respectively out of which correlation in case of total teachers and the female teachers was found to be significant at 0.01 and 0.05 level of confidence whereas no significant relationship was found in firm case of male, rural and urbanteachers. Therefore the hypothesis stating that there exist a significant relationship between Job satisfaction and emotional intelligence of degree college teachers stands partially accepted. The reason may be that a balanced and emotionally strong person adjusts in every situation but locality play a significant role.

### CONCLUSION

1. Rural and urban surroundings have more impact on both male and female degree college teachers. Female teachers are considering more emotionally intelligent as compare to male teachers.
2. Degree college teachers are influenced by rural and urban surroundings. In case of personality of Degree College teacher locality plays a significant role.
3. In spite of female teachers are more sensitive and less experienced than male but now they become more experienced more explosive to society than male teachers.
4. Urban teachers get more facilities and they are emotionally strong than rural teachers.
5. A balanced and emotionally strong person adjusts in every situation but locality play a significant role.
6. Teachers can be motivated so that they can give their best to students. With the help of motivation teacher can improve and came to know about their strengths and weaknesses.
7. Locality is the highly influenced on the job satisfaction of degree college teachers. Urban degree college teachers have more job satisfaction than the rural degree college teachers. The administrators have to provide good facilities for the rural degree college teachers.
8. A good working relationship among teachers and between teachers and college principal can also help improve on satisfaction with the job because no one can thrive successfully in an atmosphere of serious discord and animosity. Democratic leadership style should therefore be adopted by college principals.

### EDUCATIONAL IMPLICATIONS

The study reveals that significant difference is found in emotional intelligence and job satisfaction of degree college teachers. On the basis of these findings it can be said that equal opportunities, attention and same kind of environment should be given to both so that they can make their good and balance personality also the administrator should give provisions so that the individuals may be provided with adequate training to master and control their emotions. In other words, both male and female teacher should develop their emotional intelligence which may be possible by providing them congenial environment in the family and in educational institutes. Increased funding which is crucial to improvement in the teaching and learning environment should be accorded top priority in government policies and programmes.

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## TECHNOLOGY INTEGRATION IN SCHOOL EDUCATION

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### Abstract

*In a broad sense, technology integration can be described as a process of using existing tools, equipment and materials, including the use of electronic media, for the purpose of enhancing learning. It involves managing and coordinating available instructional aids and resources in order to facilitate learning. Integration of technology in education simply refers to the use of technology to enhance the student learning experience. Utilizing different types of technology in the classroom, including a virtual classroom, creates learners who are actively engaged with learning objectives.*

**Keywords:** Information Communication Technology, School Education

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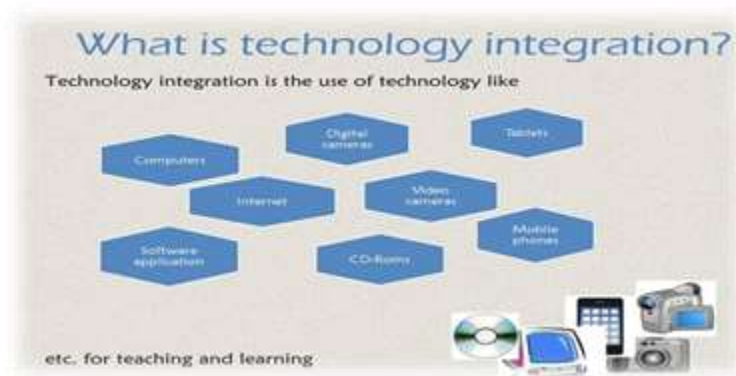
### Introduction

#### Meaning of Technology Integration

Technology integration is the well-coordinated use of digital devices and cloud computing as tools for problem-solving, deeper learning, and understanding. Technology facilitates access to curriculum but is not the curriculum itself.

#### Defining Technology Integration

Teachers at all levels of education, from preschool to college-level courses, might use a wide range of technological tools to teach content and build skills. This process, called technological integration. Technology integration is the incorporation of technology resources and technology-based practices into the daily routines, work, and management of schools. Technology resources are computers and specialized software, network-based communication systems, and other equipment and infrastructure. Practices include collaborative work and communication, Internet-based research, remote access to instrumentation, network-based transmission and retrieval of data, and other methods. This definition is not in itself sufficient to describe successful integration: it is important that integration be routine, seamless, and both efficient and effective in supporting school goals and purposes.



#### How to Integrate Technology in education.

1. Make technology is easily available and accessible to both teacher and students.
2. Allow technology tools to support the curricular goals, and help the students to effectively reach the goals.
3. Incorporate student's use of technology into meaningful activities in the lesson plan.

4. Ensure some key components of learning like active engagement, participation in groups, frequent interaction and feedback and connection to the real world experts.

### **Objectives of Technology Integration in education**

- ✓ It enhances the student's engagement.
- ✓ It increases the student's retention power.
- ✓ It makes learning effective.
- ✓ Teacher, Students and Parents can be connected easily.
- ✓ It increase the learning outcomes.

### **Need Of Technology Integration in education**

- ✓ The availability new technology tools that can help the teacher in making both teaching and learning interesting and effective.
- ✓ Engaging the students towards the effective learning.
- ✓ The technology knowledge and skills gained by the students in the classroom will helpful in future.
- ✓ It helps to teacher in producing interesting, diverse and student friendly material.
- ✓ It makes teaching fun and enjoyable.
- ✓ It gives access to more information and idea.

### **Importance of Technology Integration in education**

1. Technology makes teaching easy.
2. Technology helps you track students' progress.
3. Integration technology is very important to create good environment for both teaching and learning.
4. It is very important for the students to learn the lot of things within a short span of time..
5. Integration Technology makes distance learning more accessible than ever.
6. Students and teachers can access information at anytime and anywhere.

### **Conclusion**

Technology integration in education is essential for the academic growth of students. With access to a wider range of resources and personalized learning experiences, students can develop the skills they need to succeed in the future.

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## THE INFLUENCE OF PRE-UNIVERSITY COLLEGE PRINCIPAL'S LEADERSHIP SKILLS ON PROFESSIONAL COMMITMENT OF KALABURAGI AND BIDAR DISTRICTS

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### Abstract

*The main aim of this paper is to study The impact of leadership skills on teachers' effectiveness of pre-university college principals of Kalaburagi and Bidar districts. This paper reveals the involvement of educational Leader in the teacher's educational process. Leadership policy is a crucial factor for the Professional commitment. Some practices, in relation with Leadership policy, are proved that contribute to teacher's empowerment. The present investigation was confined to the Principals of Pre-University Colleges. The tools were used Principal's Leadership Skills and Professional commitment scale (PCS). The result reveals that there is a significant difference in the mean scores of Leadership Skills among Bidar and Kalaburagi Districts PUCPs, there is a significant difference in the mean scores of teaching effectiveness among Bidar and Kalaburagi Districts PUCPs and the leadership skills scores are increases or decreases with increase or decrease in Professional commitment scores of Pre-university college principals*

**Keywords:** *Impact, leadership skills, Professional commitment, Pre-university College, Principals.*

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### 1.Introduction.

The idea of organizing schools as learning organizations where the practices allow for continuous learning is rapidly and steadily considered as the mediator for achieving school improvement (Silins and Mulford, 2002). The school is gradually transformed into a learning organization which needs to refresh the processes involving its current and future needs (Huber, 2004). A great deal of research on factors promoting teacher effectiveness has been conducted by educational scholars. Leadership practices seem to have quite positive effects on teacher's lifelong professional development in the school context (Flores 2007) because they have the potential to empower teachers towards a commitment to change and enhance their learning in school organization (Bogler, 2001; Fullan, 2002; Day et al, 2001).

### 2.Educational Leadership:

Educational leadership has become a priority in education policy programs worldwide. It plays a crucial role in refining school outcomes by influencing the motivations and capabilities of the teachers, as well as the school climate and environment. Operative educational leadership is vital to improve the efficiency and pertinence of education. Educational leadership responsibilities should be adequately defined through an understanding of the practices that are required to make an improvement in teaching and learning. In many countries, the school administrators and the principals have heavy work-loads, they are over-burdened with work. Most of these individuals are reaching the retirement age and it is difficult to find leaders with capabilities and competencies. Educational leadership functions can contribute in making provision of guidance on the main characteristics, tasks and responsibilities of proficient leaders in the field of education.

### 3.Teacher as Leader:

Teaching is considered as an extremely intellectual effort. Teachers have to lead the classroom, students, and colleagues. The Teacher, who has formally or informally gained leadership positions, is generally termed a teacher leader, who can bring changes in the institution. When a teacher leads, they create good climate for learning that influences the school community. In order to be successful with their students and colleagues, the teachers need to learn a variety of skills while on their job viz.,

developing rapport, scrutinizing institutional conditions, supervision of students in and out of the classroom, inculcating skills and confidence in others.

#### **4.The role of Teacher Leaders:**

As a leaders teacher has to play many roles some among are Resource Provider, Instructional Specialists, Curriculum Expert, Classroom Supporter, Learning Facilitator, Mentor, School Leader, Data Coach and Catalyst for Change and Learner.

#### **5.Professional Commitment:**

Professional is someone who has completed formal education and training in one or more profession. The term also describes the standards of education and training that prepare members of the profession with the particular knowledge and skills necessary to perform the role of that profession. (Wikipedia)

The word “Professional” has implications for an individual at the organizational and occupational level. A level of behavior is expected by the organizational employing like Job, as well as by the external peer group that makes up the profession. The extent to which individuals behave in the expected manner can be reflected in their commitment to the organization & profession.

Commitment is defined as the act of committing or pledging or the state of being committed/ pledged or / an obligation, promise, etc. that restricts one’s freedom of action.

Professional Commitment of the teachers represents different ways in which the teachers perceive, understand and conceptualize the phenomenon of commitment.

**According to Vandenberg and S. Carpella (1994)** “A person’s belief in and acceptance of the values of his or her chosen occupation or line of work and willingness to maintain membership in that occupation”.

**According to Lodahl & Kejner (1965)** “Professional Commitment is the degree to which a person’s work performance affects his self-esteem.”

#### **6.Professional Commitment in Teachers:**

The quality of teaching depends a great deal on the level of teachers’ involvement in relation to the Professional Commitment exerted, to the organization. One part of the Job satisfaction is that one feels. On the one side, the relation, the nature of the teaching activity and the work carried on in the Job community, the relations with peers, superiors, students’ parent’s leads to Job achievement and indirectly it reflects on to the achievements of one’s students.

The commitment of the teachers can be identified in the six different forms. These six categories represent different ways that teacher perceive, understand and conceptualize the phenomenon of commitment of the teachers.

##### **The Identified categories are:**

**1. Teacher commitment as a passion:-**This concept sees teacher commitment as a passion or a positive emotional attachment to the work involvement in teaching generally or a specific aspect of teaching.

**2. Teacher commitment as an investment of time:-**Outside of contact hours with student this conception identified teacher commitment as an investment of extra time outside of expected contact hours with students. This extra time is discussed as either visible time invested at the school site or invisible time invested of the school site.

**3. Teacher commitment as a focus on the individual:-**This conception considers teacher commitment to be sharp focus on the needs of the student; student needs are discussed as either emotional or academic.

**4. Teacher commitment as a responsibility to impart knowledge, attitudes values and beliefs:-**This concept considers teacher commitment as taking responsibilities for imparting a body of knowledge and for certain attitudes, values and beliefs. Teachers who hold this conception place great

value on the role that they play in preparing students for the future and take responsibility for passing on core set of skills, understandings and values.

**5. Teacher commitment as maintaining Job knowledge:-**This conception views teacher commitment as the maintenance of Job knowledge and on going Job learning with in this conceptualization in the notion that committed teachers are proactive in their Job development and in many cases are willing to share with and learn from their colleagues.

### **7. Need and Significance of the Study:**

In education, there has been a concern with the leadership skills of the school/college as a decision maker, primarily because of his location in the hierarchy of authority and responsibility within the organization. It seemed appropriate and proper that efforts to be made to study the leadership skills and hopefully, improve the ability of this individual in this capacity. It has been disclosed by the study that the leadership skills of principals are of great significant at college level. The /principals of most of the colleges particularly those of PU level colleges in India have to face so many leadership skills problems with regard to their academic work. The proposed study aims to study leadership skills and professional commitment of the principals. On this theme little research has been conducted therefore there is a need to investigate the PU college principal's leadership skills and their professional commitment.

### **8. Review of related literature:**

1) **Bartlett and Bartling (2007):** assessed self-perceived leadership styles practiced by adult educators and graduate-level adult education students adopting transformational leadership theory embodied in the Full Range of leadership Model. Results showed significant differences between practitioners and graduate students in mean scores for the transformative and transactional leadership style.

2) **Abedi Jafari and Moradi (2005):** in their research entitled "Studying the Relationship between Emotional Intelligence and Transformational Leadership" studied the relationship between emotional intelligence and transformational leadership. The result showed that there is a significant relationship between emotional intelligence and transformational leadership and all subscales of emotional intelligence excluding motivation had a significant relationship with transformational leadership.

3) **Herron and Howell (2004):** conducted an Investigation on "Major Community College Leaders Attitudes toward Problem-Based Learning as a Method for Teaching Leadership" to examine attitude of community college leaders towards problem-based learning as a method of teaching leadership. The participants were taught by Problem Based Learning method in community college leadership academy for a period of one year. Results show their positive belief in problem-based learning as an effective method of instruction and helped the participants to develop their knowledge of leadership.

4) **Meschede, Fiebranz, Moller and Steffensky (2017)** surveyed 110 in service teachers to determine their professional vision, pedagogical content, investigate knowledge and beliefs. The research findings concluded that in service teachers had greater professional vision, content knowledge and beliefs when compared with pre service teachers.

5) **Politis (2017)** conducted research to analyze gender differences in occupational commitment. The study was conducted on 550 professional employees by using self prepared questionnaire with dimensions like; work place, incivility, affective occupational commitment and burnout. The research findings demonstrated that females' professionals possess higher organizational commitment when compared with men.

### **9. Objectives of the study:**

- 1) To compare the significant differences between Pre-university College principal's leadership skills in Bidar and Kalaburagi districts.
- 2) To compare the significant differences between Pre-university College principal's Professional

commitment in leadership skills in Bidar and Kalaburagi district.

- 3) To compare the significant interaction effect of Principal's leadership skills on Professional commitment among Pre-University College principals of Bidar and Kalaburagi districts.

#### 10. Hypotheses:

- 1) H01: There is no significant difference between the means scores of Leadership Skills of PUCPs of Bidar and Kalaburagi districts
- 2) H02: There is no significant difference between the means scores of Professional commitment of PUCPs of Bidar and Kalaburagi districts
- 3) H03: There is no significant interaction effect of Principal's leadership skills on Professional commitment among Pre-University College principals of Bidar and Kalaburagi districts

#### 11. Operational Definitions of the Terms Used:

The key terms used in the study were operationally defined as under:

**1) Leadership skills:** Leadership skills are skills you use when organizing other people to reach a shared goal. Whether you're in a management position or leading a project, leadership skills require you to motivate others to complete a series of tasks, often according to a schedule.

**2) Professional commitment:** According to Ryan (1969), "An effective teacher may be understood as one who helps in development of basic skills, understanding, proper work habits, desirable attitude, value judgment and adequate personality adjustment of the students". Operationally speaking in the present study Professional commitment of a teacher refers to the scores obtained by him on the Professional commitment Scale.

#### 12. Design of the study:

**1. Research method:** Descriptive research method has been adopted for the present study as it aimed to study Leadership Skills of P.U.C. College principals in relation to their Professional commitment and Professional Commitment.

**2. Population:** In this study population will constitute all the schools. More than 600 Pre-University College Principals of Bidar and Kalaburagi Districts. All the principals were considered as population.

**3. Sample techniques:** Stratified Random Sample techniques will be used in selecting samples for the study.

**4. Sample:** The present investigation was confined to the Principals of Pre-University Colleges. The whole sample comprised of total 600 Pre-University College Principals through randomizes sampling.

**5. Tools used:** a) Principal's Leadership Skills-Prepared and standardized by Investigator

b) Professional Commitment Scale (PCS)-Prepared and standardized by Dr. Shallu Puri & S.C. Gakhar (2010)

**6. Statistical techniques used:** The statistical techniques used to analyse the data in the present study are Mean, Standard deviation and t-test and r-test were used.

**13. Hypotheses wise analysis of data:** To test this hypothesis, 't' test of significance for difference between means of Leadership Skills and Professional commitment variables of PUCPs was employed and the details are presented in tables:

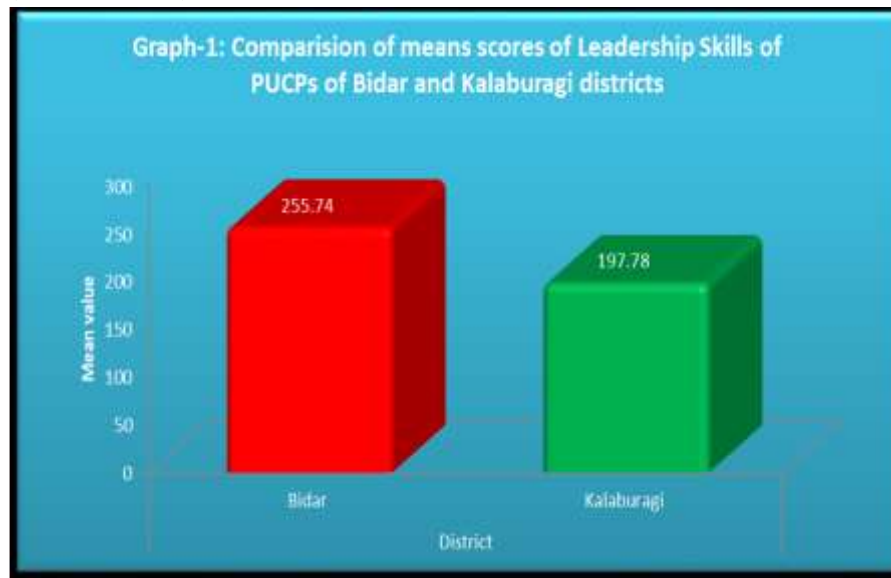
- 1) **H01: There is no significant difference between the means scores of Leadership Skills of PUCPs of Bidar and Kalaburagi Districts**

**Table-1. Mean, S.D. and t-value of scores of leadership skills of Bidar and Kalaburagi Districts PUCPs:**

Variable	Sub Variable	N	Mean	SD	't' value	Significance
Leadership skills	Bidar	300	255.74	20.221	14.72	Significant at 0.05
	Kalaburagi	300	197.78	25.310		

(Table value of  $t = 1.960$  is at 0.05 level of significance and degree of 298)

The 't' Value obtained for the variable Leadership Skills with respect to district is 14.72 and the table value is 1.960. As the P-value is 1.960 which is less than calculated value, Null Hypothesis  $H_{01}$  is rejected. That means there is a significant difference in the mean scores of Leadership Skills among Bidar and Kalaburagi Districts PUCPs. Thus, Bidar and Kalaburagi Districts PUCPs differ significantly in their Leadership Skills. It is also observed from the table that, the PUCPs of Bidar district have higher mean (Mean=255.74) of Leadership Skills than their Kalaburagi district counterparts (Mean=197.78).



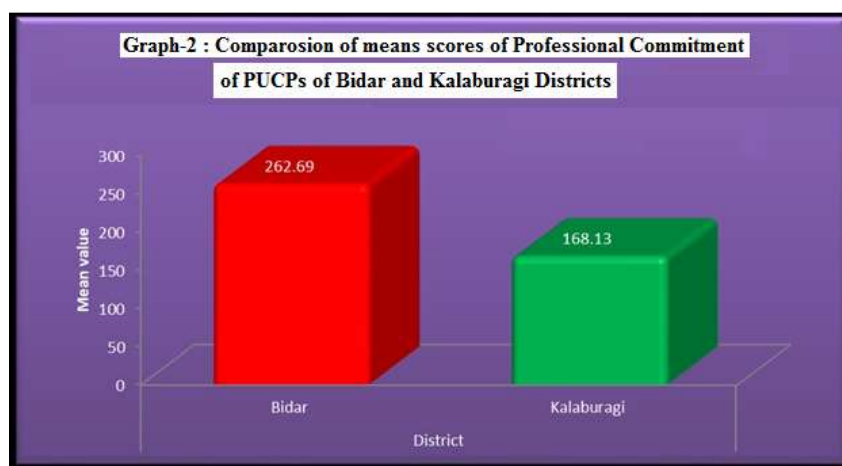
2) **H<sub>02</sub>:** There is no significant difference between the means scores of Professional commitment of PUCPs of Bidar and Kalaburagi districts

**Table-2. Mean, S.D. and t-value of scores of Professional Commitment of Bidar and Kalaburagi Districts PUCPs:**

Variable	Sub Variable	N	Mean	SD	't' value	Significance
Professional Commitment	Bidar	300	262.69	40.01	12.74	Significant at 0.05
	Kalaburagi	300	168.13	44.22		

(Table value of  $t = 1.960$  is at 0.05 level of significance and degree of 298)

The 't' Value obtained for the variable Leadership Skills with respect to district is 12.74 and the table value is 1.960. As the P-value is 1.960 which is less than calculated value, Null Hypothesis  $H_{02}$  is rejected. That means there is a significant difference in the mean scores of Professional commitment among Bidar and Kalaburagi Districts PUCPs. Thus, Bidar and Kalaburagi Districts PUCPs differ significantly in their Professional commitment. It is also observed from the table that, the PUCPs of Bidar district have higher mean (Mean=262.69) of Professional commitment than their Kalaburagi district counterparts (Mean=168.13).



3) **H03:** There is no significant interaction effect of Principal's leadership skills on Professional commitment among Pre-University College principals of both districts

**Table-3:** The r-value of scores of leadership skills and Professional commitment of PUCPs of Bidar and Kalaburagi districts.

Type sample of	N	Mean	'r' Value	Significance
Leadership skills	300	260.28	0.878	Significant at 0.05
Professional commitment	300	257.71		

A significant and positive relationship was observed between leadership skills and Professional commitment of PUCPs ( $r=0.878$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis-3 is rejected and alternative hypothesis is accepted. It means that, leadership skills and Professional commitment of PUCPs are dependent on each other. In another words, the leadership skills scores are increases or decreases with increase or decrease in Professional commitment scores of Pre-university college principals. It means leadership skills of PUCPs influence on their Professional commitment.



#### 14. Conclusion:

There is a significant difference in the mean scores of Leadership Skills among Bidar and Kalaburagi Districts PUCPs. Thus, Bidar and Kalaburagi Districts PUCPs differ significantly in their Leadership Skills. There is a significant difference in the mean scores of Professional commitment among Bidar and Kalaburagi Districts PUCPs. Thus, Bidar and Kalaburagi Districts PUCPs differ significantly in their Professional commitment and



Leadership skills and Professional commitment of PUCPs are dependent on each other. In another words, the leadership skills scores are increases or decreases with increase or decrease in Professional commitment scores of Pre-university college principals. It means leadership skills of PUCPs influence on their Professional commitment.

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## EFFECTIVENESS OF BRAIN DOMINANCE STRATEGIES ON ATTITUDE TOWARDS MATHEMATICS AMONG UPGRADED SCHOOL STUDENTS

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### Abstract

*The researcher aims to determine the Effectiveness of Brain Dominance Strategies (BDS) on Attitude towards Mathematics (ATM) of 8th grade students. The type of this research is a True experimental (Parallel design) study. The population of this study was the 8th grade students of Upgraded school in Davangere District. The sample of this research consisted of two classes namely 8th -A grade as an experimental class and 8th - B as a control class. Based on the results of the research, it was obtained that average score of the pre-test in experimental class is 127.1818 with standard deviation (s) is 16.95851. After given the treatment, the average score of the post-test in experimental class is 145.3939 with standard deviation (s) is 21.66786. According to the observation of the brain dominance strategies, which include teaching and students activities are quite active. Based on the results of two tailed t-test for post-test data in experimental class was significant. Therefore, Based on the results of this research, it can be concluded that the BD S effected on student's ATM of 8th grade students.*

**Key Point:** BDS- Brain Dominance Strategies, ATM- Attitude towards Mathematics

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### INTRODUCTION:

The Brain dominance has been considered as the cognitive feature of the students. Brain is the coordinating organ of the body. It decides the nature of responses to be delivered for the stimulus. Hence, the brain has been considered as the controlling part of the living being. Such a significant organ has to be reined and termed in such a way, so to bring the positive outcome from the learners. The students having the hemispherical dominance can overcome the learning difficulties, can also decide and practice the feasible learning styles. Brain Dominance helps the learners to gain essentialities in the learning sectors as well as reasoning abilities and adjustment behavior. The brain associated coping skills and psychological techniques will also make the learners acquire the skill to attain the Brain Dominance.

The Brain dominance is a principle which support that a brain is composed by parts, hemisphere or quadrants, not equals, but asymmetric and functionally specialised and where one part is dominant relatively to the others. The left side of the brain is responsible for controlling the right side of the body. It also performs tasks that have to do with logic, Such as in science and mathematics. On the other hands the right hemisphere coordinates the left side of the body, and performs tasks that have done with creativity and the arts.

The brain is complex and hard-working organ. It is made up of as many as hundred billion neurons or brain cells but only weights 3 pounds (1400-2000gm). It is an energy-intensive organ, making up around 2% of a person's weight but using a huge 20% of the body's energy.

### THEORETICAL FRAMEWORK: -

Morris(2005) indicated that Ned Hermann who is the father of Brain dominance Technology drew on Sperry's work and developed the theory. He then went into develop a questionnaire. It is called as "Hermann Brain Dominance Instrument (HBDI)"By this model the brain is divided into 4 different systems and styles which are listed below.

- A: Left cerebral hemisphere      -Analytical
- B: Left limbic system                -Sequential
- C: Right Limbic system              -Interpersonal

#### D: Right Cerebral hemisphere -Imaginative

According to the notes of Morris (2005), "A related but independent theory is the theory of Multiple intelligences developed by Howard Gardner (1983). He identified seven types of intelligence. They are,

- Verbal- Linguistic
- Logical- Mathematical
- Visual- spatial
- Body – Kinaesthetic
- Auditory – Musical
- Inter-personal communication
- Intra-personal communication

Later he added two more they are, i) Naturalist intelligence &  
ii) Existentialist intelligence

Rotter's (1954) social learning theory occurrence of reinforcement is contingent on his/her own behaviour factor of reinforcement. They are divided the factors as internal Brain Dominance and external Brain Dominance. According to him internal brain dominance perception of positive or negative event, take on one's own actions, one's own personal control, give personal efforts and decisions. External brain dominance is the individual's behaviour guided by fate, luck and other external circumstances.

In psychology Brain Dominance was originally developed by Julian Rotter in 1950's. Brain Dominance represents how a person's decision-making ability is influenced. Essentially those who make choices primarily on their own are considered to have internal brain dominance people with external brain dominance are generally more likely to be stressed and suffer due to depression as they are more aware of work situations since those who make decisions about based more on what other think are said to have external dominance".

#### **NEED AND IMPORTANCE / SIGNIFICANCE OF THE STUDY: -**

Attitude towards mathematics is assessed differently in various courses. In schools, assessment of academic competence is divided into assessment of cognition and assessment of behaviour in practice as proposed by Miller's hierarchical model in 1990. Cognition or knowledge is assessed most commonly by the written method such as Multiple-Choice Questions (MCQs), Modified Extended Questions (MEQs), Short Answer Questions (SAQs) and Essay questions. Assessment of scientific practice is done by Objective Structured Scientific Examination, short cases, long cases and collections.

Many studies have been carried out to associate various factors that may influence one's attitude towards mathematics. Different brain dominance amongst individuals is a widely known fact. As each hemisphere of the brain contributes to certain different functionalities of our body, different persons tend to have their own unique ways of perceiving given information and strategize thereafter in order to respond. Different brain dominance affects the way in which one studies the best. There is no definite answer to which brain dominance belongs to the more successful individuals as each hemisphere of the brain is not superior to the other, instead have different specialized functions each. However, few researches have proved that left brain dominant students perform better academically. One of the factor affecting Attitude Towards Mathematics is brain dominance.

Among the learning styles, brain hemisphericity, or to put it in more special terms, brain specialization has attracted the attention of some researchers. Tondero (2000) reported Sperry's study (1977) in which he propounded his split-brain model of intelligence as a result of his works on aphasic patients. In his seminal work he attributed some functions to different hemispheres of the

brain. Brain has two hemispheres that are assigned different functions. Hergenhahn & Olson (2005) stated that body functions have been assigned to both hemispheres “evenly but in a crossed fashion” (Kok, 2010). Simply put, the right hemisphere is in control of the left side of the body and vice versa. Using Tendero’s (2000) metaphorical statement about brain dominance, “In a sense, the body cannot serve two masters” We can state that often one side of the brain is dominant over the other. In a similar vein.

Brown (1994) maintained that “the left hemisphere is associated with logical, analytical thought, with mathematical and linear processing of information. The right hemisphere perceives and remembers visual, tactile and auditory images; it is more efficient in processing holistic, integrative and emotional information”.

Krashen (1988) maintained that “left hemisphere is superior to the right in judging temporal order, deciding which of the two stimuli was presented first”. Brown (2007) reports Torrance’s study (1980) in which he enumerated some of the features of the left and right brain dominant learners: Left-brain dominant learners: Intellectual; remember names; respond to verbal instruction and explanations; experiment systematically and with control; make objective judgments; planned and structured; prefer established certain information; analytic readers; reliance on language in thinking and remembering; prefer writing and talking; prefer multiple choice tests; control feelings; not good at interpreting body language; rarely use metaphors; favour logical problem solving ,

Right-brain dominant learners: Intuitive; remember faces; respond to demonstrated ,illustrated or symbolic instructions; experiment randomly and with less restraint; make subjective judgments; fluid and spontaneous; prefer elusive uncertain information; synthesizing readers; reliance on images in thinking and remembering; prefer drawing and manipulating objects; prefer open-ended questions; more free with feelings; good at interpreting body language; frequently use metaphors; favour intuitive problem solving.

This study investigates if students’ brain hemisphericity is one of those factors affecting Attitude towards Mathematics. Researchers interested in this sphere, can examine the effects of different Strategies related to one’s brain hemisphericity on learning Mathematics and recommended to replicate this study in different contexts to verify or reject the extent to which the findings of this research can be generalized to other contexts.

#### **OBJECTIVE:-**

1. To study the effectiveness of brain dominance strategies on attitude towards mathematics among upgraded school students.

#### **HYPOTHESIS: -**

1. There is no significant difference in pre-test mean score of attitude towards mathematics between control and experimental group.
2. There is no significant difference in post-test mean score of attitude towards mathematics between control and experimental group.
3. There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group.
4. There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group.
5. There is no significant difference in attitude towards Mathematics between post-test & delayed post-test mean scores.

#### **VARIABLES OF THE STUDY:-**

The investigator selected the following variables for this study.

#### **Dependant Variable:**

Attitude Towards Mathematics

**Independent Variable:**

- Teaching through Brain Dominance Strategies
- Conventional Method of teaching

**RESEARCH METHODOLOGY: -**

In the present study researcher adopted pre-test post-test experimental and control group design (parallel group) under true Experimental Method.

**DESIGN OF THE STUDY:**

	Pre-test	Treatment	Post-test	Delayed Post-test
<b>Experimental Group</b>	Attitude Towards Mathematics	Teaching through brain dominance Strategies	Attitude Towards Mathematics	Attitude Towards Mathematics
<b>Control Group</b>	Attitude Towards Mathematics	Teaching through Conventional Approach	Attitude Towards Mathematics	

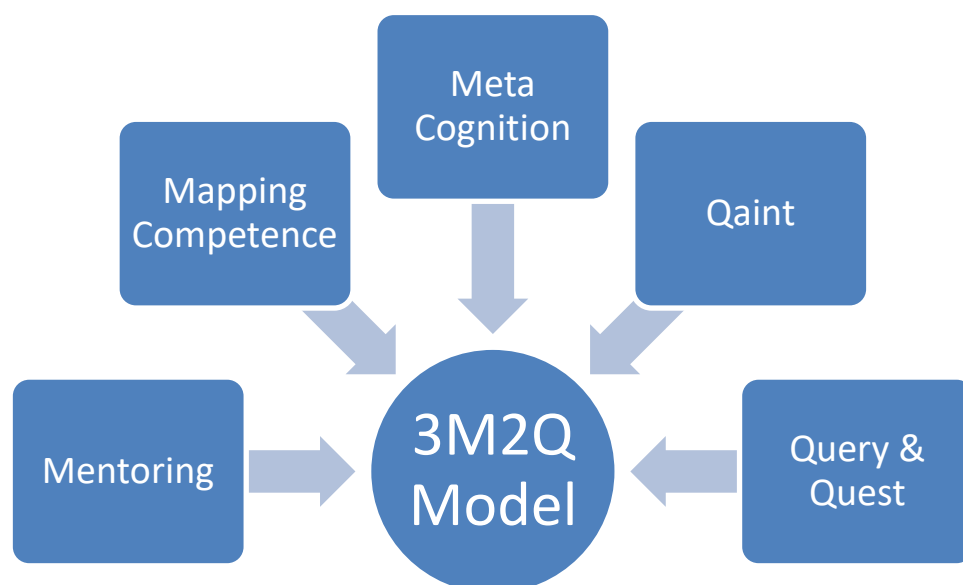
**Sampling:**

In the present study, researcher adopted purposive sampling technique. Sample of the study consists of each 33 students for both control group and experimental group. They were studying in Anjum Higher Primary School in Davangere District.

There are 75 Students in 8<sup>th</sup> grade of Anjum higher primary School. Firstly Brain Dominance Scale (SLOT) was given for 75 students to identify dominancy level. Among them 66 students got left dominancy, 5 Students got Right dominancy, 4 Students got whole dominancy. For left dominancy 66 students, Raven's progressive matrices test (non-verbal) was given to group them into control & experimental group homogenously of 33 students in each group.

**Brain Dominance Package:**

Package consists of teaching and learning strategies. Teaching was done by using 3M2Q Model prepared by the researcher after validating by the experts. Learners were actively participated in different activities and self prepared models.



- Mentoring: - Advice to a learner.
- Mapping Competence: - Planning & Presenting Information in Visual mode.
- Meta Cognition: - Ability to reflect one's own thinking and learning.
- Quaint: - Attractive & Unique Methods, Charts etc.
- Query & Quest :- a question, an inquiry, doubt or act of reaching for something

### TOOLS FOR THE STUDY:

The following tool will be used for the present study.

SI No.	Name of the tool	Developed By
1.	Brain Dominance Scale (SOLAT )	Developed by Venkataraman
2.	Brain Dominance strategies Package	Developed by Researcher. It involves teaching and learning Strategies.
3.	Achievement in Mathematics	Developed by Researcher. It consists of 30 questions from three areas of Mathematics Such as Arithmetic, Algebra & Geometry (10 questions from each Area)

### STATISTICAL ANALYSIS AND INTERPRETATION OF DATA

#### Hypothesis-1

There is no significant difference in pre-test mean score of attitude towards Mathematics between control and experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t- value	Level of significance at 0.01 level
PRE-TEST	Experimental Group	127 .1818	33	16 .95851	-0.87879	-0.186	Not-significant
	Control Group	128 .0606	33	22 .80480			

#### Interpretation:

The table reveals that, obtained t-value -0.186 is less than theoretical value 2.56. So, the obtained t-value is not significant at 0.01 level of significance. Hence accepted the null hypothesis and it is concluded that "There is no significant difference in pre-test mean score of Attitude towards Mathematics between control and experimental group". The mean of the both the groups are 127.1818 and 128.0606; SD is 16.95851 and 22.80480 respectively & gain Score is -0.87879. Hence the mean were almost same. Consequently it is assured that both the groups were equivalent to each other before beginning of the experiment.

#### Hypothesis-2

There is no significant difference in the post-test mean scores of Attitude towards Mathematics between control and experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
POST-TEST	Experimental Group	145 .3939	33	21 .66786	13.78788	2.735	Significant
	Control Group	131 .6061	33	20 .59876			



**Interpretation:**

The table reveals that the obtained t-value 2.735 is greater than the theoretical value 2.56. at 0.01 level of significance. Hence, the null hypothesis is rejected and formulated alternative hypothesis that is, "There is a significant difference in the post-test mean scores of Attitude towards Mathematics between control and experimental group". The mean scores of the both the groups are 145.3939 and 131.6061, SD are 21.66786 and 20.59876 respectively & gain Score is 13.78788. Therefore Attitude towards Mathematics of Experimental Group is higher than Control group after giving treatment for Experimental group. Teaching through Brain Dominance Strategies is more effective on Attitude towards Mathematics compare with teaching through traditional method.

**Hypothesis-3**

There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
<b>CONTROL GROUP</b>	<b>Pre-Test</b>	128.0606	33	22.80480	-3.54545	-0.678	Not Significant
	<b>Post-Test</b>	131.6061	33	20.59876			

**Interpretation:**

The table reveals that, obtained t-value -0.678 is less than theoretical value 2.56. So, the obtained t-value is not significant at 0.01 level of significance. Hence accepted the null hypothesis and it is concluded that "There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group". The mean of the both the groups are 128.0606 and 131.6061, SD are 22.80480 and 20.59876 respectively & gain Score is -3.54545. Therefore the mean were almost same. Consequently it is assured that both the tests were equivalent to each other after traditional class.

**Hypothesis-4**

There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
<b>EXPERIMENTAL GROUP</b>	<b>PRE-TEST</b>	127.1818	33	16.95851	-18.21212	-3.459	Significant
	<b>Post-Test</b>	145.3939	33	21.66786			

**Interpretation:**

The table reveals that the obtained t-value 3.459 is greater than the theoretical value 2.56. at 0.01 level of significance. Hence, the null hypothesis is rejected and formulated alternative hypothesis as "There is a significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group". The mean of the both the groups are 127.1818 and 145.3939, SD are 16.95851 and 21.66786 respectively & gain Score is 18.21212. Therefore Attitude towards mathematics of Experimental Group is higher in post test after experimental treatment.

### Hypothesis-5

There is no significant difference in attitude towards mathematics between post-test & delayed post-test mean scores.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
<b>EXPERIMENTAL GROUP</b>	<b>Post-Test</b>	145.3939	33	21.66786	-4.09091	-2.742	Significant
	<b>Delayed Post Test</b>	149.4848	33	17.76253			

### Interpretation:

The table reveals that the obtained t-value 2.742 is greater than the theoretical value 2.56. at 0.01 level of significance. Hence, the null hypothesis is rejected and formulated alternative hypothesis as “There is a significant difference in Attitude towards Mathematics between post-test & delayed post-test mean scores”. The mean of the both the groups are 145.3939 and 149.4848, SD are 21.66786 and 17.76253 respectively & gain Score is -4.09091. Therefore Attitude towards mathematics of Experimental Group is higher in delayed post test after experimental treatment using Brain Dominance Strategies. This shows that experimental treatment will help students to express their positive attitude towards Mathematics.

### MAJOR FINDINGS

1. There is no significant difference in pre-test mean score of Attitude towards Mathematics between control and experimental group. The mean were almost same. Consequently it is assured that both the groups were equivalent to each other before beginning of the experiment.
2. Teaching through Brain Dominance Strategies is more effective on Attitude towards Mathematics compare with teaching through traditional method. So There is a significant difference in the post-test mean scores of Attitude towards Mathematics between control and experimental group
3. There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group. The mean were almost same. Consequently it is assured that both the tests were equivalent to each other after traditional class
4. Attitude towards mathematics of Experimental Group is higher in post test after experimental treatment. So there is a significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group.
5. Experimental treatment will help students to express positive attitude towards Mathematics. So “There is a significant difference in Attitude towards Mathematics between post-test & delayed post-test mean scores”

**Conclusion & suggestion:** Based on the results of the research and discussion as well as conclusions, the authors would like to give suggestions to carry out further research to students at different levels of education units, and by taking a larger sample. Thus, these Strategies is expected to be used as one of the important indicators in the preparation of the curriculum, especially in Mathematics lessons that are even better in the future. This study shows that there is a significant effect of Brain Dominance Strategies on the students’ academic achievement in Mathematics among 8<sup>th</sup> grade students of Davangere District.

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## ATTITUDE TOWARDS PHYSICAL EDUCATION IN UNDER-GRADUATE STUDENTS STUDYING PHYSICAL EDUCATION AS AN OPEN ELECTIVE SUBJECT

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### Introduction

Education, aims at the holistic development of children. It provides students with opportunities to grow and develop as adults to be useful for the society. It is important to know that one of the most important requirements for growing into healthy adulthood is the physical growth which supports cognitive development. It is, therefore, necessary that all children and youth get adequate opportunity to participate in free play, informal and formal games, sports and yoga activities.

Physical education as part of education provides the only opportunity for all children to learn about physical movement and engage in physical activity. As noted, its goal and place in institutionalized education have changed from the original focus on teaching hygiene and health to educating children about the many forms and benefits of physical movement, including sports and exercise (Kohl and Cook, 2013).

Physical education provides cognitive content and instruction designed to develop motor skills, knowledge, and behaviors for physical activity and physical fitness. The concept of physical education is generally understood as organisation of some games, sports or physical activities in schools and colleges (NCERT, 1961).

Central Advisory Board of Physical Education and Recreation defines Physical education as an education through physical activities for the development of total personality of the child to its fullness and perfection in body, mind and spirit (1954).

### Objective of the study

The purpose of the study was to compare the attitude towards physical education in Under-Graduate students opting elective physical education paper and other subject open elective papers.

### Methodology

The subjects for the present study were two hundred and fifty Under-Graduate male as well as female students studying in Shivamogga District of Kuvempu University jurisdiction. The students were studying during the academic year 2022-23 in various colleges of Shivamogga District. Their age ranged between 20 to 25 years. All the students were studying NEP-2020 syllabus framed by Kuvempu University as per directions of Government of Karnataka, Higher Education Council. The data for the present was collected from Under-Graduate students at their respective colleges. The questionnaire selected for assessing attitude towards physical education was adopted by Ananda, (2022) with prior permission. The questionnaire was standardized by the author and no modifications were made to the original in the present investigation. Prior permission was obtained from the Head of the respective institutions and it was confirmed that the confidentiality of data would be maintained in all respects. Simple random sampling technique was observed in the present investigation by giving due representation to 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> year students. Descriptive statistics Mean and Standard Deviation were employed in the present investigation for ensuring normalcy and homogeneity of sample. Further, 't' test for independent sample were employed to compare attitude towards physical education in Under-graduate students studying physical education open elective and other discipline subjects.

### Findings of the study

The raw data on attitude towards physical education of male under-graduate students of open elective physical education subject and other discipline were subjected to descriptive statistics and the results are provided in table 4.1 as below.

**Table 4.1 Details of Mean  $\pm$  Standard Deviation on attitude towards physical education of open elective physical education and other discipline Under-Graduate male students**

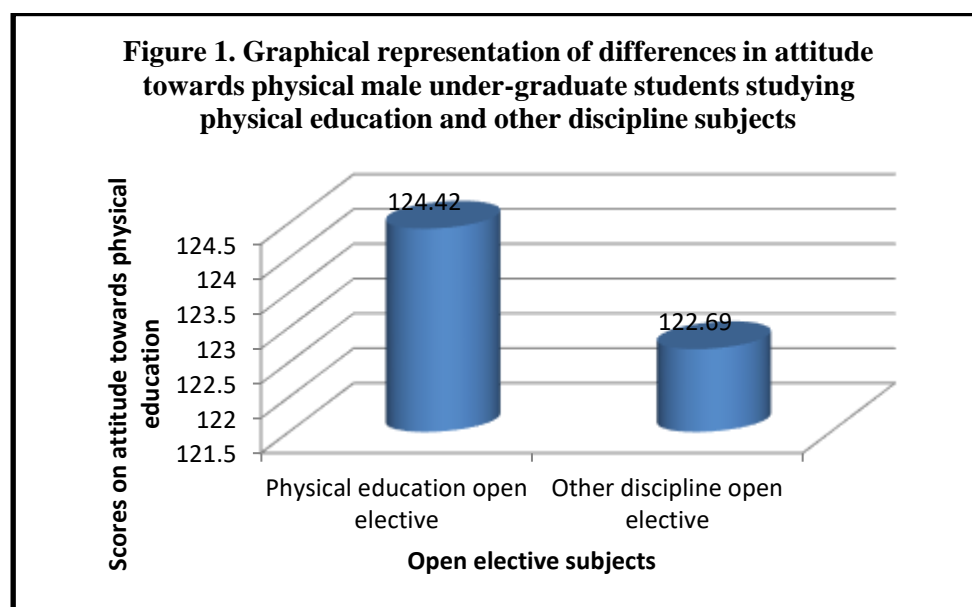
Elective information	N	Mean	Std. Deviation	Std. Error Mean
Physical Education	93	124.42	17.52	1.81704
Other discipline	67	122.69	9.53	1.16469

From table 1 it is observed that the scores on attitude towards physical education in Physical Education students it was  $124.42 \pm 17.52$ ; and in other discipline male students it was  $122.69 \pm 9.53$ . The result in the above table is found to be normally distributed with acceptable homogeneity of sample. In order to find the differences in attitude towards physical education between Under-Graduate male students opted for physical education and other discipline, suitable statistics were employed and the results are provided in table 4.2 as below.

**Table 4.2 Summary of 't' test on attitude towards physical education of open elective physical education and other discipline Under-Graduate male students**

t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
-.734	158	.464	-1.73279	2.35920

From table 2 it is clear that the obtained 't' value (-0.734) is lower than the table value (1.646) required for significance at 0.05 confidence level. Hence there is no significant difference in attitude towards physical education of open elective physical education and other discipline Under-Graduate male students. The above results are depicted graphically in figure 1 as below.



From figure 1 it seems that there is difference in Mean values of scores on attitude towards physical education between physical education open elective group and other discipline open elective in female section. As the 't' score is not significant at 0.05 levels of significance, the observed difference is not accepted as significant.

The raw data on attitude towards physical education of female under-graduate students of open elective physical education subject and other discipline were subjected to descriptive statistics and the results are provided in table 4.1 as below.

**Table 4.3 Details of Mean  $\pm$  Standard Deviation on attitude towards physical education of open elective physical education and other discipline Under-Graduate female students**

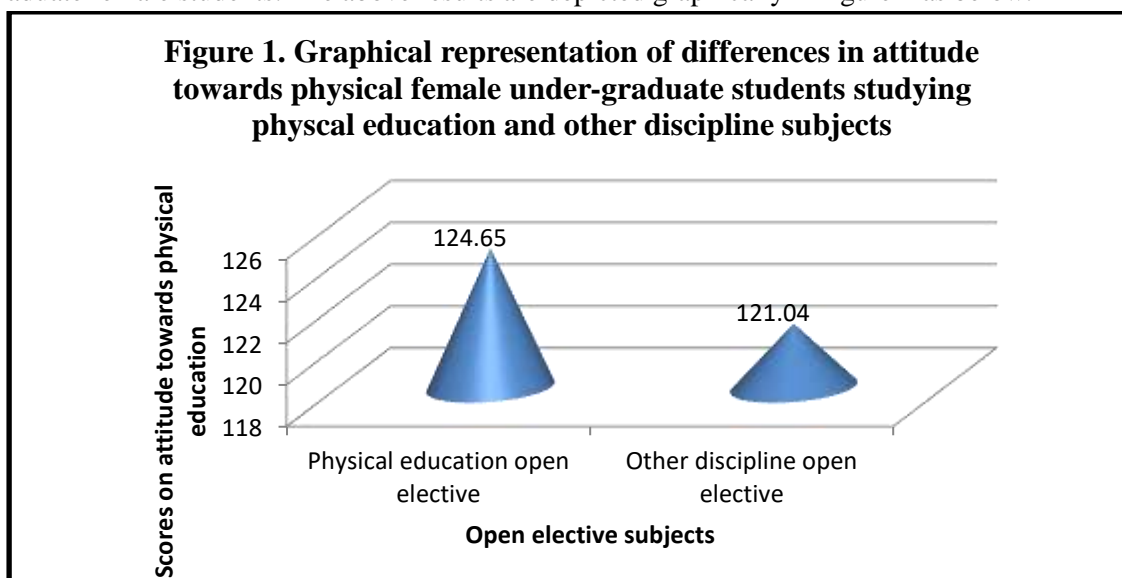
Elective information	N	Mean	Std. Deviation	Std. Error Mean
Physical Education	34	124.65	9.34	1.60207
Other discipline	21	121.04	12.09	2.63717

From table 3 it is observed that the scores on attitude towards physical education in in Physical Education female students it was  $124.65 \pm 9.34$ ; and in other discipline female students it was  $121.04 \pm 12.09$ . The result in the above table is found to be normally distributed with acceptable homogeneity of sample. In order to find the differences in attitude towards physical education between Under-Graduate female students opted for physical education and other discipline, suitable statistics were employed and the results are provided in table 4.4 as below.

**Table 4.4 Summary of 't' test on attitude towards physical education of open elective physical education and other discipline Under-Graduate female students**

t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
-1.240	53	.221	-3.59944	2.90359

From table 4 it is clear that the obtained 't' value (-1.240) is lower than the table value (1.646) required for significance at 0.05 confidence level. Hence there is no significant difference in attitude towards physical education of open elective physical education and other discipline Under-Graduate female students. The above results are depicted graphically in figure 2 as below.



From figure 2 it seems that there is difference in Mean values of scores on attitude towards physical education between physical education open elective group and other discipline open elective in female section. As the 't' score is not significant at 0.05 levels of significance, the observed difference is not accepted as significant.

### Discussion

There were no significant differences found between attitude towards physical education between under Graduate male as well as female students studying open elective physical education and other discipline subjects in the present investigation. The reasons may be attributed to their participation in



physical activities and competitive sports irrespective of open elective subject. Another reason being that high levels of intellect in both groups. Both groups are found to be having previous experiences in physical education. The awareness on importance of health and physical education has tremendously increased. The peer influences might have affected the results of the study.

### Conclusion

On the basis of the results of the present study it is concluded that there is no differences in attitude towards physical education in male as well as female students opting physical education open elective subject and subjects from other disciplines.

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## IMPACT OF ART OF MINDFUL LIVING ON ANXIETY AMONG PROSPECTIVE TEACHERS

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### Abstract

*Mindfulness makes an individual to be live in the present moment without judgment. According to Kabat-Zinn, mindfulness is “awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally”. The objective of the current study mainly focused on the impact of Art of Mindful Living on Anxiety among Prospective Teachers. The sample of the current study was 60 Alagappa University College of Education in Karaikudi, 30 students for the control group and 30 students for the experimental group as the sample of the study. The investigator has adopted a Non-Probability Sampling Convenience Sampling Technique. The design of the current study was “Parallel Group Design or Experimental - Pre-test and Post-test, Control and Experimental Group Design”. The investigator has chosen four strategies based on Mindfulness to reduce anxiety among Prospective teachers. For pre- pre-test and post-test the investigator used the standardized tool which was prepared by the investigator. The major findings of the current study concluded that there is a positive impact of the Art of Mindful Living on Anxiety among Prospective Teachers. Therefore, if the Prospective Teacher continues to do the Mindfulness-based activities daily, their anxiety may fade out from their life. It helps them to lead a stress-free life.*

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### Introduction:

“In an era marked by rapidly evolving technology, heightened academic expectations, and unprecedented levels of stress among students, the field of education faces an urgent call for innovative approaches that foster holistic well-being alongside intellectual growth. One such approach that has garnered increasing attention and acclaim in recent years is mindfulness. With mindfulness practices, students and educators alike are encouraged to engage in the present moment with non-judgmental awareness, cultivating a profound sense of self-awareness, emotional regulation, and resilience” (A et al., 2023). Mindfulness makes an individual to be live in the present moment without judgment.

According to Kabat-Zinn, mindfulness is “awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally”.

“Mindful living is the practice of living with intention, awareness, and an open heart, allowing you to experience each moment fully and without distraction”. Some of the key aspects of the Art of Mindful Living are to live in the present, cultivate awareness, encourage non-judgemental observation, deepen connection with oneself, reduce stress and promote emotional well-being.

“Mindfulness can ease anxiety by helping someone turn inward to become quiet and still, and to focus attention on what is happening in the present moment rather than past regrets or future fears” (*Mindfulness for Anxiety*, n.d.). “Mindfulness helps individuals cope with tough times and encourages and enhances their moments of joy. It can enable them to put anxiety in its place and make it a smaller part of life” (*How to Use Mindfulness Therapy for Anxiety: 15 Exercises*, n.d.).

In this study, the investigator is going to study the impact of Art of Mindful Living among Prospective Teachers.

### Review of related literature:

Lise Juul, Eva Brorsen, Katinka Gotzsche, Birgitte Lund Nielsen and Lone Overby Fjorback, (2021), have investigated a study on, “The Effects of a Mindfulness Program on Mental Health in Students at an Undergraduate Program for Teacher Education: A Randomized Controlled Trial

**in Real-Life**". This study mainly aimed "to investigate the effects of a mindfulness program including Mindfulness-Based Stress Reduction (MBSR) on the mental health of student teachers when offered at their educational institution in a real-life context". The sample of the study was "self-selected student teachers (67), 34 allocated to the intervention group and 33 students allocated to a waiting list control group, at a Danish undergraduate program for teacher education in the autumns of 2019 and 2020". The method adopted for the study was "a parallel randomized controlled trial (RCT) also the effects were analysed according to the intention-to-treat principle using mixed-effect linear regression models. Mediating effects of mindfulness skills on mental health outcomes were explored using structural equation modelling". The major findings of this study, "suggested that offering a mindfulness program at an undergraduate program for teacher education could significantly improve the mental health among self-selected students within 3 months. Results of mediation analysis supported the hypothesis that some of the effects might be explained by reduced distracting thoughts".

**Sadia Malik & Aisha Perveen, (2023)** have examined a study on, "**Mindfulness and anxiety among university students: Moderating role of cognitive emotion regulation**"

This study mainly focused "to explore the relationship between mindfulness and anxiety among students and moderating role of adaptive and maladaptive emotion regulation (ER) strategy was investigated in the relationship between mindfulness and anxiety". This study chosen "convenient sample of 210 students including both male (104) and female (106) age ranged between 18 to 26 years was drawn from various universities". To measure the variables "The Five Facet Mindfulness Questionnaire (FFMQ), Mood and Anxiety Symptom Questionnaire (MASQ), and Cognitive Emotional Regulation Questionnaire (CERQ) were used". The major findings revealed that "maladaptive Cognitive Emotional Regulation is considered a contributing factor as it leads to higher anxiety levels when combined with low mindfulness".

**Murphy, M. C. (2006)**, has described a study on "**Taming the anxious mind: An 8-week mindfulness meditation group at a university counseling center**". The main objective of this study was "Group members are taught various mindfulness meditation techniques and are encouraged to practice them daily". The sample and method adapted for this study was "an eight-week mindfulness meditation-based group that took place at a university counseling center. The group is patterned after the Mindfulness-Based Stress Reduction (MBSR) program developed by Dr. Jon Kabat-Zinn at the Stress Reduction Clinic at the University of Massachusetts Medical Center". The major finding of this study was that "the group has met with much success and it is highly valued by group members".

**Sarah Strohmaier, Fergal W. Jones & James E. Cane, (2021)** have conducted a study on "**Effects of Length of Mindfulness Practice on Mindfulness, Depression, Anxiety, and Stress: a Randomized Controlled Experiment**". The aim of this study was "to clarify which length of mindfulness practice led to greater benefits". The sample of the study was "71 healthy adults with limited prior mindfulness practice experience, who were randomized to either (i) four longer (20-min) mindfulness practices, (ii) four shorter (5-min) mindfulness practices, or (iii) an audiobook control group. All sessions were held in person over a 2-week period, each group listened to the same total length of material each session, and participants refrained from formal mindfulness practice outside of sessions". The study was adopted an experimental design. The major findings of this study, "Both longer and shorter practice significantly improved trait mindfulness, depression, anxiety, and stress compared with controls. Unexpectedly, shorter practice had a significantly greater effect on trait mindfulness and stress than longer practice, with a trend in the same direction for depression and anxiety.

From the critical analysis of the reviews, only few studies are concentrating on Prospective Teachers. So, the investigator chosen to find the impact of Art of Mindful Living among Prospective Teachers to fill the research gap.

**Need and Significance of the study:**

“University students have to face many challenges including different social and educational settings; these changes can negatively affect their performance and develop symptoms of anxiety. Mindfulness and cognitive emotion regulation can be considered as key factors in getting awareness about one’s weakness and ability to improve it” (Malik & Perveen, 2023).

Today’s Prospective Teachers are the future teachers of our society. Generally, Prospective Teachers have many anxieties that how they are going to prepare teaching aids, maintaining their records, manage their students during training period, etc., So, the investigator has chosen the Prospective Teachers as the population for this study to reduce their anxiety through the Art of Mindful Living.

**Statement of the problem:**

The investigator has addressed the problem of the current study is referred to as **“IMPACT OF ART OF MINDFUL LIVING ON ANXIETY AMONG HIGHER SECONDARY STUDENTS”**

**Operational definition:****Art of Mindful Living:**

The art of mindful living is defined as “it’s a way of living that prioritizes awareness, intentionality, and sustainability. It’s about being mindful of our thoughts and feelings, being present in each moment, and living in a way that minimizes our impact on the environment” (*What Is Mindful Living and How to Live Mindfully?*, n.d.).

In the current study, the investigator developed and implemented some strategies to enhance mindfulness practice on Anxiety among Prospective Teachers.

**Anxiety:**

According to the Diagnostic and Statistical Manual of Mental Disorders, 1980, “Anxiety may be defined as apprehension, tension, or uneasiness that stems from the anticipation of danger, which may be internal or external”(Griffin, 1990).

In the current study, the investigator has analysed the enhancement of Anxiety among Prospective Teachers with and without the practice of mindfulness strategies.

**Prospective Teachers:**

“Teacher candidates who were enrolled in a teacher education program and in their final year of education.” (Keengwe & Onchwari, 2017)

In the current study, the investigator has defined the Prospective Teachers as the people who are going to reduce their anxiety through the Art of Mindful Living.

**Objective of the study:**

The objectives of the study are,

- To find the level of Anxiety among Prospective Teachers in the control and the experimental groups in the pre-test.
- To identify and implement the Art of Mindful Living among Prospective Teachers.
- To find the level of Anxiety among Prospective Teachers in the control and the experimental groups in the post-test.
- To find the significant difference among Prospective Teachers in the pre-test and post-test on their anxiety in the control group.
- To find the significant difference among Prospective Teachers in the pre-test and post-test on their anxiety in the experimental group.
- To find the significant difference among Prospective Teachers in the control and experimental groups on their anxiety in the post-test.

### Hypotheses of the study:

The hypotheses of the study are,

- The level of Anxiety among Prospective Teachers in the control and the experimental groups in the pre-test is Average.
- The level of Anxiety among Prospective Teachers in the control and the experimental groups in the post-test is Average.
- There is no significant difference among Prospective Teachers in the pre-test and post-test on their anxiety in the control group.
- There is no significant difference among Prospective Teachers in the pre-test and post-test on their anxiety in the experimental group.
- There is no significant difference among Prospective Teachers in the control and experimental groups on their anxiety in the post-test.

### Sample and Population of the study:

The investigator has chosen the 100 Prospective Teachers of Alagappa University College of Education in Karaikudi as the population of this study. The investigator has chosen 60 Alagappa University College of Education in Karaikudi, 30 students for the control group and 30 students for the experimental group as the sample of the study. The investigator has adopted a Non-Probability Sampling Convenience Sampling Technique.

### Variables:

In the current study, the Art of Mindful Living is the Independent Variable and Anxiety is the Dependent Variable.

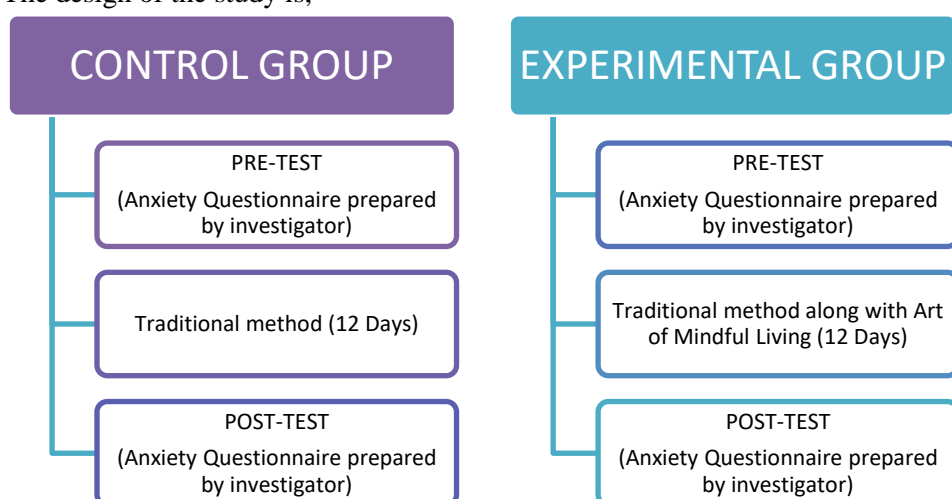
### Methodology of the study:

The investigator has chosen “Parallel Group Design or Experimental - Pre-test and Post-test, Control and Experimental Group Design” for the current study.

### Design of the study:

The investigator has chosen four strategies based on Mindfulness to reduce the anxiety among Prospective teachers. The first day pre- test were conducted by using the standardized tool which was prepared by the investigator. Each strategy has implemented for four days. After implementing all the strategies, the last day post-test was conducted by using the same tool.

The design of the study is,



### Data Analysis:

**Hypothesis 1:** The level of Anxiety among Prospective Teachers in the control and the experimental groups in the pre-test is Average.

PRE-TEST				
S.NO	GROUPS	RANGE	N	%
1	CONTROL GROUP	HIGH	0	0.0
		AVERAGE	5	16.7
		LOW	25	83.3
2	EXPERIMENTAL GROUP	HIGH	0	0.0
		AVERAGE	5	16.7
		LOW	25	83.3

From the above table, percentage of “low” is high (83.3%) and also percentage of “high” is nil in both the control and experimental group in the pre-test. Therefore, the level of Anxiety among Prospective Teachers is **LOW** in both the control and experimental group in the pre-test.

**Hypothesis 2:** The level of Anxiety among Prospective Teachers in the control and the experimental groups in the post-test is Average.

POST-TEST				
S.NO	GROUPS	RANGE	N	%
1	CONTROL GROUP	HIGH	3	10.0
		AVERAGE	9	30.0
		LOW	18	60.0
2	EXPERIMENTAL GROUP	HIGH	28	93.3
		AVERAGE	2	6.7
		LOW	0	0.0

From the above table, the percentage of “HIGH” in the Experimental Group (93.3%) is greater than the percentage of “HIGH” in the Control Group (10 %). Therefore, the level of Anxiety among Prospective Teachers is **LOW** in the Control Group and the level of Anxiety among Prospective Teachers is **HIGH** in the Experimental Group in the post-test.

**Hypothesis 3:** There is no significant difference among Prospective Teachers in the pre-test and post-test on their anxiety in the control group.

S.NO	TEST	N	MEAN	SD	t-value	df	REMARK
1	PRE-TEST	30	27.73	9.49	2.22	58	Significant
2	POST-TEST	30	34.27	12.98			

(At 0.01 level of significance the table value of ‘t, is 2.576)

From the above table, as the calculated value is less than the table value, it is inferred that there is a significant difference between the Prospective Teachers in the pre-test and post-test on their anxiety in the control group. Therefore, the null hypothesis is rejected.

**Hypothesis 4:** There is no significant difference among Prospective Teachers in the pre-test and post-test on their anxiety in the experimental group.

S.NO	TEST	N	MEAN	SD	t-value	df	REMARK
1	PRE-TEST	30	28.3	9.51	17.43	58	Significant
2	POST-TEST	30	80	13.15			

(At 0.01 level of significance the table value of ‘t, is 2.576)

From the above table, as the calculated value is less than the table value, it is inferred that there is a significant difference between the Prospective Teachers in the pre-test and post-test on their anxiety in the experimental group. Therefore, the null hypothesis is rejected.



**Hypothesis 5:** There is no significant difference among Prospective Teachers in the control and experimental groups on their anxiety in the post-test.

S.NO	TEST	N	MEAN	SD	t-value	df	REMARK
1	<b>CONTROL GROUP</b>	30	34.27	12.98	13.55	58	<b>Significant</b>
2	<b>EXPERIMENTAL GROUP</b>	30	80.00	13.15			

(At 0.01 level of significance the table value of 't', is 2.576)

From the above table, as the calculated value is less than the table value, it is inferred that there is a significant difference between the Prospective Teachers in the control and experimental groups on their anxiety in the post-test. Therefore, the null hypothesis is rejected.

### Findings:

From the current study,

1. The level of Anxiety among Prospective Teachers in the control group in the pre-test is Low.
2. The level of Anxiety among Prospective Teachers in the experimental groups in the pre-test is Low.
3. The level of Anxiety among Prospective Teachers in the control group in the post-test is Low.
4. The level of Anxiety among Prospective Teachers in the experimental group in the post-test is High.
5. There is a significant difference between the Prospective Teachers in the pre-test and post-test on their anxiety in the control group.
6. There is a significant difference between the Prospective Teachers in the pre-test and post-test on their anxiety in the experimental group.
7. There is a significant difference between the Prospective Teachers in the control and experimental groups on their anxiety in the post-test.

From the above findings we have concluded that there is a positive impact of the Art of Mindful Living on Anxiety among Prospective Teachers.

### Recommendation:

The current study recommending the following,

- ✓ In colleges, daily in assembles any one Prospective Teachers can conduct mindfulness based practices.
- ✓ While entering into the service as a teacher, Prospective Teachers can conduct five minutes mindfulness based practices before starting the class.

### Suggestions for further study:

The suggestions for the further study are,

- ✓ In the current study, the investigator finds the impact of Art of Mindful Living on Anxiety among Prospective Teachers. In future, the investigator may choose some other variables like Attention, Emotional Regulation, Self-compassion etc.,
- "The Positive Impact of Mindful Living Practices on Stress Reduction Among M.Ed. Students"**

### Delimitations of the study:

The investigator has limited the current study as follows,

- ✎ Only M.Ed., II-Year are chosen for the study.
- ✎ In Sivaganga District, Karaikudi B.Ed., college was chosen.

### Conclusion:

Art of Mindful Living promotes one's emotional well-being, live in their present moment without judgement, makes to lead a peaceful live. From the data analysis, there is a greater impact of

Art of Mindful Living on Anxiety among Prospective Teachers. Therefore, if the Prospective Teacher continue to do the Mindfulness based activities daily, their anxiety may fadeout from their life. It helps them to lead a stress-free life.

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## IMPORTANCE OF YOGA FOR B.ED TRAINEES

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### Abstract

*Change in the law of nature. Education aims at the all round development of an individual. Education and other factor build the personality. Mental and physical development, balance is very important in personality. Yoga provides mental stability peace and well physic to everyone. Yoga has vital role in teacher education. This paper highlighted meaning, definitions, aims and objectives of yoga education, importance of yoga for B.Ed trainees and importance of yoga syllabus in curriculum.*

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### INTRODUCTION:

Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between and body. It is an art and science of healthy living. As per Yogic sculptures the practice of yoga leads to the union of individual consciousness, with that of the universal consciousness, indicating a perfect harmony between the mind and body. Man and Nature. According to modern scientists, everything in the universe is just a manifestation of the same quantum firmament.

Thus the aim of yoga is self realization, to overcome all kinds of sufferings leading to the state liberation freedom yoga also refers to an inner science comprising of a verify of methods though which human beings can realize this union and achieve mastery our the destiny.

### ORIGIN:

There is no consensus on yoga's chronology as origin other than its development in ancient India. There are two broad theories explaining the origin of yoga. The linear model holds that yoga has Vedic origin and influenced Buddhism. The model is mainly supported by Hindu scholars. According to synthesis, non-Vedic practices with Vedic elements this model is favored in western scholarships.

**MEANING:** Etymologically the word yoga is delved them the Sanskrit root 'yuj' which means "to attach, join, harness, yoke". Yoga is a cognate of the English word "yoke". According to mikel Burley, the first use the root of the word yoga is in hymn of the Rig-Veda, a dedication to the rising sun-good, where it has been interpreted as yoke as wntrol.

**DEFINITIONS:** Some of the definitions of yoga are listed below

#### ACCORDING TO KATHOPANISHAD-

When the senses are stilled, when the mind is at rest, when the intellect wavers not then, say the wise, is reached the highest stage, the steady Weirton of the senses and mind has been defined as yoga, who attains it is the from delusion.

#### ACCORDING TO PATANJALI-

Checking the impulses of mind is yoga.

#### ACCORDING TO SWAMI DIGAMBAR JI-

Yoga is spiritual kamdhenu.

#### ACCORDING TO SHANKARACHARYA-

Yoga is withdrawal of since organs from the worldly objects and their control.

#### ACCORDING TO BHAGAVAD GITA-

Work in the name of word abandoning selfish desires. Be not affected by success or failure this equipoise is called yoga.

### TYPES:

Some types of yoga asana all as follows:

- Arial yoga

- Bhujngasana
- Padmasana
- Hath yoga
- Dhanurasana
- Trikonasana
- Astanga vinyasa yoga
- Adho mukha savanasana
- Tadasana
- Padahastasana
- Sarvangasana
- Navacasna
- Mastyasana
- Chakrasana
- Salabhasana
- Sirsasana
- Vrikshasana
- Paschimottasana
- Shavasana
- Balasana
- Setu Bandhasana

#### **AIMS AND OBJECTIVES OF YOGA EDUCATION**

- To enable students to have good health.
- To practice mental hygiene.
- To possess emotional stability.
- To inlegate moral values.
- To attain higher level of consciousness.
- To improve flexibility, strength, biochemical balance.
- For emotional, social and spiritual well-being.
- To incase progression, tolerance.
- To increase immunity and decease pain.
- To improve pulse and respiratory rate.
- To cure many other physical and mental health problems.

#### **IMPORTANCE OF YOGA FOR B.ED TRAINEES.**

- Student-teacher need to analysis the psychological difference of each students each student have a different psychological block in learning remembering and memorizing.
- Teacher has to be aware when to speak and when to be silent, as both speech and silent, as both speech and silent as medium of instruction.
- In the period of silence, get the children to play a game of observing their own breath and ask them to want their breath.
- Student-teacher must encourage students to do simple yoga practice daily.
- Practice of yoga helps to increase, proper learning and teaching process, by increasing the efficiency of both students and teachers.

#### **IMPORTANCE OF YOGA SYLLABUS IN CURRICULUM:**

Young people experience very high stress in school, which has negative impact on their academic performance, and mental health. It is crucial schools teach students how to identify and best manage stress. These skills will continue to benefit them throughout their lives.

Adolescence is a critical stage at which to intervene as health-related behaviors established during this period are often carried into adulthood.

School-based stress management programs, such as mindfulness based yoga programs, have been shown to be effective, yoga helps in school related academic stress and burnout decreases student academic motivation and increases the risk for dropout.

The need and importance of yoga in education arises from the fact that it helps in improving concentration and attention span. Yoga is also known to improve memory function and its direct impact can be seen in the students' performances.

#### **CONCLUSION:**

In present time of complexities and competitions yoga education is very much significant through practicing yoga social and moral values are developed in human being it helps control mental condition and positive thinking yoga accepts the value of cosmic existence and holds it to be reality its object is to enter into a higher truth consciousness in which action and creation are the expression not of ignorance and imperfections.

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## CREATIVE TEACHING METHODS IN EDUCATION

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### Abstract

*Creative instruction is defined as educational exchanges facilitated by the teacher that are unique, customized, valuable, exciting, engaging and innovative. Creative teaching is complex, involving a broad range of knowledge, skills, experience, different ideas and perspectives. Creative teaching has been linked to effective teaching that enhances learning and it promotes creative thinking among learners. Creative teaching is an vital component of nurturing creativity and support for innovative ways of investigating educational good learning environment. They present the learning environment as an area of creative teaching that essential for further development. A number of physical attributes of the class room learning environment have been attributed to expect learning outcomes and creative production. The classwork involving creativity is more likely to observe higher level cognitive skills, problem solving, and critical thinking, establish connections with subjects in pupils and when teachers combine creativity with innovative technology use, they can see very good outcomes also. There is not only one component that contributes to creativity, the most vital factor that impact the creativity of pupils their social environment, the best environment may be the classroom environment or family environment. Today it's easier than ever before to learn about content and teaching. There are lots of different books, training programmes, free on-line programmes, online resources and university programmes that can support us develop as model teachers. Learning about other things is important too in teaching. Creative teachers bring more to class than just knowledge of teaching. They are educated in other areas, methods of teaching and can draw on their potentiality, experiences and outside interests.*

**Key words:** Creative teaching, Innovative teaching, Technology-based learning activities, Experiential learning.

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### MEANING:

Creativity teaching methods are actually the process of introducing new ways or strategies in the classroom in the form of instruction. A process of constructing and strategizing instruction in such a way so as to creating thinking skills especially creative thinking skills among pupils is called 'Creative Teaching'. The act of teaching in a novel and useful way that promotes learner growth related to the development of original thought and action. Creative teaching focuses both on the methods a teacher usage to transfer learning and the overall impact those methods have on pupils and the expect outcomes produced. The Creative problem solving skill development in school, college and higher education is needful, comprehensive collection of the new investigation in higher education given importance to creativity, problem solving and pedagogical framework. Creativity is potentiality to produce new things using skills or imagination. The problem has more than one solution and creative persons are open-minded and innovative. When creativity collaborates with teaching learning it will help the students and society to grow more.

### IMPORTANT OF CREATIVE TEACHING:

- ❖ **Creativity motivates children to learn:** When learners are focused on a creative aims, they become more strength in their learning and more driven to get the different skills they need to accomplish it. Students are most inspired to learn when certain components are present.
- ❖ **Creativity lights up the brain:** Creative work helps learners connect new ideas to their previous knowledge that makes the learning stickier. Unless there's a place to stick the knowledge to what learners already know, it's hard for learners to make it a part of themselves moving forward.
- ❖ **Creativity helps emotional development:** The creative process involves a lot of trial and error. Productive struggle a gentler term for failure builds resilience, teaching learners to push through difficulty to reach success.



- ❖ **Creativity can ignite those hard-to-reach pupils:** When academically disinclined pupils are permitted to unleash their creativity a topic of individual interest, the transformation can be startling. Some students don't do well on tests or don't do well grade-wise, but they're super-creative kids.
- ❖ **Creativity is a vital job skill of the future:** We can't exist without the creative thinking. It's the idea generation and the opportunity to collaborate with others that moves towards work.
- ❖ **Define the problem:** Creatively defining a problem broadens both understanding and creative potential. In defining the problem, we exercise certain skills. Here are some of the creative thinking benefits we gain from it.
- ❖ **Restating the problem:** They helps to thinking from different perspectives, leading to more versatile solutions and leads to hearing unique perspectives from others.
- ❖ **Challenging assumptions:** They help learners to understand how the problem may have originated and teaches learners to decide for themselves what is right and true.
- ❖ **Researching and gathering facts:** Provides opportunities for developing useful investigation and data analysis and gives learners time to think about why finding a solution to the problem is important.
- ❖ **Assess Creatively:** This is where on-going formative assessment comes into play. By encouraging critical and analytical thinking in assessment activities, we can allow our learners some room in testing to get creative.
- ❖ **Focus on Ownership:** Learners must understand that teaching creatively includes taking responsibility for both success and failure. In lifelong learning, we own everything.

#### CREATIVE TEACHING METHODS IN EDUCATION:

- Smart class: Nowadays, teachers used to teach on the smart boards by giving presentations, showing informative videos to generate interest for particular topics among the students.
- 3D Presentation method: The 3 D printing teaching method is gaining acceptance globally at a very fast rate at higher educational institutes. In this method, 3D printers are used to create prototypes to make the learning easy and effective.
- Organizing quizzes: If there is no competition then there is no growth. Competition not only motivates you to do better but also boosts up your confidence level.
- Organizing seminars or workshops: By organizing workshops and seminars we can guide the pupils better and give them time for concept building and recognizing their field of interest.
- Video related to courses: Visual learning helps to create memory which lasts for a long time. The concept which is taught through videos or relatable visual contents helps to retain it better.
- Technical crossword puzzles: Solving the technical puzzles makes the brain more active to grasp knowledge fast.
- Demonstration of machines and models: Instead of giving theoretical knowledge only practical demonstration of machines and experimental models will enhance the chances of getting success as a future perspective.
- Crafts and creativity: Students can apply their knowledge in creativity much better. So, it's an effective method to make them learn by their own creativity. It involves crafts work related to the subject or course.
- Experiential learning: This method of teaching involves experimentation of the activities which can be performed easily for better concept building. Doing experiments is always better rather than just reciting bookish knowledge.

- **Multiliteracies and group discussions:** Group discussion is always the good option to make the impression everlasting. It not just reduces hesitation but also makes more expressible before others.
- **Personalized learning:** Teaching each student according to their unique needs in terms of what, when, and how is referred to as personalized learning. Teachers adapt to the talents of each student to help them succeed, instead of utilizing a single technique or plan to teach the entire class.
- **Open-ended questioning:** Students often rely too heavily on finding the correct answer in their textbooks instead of thinking creatively. However, the majority of questions do not have a single, clear answer.
- **Inquiry-based learning:** Inquiry-based learning enhances the educational experience by allowing students to conduct independent research. Students can use their cognitive abilities to gain a solid comprehension of all subjects while making connections to real-world situations.
- **Co-operative learning:** Cooperative learning involves a lot of group work. To ensure that learning is as effective as possible, instructors must also provide a lot of structure and intervene frequently.
- **Hypothetical teaching:** Hypothetical learning is a concept that for involve in our day to day lives without even realizing that we does it. It's when we try our hand at anticipating the outcome of future ventures and incidents that we may come across
- **Student-cantered approach:** In student-cantered classrooms, students are involved in designing, implementing, and assessing their own learning. By involving students in these decisions, the teacher becomes less responsible, and more ownership is transferred to the students.
- **Project-based learning:** In project-based learning, students identify a real-world problem and come up with a solution. This method emphasizes research, critical thinking, problem-solving, and cooperation.
- **Games and puzzles:** Low student involvement is one of the main challenges that teachers face. Lack of focus and interest reduces the effectiveness of learning. Game-based learning is one of the many teaching strategies that teachers employ to spark student interest.
- **Storytelling:** Stories have a lasting impact on children's minds. Regardless of the grade level, using storytelling results in a significant improvement in students' understanding of concepts.
- **Audio-video devices:** The technique that helps the learners to learn quickly. This can be in the form of short films, videos, models, pictures, graphics and many other brain mapping tools.
- **Brainstorming:** Brainstorming is the very good and most effective device that helps the learners to think of new and creative ideas by strengthening the brain muscles and making the brain more flexible.
- **Classes outside the classroom:** It is possible to plan an educational visit for the learners it will be surely useful for them. This helps them to realize and understand that learning takes place everywhere in their surroundings.
- **Role play:** This technique gives guidance to the learners to develop interpersonal skills and get out of their comfort environment and be more confident and take a better stand by solving a problem creatively.

- **Participation:** The teacher should organize activities like games or visual exercises that can inspire the learners and motivate them to take part in the activities and make more and more creative contributions.
- **Interactive lessons:** Students should be innovative learners. One-way lessons are very traditional, so we try to create an environment where pupils feel encouraged to speak up and express their own ideas.
- **Using virtual reality technology:** Enter a whole new world right inside the classroom with virtual reality technology. Like sitting in a 3D cinema or playing VR games, students can immerse themselves in different spaces and interact with 'real' objects.
- **Blended learning:** Blended learning is a method that combines both traditional in-class training and innovative online teaching. It gives more flexibility to create effective study environments and give learning experiences to the pupils.
- **Experiential learning & critical thinking:** The experiential learning can have profound impacts on a pupil intellectual development. A child who designs and conducts a simple science experiment will grasp the underlying principles more effectively than merely reading about them.
- **Field trips:** Field trips are a long-standing tradition in experiential learning, providing students with a first-hand encounter of the topics they're studying. A trip to a historical monument can make lessons from history class come alive.
- **Adaptive learning:** Adaptive learning technology collects data from student responses to specific questions on a computer. Then the software uses that information to provide immediate feedback for the student and notifies the teacher so they can change the lesson plan accordingly.
- **Jigsaws:** Any educator understands that being able to teach a concept to others successfully demonstrates true mastery. Jigsaws are a tried-and-true cooperative learning technique that capitalizes on this idea by having students teach other students.
- **QR Codes:** QR (Quick Response) codes are simple to develop and have several applications in classrooms of all grade levels. QR codes can direct students to information simply by scanning the code with a digital device.
- **Flexible learning environments:** Teachers should know how to use their classrooms for different instructional approaches. For example, when teachers are willing to change the furniture around in the classroom, they may discover that it is a critical variable for boosting student learning.

#### **TYPE OF STRATEGIES FOR INCORPORATE CREATIVITY IN TEACHING:**

- ❖ **Use technological devices to enhance learning:** Technology can be a powerful tool for developing creativity and engagement in the classroom. For ex. interactive whiteboards, educational apps and online tools to create multimedia presentations, digital stories and interactive games.
- ❖ **Incorporate real-world examples:** Incorporating real-world examples and case studies into teaching can make the learning experience more meaningful and relevant for learners.
- ❖ **Encourage the collaboration and group work:** Collaboration and group work are important skills that learners need to develop in order to succeed in this century. Creative teaching methods can provide good opportunities for learners to work together.
- ❖ **Make the learning fun and engaging:** Creative teaching methods should be fun and engaging for learners. Use humour, storytelling, and other techniques to make the learning enjoyable and memorable for pupils.

#### **CREATIVE WAYS TO ENGAGE STUDENTS IN TEACHING LEARNING ACTIVITIES:**

- **Assumption Busting:** Assumption busting is more effective when someone is stuck in current thinking paradigms run out of ideas.
- **Brain-sketching:** To solve a specific problem, learners make sketches and then pass evolving sketches to their neighbours.

- **Concept Mapping:** Concept mapping states knowledge in graphic form. Networks consist of nodes, which represent concepts and links, which represent relationships between concepts.
- **Exaggeration:** This method helps in building ideas for solutions. It is useful to explain a problem, by testing unspoken predictions about its scale.
- **Fishbone:** The fishbone technique uses a visual organizer to find out the possible reasons of a problem. This technique discourages partial solutions and demonstrates the relative importance and interactions between different parts of the problems.
- **Questioning Method:** This method simply asks the Who? What? When? Where? Why? And How? When problem-solving or decision-making.
- **Laddering:** Laddering method involves toggling between two abstractions to create ideas. Laddering techniques involve the creation, reviewing and modification of hierarchical knowledge.
- **Negative Brainstorming:** Negative brainstorming involves analyzing a short list of existing ideas, rather than the initial massing of ideas as in conventional brainstorming. Examining potential failures is relevant when an idea is new or complex or when there is little margin for error.
- **Post-up:** Post-up can gather ideas from large groups, numbering from the dozens to the hundreds. Participants are given slips of paper and asked to write down ideas which are evaluated.
- **Story boarding:** Story boarding can be compared to spreading learners thoughts out on a wall as they work on a project or solve a problem.

#### **BENEFITS OF CREATIVE TEACHING METHODS:**

- ✓ **Encourage the research:** Creative teaching methods to learning encourage learners to explore and discover new things and tools to broaden their minds.
- ✓ **Improve the problem-solving and critical thinking skills:** Creative teaching methods allow students to learn at their own pace and challenge them to brainstorm new ways to address a problem instead of finding answers already written in textbooks.
- ✓ **Avoid receiving a lot of knowledge at once:** Teachers using new approaches still give students information, but they tend to split it into smaller parts.
- ✓ **Adopt the more soft skills:** Students have to use more complex tools in class to finish their work, which helps them learn new things and spark their creativity. Also, when doing individual or group projects, learners know how to utilize their time, prioritise tasks, communicate, work with others and much more.
- ✓ **Check the students' understanding:** Grades and exams can say something, but not everything about pupils learning capacity and knowledge. Innovative teaching ideas let teachers monitor classes and better know what their pupils struggle with to recognise the suitable solutions.
- ✓ **Improve the self-evaluation:** With great methods from teachers, pupils can understand what they have learnt and what they are missing.
- ✓ **Enliven classrooms:** Don't let your classrooms be full of your voice or awkward silence. Innovative teaching methods give students something different to get excited about, encouraging them to speak up and interact more.

#### **CREATIVE IDEAS TO MAKE TEACHING MORE EFFECTIVE:**

- ❖ **Welcome New Ideas:** An open-minded attitude can help you in innovating new teaching methods. Though you might claim to be open-minded, its human nature to resist change.
- ❖ **Think About a New Hobby:** Sometimes, a hectic workload may affect your engagement in teaching. If it happens to you, it's natural. You can take a break for a couple of hours and engage in some other activity that you're interested in.
- ❖ **Work Together As a Team:** As everyone knows, the end result of the collaborative effort is always immense. Think about spending some quality time with colleagues.
- ❖ **Puzzles and Games:** Learning is fun when puzzles and games are part of education. Children may not require taking conscious effort when their lessons are introduced through games.
- ❖ **Refer to Books on Creativity:** To be a creative teacher, we need to do some research on creative ideas and techniques. There are a lot of books on creativity.

- ❖ Love What You Do: we can give our best only if we truly love what we do .When we are not stressed, we will be more creative and inspired.
- ❖ Introduce Lessons like a Story: Just think, why do we watch movies with much interest? We like to watch movies because there is always an interesting story to keep engaged.
- ❖ Music: Use music to create a more engaging learning environment. Music can be used to help students learn new concepts, improve memory retention, and enhance creativity.
- ❖ Art Activities: Make use of art activities. Art can help learners develop creativity, critical thinking, and problem-solving skills. One way to incorporate art is to use visual aids, such as pictures or diagrams, to help explain complex concepts.
- ❖ Create Challenges: Creating challenges for pupils can help to keep them motivated and can help to ensure that they are actively participated in the lesson.
- ❖ Technology-Based Learning Activities: Technology-based learning activities can be an innovative way to make classes more interactive and effective.
- ❖ Debate: Debate activities can help to develop critical thinking skills in students and can help to make lessons more engaging.
- ❖ Virtual Labs: Virtual labs can be used to make lessons more engaging and can help to reinforce the material that is being taught. They help students develop scientific and technical skills and provide opportunities for self-directed learning.

**CONCLUSION:** Teachers have a multitude of responsibilities, such as managing student engagement, classroom management, and instructional techniques, among other things. In the classroom, learning can be facilitated and improved through creative teaching methods. Teachers must adjust their approach and method based on their students' needs. The success of learning in the classroom depends on the choice of teaching approach. Using innovative teaching strategies in the classroom can make learning easier and more effective. Experimenting with diverse strategies in the classroom is an iterative process that will assist teachers in promoting learning to encourage student growth. With the ever changing environment, everything is getting updated and innovative to meet the new challenges. The classroom has been replaced by the laptop or your smartphone, the chalk has been replaced by a light pen. Yes, this is all about the online teaching system. The education system is getting very much updated with every single year. There are vast innovations emerging in the new education world.

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## **THEME - 2**



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## ASSESSING THE USER-FRIENDLINESS OF LEARNING MANAGEMENT SYSTEMS (LMS) AND EXPLORING ALTERNATIVES

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### Abstract

*The prevalence of the Learning Management System (LMS) among teachers in higher education was examined in this study, along with the replacement of other options. The author drew the assumption that users have complained about the usability of the current LMS and that better solutions may be found in alternative systems. We gathered information from 52 Teaching faculties of various fields in India who have used LMSs, mostly Moodle and Google Classroom. System Usability Scale (SUS)-based questionnaire having validity approved by experts were employed. The findings showed that the total SUS score was as low as 57.63/100 and that user retention or LMS usage were substantially linked ( $r = .740$ ,  $p = 0.01$ ) with individual usability scores. Based on the study, our participants replaced each component of the e-learning system with a variety of alternatives, such as a cloud drive for content management, an online quiz maker for quiz-based assessment, and e-mail for assignment-based evaluation. Here in this case study the teachers' main priority when choosing which techniques or tools to utilize is the students' usability.*

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### INTRODUCTION

Online learning is made easier with the help of the learning management system (LMS). Numerous well-known platforms, including Moodle, Blackboard, Canvas, and Google Classroom, have been widely used for years. According to RMUTI's E-learning and Educational Technology Department's (2018) research, any LMS will have the following elements:

- 1) Users publish text, links, and files using a content management system.
- 2) Access to courses, content, and activity logs are controlled by the user account management system.
- 3) System for communication, including meetings, chat, private messaging, and email
- 4) Assessment tools, including tests, assignments, and grade sheets

The LMS is frequently utilised with locally enrolled students within the school or institution, unlike the Massive Online available Course (MOOC), which is available to the public globally. As a result, everything online doesn't have to be on one platform. In addition to the appropriate LMS or MOOC, teachers may still conduct in-person lessons and employ other teaching strategies and resources.

Online quiz tools like Kahoot! and social networking sites like Facebook are becoming more and more popular as a result of the recent partial or complete rejection of the LMS by many faculty members. The author assumed the case that users had encountered some issues that hindered the usage of the current LMS and for which better solutions may be found in other systems. The system evaluation also incorporates the usability test (Kularbphettong, Kedsiribut, & Roonrakwit, 2014).

The System Usability Scale (SUS) (Sauro, 2011), which is detailed in Section 2 of this article, has been used in studies to evaluate the effectiveness of system implementation and to identify any defects that prevent users from effectively using the system. Our study's objectives were to assess the overall SUS of LMS usage in an environment with a high availability of substitute systems and to ascertain the relationship between individual SUS and the user's choice to continue using the LMS or discontinue it. Additionally, we sought to learn which LMS substitutes each of them employed in place of the LMS.

## 1. LITERATURE REVIEW

This section contains our theoretical framework, the System Usability Scale (SUS) (Sauro, 2011), as well as a few studies that are connected to it.

### 1.1 System Usability Scale (SUS)

John Brooke developed the System Usability Scale in 1996. It comprises of 10 simple queries used to assess a system's usability. The following questions were frequently used in prior studies:

- 1) I feel like I would like employ this system regularly.
- 2) The interface seems simple to use
- 3) The system was very complicated in my opinion.
- 4) I believe this system's different features were well-integrated.
- 5) To utilise this system, I believe I would require technical assistance.
- 6) Most individuals, in my opinion, would pick up using this approach quite fast.
- 7) I believed this approach to be far too inconsistent.
- 8) The system was indeed difficult for me to employ.
- 9) While using the system, I was quite confident.
- 10) Before I could begin using this method, I had a lot to learn.

A 5-point Likert scale is used to evaluate choices (5 being strongly agree, and 1 being strongly disagree). According to a special data interpretation, which is covered in Section 3.3, a score between 0 and 100 is produced. According to the U.S. Department of Health and Human Services (2013), a system is deemed "above average" if its SUS score as a whole is more than 68. Since both positive and negative questions will self-validate replies, it was discovered that SUS produces valid and trustworthy results even with a small sample group. The SUS may be used to rapidly assess how user-friendly the system being presented is (Bernazzani, 2018).

### 1.2 Related Works

Bangor A., Kortum P., Miller J.A. (2008). Worked on System Usability Scale (SUS) statistics gathered over the course of over ten years on different products throughout all stages of the development lifecycle. Citation. Brooke (1996) created the SUS in response to a critical need in the usability community for a tool that could quickly and simply gather a user's subjective assessment of a product's usability. The SUS satisfies that demand, according to the study's results. The examination of this many SUS ratings has revealed that the SUS is a very strong and adaptable tool for usability professionals. The article outlines non-traditional applications of the SUS, explains a suggested adjustment to the SUS to include an adjective rating that corresponds with a specific score, shows these findings and examines their ramifications.

An empirical research was undertaken by Orfanou, Tselios, and Katsanos (2015) to assess the SUS of LMSs used by students at eight Greek institutions. The SUS questionnaire, which was later proven to have good validity and reliability, was used to collect data from 11 different subjects using the LMSs eClass and Moodle. The findings indicate an overall high SUS score of more than 76. The scientists also discovered a number of relationships between the SUS and factors including past LMS usage, online self-efficacy, attitude towards the internet, and frequency of usage.

Researchers Thuseethan, Achchuthan, and Kuhanesan (2015) looked at the LMS's (perhaps Moodle's) poor usability at a university in Sri Lanka. A lack of first impression brought on by poor user interface design, visual inconsistencies, a lack of error prevention and recovery, and inconsistent icon usage are just a few of the key factors that could contribute to low usability and users' satisfaction, according to qualitative responses from research participants.

Harrati, Bouchrika, Tari, and Ladjailia (2016) investigate the barriers to e-learning adoption for university lecturers. The SUS and the usability metrics assessment approach, which tracked users' online behaviours such as the amount of clicks, task time, and completion, were used to evaluate data

gathered from 50 instructors who utilised the Moodle LMS. According to the findings, the SUS score overall was 69.3, which is marginally over average at 68 (U.S. Department of Health and Human Services, 2013). The researchers claimed that while detailed activity data differed depending on user experiences, the SUS score alone may not adequately reflect the overall system usability.

Previous research demonstrates that the SUS is a quick, easy, legitimate, and reliable technique to gauge system usefulness. However, relying just on the SUS technique might not be sufficient to assess the system's quality. It is best to utilise a qualitative approach or an extra assessment to get comprehensive data on system usability. Low usability will clearly result in a lack of system adoption or abundance, according to past studies. In this study, we go a little further to see what sorts of substitute LMS users utilised in place of each LMS component.

**2. METHODOLOGY** In this section, we provide further details on the preparation of the research tool (a questionnaire), the selection process used to choose our participants, and the methods used to gather and analyse the data.

### **2.1 Research Instrument**

The online survey builder (Google Forms) used to create the questionnaire for data collection was configured to show items based on responses to previous questions. There are four sections to the questionnaire. The LMS that the respondents used most frequently was the subject of the only question in the first section of the survey. Only those who have used the LMS before will continue to the second section, which includes questions measuring the SUS as indicated in Section 2.1. The final section of the survey included questions on whether respondents predominantly used the LMS substitute or continued to use it for each of the following tasks: communication, content management, quiz-based assessment, and assignment-based assessment. Social networking, email, cloud storage, and quiz generator were popular LMS options. LMS substitutes can alternatively be a specially created system (such as a website with interactive features) or even an offline approach (such as paper & pencil). Participants can specify whether they continued to utilise the LMS for that particular task (no alternative was employed). The fourth section of the survey focused on the crucial elements that teachers (the questionnaire's target audience) found most important when selecting a learning tool. The following are some typical responses: playfulness, system functioning, social impact, technical support, teacher and student usability, and simplicity of use.

By refereeing the questionnaire questions from the original Brooke (1996), questionnaire draft was produced for the second half (measuring SUS), tested with a second sample group, and then repeated with shuffled items. It was determined that the instrument has a high dependability of over 95%.

### **2.2 Participants and Data Collection**

Fifty-two faculty from various university in India who had used the LMS that their institutions supplied participated in this study. The questionnaire link was put in the intimate social network group, and instructors freely filled it out as part of a practical sample technique. This is done with the author's previous acknowledgement that various participants used LMSs to varying degrees. The replies were compiled in the linked spreadsheet after the data collection, which took place in a single day.

### **2.3 Interpretation of Data**

The original author (Brooke, 1996) provided the following rigorous interpretation for the second portion of the questionnaire (measuring SUS):

- 1) Subtract one from the user response for affirmative items.
  - 2) Subtract the user responses for negative items from 5 the scaled values range from 0 to 4, where 4 denotes the highest positive answer.
  - 3) Each user's scaled replies are added up, and the value is multiplied by 2.5.
- This will change the allowed value range from 0 to 100.

In the third section of the survey, when the offline system and the LMS itself (no alternative) are both viable options, the findings are shown as a percentage of users who utilised each system to replace a specific LMS component. For the fourth section, the same data interpretation was applied. Based on the assumptions that 3 = continue using the LMS, 2 = use an online alternative, and 1 = use an offline option, the correlation between SUS ratings and users' decisions was evaluated.

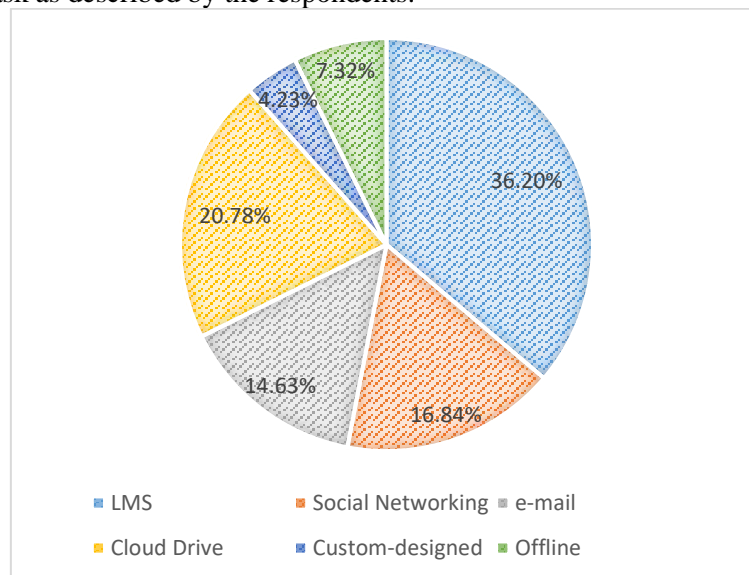
### 3. RESULTS AND DISCUSSION

The average SUS score for the 52 responders was 57.63 (S.D. = 18.01), ranging from 16.5 to 88.5. Table 1 displays specific SUS ratings for each LMS platform.

**Table 1 – SUS scores**

LMS Platform	N (%)	SUS Scores (0-100)			
		Min	Max	Average	S.D.
Moodle	32 (61.54%)	16.5	88.5	52.5	19.14
Google Classroom	12 (23.07%)	46.5	76	57.5	9.54
Others	8 (15.38%)	68.5	84	79	8.6
Total	52 (100%)	16.5	88.5	57.63	18.01

It is known that two of the five respondents who said they used another LMS also utilised Moodle and Google Classroom (one each), although on personal accounts that were not offered by the institution. The LMS utilised by the other three responders was not explicitly stated. Figures 1–4 depict the systems utilised for each task as described by the respondents.



**Figure 1 – System used for content management**

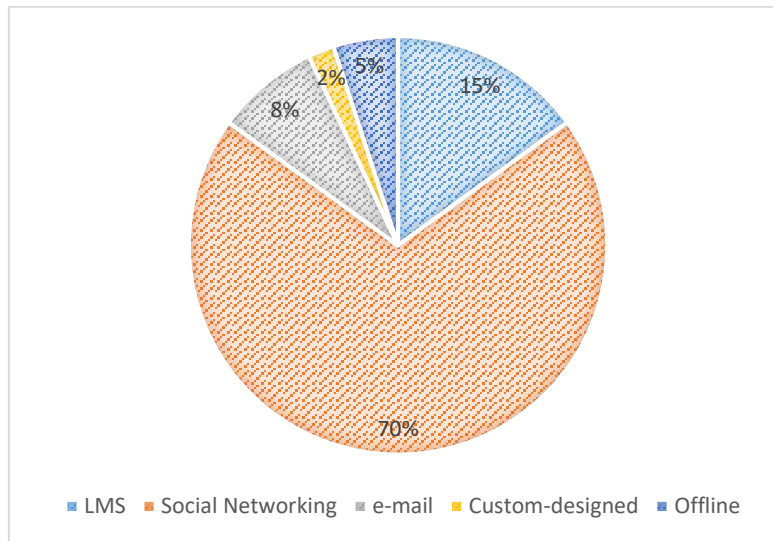


Figure 2 – System used for communication

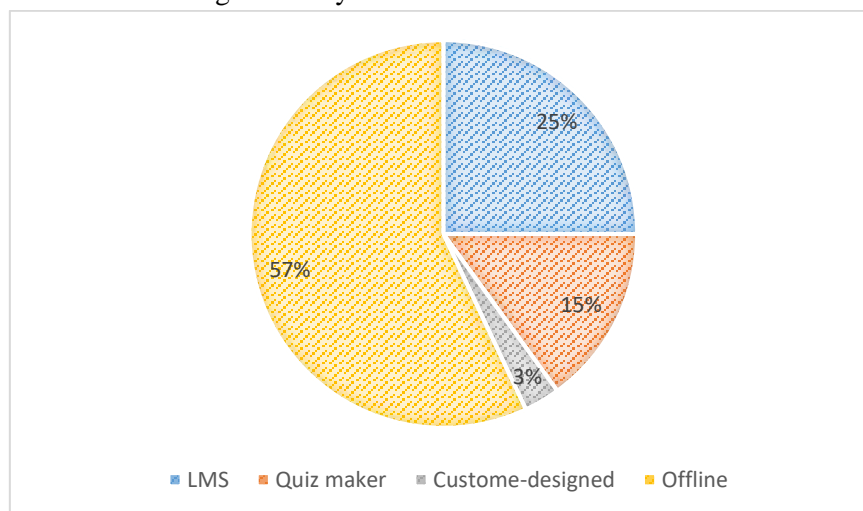


Figure 3 – System used for quiz-based evaluation

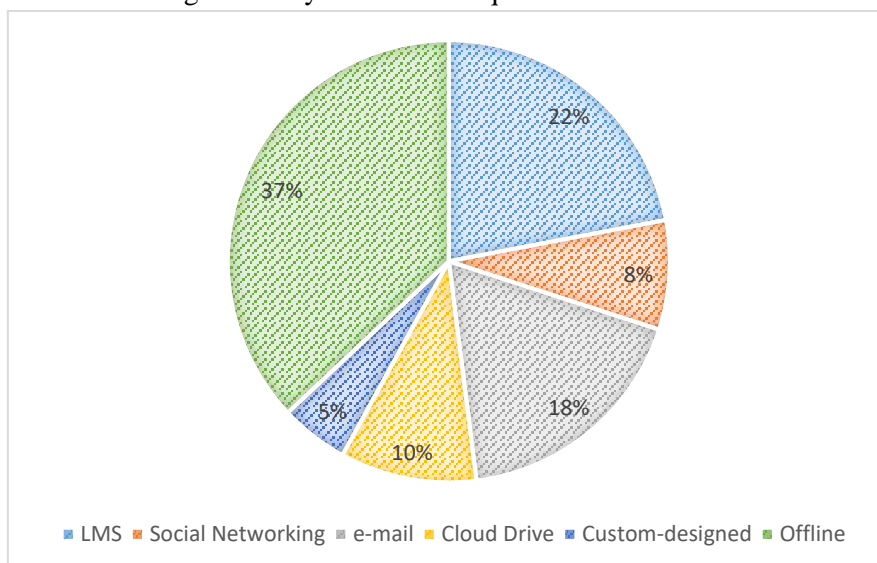


Figure 4 – System used for assignment-based evaluation

Individual SUS scores and the outcome are correlated by .740 ( $p < 0.01$ ), which is significant. Figure 5 highlights some of the main criteria that participants found to be most important when selecting the learning tool.

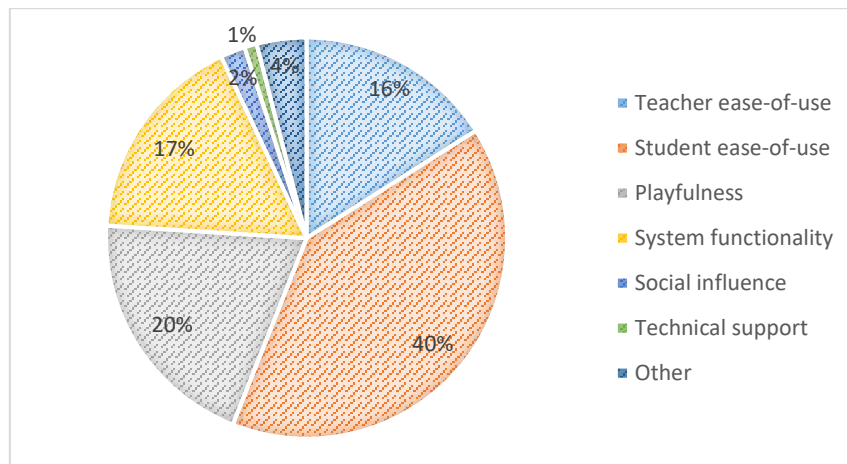


Figure 5 – Key factors participants most concerned when choosing the learning tool

#### 4. CONCLUSION

The total SUS rating of all LMS platforms was well below the standard in our scenario. This is consistent with the widespread use of LMS substitutes. Since many users maintained using it, the LMS's content management module appears to be the simplest to use. Social networking is obviously more simpler to utilise in terms of communication. The majority of users picked the offline technique because they believed online quizzes to be challenging. The LMS was not the only instrument used for assessment-based evaluation; other tools were also often employed. Our professors focused mostly on the students' usability while choosing the methods or instruments to be employed.

To increase the systematic variance and improve the reliability of the correlation test, data were purposefully collected from diverse groups with various perspectives on using the LMS. The high Standard Deviation in our samples demonstrates this. As a result, we may infer from the correlation test that instructors are more likely to look for alternatives when they consider usability to be low. Teachers could even turn to offline means if the system usability becomes too poor.

We concurred that LMS alternatives, including offline techniques, are useful resources. When users report poor usability, it makes sense to employ alternatives, especially from the standpoint of the students, who are crucial to the teaching and learning process. As long as there are students who have registered locally, such options may be utilised. We could anticipate fewer students enrolled in formal education in the near future, as the number of newborns declines. The 21st century's educational trends are shifting towards independent learning, making fully integrated LMSs or MOOCs the new norm. Therefore, it is crucial that university lecturers accept and have good perceptions of fully integrated platforms. The factors that make a system less usable should be looked into thoroughly.

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## AUGMENTED AND VIRTUAL REALITY IN EDUCATION

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### Abstract

*Virtual Reality is the technology that provides almost real and/or believable experiences in a synthetic or virtual way, while Augmented Reality enhances the real world by superimposing computer-generated information on top of it. Augmented Reality (AR) and Virtual Reality (VR) are revolutionizing education by providing immersive and interactive learning experiences. These technologies have found applications in various educational contexts, increasing participation and improving comprehension. In AR, digital elements are overlaid onto the real world, creating a blended environment. AR can be used to supplement textbooks with interactive 3D models, allowing students to explore complex concepts in subjects like biology and chemistry. It can also enable historical reenactments or virtual field trips, transporting students to different times and places without leaving the classroom. VR offers complete immersion in a virtual environment. It is particularly beneficial for experiential learning. Moreover, VR can recreate historical events, making history lessons more engaging. Both AR and VR foster collaborative learning. Students can interact with peers and educators in virtual classrooms, promoting teamwork and communication skills. Additionally, these technologies can cater to individual learning styles, adapting content to suit each student's pace and preferences.*

**Key words:** experiential learning, blended environment, historical reenactments, virtual field trips, collaborative learning and accessibility benefits.

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## INTRODUCTION

In the present educational scenario, Augmented Reality (AR) and Virtual Reality (VR) are playing increasingly significant roles, offering transformative benefits to both students and educators. AR and VR provide immersive and interactive learning experiences, capturing students' attention and fostering engagement. This is especially valuable in combating digital distractions and maintaining student interest in online or traditional classrooms. Complex subjects are made more comprehensible through AR and VR. For instance, in biology, students can explore 3D models of cells, while in History; they can virtually step into historical events, improving their understanding and retention of information. These technologies allow for personalized learning experiences. AR and VR can adapt content to individual learning styles and paces, ensuring that students receive tailored instruction, which can lead to better outcomes.

### 1. Augmented and Virtual reality for Teachers.

Augmented Reality (AR) and Virtual Reality (VR) offer valuable tools and resources for teachers to enhance their effectiveness in the classroom. Here are several ways in which AR and VR can benefit educators:

- **Interactive Lesson Planning:** Teachers can use AR and VR to create engaging and interactive lesson plans. They can develop 3D models, simulations, and virtual environments that bring abstract or complex concepts to life, making it easier for students to understand.
- **Visual Aids:** AR can enhance traditional teaching materials by overlaying digital content on physical objects or textbooks. This visual aid can make explanations more vivid and memorable, benefiting students' comprehension.
- **Virtual Field Trips:** Teachers can take students on virtual field trips to explore different locations, historical periods, or natural habitats. This allows for experiential learning without the logistical challenges of organizing real-world trips.
- **Customized Learning:** AR and VR can be tailored to individual students' needs and learning styles. Teachers can use adaptive content and simulations to address varying levels of understanding within the classroom.

- **Professional Development:** Educators can use VR for their own professional development. They can attend virtual workshops, conferences, and training sessions, expanding their knowledge and teaching skills.
- **Skill Development:** VR can be employed to train teachers in specific skills and classroom management techniques. For example, they can practice dealing with classroom disruptions or challenging student behavior in a controlled virtual environment.
- **Global Collaboration:** Teachers can connect with colleagues and educators worldwide through virtual platforms. This facilitates knowledge sharing, collaborative projects, and the exchange of teaching strategies and resources.
- **Assessment and Feedback:** AR and VR can assist in assessing student progress. Teachers can use VR simulations for formative assessments, providing students with immediate feedback and opportunities for improvement.
- **Inclusive Education:** These technologies can help teachers cater to the needs of students with disabilities. AR and VR can provide alternative learning experiences, ensuring inclusivity in the classroom.
- **Parent Engagement:** Teachers can use AR and VR to involve parents in their children's education. Virtual parent-teacher conferences or interactive progress reports can strengthen the parent-teacher partnership.
- **Professional Networking:** Virtual reality can enable educators to attend virtual conferences, webinars, and meetings with colleagues from around the world, expanding their professional network and staying up-to-date with educational trends.

## 2. Augmented and Virtual Reality for Students.

Augmented Reality (AR) and Virtual Reality (VR) offer a wide range of benefits and opportunities for students in various educational settings. Here are some ways in which AR and VR can enrich the learning experiences of students:

- **Immersive Learning:** AR and VR provide students with immersive environments where they can explore and interact with subjects they are studying. This hands-on approach can make learning more engaging and enjoyable.
- **Visualizing Complex Concepts:** AR can overlay 3D models and information onto real-world objects, helping students understand abstract or complex concepts. VR can create realistic simulations, making it easier to grasp challenging topics like physics or molecular biology.
- **Virtual Field Trips:** Students can take virtual field trips to historical sites, museums, and far-off locations, offering a cost-effective and accessible way to explore the world and its rich history.
- **Experiential Learning:** VR enables students to experience situations they might not encounter in real life, such as space exploration, medical procedures, or historical events, enhancing their understanding and empathy.
- **Personalized Learning:** AR and VR can adapt content to individual learning styles and paces, ensuring that students receive tailored instruction. This personalization can improve retention and achievement.
- **Skill Development:** VR can be used for skill development in various fields, including healthcare, aviation, and engineering. Students can practice procedures and scenarios in a controlled virtual environment, reducing risks associated with real-world training.
- **Global Collaboration:** These technologies can connect students from around the world, fostering cross-cultural understanding and providing opportunities for collaborative international projects.
- **Accessibility:** AR and VR can make education more accessible for students with disabilities. Features like 3D audio and tactile feedback can provide alternative sensory experiences, ensuring inclusivity.

- **Creativity and Innovation:** Students can use AR and VR tools to create their own virtual worlds, fostering creativity and innovation. They can design and build their projects, exploring new possibilities.
- **Future-Ready Skills:** Incorporating AR and VR into education prepares students for a future that increasingly relies on digital literacy and technology. They develop skills in using advanced technologies, which can be valuable in their future careers.

### 3. Drawbacks of Augmented and Virtual Reality:

While Augmented Reality and Virtual Reality offer numerous benefits, they also come with several drawbacks and challenges:

- **Cost:** Implementing AR and VR in education can be expensive. Schools and institutions need to invest in hardware, software, and maintenance, which may be cost-prohibitive for some.
- **Technical Requirements:** AR and VR systems require powerful computing hardware, which can be a barrier for some students and institutions with limited resources. Not all students may have access to the necessary devices, such as high-end smartphones or VR headsets.
- **Health Concerns:** Extended use of VR can lead to discomfort, motion sickness, and eye strain for some users. Younger students, in particular, may be more susceptible to these issues.
- **Learning Curve:** Both students and teachers need time to become proficient with AR and VR technology. Learning how to use these tools effectively can be time-consuming and may divert attention from the primary learning objectives.
- **Content Quality:** The quality of AR and VR educational content varies widely. Poorly designed experiences can be ineffective or even counterproductive in achieving educational goals.
- **Limited Content Availability:** There may be a lack of high-quality educational content for AR and VR in some subject areas. Finding or creating appropriate content can be challenging.
- **Isolation:** VR, in particular, can be isolating, as it often involves wearing a headset that blocks out the physical world. This isolation can limit social interactions, which are essential for some aspects of learning.
- **Privacy Concerns:** The collection of data within AR and VR environments can raise privacy concerns, especially when used with younger students. Safeguarding sensitive information is a critical consideration.
- **Equity and Access:** Not all students have equal access to AR and VR technology. This can create disparities in educational opportunities, disadvantaging those without access to these tools.
- **Ethical Concerns:** There are ethical concerns related to the use of AR and VR in education, such as issues related to data privacy, digital addiction, and the potential for misuse of the technology.

### 4. India's Technical Literacy and its Concerns.

- **Digital Divide:** One of the most significant concerns is the digital divide. While urban areas and some segments of the population have access to advanced technology and the internet, rural and marginalized communities often lack such access. This divide hampers the overall technical literacy of the country.
- **Curriculum Relevance:** The curriculum in many Indian educational institutions can be outdated and not aligned with the rapidly changing technology landscape. This can result in students graduating with skills that are not in demand in the job market.
- **Gender Disparity:** There is a significant gender disparity in technical literacy in India, with fewer women pursuing careers in STEM (Science, Technology, Engineering, and Mathematics) fields. Societal norms, stereotypes, and unequal opportunities are some factors contributing to this issue.
- **Quality of Technical Education:** The quality of technical education, particularly in engineering and IT, varies widely. While some institutions provide excellent training, others may lack quality faculty, infrastructure, or industry collaboration, affecting the employability of graduates.
- **Lack of Research and Innovation:** India faces challenges in promoting research and innovation in technology. Many Indian institutions prioritize academic qualifications over research, and there's a need for a more conducive environment for innovation and entrepreneurship.

- **Skill Mismatch:** India often produces graduates with theoretical knowledge but lacks practical skills. There is a gap between the skills taught in educational institutions and the skills demanded by the job market.
- **Cybersecurity Concerns:** With the increasing use of technology, cyber security threats have also grown. Technical literacy should include an understanding of cyber security, but many individuals and organizations lack awareness and preparedness in this area.
- **Internet Connectivity:** Though the internet has become more accessible, rural areas still suffer from inadequate connectivity. This limits the ability of residents in these areas to access online educational resources and opportunities.

**CONCLUSION:** Augmented Reality (AR) and Virtual Reality (VR) are transforming education by providing immersive, interactive, and personalized learning experiences. These technologies enhance engagement, improve comprehension, and cater to individual learning styles. They have proven invaluable for distanced learning during the COVID-19 pandemic and offer cost-effective alternatives to traditional resources. AR and VR also have the prospective to bridge educational disparities by making learning more accessible and inclusive. However, there are challenges to overcome, including the cost of execution, technical requirements, and concerns about health and privacy. The learning curve for both students and teachers is another roadblock, and the quality of educational content must be consistently high. Additionally, issues related to equity, access, and potential distractions need to be carefully managed.

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## ROLE OF ARTIFICIAL INTELLIGENCE IN TEACHER EDUCATION

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### *Abstract*

*The role of Artificial Intelligence (AI) in teacher education is to support and enhance the process of preparing teachers for the classroom. AI can be leveraged to provide teachers with customized and personalized learning experiences, improve their professional development, and help to enhance student outcomes. One key area in which AI can play a role in teacher education is in providing teachers with personalized and customized professional development opportunities. AI algorithms can analyze teachers' performance data, such as classroom observations, student assessments, and feedback from peers, to provide objective and data-driven insights into their strengths and areas for improvement. Based on this analysis, AI can suggest personalized professional development opportunities and resources to help teachers improve their practices and better support student learning. Another area where AI can be applied in teacher education is in the development of educational content. AI can be used to generate educational resources, such as videos, simulations, and interactive learning experiences, that can be easily integrated into classroom instruction. This can help to make education more engaging and accessible for students, and can also provide teachers with a wealth of new resources to support their instruction. In addition to these applications, AI can also be used to enhance classroom management, improve accessibility for students with disabilities, and support student behavior and motivation. By leveraging the capabilities of AI, teacher education can be transformed to better support teachers in their professional growth and improve student outcomes.*

**Key words:** Artificial intelligence, Teacher education, Higher education

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### **Contextualising teacher education:**

Teacher education refers to the process of acquiring the knowledge, skills, and attitudes necessary to become an effective teacher. It encompasses a wide range of formal and informal learning experiences, including preservice education programs, induction and mentoring programs, professional development opportunities, and ongoing education and training. The goals of teacher education are to prepare individuals to be knowledgeable and skilled educators, who are able to design and implement effective instruction, create positive learning environments, and respond to the diverse needs of students.

Teacher education typically includes the following components:

1. Coursework: This includes study in subject matter knowledge, pedagogy, and educational psychology, as well as other areas relevant to teaching and learning.
2. Clinical practice: This involves supervised teaching experience in a real-world classroom setting, allowing teachers-in-training to apply the knowledge and skills they have acquired through coursework.
3. Mentoring and coaching: This provides new teachers with support and guidance from experienced educators as they transition into the teaching profession.
4. Ongoing professional development: This ensures that teachers are up-to-date with new developments and best practices in the field of education.

Teacher education is an essential aspect of ensuring that teachers are well-prepared to meet the challenges of the classroom and support student success.

### **Teacher Education and Technology**

The role of technology in teacher education is multifaceted and can greatly enhance the process of preparing teachers for the classroom. Technology can support teacher education in the following ways:

- Online and blended learning: Technology can provide teachers with access to online courses, resources, and professional development opportunities, making it easier for them to acquire new knowledge and skills.



- Classroom management and assessment tools: Technology can assist teachers in managing their classrooms and tracking student progress, providing insights into student learning and helping teachers make informed instructional decisions.
- Virtual learning environments: Technology can create virtual learning environments that allow teachers to engage students in hands-on, interactive learning experiences.
- Collaborative learning and professional development: Technology can support collaboration among teachers, allowing them to share resources, best practices, and engage in professional development activities.

In rural India, technology has the potential to play a critical role in transforming the lives of rural students. By leveraging technology, teachers in rural areas can increase access to educational resources. Technology can provide teachers and students in rural areas with access to online resources, including educational videos, interactive simulations, and educational games, which can enhance the quality of instruction and student learning. Technology can support student engagement by providing opportunities for hands-on, interactive learning experiences, and by facilitating student-centered learning environments. Technology can support teacher professional development by providing access to online courses and resources, as well as opportunities for collaboration and networking with other teachers. Technology has the potential to greatly enhance teacher education and support teachers in their efforts to improve student outcomes, particularly in rural areas where access to resources and professional development opportunities may be limited.

### **Artificial intelligence: concept and history:**

Artificial Intelligence (AI) is a branch of computer science that deals with the creation of intelligent machines that can perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation. AI systems can learn from data, reason about it, and make predictions or decisions based on that information. The ultimate goal of AI research is to create systems that can operate autonomously and perform complex tasks with a high degree of accuracy and efficiency.

### **Brief history of artificial intelligence:**

The history of Artificial Intelligence (AI) can be traced back to ancient Greek myths and legends that feature robots and automated devices. However, the modern field of AI research was founded at a conference at Dartmouth College in 1956, where computer scientists John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon proposed the study of "intelligent agents" that could perform tasks requiring human-like intelligence.

In the following decades, AI saw rapid progress and growing interest, with major advancements in fields such as computer vision, natural language processing, and expert systems. However, the field also faced setbacks, including the "AI winter" in the 1970s and 1980s, when funding for AI research decreased due to overstated promises and under-delivery of results.

With the advent of big data, cloud computing, and powerful GPUs, AI experienced a resurgence in the late 2000s and early 2010s. This period saw major breakthroughs in deep learning, a type of machine learning based on artificial neural networks. Today, AI is widely used in various applications such as speech recognition, image recognition, autonomous vehicles, and recommendation systems.

### **AI and teacher education**

Artificial Intelligence (AI) has the potential to play a significant role in teacher education and professional development. Here are some ways AI can be used:

- Personalized professional development: AI can provide teachers with customized professional development experiences based on their individual learning styles and needs.

- Automated feedback: AI can provide teachers with instant feedback on their teaching practices and suggest areas for improvement, making professional development more effective and efficient.
- Skill assessment: AI can assess teachers' skills and competencies, providing objective and data-driven insights into their strengths and areas for improvement.
- Content creation: AI can be used to generate educational content, such as educational videos or interactive simulations, allowing teachers to easily access and integrate new resources into their lessons.
- Classroom management: AI can assist teachers in managing their classroom and support student behavior, helping to create a more positive and productive learning environment.
- Improved accessibility: AI can help make education more accessible for students with disabilities by providing tools for text-to-speech, speech-to-text, and other accessibility features.
- By leveraging the capabilities of AI, teacher education can be transformed to better support teachers in their professional growth and improve student outcomes.

**Artificial Intelligence (AI) has several potential applications in teacher education, including:**

1. Personalized learning: AI can help teachers provide individualized instruction by analyzing data on student performance and offering personalized recommendations for improvement.
2. Automated grading: AI can grade assignments and provide feedback to students, freeing up time for teachers to focus on other aspects of their work.
3. Learning analytics: AI can analyze student data and provide teachers with insights into their students' learning styles and progress, allowing for more informed decision-making and classroom instruction.
4. Virtual tutors: AI can provide students with virtual tutors that can answer questions, provide explanations, and offer feedback in real-time.
5. Content creation: AI can be used to generate educational content, such as educational videos or interactive simulations, allowing teachers to easily access and integrate new resources into their lessons.
6. Improved accessibility: AI can help make education more accessible for students with disabilities by providing tools for text-to-speech, speech-to-text, and other accessibility features.
7. Overall, AI has the potential to greatly enhance teacher education and support teachers in their efforts to improve student outcomes.

**Artificial intelligence: learning challenges**

There are several challenges that young teachers in India may face while learning AI, including:

- Lack of access to resources: Many teachers in India, particularly in rural areas, may not have access to the technology and resources needed to learn AI effectively. This includes access to computers, the internet, and training programs.
- Technical skills: AI requires a strong foundation in technical skills, such as programming, data analysis, and machine learning, which may be challenging for young teachers who lack prior experience in these areas.
- Time and cost: Learning AI can be time-consuming and costly, particularly for young teachers who may have limited resources and other responsibilities.
- Keeping up with technology: AI is rapidly evolving, and young teachers may struggle to keep up with the latest developments and advancements in the field.

- Understanding the practical applications: While AI has the potential to improve teaching and learning, young teachers may struggle to understand the practical applications of AI in the classroom and how it can be used to support student success.
- Despite these challenges, it is important for young teachers in India to embrace AI and explore its potential to enhance their teaching practices and improve student outcomes. With the right support and resources, they can overcome these challenges and become more effective educators.

There are several compelling reasons why Indian teachers should embrace Artificial Intelligence (AI) and consider its potential to enhance their teaching practices and improve student outcomes.

Firstly, AI can provide teachers with new tools and resources to support professional development and lifelong learning. By using AI, teachers can access customized professional development experiences based on their individual learning styles and needs, receive automated feedback on their teaching practices, and assess their skills and competencies. This can help teachers to focus on areas where they need the most improvement and continuously develop their abilities as educators.

Secondly, AI has the potential to transform the classroom by making education more accessible and engaging for students. For example, AI can be used to generate educational content, such as educational videos or interactive simulations, and to provide students with personalized learning experiences that are tailored to their needs and abilities. This can help to improve student motivation and engagement and support better learning outcomes.

Thirdly, AI can help to address some of the major challenges facing Indian education, such as the shortage of qualified teachers, particularly in rural areas. By using AI to support teacher professional development and provide educational resources, it is possible to help bridge this gap and ensure that all students have access to quality education.

Finally, AI is rapidly evolving, and Indian teachers who embrace this technology will be well-positioned to take advantage of its future developments and advancements. By developing their skills and knowledge in AI, teachers will be better equipped to support their students in an increasingly digital world.

In conclusion, AI has the potential to play a significant role in transforming teacher education and improving student outcomes in India. By embracing this technology, Indian teachers can access new tools and resources to support their professional growth and help ensure that their students are well-prepared for the future.

## PLAGIARISM TECHNOLOGIES

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### Abstract

*This articles gives information about plagiarism its meaning, etymological meaning along with the definitions. In the next para it gives etymological meaning of technology and definitions of technology. Continuing author has discussed about forms of the plagiarism and their brief explanation along with examples. Finally author tries to bring about the plagiarism check technologies used to check the plagiarism and UGC recommended plagiarism check software concluding plagiarism is unethical and leads to expulsion of authors' redundant publication.*

**Keywords:** articles, information, plagiarism, etymological, technology, check, UGC, recommended, unethical, redundant, publication.

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### Introduction

Now a day we are seeing so many articles being published in many journals and lot of students doing their PhD work and submitting their thesis in many universities across the globe. Authors or students while writing their articles or submitting their thesis need to prove their originality in writing articles or in their work. They should be honest towards their thoughts and ideas in their work. We cannot say exactly all the authors or students are authentic and honest towards their work. Sometimes misconduct may happens in their work and they fails to follow the research and publication ethics. In such cases plagiarism technologies are very helpful in identifying their misconduct of ethic in their work.

### Plagiarism

The word Plagiarism derived from the Latin word "**plagiarius**" literally means "kidnapper" and "**plagium**" means "kidnapping" to denote stealing someone else's **creative work**. Plagiarism means using someone else's work without giving them proper credit. In academic writing, plagiarizing involves using words, ideas, or information from a source without citing it correctly. According to Wikipedia.org "Plagiarism is the fraudulent representation of another person's language, thoughts, ideas, or expressions as one's own original work." Oxford University defines Presenting work or ideas from another source as your own, with or without consent of the original author, by incorporating it into your work without full acknowledgement in all published and unpublished material, whether in manuscript, printed or electronic form. Re-using your own work without citation. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence. The necessity to acknowledge others' work or ideas applies not only to text, but also to other media, such as computer code, illustrations, graphs etc. It applies equally to published text and data drawn from books and journals, and to unpublished text and data, whether from lectures, these or other students' essays. You must also attribute text, data, or other resources downloaded from websites.

Plagiarism is a breach of academic integrity. It is a principle of intellectual honesty that all members of the academic community should acknowledge their debt to the originators of the ideas, words, and data which form the basis for their own work. Passing off another's work as your own is not only poor scholarship, but also means that researcher or author have failed to complete the learning process. Plagiarism is unethical and can have serious consequences for future career; it also undermines the standards of institution and of the degrees it issues.

## Technology

The word Technology derived from two Greek words “*Technic*” and “*Logia*”. Technic means *art of skill* Logia means *Science of Study*. So simplest meaning of Technology is “**Science of Study of an art or skill.**” Dictionary meaning of technology is the application of scientific knowledge for practical purposes, especially in industry. It is the branch of knowledge dealing with engineering or applied sciences. Britannica defines technology as the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment. Sachs I defines the technology is Knowledge organized for Production. Dictionary. According web Dictionary The branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science.

## Forms of Plagiarism

In the forms of Plagiarism will briefly discuss about few forms of plagiarism among direct plagiarism or verbatim, auto or self-plagiarism, Mosaic plagiarism, accidental plagiarism, duplicate publication and paraphrasing. Direct Plagiarism/Verbatim is the (word-to-word) word-for-word transcription of a section of someone else’s work, without attribution and without quotation marks. The deliberate plagiarism of someone else’s work is unethical, academically dishonest, and grounds for disciplinary actions, including expulsion. Auto or Self Plagiarism occurs when an author or student submits his or her own previous work may be previously published article, or mixes parts of previous works, without permission from all professors involved is called Auto or Self plagiarism. Mosaic Plagiarism occurs when a student borrows phrases from a source without using quotation marks, or finds synonyms for the author’s language while keeping to the same general structure and meaning of the original. Sometimes it is called “patch writing,” this kind of paraphrasing, whether intentional or not, is academically dishonest and punishable. Accidental plagiarism occurs when a person neglects to cite their sources, or misquotes their sources, or unintentionally paraphrases a source by using similar words, groups of words, and/or sentence structure without attribution. Any authors or student’s work of accidental plagiarism are taken as seriously as any other plagiarism and are subject to the same range of consequences as other types of plagiarism. Duplicate publication is a form of redundant publication where the same article is published more than once, without acknowledging the first publication. In this types of plagiarism author publishes his same work in two or more journals or may be in different languages. With help of plagiarism technologies one identify author’s duplication work. Paraphrasing

## A Variety of Reasons in relation to Plagiarism

- To avoid authors dishonesty towards his work and put simply presenting another writers work as his own lying.
- To avoid in misjudging authors work as every author is expected to defend his position with ability, applying critical thinking, skills, engaging with the topic etc and presenting his work with honesty.
- To avoid in taking credit from others work.

## Plagiarism Checker Database size

Not every plagiarism checker has access to the same database. This can lead to major differences in results. Free plagiarism checkers often have smaller databases. This means that there are large gaps in their ability to find matches, especially with less readily available online content. The highest-quality plagiarism checkers have larger databases, enhancing their ability to find matches. Scribbr’s plagiarism checker (which has a free version) has access to Turnitin’s comprehensive database.

## Quality of scanning

The quality of the scanning software itself also varies widely. Many free checkers only recognize exact matches. If you paraphrased too closely or forgot to add a citation, these checkers are unlikely to

flag it. High-quality plagiarism checkers use a process called “fingerprinting” to find non-exact matches among paraphrased or altered texts. Here, the software scans sentence fragments, searching for structural similarities. Just like a real fingerprint, each fragment in your text should be completely unique, not matching existing document fingerprints. If there are matches, these checkers are able to identify them.

In this era Plagiarism checkers are consistently evolving and improving but they can't recognize everything yet. Plagiarism checkers often struggle to identify plagiarized ideas if they have been completely rewritten or translated. They also can't help with other non-text plagiarism, such as plagiarism of images. Plagiarism of translated texts, ideas, images, or other non-text content is still a problem, and has the same consequences as more easily identified plagiarism.

In addition to standard plagiarism checkers, most educational institutions/universities also have their own internal database with uploaded work from current and former students. This database usually isn't shared with outside parties. This means that plagiarism from fellow students will probably only be recognized by our educational institution—not by a commercial plagiarism checker. However,

sometimes educational institutions share access to their internal database with other institutions, in order to better flag plagiarism or other types of academic dishonesty among students. Self-plagiarism or resubmitting a friend's work as your own still counts as plagiarism and has the same consequences.

If you're concerned about accidental plagiarism from unpublished or private documents, such as a previously submitted paper or a friend's thesis, Scribbr's Self-Plagiarism Checker can help. With this tool, one can submit documents not available online that may still be in our university's database.

### **Plagiarism Checker Software**

At a basic level, plagiarism checker software scans through a body of text to see if there are instances of plagiarism within the written content. Free and paid plagiarism checkers alert the writer to whether or not their text has duplicate content within a body of text. Most tools cross-reference public websites and web pages to help identify instances of plagiarism. Some plagiarism checker tools also leverage a large online database of published work they use for cross-referencing, this is especially true for plagiarism detection software designed for academic use cases.

More advanced paid plagiarism checkers offer other features like alerting the writer to whether or not a section of their writing requires a citation, providing citation formatting guidelines or tools, and giving a document a score based on how original the content is. Certain advanced tools offer plagiarism checking in multiple languages and use AI (Artificial Intelligence) technology to help identify identical and paraphrased content.

Some vendors offer plagiarism checking software as part of a larger suite of writing and proof reading tools. For example, Grammarly provides users with a plagiarism checker along with grammar, spelling, syntax, writing style, and text sentiment features.

### **Plagiarism Checkers Work**

Depending on the tool, individuals can check to see if their writing contains plagiarized text in a few different ways. Most tools allow users to copy and paste the text they wish to check for plagiarism into an interface on the plagiarism checker website. Many tools also allow users to upload a word document or other accepted file format for scanning. Some paid tools provide users with an extension they can install in their browser that they can use to dynamically check their writing as they type.

For organizations that are looking for a plagiarism detection tool to use across the whole company, some vendors offer tools that can be directly integrated with a business website to scan for instances of plagiarized or paraphrased content. This includes the content published on the website, blog content, and sometimes even coding assignments.



### **Plagiarism Checker Software Use Cases**

A primary use case for plagiarism checker software is in the world of schooling and academia. Students, teachers, and administrators in secondary schools and higher education institutions (colleges and universities) use these tools.

However, these tools are frequently used outside of education and academia as well. Anyone who writes as part of their job in the corporate, nonprofit, and government sectors can use these software products too. For example, people who either write full-time or are responsible for publishing content will want to ensure the content they produce is not accidentally plagiarized. These types of people may be: Bloggers, Content creators, Contract writers, Professional writers, SEO experts, Marketers.

### **Plagiarism Checker Software Features**

Free plagiarism software is often very simple and may only allow users to either copy or paste or upload text to be scanned for plagiarized content. However, most paid tools will offer the following features:

- Text scanning
- Plagiarism alerts
- Document to document comparisons
- Authenticity/originality scoring
- Ability to copy & paste text to be scanned
- Document/file upload
- Browser extension
- APIs

Some plagiarism detection tools are embedded within a larger suite of writing tools. These suites typically include the following features:

- ✓ Spell checking
- ✓ Grammar checking
- ✓ Sentence syntax recommendations
- ✓ Writing style and tone identification
- ✓ Word choice suggestions

### **Plagiarism Checker Software Comparison**

Plagiarism checker software may be free or paid plagiarism checker tool. Free tools are great for individuals that need a quick and easy way to check their work for plagiarism, though they typically do not offer additional features. On the other hand, paid tools are ideal for someone who writes frequently, or for businesses looking for a suite of writing tools to use for their whole business. Paid plagiarism checker software often offers advanced features such as spelling and grammar checks, calculating the authenticity score of the document, and the ability to integrate with websites and third-party applications.

There are many free and paid plagiarism detection tools available. Free tools can be great for individuals that need to check their writing for plagiarism in an ad hoc manner, while paid tools are better suited for individuals who write professionally or organizations looking for a solution that can be used across their business.

Some free tools include:

- 1) Copy leaks Plagiarism Checker
- 2) Paper Rater
- 3) Dupli Checker
- 4) PlagScan
- 5) Quetext
- 6) Plagiarism Detector

Pricing for paid plagiarism checker and writing tool suites can vary based on a few key things: the number of pages that need to be checked, the number of words that need to be scanned, and the number of users. Most solutions charge either a monthly or annual fee. Prices can range from \$20 per month (for between 200 - 3,000 pages and 72K - 800K words) up to \$100 or more per month for over 100K pages and millions of words.

#### **Best Plagiarism Checker Software includes:**

Quetext, Dupli Checker (DupliChecker.com), Copy leaks Plagiarism Checker, Plagiarism Detector (plagiarismdetector.net), Copyscape, PlagScan, Ouriginal, Noplag, Turnitin Originality and Unicheck. Grammarly Paper Rater (PaperRater.com) ProWritingAid, WhiteSmoke, Writer, Unicheck, Rytr, Texta.ai Turnitin, iThenticate.

#### **UGC Recommended Plagiarism Checker Software**

UGC has recommended **URKUND** Plagiarism Detection Software (Provided by Ms Prio Infocenter AB, Sweden; Indian Partner: eGalactic) and has been selected by INFLIBNET (Information and Library Network Centre) Centre (Inter University Centre of UGC) under the aegis of Ministry of HRD to enhance quality and prevent plagiarism in research/academic publications. Universities in India who have signed MoU (Memorandum of Understanding) with INFLIBNET Centre, which come under section 12(B)/ 2f of UGC Act and eligible for funding from UGC, get the software free of cost from INFLIBNET Centre.

#### **About URKUND Plagiarism Check Software**

URKUND system checks all documents against three central source areas: The Internet, Published material such as Journals, Books etc. and previously submitted students' material (e.g. memoranda, case studies and examination works). It is a text-matching tool intended to be used for monitoring plagiarism primarily in academic submissions by the students. Academic writing is a craft in itself, and something that students need to learn in order to avoid the accusation of plagiarism. This software not only shows potential text matches and points of suspicion, but also enables a conversation around the correct methods of academic writing.

When a document is submitted to Urkund, it is compared to sources online, alongside our multiple academic databases, and also previously submitted documents. The most relevant sources are then singled out and presented in the analysis report, which will show a detailed view of how many paragraphs that could be matched against these sources, as well as how significant these similarities are.

Urkund has an API (Application Programming Interface) that can be integrated into most of the well-known LMS/VLE (Learning Management System/Virtual Learning Environment) platforms. But it does not recognize pictures, links (copied or shared), videos, scanned documents, or protected files. If any of these files are sent to Urkund, the system will send an email to the submitter stating that the file does not contain enough characters.

#### **Conclusion:**

This to conclude that deliberate plagiarism of someone else's work is unethical, academically dishonest, and grounds for disciplinary actions, including expulsion. Plagiarism being expulsion of authors' redundant publication/work and it will not reflect the authors' ability in applying critical thinking, skills, engaging with the topic etc. and presenting his work with honesty. Students/researcher scholars/authors/writers require putting their efforts honestly and surrendering themselves to acquire ocean of knowledge.

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## A STUDY ON STATUS OF COMPUTER AWARENESS OF 9<sup>TH</sup> STANDARD STUDENTS OF HASSAN DISTRICT

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### Abstract

*Computer awareness is related to information technology skills, but has broader implications for the individual, the educational system, and for society. computer awareness enable an individual to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals. The first objective was to find to study the status of computer awareness of secondary students. The analysis of this objective revealed that the scores on computer awareness of standard twelve students are nearly normally distributed. The majority of the 9<sup>th</sup> standard students are found to be at an average level at 67%, and only 15% showed a low level of computer awareness and 18% have high computer awareness in Hassan district. This is a common phenomenon of central tendency. The second objective was to find the difference in computer awareness in terms of gender. The analysis of this objective revealed that there is no significant difference in mean scores of computer awareness between boys and girls of standard Nine. The third objective was to study whether there exists any deference in computer awareness of government and aided schools. The analysis of this objective revealed that there is a significant difference in mean scores of computer awareness of students of standard Nine regarding Government and Aided schools. Students of Aided schools have high computer awareness than Students of Government schools. This may be due to low facilities available in Government schools comparing to Aided schools. The fourth objective was to find whether there exists any deference in computer awareness of students of urban and rural area. Analysis of this objective revealed that there is a significant difference in computer awareness of students of Urban and Rural schools in 9<sup>th</sup> Standard of Hassan district. Students of Urban schools have high computer awareness than students of rural schools. This may be also due to the physical facilities especially computer labs of rural schools comparing to urban school. Economic back ground of PTA may be poor and hence it affects the status of education especially computer awareness.*

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### Introduction

Computer awareness is related to information technology skills, but has broader implications for the individual, the educational system, and for society. computer awareness enable an individual to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals.

Computer awareness, while showing significant overlap with information technology skills, is a distinct and broader area of competence. Increasingly information technology skills are interwoven with, and support, information literacy. A 1999 report from the National Research Council promotes the concept of "fluency" with information technology and delineates several distinctions useful in understanding relationships among information literacy, computer literacy, and broader technological competence. The report notes that "computer literacy" is concerned with rote learning of specific hardware and software applications, while "fluency with technology" focuses on understanding the underlying concepts of technology and applying problem-solving and critical thinking to using technology.

Main function of higher secondary education is to prepare the young to live effectively and properly as adults in the society. It will also help to develop intellectual powers of the young and transmit the knowledge and wisdom of the society to the new generation. Now a day the world is changing rapidly with the technological advancement. So students must cater with the needs of the society. Information Technology is the most developing science. So the students must know the application of the Information Technology in daily life. The tremendous influence and growth of computer technology creates pressures on everyone affected by its proliferation to interact with computers and become proficient in their use. The computer is causing a change in society that is

comparable to the change occasioned by the industrial revolution. This awareness depends upon the use of computer among the higher secondary students. So we must know the levels of computer awareness

Developing lifelong learners is central to the mission of Secondary education institutions. By ensuring that individuals have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning how to learn, as well as in their roles as informed citizens and members of communities. Information literacy is a key component of, and contributor to, lifelong learning. Information literacy competency extends learning beyond formal classroom settings and provides practice with self-directed investigations as individuals move into internships, first professional positions, and increasing responsibilities in all areas of life. Because information literacy augments students' competency with evaluating, managing, and using information, it is now considered by several regional and discipline-based accreditation associations as a key outcome for secondary students.

### **Present Status of the Study**

Computer awareness of students is not equal in schools. It is different for different schools. Also there exists a difference among each student. Some students have good computer literacy, while others have badly.

The present study will contribute to some extent for that knowledge. Since the computer education is now a part of many secondary levels have computer awareness. The students and teachers belonging to secondary levels may have a chance of good knowledge in computer. The students already had some familiarity or had not have familiarity with the computer at secondary level.

### **Objectives of the Study**

1. To study the status of computer awareness of 9<sup>th</sup> standard students of Hassan district.
2. To study whether there exists any difference in computer awareness of Boys and Girls of 9<sup>th</sup> standard.
3. To study whether there exists any difference in computer awareness of Government and Aided schools of 9<sup>th</sup> standard.
4. To study whether there exists any difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural area.

### **Hypotheses of the Study**

1. There is a significant difference in the computer awareness of Boys and Girls of 9<sup>th</sup> standard students of Hassan district.
2. There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Government and Aided schools of Hassan district.
3. There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools of Hassan district.

### **Variables of the Study**

1. Boys and girls
2. Government and Aided schools
3. Urban and Rural geographical area

### **Sample of the Study**

The sample selected for the study consisted of 400 Ninth Standard students of Hassan District. The students in the sample were randomly from the seven school located in the different parts of Hassan District.

Gender	Boys				Girls			
Type of the School	Govt		Aided		Govt		Aided	
Locality	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Total No. of Population	50	50	50	50	50	50	50	50
	100		100		100		100	
	200				200			
	400							

### Tool Used in the Study

The tools used in the study was four point rating scale for rating the computer awareness among the selected secondary schools of Hassan District constructed by the investigator.

### Statistical Techniques of the Study

#### 1. Descriptive Statistics:

Mean, Median, and Standard Deviation were computed for different variables in the study.

#### 2. Inferential statistics

't' test was employed to find out the significant difference between the means of scores of computer awareness of different categories of the selected higher secondary schools, ANOVA and Scheffe Test were used to find the significance difference among the streams.

### Analysis and Interpretation of the Data

#### Analysis and Interpretation of objective One

The first objective was to find out the status of computer awareness of 9<sup>th</sup> standard students of Hassan district. It has been studied by using four point rating scale. The analysis and interpretation of the objective has been done using the descriptive statistics. It includes mean, median, standard deviation and Skewness. The data has been presented in the below tables.

Table-1: Showing Mean(M), Median(Mdn), Standard Deviation(SD) and Skewness(Sk) of the distribution of the Scores of Computer Awareness of 9<sup>th</sup> standard students of Hassan District.

Variable	N	Max. Score	M	Mdn	SD	Sk
Computer Awareness	400	160	98.1	101.5	25.79	0.237

### Interpretation

From the above table-1, it is observed that the mean value of the scores of computer awareness is 98.1, median value is 101.5, standard deviation of score is 25.79. The skewness of probability curve is 0.237. Since the obtained mean value is close to the median value it can be concluded that the scores of computer awareness are nearly normally distributed.

#### Conclusion related to objective One

From the preceding interpretation of data for the first objective it can be concluded that the computer awareness of 9<sup>th</sup> standard students of Hassan district is nearly normally distributed. It was revealed that the majority of the 9<sup>th</sup> standard students are found to be at an average level at 67%, and only 15% showed a low level of computer awareness and 18% have high computer awareness in Hassan District.

#### Analysis and Interpretation of objective Two

The second objective was to find the difference in computer awareness of Boys and Girls of 9<sup>th</sup> standard. The analysis and interpretation of this objective was done by using the descriptive statistics namely Mean, Median, and Standard deviation. Inferential statistics "t" test was employed to test the hypothesis with level of significance at 0.05



### Hypothesis One

**H1:** There is a significant difference between the computer awareness of Boys and Girls of 9<sup>th</sup> standard students of Hassan district.

In order to test the above hypothesis it was changed into null hypothesis.

**H0:** There is no significant difference between the computer awareness of Boys and Girls of 9<sup>th</sup> standard students of Hassan district.

't' test was employed to test the null hypothesis with a level of significance at 0.05 with a theoretical 't' value of 1.97 for 398 degree of freedom. The results are given in the below table.

Table-2: Showing Mean(M), Median(Mdn), Standard Deviation(SD) and 't' test scores of Boys and Girls on Computer Awareness of 9<sup>th</sup> standard students of Hassan District.

Variable	Gender	N	M	SD	't' value	Result
Computer Awareness	Boys	200	103.11	26.12	0.522	Not Significant at 0.05. level
	Girls	200	101.76	25.59		

### Interpretation

From the above table-2, it is revealed that the obtained 't' value of 0.522 is not significant at 0.05 level. Thus the formulated null hypothesis "There is no significant difference in the mean scores on computer awareness of Boys and Girls of 9<sup>th</sup> standard students" was accepted and the alternative hypothesis titled "There is a significant difference in the mean scores on computer awareness of Boys and Girls of 9<sup>th</sup> standard students" was rejected.

### Conclusion related to objective Two

- There is a no significant difference in the computer awareness of Boys and Girls of 9<sup>th</sup> standard students of Hassan district.
- Boys and Girls have same computer awareness in 9<sup>th</sup> Standard.

### Analysis and Interpretation of objective Three

The third objective was to find the difference in computer awareness of Government and Aided schools of 9<sup>th</sup> standard. The analysis and interpretation of this objective was done by using the descriptive statistics namely Mean, Median, and Standard deviation. Inferential statistics" test was employed to test the hypothesis with level of significance at 0.05

### Hypothesis Two

**H2:** There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Government and Aided schools of Hassan district.

In order to test the above hypothesis it was changed into null hypothesis.

**H0:** There is no significant difference in computer awareness of 9<sup>th</sup> standard students of Government and Aided schools of Hassan district.

't' test was employed to test the null hypothesis with a level of significance at 0.05 with a theoretical 't' value of 1.97 for 398 degree of freedom. The results are given in the below table.

Table-3: Showing Mean(M), Median(Mdn), Standard Deviation(SD) and 't' test scores of Government and Aided schools on Computer Awareness of 9<sup>th</sup> standard students of Hassan District.

Variable	Type of School	N	M	SD	't' value	Result
Computer Awareness	Govt.	200	91.79	24.76	4.36	Significant at 0.05. level
	Aided	200	103.01	26.59		

### Interpretation

From the above table-3, it is revealed that the obtained 't' value of 4.36 is significant at 0.05 level. Thus the formulated null hypothesis "There is no significant difference in computer awareness of 9<sup>th</sup> standard students of Government and Aided schools" was rejected and the alternate hypothesis titled

"There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Government and Aided schools of Hassan district" was accepted.

#### Conclusion related to objective Three

- There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Government and Aided schools of Hassan district.
- Students of Aided schools have high computer awareness than Students of Government schools.

#### Analysis and Interpretation of objective Four

The Fourth objective was to check the difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural area. The analysis and interpretation of this objective was done by using descriptive statistics namely Mean, Median, and Standard deviation. Inferential test was employed to test the hypothesis with level of significance at 0.05.

#### Hypothesis Three

**H3:** There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools of Hassan district.

In order to test the above hypothesis it was changed into null hypothesis.

**H0:** There is no significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools of Hassan district.

't' test was employed to test the null hypothesis with a level of significance at 0.05 with a theoretical 't' value of 1.97 for 398 degree of freedom. The results are given in the below table.

Table-4: Showing Mean(M), Median(Mdn), Standard Deviation(SD) and 't' test scores of Urban and Rural schools on Computer Awareness of 9<sup>th</sup> standard students of Hassan District.

Variable	Geographical Area of School	N	M	SD	't' value	Result
Computer Awareness	Urban	200	98.98	26.04	9.95	Significant at 0.05. level
	Rural	200	89.03	26.12		

#### Interpretation

From the above table-4, it is revealed that the obtained 't' value of 9.95 is significant at 0.05. Thus the formulated null hypothesis "There is no significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools" was rejected and the alternate hypothesis titled "There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools" was accepted.

#### Conclusion related to objective Four

- There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools.
- Students of Urban schools have high computer awareness than Students of Rural schools.

#### Major Findings of the Study

1. The scores on computer awareness of 9<sup>th</sup> standard students are nearly normally distributed. The majority of the students of 9<sup>th</sup> standard are found to be at an average level at 67%, and only 15% showed a low level of computer awareness and 18% have high computer awareness in Hassan district.
2. There is no significant difference in computer awareness of Boys and Girls of 9<sup>th</sup> standard students of Hassan district.
3. There is a significant difference in computer awareness of 9<sup>th</sup> standard students Government and Aided schools of Hassan district. Students of Aided schools have high computer awareness than students of Government schools.
4. There is a significant difference in computer awareness of 9<sup>th</sup> standard students of Urban and Rural schools of Hassan district. Students of Urban schools have high computer awareness than students of Rural schools.

### Educational Implications

- Students need to be helped to handle computer files approximately.
- Teacher need to guide students to edit computer files.
- Students need to be guided to insert files format according to different applications.
- Students needed to be facilitated to handle MS Word files especially in editing files, inserting and using tools and tables.
- Students needed to be helped to handle MS Excel files in entering data sheets, performing calculations charting data, data management and in linking data.
- Students needed to be guided to perform operations with MS Power point especially in handle files, editing, viewing, inserting, formatting, using tools and in drawing animations.
- Students needed to be guided to perform operations with MS Access especially in handle files, editing, viewing, inserting, formatting, using tools.
- Students need to be helped to handle websites and search engines.

### Suggestions for Further Research

1. An experimental study could be conducted to explore in depth of computer awareness of Urban and Rural Schools.
2. The present study can be duplicated by taking a large sample covering more districts and states.
3. This study can be duplicated at college level.

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## THE ROLE OF OPEN EDUCATIONAL RESOURCES IN EDUCATION

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### **Abstract**

*Globalization today is making a striking impact on all sectors of our society and education is no exception. New knowledge is being added every second as well as the existing ones are being modified or revised. One has to continually update his/her knowledge as per these changes and advancements being made in their respective fields so as to keep themselves at par with the standards of the global society. Sharing educational resources was traditionally limited in the competitive world of higher education. Educational institutions keep their educational materials and resources private. Today, an increasing number of institutions and individuals have made such digital resources available for distribution on the Internet by removing legal, financial and technical hurdles. Open Educational Resources (OER) creates the right way to provide free and accessible education to all and access information for the public good. It is important that OER is inexpensive and freely adaptable. The ability to adapt and modify content provides a significant advantage, especially when targeting specific populations such as the disabled or those with special needs. Digitization of learning materials is definitely helping to a great extent in this regard. Learners can access the materials anytime and anywhere. Because of this increase in online resources the educational institutions today are using such learning resources in developing courses and curriculum transaction. Open Educational Resources is considered to be a major revolutionary movement in the field of education. It provides a lot of scope for digital learning by providing access to ample learning materials from across the world. This paper focuses on the role of open educational resources (OER) in the field emerging educational technology.*

**Key Words:** *Open Educational Resources (OER), Digitization, Education.*

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### **Introduction:**

The phrase ‘open educational resources’ was first coined in 2002 at UNESCO’s Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Open Educational Resources are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions (William & Flora Hewlett Foundation, 2018). Open Educational Resources includes textbooks, curricula, syllabi, lecture notes, teacher’s guides, references and readings, simulations, experiments and demonstrations, assignments, projects, audio, video and animation. However, rapid digital changes in the world have moved the learning environment to a different place in terms of space. The traditional teacher-student hierarchy began to disappear. Students' ability to access information quickly eliminates the teacher's role of knowledge transfer. The wealth of information and publicly available information make teachers comparable to other teachers and educational resources (Taşkıran, 2017). As in all disciplines, rapid access to information is critical for society and individuals. Distance education applications that support education in the digital environment are gaining importance due to the ease of access to information (Çalli, Torkul, & İşman, 2014). Today OER is acquiring wide popularity across the world because of its user friendly attitude and it has also started creating its imprints in India too.

### **OPEN EDUCATION RESOURCES:**

Open Educational Resources refers to educational tools and resources that are prepared and presented so that anyone can access them without any charge, and can be developed and republished under certain conditions (UNESCO, 2019). It has an intellectual property license that can be easily accessed, used and developed by open educational resources that support the progress in education for all and the processes of improving living conditions in developing countries; It is emphasized that there are resources for learning, teaching and research purposes. All kinds of resources that will provide access to and facilitate information such as videos, course materials, computer software, modules, textbooks,

tests can be evaluated within the scope of OER (Pawlowski & Hoel, 2012). Open Educational Resources;

- To contribute to the lessons of the students who continue their education life and to support their preparation for the exams,
- To ensure that all individuals who want to follow their developments in the field of science and technology,
- To pave the way for educators to improve themselves and therefore their teaching methods with accessible course-related resources and sample course teaching methods,
- To meet these needs of educational institutions that are insufficient in terms of resources.
- To contribute to making conscious choices by ensuring that students who will enter higher education life have preliminary information about the departments and courses they want to choose,
- By providing a universal information sharing environment, especially at the university level, to ensure that students in any country benefit from the resources (library, film and video recordings, archaeological excavation data, all course materials...) offered by the university anywhere in the world,
- It can be used to serve purposes such as creating a developing discussion environment, especially for students and educators (Kurşun & Çağıltay, 2011; Smith & Casserly, 2006; Baysal, Çakır & Toptan, 2015).

### **Characteristics of OER:**

#### **1. Openness**

Open educational resources should be accessible to everyone anytime anywhere irrespective of whomever they are. OER has to be open to all and they should be able to access and use it at their convenience. The term open also denotes that these materials should be freely available to everyone for their usage as per their needs and for that they don't have to pay royalties or license fees.

#### **2. Cost**

It is usually preferred to provide open educational resources free of cost to the users. It should be available to everyone so as to be downloaded at free of cost from the websites. If at all there is a cost associated with it then the cost will be taken care of by the universities or institutions that maintain the websites and however it will be a minimal one.

#### **3. Reusability**

Open educational resources should be reusable. Reusability here implies that the materials developed by a person should be in such a way that it would be useful for people all over the globe and not just for some people from a specific locale, university or institution. Users should be able to apply it into their teaching or learning contexts and use it as per their needs. There should not be contents or symbols which are related to a specific region, university or institution which would make its adaptation difficult for users from other institutions or places.

#### **4. Relevance**

For any educational material it is very essential for it to be relevant. Relevance here means that the materials should be genuine and connected in depth to the topics concerned. It should be able to provide insightful and meaningful learning to the users. These digital resources should be able to provide learners with the apt information on the topics concerned just as they would have got it from referring books or other offline resources.

#### **5. Simple and easy to use**

The content and language used should be simple and easily comprehensible for all types of learners and not just the gifted or bright ones. It should be developed in user friendly formats which can be easily accessed, downloaded and printed.

## 6. Copyright licensing

Copyright licensing is one of the most important characteristic of an OER. OER is copyrighted under the Creative Commons license and is available as freeware or with various degrees of freedom of use and distribution

### Five R's of OER:

An OER should be having the following five Rs, that is, we should be able to

**Reuse** – content can be reused in its unaltered original format –the right use the content in a wide range of ways.

**Revise** – The permission to alter the content shared by someone as per user's choice, i.e. adapt, modify, add, tweak or improve.

**Remix** – The permission to combine two or more OERs to form something new as per our needs. We can modify an OER and then combine it with another OER according to our necessity.

**Redistribute** – The permission to share the original OER or the revised or remixed versions with others.

**Retain** – The permission to access the OER and keep it with us after our use.

### Criteria to be taken care of while creating OERs:

TIPS Framework (CEMCA, 2014) gives quality assurance guidelines for developing OERs

### Teaching and Learning Processes:

- Learner centred approach should be used in the teaching learning materials.
- Use appropriate and authentic pedagogy reflecting on the latest changes and transformations.
  - The reason and purpose of OER should be specifically stated along with its relevance and significance
- It should be in line with the local wants and needs of the users and should anticipate the present and future needs of learners.
  - Aim should be to support learner autonomy, personal independence and self-sufficiency.
  - Style of conversation preferred is in active voice which should be free from gender bias and should be user friendly.
- Language used must be simple and appropriate for learner's age and cognitive level.
  - Include learning activities which build in learners the skills of learning to learn and help recycle new information.
- Link information with outside world and explain the relevance of the material and why it's essential for them to learn it.
- Develop intrinsic motivation in learners by including surprising anecdotes that arouse curiosity.

### Information and Material Content:

Consult subject experts to ensure that the information and material content is up to date, accurate and reliable.

- Equality and equity should be reflected in the content. It should be abiding to the law and free from any sort of discrimination. The content should be socially inclusive and promote social harmony.
  - Content should be relevant and appropriate. It should not contain materials that distract learners from the main topic.
- Content should cater to the local context of users and should be authentic and internally consistent.
- It should encourage situational learning and should be built on prior knowledge and experience of learners along with their empirical and indigenous knowledge.
- OER should be the size of a standard learning unit but compact and to the point. Avoid too lengthy materials and check if it can be reused in other disciplines.
- Content should be enriched by providing links which are connected to other relevant materials related to the unit.



**Presentation Product and Format:**

The OER license should be visible to all in the presentation.

- OER must be easily accessible to everyone.
- Material should be presented in a clear, concise, orderly and logical way with good quality sound.
- Product should be designed in a very attractive manner with effective colour contrasts so as to stimulate learning.
- Provide space in the material for getting feedback from students.
- Check if the OER can be printed, used offline and is suited for mobile usage.
- OER should be delivered in open formats so as to allow maximum reuse and remix.
- Suggestions can be given on which OER would come prior to our OER and which would come after it in a learning pathway.

**System Technical and Technology:**

- It is better to add metadata tag about the content. This will help in finding the OER later on.
- Metadata tags can also be given for expected duration of study, expected difficulty level, format and size.
- The source ware/software used should always be free and easily transmittable across platforms.
- The OER should be easily adaptable. For example, the teaching content should be separated from our computer code.

**Advantages and Role of Open Educational Resources:**

The use of Open Educational Resources provides various advantages to educational institutions, academics and learners. It is foreseen that the gap between different classes in the society and countries in the international arena will decrease with Open Education Resources, the quality of education will increase and access to information will accelerate. In addition, it is stated that the number of people receiving informal education and lifelong learning tendencies will increase with OER. From the OER definitions, it is stated that the provided training resources can be used without any limitations, edited, used repeatedly if necessary, mixed and recreated in line with the purposes. One of the core values of OER is the universal use of these resources, independently of the education system and national curriculum frameworks (Grodecka, Sliwowski, 2014). Explained by the European Commission the values of OER, Open Educational Resources and open applications as having more personal learning, good learning experience. In addition, they stated that by increasing the access of individuals to information, it allows more efficient and better use of resources that provide learning equality. Students can access different educational resources suitable for their learning styles through OER. They find the opportunity to easily access information by using any device without space, support and time limitations.

Students become more active participants in the education process in collaboration with other participants in virtual learning environments. Thanks to OER, teachers have the opportunity to compare their own teaching materials with the teaching materials of other teachers and to use them as a resource. They can learn to publish their work worldwide with an open license and how to improve the quality of their teaching practices and encourage pedagogical innovations. Finally, OER can reduce the cost of accessing educational materials (McGreal et al, 2013).

**Conclusion:**

The term OER was introduced in 2002, till now it has not gained significant momentum and acceptance in many places. This is because of lack of awareness among the users on OER. It is therefore very essential to first make people understand about OER and promote awareness on it. If this is done then users will automatically start developing and using OER at its best. Learners today are expected to meet the escalating standards of our global society and for this they need to develop global skills.

Digitization of learning materials is helping everyone in this regard to a great extent. And one such significant step put forward is the OER movement. If the potential of Open Educational resources is utilized in the best possible ways then we will definitely be able to cope up with the global standards of education and thus bring a major transformation in the higher educational system of our country.

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## ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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### Abstract

*The contribution of Artificial Intelligence (AI) in the field of education has always been significant. The rapid advancement of computing technologies has facilitated the implementation of Artificial Intelligence in Education applications. It refers to the use of AI (Artificial Intelligence) technologies or application programs in educational settings to facilitate teaching, learning, or decision making. With the help of AI technologies, which simulate human intelligence to make inferences, judgments, or predictions, computer systems can provide personalized guidance, supports, or feedback to students as well as assisting teachers or policymakers in making decisions. From robotic teaching to the development of an automated system for answer sheet evaluation, AI has always helped both the teachers and the students. In this paper we have done an in depth analysis of the various research developments that were carried out across the globe corresponding to artificial intelligence techniques applied to education sector so as to summarize and highlight the role of AI in Education.*

**Keywords:** Meaning of Artificial Intelligence, Role of Artificial Intelligence in Education, Benefits of Artificial Intelligence for Students, Incorporating AI into the Curriculum, Benefits of Incorporating AI Into The Classroom, Challenges of incorporating AI into the classroom.

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### Introduction

Artificial Intelligence has the potential to provide students with personalized and engaging learning experiences, as well as help them develop important 21st-century skills such as critical thinking and problem-solving. However, this integration of technology into the classroom also presents a range of challenges, such as data privacy and ethics, the need for ongoing training and support, and the potential for unequal access to technology and digital skills. AI (artificial intelligence) technology has infiltrated all aspects of our lives, including making its way into our education system. AI's role in education can revolutionize the way we learn and teach from student engagement to teaching styles, including helping learners of all different styles more accurately understand course materials.

### Meaning of Artificial Intelligence

AI, sometimes called machine intelligence, is the simulated human intelligence in computers.

The term 'artificial intelligence (AI)' was coined in 1956 when John McCarthy and Marvin Minsky hosted the Dartmouth Summer Research Project over Artificial Intelligence.

Artificial intelligence (AI) is a set of technologies that enable computers to perform a variety of advanced functions, including the ability to see, understand and translate spoken and written language, analyze data, make recommendations, and more.

### Role of Artificial Intelligence in Education

Global adoption of technology in education is transforming the way we teach and learn. Artificial Intelligence is one of the disruptive techniques to customize the experience of different learning groups, teachers, and tutors.

This is how Artificial Intelligence tools may be applied to improve study processes:

#### 1. Personalize Education

Artificial Intelligence helps find out what a student does and does not know, building a personalized study schedule for each learner considering the knowledge gaps. In such a way, AI tailors studies according to student's specific needs, increasing their efficiency.

To do it, many companies train their AIs, armed by the Knowledge Space Theory, to define and represent the knowledge gaps, taking into account the complexity of scientific concepts relations between each other (one can stimulate the learning of another or become a basis for filling in the gap).

## 2. Produce Smart Content

- **Digital lessons**

Digital learning interfaces with customization options, digital textbooks, study guides, bite-sized lessons, and much more can be generated with the help of AI.

- **Information visualization**

New ways of perceiving information, such as visualization, simulation, web-based study environments, can be powered by AI.

- **Learning content updates**

Besides, AI helps generate and update the content of the lessons, keeping the information up to date and customizing it for different learning curves.

## 3. Contribute to Task Automation

Administrative tasks simplification: grading, assessing, and replying to students is a time-consuming activity that could be optimized by the teacher using AI.

Do you remember the hints Gmail provides in the messages you compose based on the overview of your current and past messages plus the business vocabulary essentials? It would be great to have such an option on any Learning Management System or learning platform envisaging the feedback.

## 4. Do Tutoring

Continuously evolving personal study programs take into account student's gaps to fill during individual lessons. Personal tutoring and support for the students outside of the classroom help learners keep up with the course and keep their parents from struggling to explain algebra to their kids. AI tutors are great time-savers for the teachers, as they do not need to spend extra time explaining challenging topics to students. With AI-powered chatbots or AI virtual personal assistants, students can avoid being embarrassed by asking for additional help in front of their friends.

## 5. Ensure Access to Education for Students with Special Needs

The adoption of innovative AI technologies opens up new ways of interacting for students with learning disabilities. AI grants access to education for students with special needs: deaf and hard of hearing, visually impaired people with ASD...

Artificial Intelligence tools can be successfully trained to help any group of students with special needs.

## Benefits of Artificial Intelligence for Students

- **24/7 Access to Learning**

With AI helpers based online, students always have access to learning. They are free to plan their day without being linked to a specific place. They can study on the go, at any place and time they want. They can build their schedule based on their most productive hours.

- **Better Engagement**

Individualized schedules, custom tasks, interaction with digital technologies, and personal recommendations are part of the personal approach each student gets using AI. Besides, a personal approach helps students feel special, increasing their engagement and raising interest in studies in such a way.

- **Less Pressure**

Lessons tailored to the needs of different learning groups allow students to stop comparing them to each other. Earlier, a student should have asked a teacher for help in front of the class. Now, it's enough to type a query using a personal virtual assistant and get an instant explanation.

These opportunities offered by AI tools make personal progress come to the fore, reducing the pressure in the classroom. Less pressure means less stress and more enthusiasm to study.

**Incorporating AI into the Curriculum:** The integration of Artificial Intelligence (AI) into the classroom has the potential to revolutionize the way students learn and teachers teach. AI algorithms can provide students with personalized feedback and recommendations, allowing for a more engaging

and effective learning experience. Despite these potential benefits, there are also several challenges associated with incorporating AI into the classroom. This paper examines the benefits of incorporating AI into the classroom, the challenges that teachers face when doing so, and best practices for effectively integrating AI into the curriculum. The paper also highlights the need for ongoing research and development in this area, in order to fully realize the potential of AI in education. Artificial Intelligence is becoming an increasingly important part of our daily lives, and it has the potential to revolutionize the way we work, communicate, and learn. In education, AI has the potential to provide students with a more personalized and engaging learning experience and to help teachers more effectively meet the needs of each student. Despite these potential benefits, there are also several challenges associated with incorporating AI into the classroom, including the need for technical expertise, limited resources, and ethical concerns.

**Benefits of Incorporating AI into The Classroom:** One of the key benefits of incorporating AI into the classroom is the ability to provide students with a more personalized learning experience. AI algorithms can analyze student data and adapt to their learning styles, providing feedback and recommendations that are tailored to their individual needs and abilities. This can help to keep students engaged and motivated and can lead to improved academic performance. Another benefit of incorporating AI into the classroom is the opportunity to deepen students' understanding of this rapidly-evolving technology. By incorporating AI into the curriculum, teachers can help students develop a critical perspective on this technology, and prepare them for the challenges and opportunities of the digital age. Finally, incorporating AI into the classroom can also help students develop important 21st-century skills, such as problem-solving, critical thinking, and collaboration. These skills are essential for success in the digital age, and they can be developed through hands-on experience with AI tools and applications.

**Challenges of incorporating AI into the classroom:** While there are many benefits to incorporating AI into the classroom, there are also several challenges that teachers must overcome. One of the biggest challenges is the need for technical expertise. Teachers who are not familiar with AI may find it difficult to integrate this technology into their teaching practices, and they may need support and training to get started. Another challenge is the cost of AI tools and applications. Many schools and universities do not have the resources to purchase and maintain the technology they need to incorporate AI into the classroom, and they may need to seek external funding or partnerships to support their efforts. Finally, there are also ethical concerns associated with incorporating AI into the classroom. As AI becomes more sophisticated, there are concerns about its impact on privacy, security, and the job market. Teachers must be aware of these concerns and work to ensure that their students are protected as they explore this exciting and rapidly-evolving technology.

**Conclusion:** In conclusion, incorporating Artificial Intelligence into the classroom presents a unique opportunity for teachers and students alike. The field of education is gradually being transformed by Artificial Intelligence. It has the potential to revolutionize how students learn and modify how teachers and educational institutions carry out their duties. You are now familiar with some of the best applications of Artificial Intelligence in the educational sector.

Furthermore, it is undeniably true that Artificial Intelligence has revolutionized traditional methods of education and teaching. This is why universities, colleges, and other educational institutions are making significant investments to integrate AI into their curricula. This technology has several benefits, including the ability to teach students, automate tasks like grading, update educational software, assist in course improvement, and much more.

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## MOOC PLATFORMS FOR ENHANCING OERS IN INDIAN HIGHER EDUCATION

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### Abstract

**Open Educational Resources (OERs)** are teaching, learning, and research materials available for free in any digital medium. They can be used, adapted, and distributed without restrictions. OERs include text, media, and other digital assets that are useful for teaching, learning, assessing, and research purposes. These resources are available online to anyone, whether an instructor, student, or self-learner. Although OERs do not use universal file formats, they provide an excellent way to access educational materials for free.

E-learning is not just about technology. It encompasses various pedagogical and instructional strategies that create a comprehensive learning environment based on the Internet. In higher education, e-learning is widely used to support learning in academic programs. Open Educational Resources (OERs) are becoming a valuable alternative to improve access to high-quality educational content. Outstanding universities worldwide release these resources under open licenses. Combining both concepts can be an effective strategy to enhance the quality of curricula in higher education institutions, particularly in developing countries like India. It can help standardize the learning outcomes of international academic programs and reduce the cost associated with educational content development. This research aims to explore the potential of making OERs available in e-learning environments.

**Massive open online course (MOOC)** is the most recent and prominent trends in higher education. MOOCs have witnessed tremendous growth with huge enrolment. India has initiated various projects such as NPTEL, IITBX, and **Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM)**, and many online platforms have been developed worldwide to provide online courses to encourage continuing education. This paper reveals the characteristics of MOOCs along with various online platforms around India. The author conveyed the growth of Indian MOOCs with the list of providers who develop and deliver online courses. The paper focussed on the possible challenges of MOOC implementation in India.

**Keywords:** Open Educational Resources (OERs), MOOC, SWAYAM, Online education, Learning & Evaluation pedagogy, Higher Education (HE).

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### INTRODUCTION:

A **Massive Open Online Course (MOOC)** is a web-based platform that offers distance education opportunities to an unlimited number of students worldwide through some of the best institutes in the world. It was established in 2008 and gained popularity in 2012 as a popular learning tool. Many MOOCs have communities that facilitate interactive sessions and forums between students, professors, and teaching assistants (TAs), along with the study/course material and video lectures.

These are recent and prominent trends in higher education. They enable learners to access online educational multimedia materials and engage with vast numbers of other learners through social tools such as discussion forums (Liyanagunawardena et al., 2013). MOOC provide online structured course platforms, with pedagogical tools like glossaries, images, videos, and public repositories. Hundreds of courses have been offered through MOOC, with millions of registered users worldwide.

The roots of MOOCs can be traced back to the early 2000s (Zawacki, Richter & Naidu, 2016), but the year 2008 was when networked learning and MOOCs began to take shape. That year, Stephen Downes and George Siemens coined the term MOOCs to define connectivist learning on networks (Meltem Huri Baturay, 2015).

In 2011, some Stanford University professors developed educational videos and released them through open online platforms. The same year, Peter Norvig and Sebastian Thurn facilitated the Artificial Intelligence MOOC, which attracted 160,000 learners from 190 countries. In early 2012, independent platforms such as Coursera and Udacity were established; the former was initially paid, while the latter

was a non-profit initiative by Stanford University. MIT also developed the MITx web resource, which was later incorporated into EdX (Meltem Huri Baturay, 2015).

The platform operates like an online classroom, bringing together students and teachers to form a pool of online resources, readily available for students to utilize. Students have the option of listening to lectures, downloading notes, contributing their own, and most importantly, sharing their points of view by communicating with their peers. The networking aspect of MOOC makes the process feel like a virtual online classroom, where students can interact with each other despite being in different parts of the world.

SWAYAM is a new portal for MOOCs that offers students a chance to study from a list of 2000 courses, out of which 200 are currently open for enrolment. The portal uses a variety of mediums such as audio-visual aids, illustrations, research, and case studies, along with self-assessment tools to facilitate learning. MOOCs were originally developed by universities in the United States, but they have gained acceptance in many countries, including India, in recent years.

#### **CHARACTERISTICS OF MOOCs:**

- **Massive:** MOOCs can have enormous of participants. It witnessed more than 81 million registrations across the world. It recorded around 23 million new registrations in the year 2017 (Class central, 2018).
- **Open:** Anybody who is willing to learn can enroll and participate in MOOC without any formal qualification restriction. Participation is completely free and open to anyone who has access to the Internet. One might enroll in more than one course. The materials developed through the course are shared and available to all.
- **Interactive:** MOOC courses are highly interactive. It provides opportunities to interact not only with the tutors but also with fellow students. The participants are encouraged to create and share their contributions.
- **Four Quadrant Approach:** e-Tutorial, e-Content, Discussion forum, and Assessment.

#### **MOOCs IN INDIAN SCENARIO:**

**In India,** MOOCs offer enormous opportunities. Student enrolment has increased significantly in recent years and India is now one of the leading countries in terms of enrolment in courses offered by popular MOOC providers such as edX, Coursera, and Udacity. MOOCs have helped many people in India to overcome the unmet demand for higher education. Online education is available in English and can be translated into many regional languages, making it accessible and easy to understand in different parts of India. India has witnessed massive growth and is now dominating the global development scene after the United States of America. Many online sources have established and delivered education from India, thanks to the huge enrolment in MOOC platforms such as Coursera, edX, and Udacity. Coursera CEO Mr. Richard Levin has said that India is one of the top five nations in terms of revenue generated for Coursera, and it is the second-largest country in terms of registered users (Economic Times, 2014). Currently, IITBX, mooKIT, NPTEL, and SWAYAM offer courses and operate from India. The major reason for this growth is the low rate of enrolment in higher education.

#### **SOME OF THE MOOCs ARE LISTED BELOW:**

**1. National Repository of Open Educational Resources (NROER)-** It is an initiative of CIET the educational technology unit at NCERT, which has created several audio & video resources on education topics. These resources have been made available to students & teachers across the country, through broadcasting technologies. The state-level organizations SIETS also create audio, video & other multimedia resources based on their specific needs. On 13 August 2013 in New Delhi in collaboration with the Department of School Education and Literacy, Ministry of Human Resource Development, Government of India NROER hosts a large number of educational resources in many subjects and in different Indian languages for Primary and secondary and Senior Secondary classes. Resources are

available in different formats like Video, Image, Audio, Document, and Interactive & will be utilized for K-12 (kindergarten to grade 12 classes), freely with CC-BY-SA, Republication is strictly prohibited.

**2. NPTEL (National Programme on Technology Enhanced Learning)-** To improve the quality of higher education in India, IIT Madras came up with an initiative called NPTEL (National Programme on Technology Enhanced Learning) in the year 1999. As per this initiative, all the IITs, along with the IISc Bangalore would come up with a series of video lecture-based courses across all the streams of engineering. This initiative has gained wide popularity in India and the lectures are being used by several engineering students from across India. **All courses are completely free to enroll in and learn from.** The certification exam is optional and comes at a fee of Rs 1000/course exam. Certification process: NPTEL began the initiative of offering certification to students for courses in March 2014 & will be utilized for Engineering Students, freely with CC-BY-NC-SA.

**3. Khan Academy-** Khan Academy is a non-profit educational organization created in 2005 by Salman Khan to create a set of online tools that help educate students. The organization produces short lessons in the form of YouTube videos. Its website also includes supplementary practice exercises and materials for educators. The website is meant to be used as a supplement to its videos because it includes other features such as progress tracking, practice exercises, and teaching tools. The material can also be accessed through mobile applications. In 2018, Khan Academy created an application called Khan Academy Kids. It is used by two to six-year-old children to learn basic skills (primarily mathematics and language arts) before progressing to grade school & will be utilized for K-12 (kindergarten to grade 12 classes) freely with CC-BY-NC-SA.

**4. TESS-India (Teacher education through school-based support)-** It is led by The Open University and Save The Children India, funded by UK Aid. It is a multilingual teacher professional development program that aims at supporting India's national education policy through the use of freely available and adaptable OER. A collaboration between the educational experts and policymakers of India and the UK, the OER focuses on the enhancement of pedagogic practices parallel to Language, Literary, Science, Mathematics, and English. It aims to support learner-centered, inclusive, participatory, engaging, and effective classroom pedagogy to influence the progress and achievements of students through quality schooling & will be utilized for Teacher Education freely with BY-NC-SA.

**5. Gooru-** Gooru is an online learning platform for students and teachers. Teachers can search for individual resources in subjects in Math, English Language Arts, Science, Social Studies, and more. They can design their lessons or adapt ones created by other educators. Teachers have millions of free online multimedia resources and quiz questions at their fingertips, often making it difficult and time-consuming to create a learning experience geared expressly for their students. Gooru is a free personalized learning solution that helps teachers find, remix, and share collections of web resources on any K12 topic.

Gooru organizes all online learning content. It connects a community of educators and learners. It supports many different instructional uses and types of learners to improve all students' learning outcomes. Its online quiz environment gives students instant feedback on their progress and provides teachers with assessment results and learning resource suggestions & will be utilized for students & teachers freely with CC-BY-NC.

**6. CEMCA (COMMONWEALTH EDUCATIONAL MEDIA CENTRE FOR ASIA)-** In response to needs expressed by the Commonwealth countries of the Asian region for more effective utilization of educational media resources for Distance Education, the Commonwealth of Learning (COL) established Commonwealth Educational Media Centre for Asia (CEMCA) in the year 1994. CEMCA, under a host country agreement signed between COL and the Government of India (GoI) in 1998, is headquartered in New Delhi. Its vision & mission are respectively, To be the foremost agency in Commonwealth Asia that promotes media-enabled learning for development. & To assist governments and institutions in expanding the scale, efficiency, and quality of learning by using multiple media in open, distance, and technology-enhanced learning.

The strategic objective of CEMCA is to promote cooperation and collaboration in the use of electronic media resources for distance education & which will be utilized for learning by using multiple media in the open, distance, and technology-enhanced learning through Distance education for Stakeholders, Teachers freely with CC-BY-SA

The specific objectives are to:

- Serve as a regional electronic media resource center.
- Facilitate an effective exchange of information on educational media resources between educational and media organizations in the region.
- Promote greater use of electronic media in the delivery of distance education programs.
- Promote linkages between CEMCA and other organizations to enhance the availability of educational media resources region-wide
- Facilitate access to training in the development and use of electronic media resources for distance education.
- Serve as an information center on educational technology.

**CEMCA has promoted the following:**

- Educational Multimedia
- eLearning
- Radio Enabled Learning
- Open Educational Resources
- Community Radio
- Television
- Webinar
- Online learning
- MOOC

**7. Indira Gandhi National Open University (IGNOU)-** IGNOU was founded to serve the Indian population using distance and open education, providing quality higher education opportunities to all segments of society. It also aims to encourage, coordinate, and set standards for distance and open education in India, and to strengthen the human resources of India through education. Apart from teaching and research, extension and training form the mainstay of its academic activities. It also acts as a national resource center and serves to promote and maintain standards of distance education in India.

**8. National Institute of Open Schooling (NIOS)-** NIOS is the world's largest open schooling system, and supplements self-learning using print materials as well as audio, video & multimedia material. Their resources are distributed in CD format or broadcasted through education channels on television & radio. It publishes the online version of textbooks on its website.

**9. Karnataka Open Education Resources (KOER)-** Karnataka Department of State Educational Resource & Training (DSERT) launched a project Karnataka Open Educational Resources for all grades & subjects for Karnataka school Teachers, in English & Kannada between 2013 & 2016. In 2013-14 it is running a pilot project to create OER, for Grade 9 mathematics, Science & Social Science.

**10. Moodle-** is a free and open-source learning management system (LMS) written in PHP and distributed under the GNU General Public License. Developed on pedagogical principles, Moodle is used for blended learning, distance education, classrooms, and other e-learning projects in schools, universities, workplaces, and other sectors.

**CONCLUSION:** MOOC instruction influenced the academic world through many conceptual and technological changes. Many people consider the growth of MOOCs as a big advancement and opportunity for continuing education. Major technological advancements in augmented and virtual reality could revolutionize MOOCs' future where many subjects need close supervision, expensive equipment, and state-of-the-art laboratories to impart knowledge and skills. MOOC platforms are being widely used for offering e-learning content and India is no exception. Various MOOC platforms that are being started in India for delivering online courses, such as NPTEL, mooKIT, IITBX, and SWAYAM are notable platforms among the MOOC providers. These are the newly started web platforms having a history of hardly 4 to 5 years except the NPTEL. SWAYAM was launched very recently by MHRD, Government of India. A comparative analysis is depicted for MOOC platforms using available secondary data considering several parameters as mentioned. Furthermore, certain

difficulties are faced while implementing MOOCs in India. These challenges are discussed in this study. Some of these issues are already addressed by SWAYAM, which is the most recent platform.

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## DIGITAL TECHNOLOGY FOR 21<sup>st</sup> CENTURY LEARNERS

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### Abstract

*Educational Software is a massive, all-encompassing term used to refer to any and all software designed for use in the education industry. The term includes everything from student information systems and classroom management software to reference management software and language learning software. Educational software or computer applications developed for the purpose of teaching and learning. This is a large domain that includes software made for different types of people. Students, teachers, administrators, mentors, and others. The software can also be made for different types of education: Traditional classrooms, self-directed learning, asynchronous lessons, and others. In classroom, educational software can provide functions, such as automatically grading multiple-choice assignments using formatted cards, or allowing students to submit digital assignments from home through a learning management System.*

### Introduction

Educational Software is a massive, all-encompassing term used to refer to any and all software designed for use in the education industry. The term includes everything from student information systems and classroom management software to reference management software and language learning software. Educational software or computer applications developed for the purpose of teaching and learning. This is a large domain that includes software made for different types of people. Students, teachers, administrators, mentors, and others.

The software can also be made for different types of education: Traditional classrooms, self-directed learning, asynchronous lessons, and others. In classroom, educational software can provide functions, such as automatically grading multiple-choice assignments using formatted cards, or allowing students to submit digital assignments from home through a learning management System.



Digital technologies electronic tools, devices, systems and resources which generate, store or process data. Digital tools include social media, mobile phones, online games and multimedia. The 21<sup>st</sup> century's digital revolution has totally changed the methods of work, communication and living. Internet can connect people, hardware devices, software applications, information and resources all around the world. A rapid and wide

range of technological advancements has enforced profound influence on every walk of life including pedagogy. To achieve high quality digital learning students continually have access to the digital content and online resources. However, when technology is used in education it enhances student's attitude and digital skills. Digital learning facilitates students to use their devices for their learning process. It provides both teachers and students with access to a selection of educational resources that motivate creativity, critical thinking, communication and collaboration. It provides inclusion and the development of digital literacy skills. It extends learning beyond the text and classroom walls.

21<sup>st</sup> century digital technology a highly effective and economic digital teaching platform which is delivered directly into the education system.

Digital innovation for children include improved memory, increased fine and gross motor capabilities, enhanced child critical thinking and problem solving abilities.



Educational software is term used for any computer software which is made for on educational purpose, it encompasses different ranges from language learning, software to classroom management software. The purpose of all this software is to make some part of education more effective and efficient.

In educational software there are so many purpose can used they are:

- Classroom aids
- Assessment software
- Reference software

**SIMULATION:** Simulation is a teaching technique used particularly in management education and training in which a real situation and values are simulated by substitute displaying similar characteristics.

**ICT Based lesson:** ICT involves the use of computers and other electronic devices to access information easily and quickly.

**Simulated ICT based lesson:** The use of a computer to represent the dynamic responses of one system by the behaviour of another system modeled after it.

**Software** used for teaching, learning, assessment and research in the 21<sup>st</sup> century are listed in the table below.

1. Google classroom	10. Quizlet
2. Moodle	11. Chemskech
3. Edmodo	12. Refme
4. Microsoft one note	13. D2L Brightspace
5. Blackboard learn	14. Quizizz
6. Class Dojo	15. Ispring suite
7. Geogebra	16. Ellucian Banner student
8. Schoology	17. Zoom
9. Tinkercard	

**Google classroom:** Google classroom is a free blended learning platform by google for educational institutions that aims to simplify creating, distributing and grading assignments, the primary purposed of google classroom is to stream line the process of sharing files between teachers and students. Initial release date: 12-Aug-2014, Developer: Jonathan Rochelle, Operating system: Android; iOS;

iPadOS [1].

**Moodle:** Moodle is a free and open-source learning management System written in pHP and distributed under the GNU general public license, moodle is used for blended learning, distance education, flipped classroom and other online learning projects in schools, universities, workplace and other sectors. Developer: Martin Dougiamas, Accessible for all for teaching, learning and managing everything in one place and one can teach in safe and secure online spaces [2].



**Edmodo:** Edmodo was an educational technology platform for schools and teachers, Edmodo enabled teachers to share content. Distribute quizzes and assignments and manage communication with students.



Founder: Jeff O' Hara, Nic Borg, Crystal Hutter, Founded: 1-September-2008, Lesson Builder for lesson planning. Discovery for content discovery, live class for synchronous lesson delivery [3].

**Microsoft one note:** Is a note taking software. It is available as part of the Microsoft office suite and since 2014. Has been free on all platforms one note is designed for free from gathering information and multi uses collaboration. It gathers user's notes, drawings, screen clippings. Organize data in Network, Recording and Translate notes [4].

**Black board learn:** Black board learn is an application for online teaching, learning, community building and knowledge sharing, you can use theory or model for teaching your online course because black board learn is open. Initial release Date: 21-jan-1997, Developer: Black board, Activity Dashboard, Assessment Management, Asynchronous Learning and Academic/Education [5].



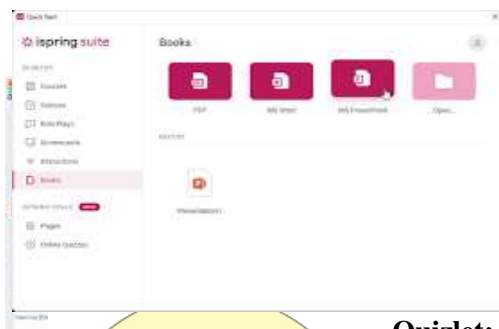
**Class Dojo:** Class Dojo is an educational technology company, it connects primary school teachers, students through communication features such as a feed for photos and videos from the school day and messaging that can be translated into more than 35 languages. Founder: Sam Choudhury, Liam Don, Founded: Aug-2011, Activity management, Track student behaviour, Engage in school to home communication, Families are able to connect with teachers and communicate privately [6].



**GeoGebra:** GeoGebra is an interactive geometry, algebra, statistics and calculus application, intended for learning and teaching mathematics and science from primary school to university level. Developer: Markus Hohenwarter, Interactive geometry environment (2d and 3d), Built-in spreadsheet, Built-in Computer algebra system (CAS), Graphing, statistics [7].

**Schoology:** Schoology is a learning management system for schools and business that enables its uses to create, manage and share assignments and resources. Founder: Jonathan Friedman; Ryan Hwang; Tim Trinidad, Learning

management system, Create, manage, Share assignment and resource. Technical Support, Markup Tools [8].



**Tinkercad:** Tinker cad is a free of charge, online 3D modeling program that runs in a web browser, since it became available 2011 it has become a popular platform for creating models for 3D printing as well as an entry level introduction to constructive solid geometry in schools. Developer: Auto desk, 3D design & Modelling, Animation, Annotation, Collaboration Tool and Content library [9].



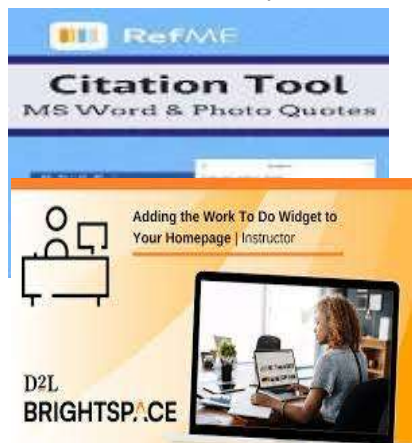
**Quizlet:** Is a multi-national American company that provides tools for studying and learning. It was founded by Andrew Sutherland in October 2005, and released to the public in January 2007. Quizlets primary products include digital flash cards. Matching, practice assessments and live quizzes, Leaderboard, Quiz timer, show quiz score in gauge, view correct answer options and view question results [10].

**Chemsketch:** Chemsketch is a molecular modeling program used to create and modify images of chemical structures, also there is a software that allows molecules and molecular modules. Displayed in two and three dimensions. To understand the structure of chemical bonds and the nature of the functional groups. Draw chemicals structures, including organics, polymers and Markush structures, Calculate molecular properties, Clean up your structure and view it in 2d and 3d [11].



**RefME:** RefME is the world's leading and most accurate multi-platform tool for automating, citations, reference lists and bibliographies in over 7500 citation styles. RefMe allows user to generate citations by scanning book or journal barcodes [12].

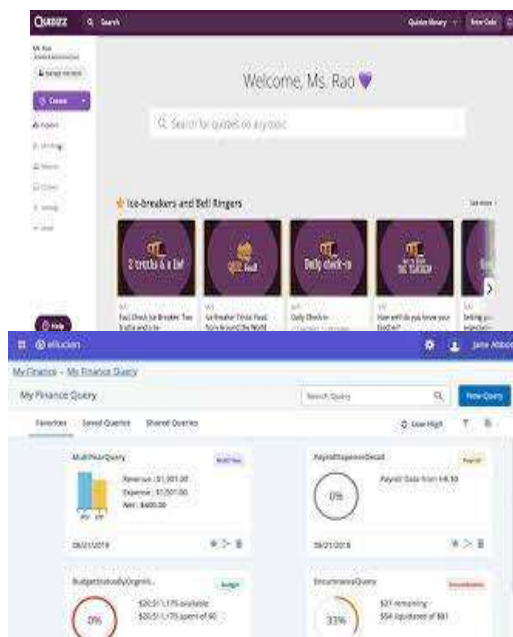
**D2L Brightspace:** D2L is the developer of the bright space learning management system. A cloud based software suit based by schools, higher educational institutions and business for online and blended classroom learning. Academic / Education, Assessment Management, Assignment management, Built-in Course Authoring [13].



**Quizizz:** Motivate every student to mastery with easy to customize content plus tools for inclusive assessment institution. Fun online quizzes can be reduce students' stress, Students able to see their own and others rank [14].

**Ispring suite:** Is a power point based authoring toolkit produced by Ispring solutions that allows users to create slide based course quizzes. Dialog simulations, screenshots, video lectures and other interactive learning materials.

It provides you with the ability to change your file's size, thereby, making your Ispring course more compatible [15].



**Ellucian Banner student:** It provides critical data that enables registration, curriculum management, advising, assessment graduation and key reporting.

It offers Banner educational ERP including its student management system emphasizing control and reporting of process-oriented facets of education such as grading and attendance [16].

**Zoom:** Zoom is a cloud based video conferencing software solution that allows organizations in the educational, financial to conduct virtual meetings and collaborate in real-time using integrated communication tools. It allows to create and join virtual meeting room where they can communicate with each other using video and audio [17].

### Conclusion

The balance between digital technology and social interaction is the key to taking advantage of all of the limitations that digital technology brings to children and their education, whether it be knowledge based or

practice based. It is not just a change of technology it is part of a redefinition of how we as a species transmit knowledge, skill and values to younger generations of workers and students. It is a digital devices, systems and resources that help create store and manage data. An important aspect of digital technology (IT) which refers to the use of computers to process data and information. This can be achieved by the activities, instead of providing access to health and education and financial services.

Digital technology has the potential to revolutionize the entire education sector of the country and transform into a knowledge economy. It enables immense amounts of information to be compressed on small storage devices that can be easily preserved and transported.

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## CONCEPT AND IMPLICATIONS OF EDUCATIONAL SOFTWARE'S IN TEACHING LEARNING PROCESS

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**Introduction :** The information and communication technologies (ICT) bring new opportunities to make teaching and learning more effective and attractive. The computer is used not only to review (practice) the study materials, to create and enhance the skills and habits for the algorithmic solving of different tasks, but it can also significantly facilitate the development of student's individual work through the individualization of tasks. It is possible to assign each student with a task of various difficulties and with different time amount, which is needed for its solution. It is also possible to use computers while solving application tasks from the actual practice, which are usually difficult because of time consuming numerical computations. These computations can be carried out by the computers with the appropriate pedagogical software, whereby the chances are developed, which aim the education at understanding of discussed concepts together with their utilization in practice. The concepts can be actively sought by students, whether through the individual or group work. Software are used for a variety of purposes. The software which are used in teaching-learning process by teachers and students are called educational software. Wikipedia defines educational software as computer software, the primary purpose of which is teaching or self-learning. Educational software help teachers improve their teaching skills and students their learning skills. Educational software is available in plenty, though many of them may not suit everyone's requirements. Thus, you have to select a software as per your requirement and context. You can choose appropriate software from a huge range of educational software. You have to be very careful in selection of the software for their use for educational purposes. Educational software can be divided into two categories. As already mentioned, the teacher can select as per the context, need and the level of the learners.

**1) Content-free Software:** They help or facilitate the learners/users to create their own contents. Learners can create their own contents as these are more open-ended like word processing suite, and graphic programs. It can be used across disciplines/subjects. For example, if you want to develop a material for its use in teaching history or geography, it can be easily done by word processing software. This software not only facilitate creation of text files but also multimedia files. If you want to add an audio file, it can be done through audio recording and editing software like Audacity. Similarly, planning an essay or a brainstorming session in any subject area can be done through any concept mapping software like c-map, or free mind. The graphics can be used and modified using Paint, etc. If a teacher intends to use technology for teaching-learning purpose, these Content-free Software facilitates him/her for a wide range of cross-curricular teaching and learning activities. Content-free software also offers better opportunities for sharing and collaboration of reusable resources.

**2) Content-rich Software:** As the name indicates, they focus on content. These are discipline/subject specific software which are used for teaching-learning purpose in particular subject. They typically comprise multimedia content (e.g., graphics, video, sound, animation, etc.), which are presented in a very structured way for concept building as well as concept clarification. Teachers use this software for teaching new topics for concept attainment and clarification among learners. They are often used as supplementary to classroom teaching in schools and provide an alternative way to teaching-learning. In using the content -rich software, the learner has the advantage of re-running the software till the mastery of the concept. These are used in schools, sometimes, as part of SMART classroom project and are useful in teaching-learning activities in schools. Most of this software are copyrighted and proprietary.

**Principles of Educational Software :** Principles are the guiding rules which help in smooth functioning of any area of knowledge. Though there are many principles of educational software, but there are three main principles which need to be considered while using educational software.

**1) Usability:** This is most important principle as it helps us to select whether the educational software, under consideration, is suitable for the intended task. This principle also takes care of the effectiveness and efficiency of the educational software in achieving its intended outcome.

**2) Usefulness:** The software should be able to make positive changes or help in improving teaching - learning process in the classroom. If it is not able to bring any improvement in teaching-learning process, its use becomes redundant. Thus, usefulness is another principle in selection of educational software.

**3) Desirability:** The quality which makes the software popular and desirable is its quality to motivate learners to learn new learning tasks. It should be effective in helping learners attain new concepts and clarify doubts. Any good software, especially educational software, must have all the three characteristics. All of these are interlinked to each other like desirability depends on usability. Most of the software development are governed by two general guidelines to accommodate these three principles –

- Know the user: This means the human aspect like the age, cognitive level and reasoning, leaning styles, social and psychological aspects; and
- Know the system: It is concerned with the delivery aspect i.e. the platform has the maximum reach, interoperable, etc.

**Free Open Source Software (FOSS)** Software are the computer programmes, which are written in programming language (codes) by developers. This is called ‘coding’. The coding is done as per the requirements, as discussed in previous section. To use a everyday analogy, coding is like recipe of a new dish. A cook keeps on modifying the recipe till the perfect desired taste is achieved. Similarly, coding is developed, modified, tested and revised till the desired output as software is reached. It is quite a comprehensive process. Now it depends on the developer or the organization he/she is working for to decide whether the code (source) should be shared with others or not. It is this decision which makes the software proprietary or free and open source.

**Proprietary Software:** Most people want to retain the rights of their creations and this is the concept of copyright or the intellectual property right. In case of software it is called proprietary software where code or the recipe is not disclosed by the developer to the users. One has to pay a license amount to use the proprietary software. In case of freeware, the code is not shared but the use of software is allowed for free.

**Free and Open Source:** The application of democratic values in education gave rise to free and open philosophy and the copy left movement. The basic premise of the copy left movement is sharing the code and the software with the user/ learner who in turn has the freedom to access, use, modify and, if need be, redistribute the software back to the community. Free and Open-Source Software (FOSS) is computer software that can be classified as both free software and open-source software. Anyone is free to use, copy, study and change the software in any way as per his/her need and context. As already discussed, the source code is shared with all and others are encouraged to make changes for the betterment of the design. This is in contrast to proprietary software, in which the software is under restrictive copyright and the source code is usually hidden from the users. Free in FOSS does not mean free in price but the liberty given to the user to run, copy, distribute study, change and improve the software. To understand the concept, you should think of “free” as in “free speech”. It is also sometimes called “libre software”. Software Libre (or libre software, or Free software) is software released in a way which grants users the freedom to run, copy, study, change, improve and share the software. ([http://wikieducator.org/Software\\_libre](http://wikieducator.org/Software_libre)) (<https://www.gnu.org/philosophy/free-sw.html>). It further states that free software grants its users four essential freedoms:



- ✚ To run the program as you wish for any purpose.
- ✚ To study how the program works and change it so that it does your computing as you wishes. Access to the source code is a precondition for this.
- ✚ To redistribute copies so you can help your neighbour.
- ✚ To distribute copies of your modified versions to others. This can be done through the sharing of source code so that the whole community gets a chance to benefit from your changes. The GNU General Public License (GNU GPL or GPL) is a widely used free software license, which guarantees end users (individuals, organizations, companies) the freedoms to run, study, share (copy), and modify the software. The license was originally written by Richard Stallman of the Free Software Foundation (FSF) for the GNU Project.

### Limitations of Educational Software's:

Though it seems very attractive, the use of open software also has its limitations:

- i) User Interface** - Sometimes the user interface is not as user friendly as in case of proprietary software. This is because in case of Open and free software, commercial angle is not involved, and therefore, it is more in terms of developer's perception of the need of the users than the researched need of the user.
- ii) Service support** - As the software is free and open, there is absence of any dedicated support service as in case of proprietary software. There is community of users who respond and fix problems for the user but that is not as prompt as in case of proprietary software.
- iii) Compatibility issues** - In case of some proprietary hardware, there is requirement of specialized drivers to run open source programs. These have to be procured from the equipment manufacturer. This can potentially add to the cost of your project. Even if an open source driver exists, it may not work with your software as well as the proprietary driver.
- iv) Hidden costs** - Software that is free up-front but later costs money to run can be a major burden, especially if you haven't considered these hidden costs from the outset.

**Conclusion:** Activities with educational software Baltie, GeoGebra and Imagine can effectively assist teachers in supporting the pupil's cognitive process. Pupils can develop its formal and logical reasoning, cooperation and communication. They gain skills that are necessary for the research work, e.g. an ability to implement a simple research project, to formulate a problem, to look for the solution and cause context, and to learn how to use various methods of problem solving. The characteristic features for the new competencies are integration, connection and non-demanding extension of known subject using of different methods by the problem solving.

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## SMART CLASSROOM SCHOOLS, TEACHERS TEACHING LEARNING ENVIRONMENT IS HIGH EFFECTIVENESS OF ACADEMIC ACHIEVEMENT

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### Abstract

*“Smart School Systems Connect Discover With Classroom Solutions” Smart classrooms are basically technologically and electronically enhanced classrooms which is the tool used for teaching to the students by the method of E-Learning. E-Learning refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance. It is based on three fundamental criteria: The main aim of classroom teaching should be to facilitate learning. Classroom: A classroom is a place where various activities are going on, where interactions take place, social situations are enhanced and norms are built-in instructional situations. The goal of smart education is to foster smart learners to meet the needs of the work and life in the 21st century. An all-around composition of mode of lesson delivery, formative and summative assessments, preschooler's teamwork, and game based application in the whole learning set up.*

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### INTRODUCTION:

#### “SMART SCHOOL SYSTEMS CONNECTED DISCOVER WITH CLASSROOM SOLUTIONS”

Smart classrooms are basically technologically and electronically enhanced classrooms which is the tool used for teaching to the students by the method of E-Learning. E-Learning refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance. It is based on three fundamental criteria: The main aim of classroom teaching should be to facilitate learning. Classroom: A classroom is a place where various activities are going on, where interactions take place, social situations are enhanced and norms are built-in instructional situations.

The goal of smart education is to foster smart learners to meet the needs of the work and life in the 21st century. An all-around composition of mode of lesson delivery, formative and summative assessments, preschooler's teamwork, and game based application in the whole learning set up.

What is the concept of a smart classroom?

Standard smart classrooms are teacher-led learning spaces that usually include a computer, interactive whiteboard and projector. Like a traditional class, teachers deliver front-of-class learning – but the smart technologies provide students more opportunities to interact with the content, the teacher What is the impact of smart classrooms?

Smart classrooms also reduce distractions, and therefore, students can concentrate more and retain more information. A smart classroom uses smart class equipment like a digital board, projectors, computers, LED, etc., for imparting quality education. Effective classroom management can create a positive learning environment that: Fosters an environment that supports academic, social, and emotional learning; Facilitates a structured and organized environment where students can focus on learning; and. What is the scope of smart classroom?

A smart classroom provides the students and teachers with virtual interactive sessions, access to adaptive and collaborative learning, performance-based assessments, and developing students' abilities and performance

What is the main aim of classroom learning?

### 2. OBJECTIVES OF THE STUDY.

**SMART Goal Components:** What is the principle And What are SMART goals examples?

The SMART in SMART goals stands for Specific, Measurable, Achievable, Relevant, and Time-Bound. Defining these parameters as they pertain to your goal helps ensure that your objectives are attainable within a certain time frame.

1 specific, Specific: Specific (concrete, detailed, well-defined) I'm going to study daily so I can ace chemistry

2 measurable, Measurable: Measurable (numbers, quantity, comparison) I have monthly quizzes to evaluate

3 achievable, Achievable: Achievable (feasible, actionable) I'm good in school and can get great grades when I focus

4 Relevant: Realistic or Relevant (consider resources) I want to graduate at the top of my class and have the opportunity for a great career in my field

5 time-bound.

6. Evaluate,

7. and Reward.

What are the elements of SMART classroom?

- Interactive whiteboards, Interactive boards , Performance analysis system laptops, tablets, learning management systems, Robotics lab , Facial Recognition based security system: AI-based learning: Augmented learning education apps and even video conferencing tools have become core smart classroom components. Smart device-based learning: ...

- What are the facts about smart classrooms?

- A smart classroom is a digital classroom which is an advanced form of a school that follows different ways of teaching to improve efficiency. They work towards providing a better environment for learning and prioritize a healthy classroom where the students are interested in learning. Following objectives are formulated to realize the present study :

1. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among primary school teachers
2. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among male primary school teachers.
3. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among female primary school teachers.
4. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among urban primary school teachers.
5. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among rural primary school teachers
6. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among government primary school teachers.
7. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among private primary school teachers.
8. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among graduate primary school teachers.
9. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among post-graduate primary school teachers.
10. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among below 40 years age primary school teachers.
11. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among above 40 years age primary school teachers

12. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among below 10 years teaching experienced primary school teachers.

13. To investigate the relationship of awareness of ICT, use of ICT, attitude toward ICT, competencies in ICT with teaching effectiveness among above 10 years teaching experienced primary school teachers.

### **RESEARCH METHODOLOGY**

This study was compiled with the help of both primary and secondary data. The primary data were collected directly from the Principals and management of the schools with the help of a questionnaire. The secondary data have been collected from the internet and journals, newspapers. Descriptive research design is adopted for the study. Simple random sampling method is used to collect the data.

#### ***ICT Awareness of Teachers***

The explosion of digital technology has created a revolution in educational instructions. The flexibility, high speed and huge storage capacity of ICT is causing teachers to redefine and rethink the traditional process of teaching. The challenges facing teachers are to evaluate relevant applications of information and communication technologies in the teaching learning process. At the same time, instruction utilizing information and communication technologies must reflect what is known about effectiveness of student-centered teaching and learning process. The digitization of technologies has made a great impact on teachers' role. The impact can be felt in many ways. Digital technologies are changing the ways teachers interact with students in the classroom. Teachers and students have virtual discussions related to course content, advice and counselling in a wide variety of times and paces through email and other features of the web. Teachers and students now produce documents with more information and in far more diverse formats as a result of desktop publishing, online libraries and databases and file transfer capabilities. The pervasiveness of digital technologies motivates a thorough review of technological impact of instruction in education.

#### ***Teaching Effectiveness***

In recent years an enormous amount of public attention has been focused on teacher quality and teacher preparation (Cochran-Smith, 2006). These initiatives have listed the effectiveness of teachers as a major factor in improving student achievement. Effective instruction meets the demands of the students with respect to the academic disciplines of the teachers i.e., their subjects of teaching. The effectiveness of teachers and teaching are most significant in determining the learning of students (Ferguson, 1991; Ingersoll, 2004; Sanders, 1998). Teacher Effectiveness is vital for improving student learning and achievement (Darling-Hammond, 2000; Hanushek & Rivkin, 2004; Hanushek, Kain, O'Brien, & Rivkin, 2005; Rivkin et al., 2005). Researches support that the actions taken by the effective teachers in the classroom play a fundamental role in effective and efficient learning of the students (Andrew & Schwab, 1995; Markley, 2004; Wang & Fwu, 2007). *Effectiveness* of a teacher can be described as their success in helping students to learn and the *related characteristics* of effectiveness can be described as certain qualities which are related to teachers' effectiveness and which enable the teachers to achieve success in education (Walker, 2008). During last two decades, numerous researchers throughout the World have been studying related characteristics of Teacher Effectiveness. In order to discuss about these characteristics, they may broadly be categorized into three main streams i.e., School related, teaching related and Teacher related characteristics according to the nature of assessing variables.

### **ANALYSIS AND INTERPRETATION**

#### **Research Design**

**Research Method :** The present study was a descriptive survey research. The method deals with the relationship between the variables, the testing of hypotheses, and the development of generalizations, principles or theories that have universal validity. Descriptive research has been divided into several

types, however, they are all attempting to find generalizable attitudes, and they all deal with present conditions. The study was focus on the investigation of awareness of ICT, use of ICT, attitude towards ICT and their relationship with teaching effectiveness of school teachers.

### Tools Used

The following research tools were used to collect the essential data. They are :

1. Awareness of ICT Scale,
2. Use of ICT Scale,
3. Attitude towards ICT Scale,
4. Teaching Effectiveness Scale.

### 1. Research Method :

**Table – : Relationship between Awareness of ICT, Use of ICT, Attitude toward ICT with Teaching Effectiveness –**

VARIABLES	Teaching Effectiveness				
	r-value	df	t-value	p-value	Signi.
SCHOOL TEACHERS AWARENESS OF ICT	0.7294	265	17.3587	< 0.05	Yes
USE OF ICT	0.5938	265	12.0152	< 0.05	Yes
ACADEMIC ACHIEVEMENT ATTITUDE TOWARD ICT	0.6841	265	15.2680	< 0.05	Yes

### Interpretation

*The analysis of the above table reveals the following :*

1. Since the obtained 't' value 17.3587 is greater than the tabled 't' value 1.96 at 0.05 level, the hypothesis that  $r_{pop.}$  is zero is rejected. It thus implies that the obtained correlation is a significant. This reveals that there is relationship between awareness of ICT of female teachers and their teaching effectiveness.
2. Since the obtained 't' value 12.0152 is greater than the tabled 't' value 1.96 at 0.05 level, the hypothesis that  $r_{pop.}$  is zero is rejected. It thus implies that the obtained correlation is a significant. This reveals that there is relationship between use of ICT of female teachers and their teaching effectiveness.
3. Since the obtained 't' value 15.2680 is greater than the tabled 't' value 1.96 at 0.05 level, the hypothesis that  $r_{pop.}$  is zero is rejected. It thus implies that the obtained correlation is a significant. This reveals that there is relationship between attitude towards ICT of female teachers and their teaching effectiveness.

**Findings :** The interpretation of the data reveals the following findings :

1. There is a positive and significant relationship between awareness of ICT of female primary school teachers and their teaching effectiveness.
2. There is a positive and significant relationship between use of ICT of female primary school teachers and their teaching effectiveness.
3. There is a positive and significant relationship between attitude towards ICT of female primary school teachers and their teaching effectiveness.

### 5. INTERPRETATION

What is the need and importance of SMART classroom? Why are Smart Classrooms Important? Smart classrooms allow teachers to change and adapt their teaching styles to help meet the needs of the students sitting in their classrooms. Technology can help students with a variety of learning needs and is important for helping kids with learning challenges. One of the smart classroom advantages is that teachers can use smart class tools to make the classroom interactive and learning more fun. As learning becomes more engaging with a smart classroom, students understand concepts better and retain them for longer.

**CONCLUSION:** The concept of smart class is being important facility in the schools as it helps in improving the effectiveness of teaching. Majority of the respondents were satisfied about the facilities and all the benefits, of smart class. Since many of the respondents are feel satisfied in excellent level with its facilities and features. So, we could conclude that there is excellent scope for smart class in Coimbatore and to make it the most effective the schools should develop itself more and more in the future than past.

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## APPLICATION OF ARTIFICIAL INTELLIGENCE IN LIBRARY SERVICES: IMPLEMENTATION, BENEFITS, AND CHALLENGES

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### Abstract

*The advent of Artificial Intelligence (AI) has revolutionized numerous industries, and libraries are no exception. In recent years, libraries have been increasingly adopting AI technologies to enhance their services, streamline operations, and provide more personalized experiences to patrons. This research article delves into the application of AI in library services, discussing its implementation, benefits, and the challenges faced by libraries in incorporating AI into their operations.*

**Keywords:** AI, Library, Benefits, Challenges, Implementation.

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### 1. Introduction

Libraries have long been regarded as repositories of knowledge and information, and their role in society has evolved in tandem with technological advancements. The emergence of AI has provided libraries with new tools and capabilities to better serve their patrons. AI, encompassing machine learning, natural language processing, and computer vision, has the potential to transform how libraries manage collections, assist users, and optimize their operations.

### 2. Implementation of AI in Library Services

There are a number of different ways that libraries can implement AI. Some libraries are developing their own AI solutions in-house, while others are partnering with companies that develop AI-powered library software and tools. There are also a number of open-source AI solutions that libraries can use. When implementing AI, it is important for libraries to carefully consider their needs and goals. Libraries should also develop a plan for how they will evaluate the success of their AI initiatives.

**2.1. Search and retrieval:** AI can be used to develop more sophisticated and effective search algorithms that can better understand the intent of users' queries and return more relevant results. AI can also be used to develop tools that can help patrons to narrow down their search results and find the information they need more quickly.

**2.2. Recommendation systems:** AI can be used to develop recommendation systems that can suggest books, articles, and other resources to patrons based on their interests and past usage history. This can help patrons to discover new and relevant resources that they may not have found on their own.

**2.3. Personalization:** AI can be used to personalize the library experience for each individual patron. For example, AI can be used to recommend books to patrons based on their reading history, or to suggest events and programs that may be of interest to them. AI can also be used to create customized library websites and portals for patrons.

**2.4. Automation:** AI can be used to automate many of the routine tasks that librarians perform, such as cataloguing materials, processing returns, and answering reference questions. This can free up librarians to focus on more complex tasks and to provide more personalized service to patrons.

**2.5. New services:** AI can be used to develop new and innovative library services that were not possible before. For example, AI-powered chatbots can provide 24/7 reference assistance, and AI-powered virtual reality tours can allow patrons to explore libraries and collections from anywhere in the world.

### 2.6. Collection Management

AI technologies can assist libraries in cataloguing, classification, and recommendation systems. AI-driven algorithms can automatically classify and tag library materials, making it easier for patrons to discover relevant resources. Recommendation systems, akin to those used by online retailers and

streaming services, can suggest books, articles, or other resources based on a user's past behaviour and preferences.

#### **Case Study: The New York Public Library**

The New York Public Library (NYPL) is a prime example of how AI can enhance collection management. The library implemented an AI-driven cataloguing system that uses machine learning to automatically tag and categorize newly acquired materials. This significantly reduced the workload for cataloguers and improved the accuracy of metadata, making it easier for users to search and discover resources.

#### **2.7. Chatbots and Virtual Assistants**

Libraries have incorporated AI-powered chatbots and virtual assistants to provide immediate assistance to users. These chatbots can answer common questions, help with navigating the library's website, and even guide users in conducting research.

#### **Example: The University of Washington Libraries**

The University of Washington Libraries implemented a chatbot named "Sara" to assist users with a wide range of tasks, from locating books to providing information on library hours and policies. Sara utilizes natural language processing to understand user queries and provide relevant responses, offering a seamless support experience for library patrons.

#### **2.8. Content Digitization and Preservation**

AI, particularly computer vision, is employed in digitizing and preserving fragile or deteriorating materials. Optical character recognition (OCR) technology can convert printed materials into digital formats, making them accessible to a broader audience.

#### **Case Study: The British Library**

The British Library embarked on a digitization project using AI to convert historical manuscripts into digital formats. AI-powered image recognition and OCR tools allowed the library to preserve delicate documents while making them available for online research and study.

#### **2.9. Personalized Services**

AI can facilitate personalized services by analysing user behaviour and preferences. For instance, it can recommend relevant resources, notify users about events or publications of interest, and even create personalized reading lists.

#### **Example: The Library of Congress**

The Library of Congress uses AI to provide personalized recommendations to users. By analysing users' borrowing history and preferences, the library's AI system suggests books, research papers, and other resources that align with their interests, enhancing the overall user experience.

### **3. Benefits of Implementing AI in Library Services**

AI offers a number of potential benefits for libraries, including:

**3.1. Improved efficiency and productivity:** AI can help libraries to automate many of their routine tasks, which can free up librarians to focus on more complex tasks and to provide more personalized service to patrons.

**3.2. Enhanced user experience:** AI can help libraries to personalize the user experience and make it easier for patrons to find the information they need. AI can also be used to develop new and innovative library services that were not possible before.

**3.3. Increased access to information:** AI can help libraries to improve access to information for all patrons, including those with disabilities or who live in remote areas.

**3.4. Reduced costs:** AI can help libraries to reduce costs by automating tasks and by improving efficiency.

### 3.5. Improved User Experience

AI-enhanced services provide a more personalized and efficient experience for library patrons. Users can easily find relevant materials, receive timely assistance, and access resources in digital formats. This leads to higher user satisfaction and increased engagement with library services.

### 3.6. Efficient Operations

AI can automate routine tasks such as cataloguing, freeing library staff to focus on more complex and value-added activities. This leads to improved operational efficiency and allows libraries to reallocate resources to areas where human expertise is most needed.

### Case Study: The Singapore National Library

The Singapore National Library implemented AI-driven inventory management to optimize the allocation of books and other materials across its branches. This resulted in reduced manual labour and improved inventory accuracy, ensuring that patrons could find the materials they needed more easily.

### 3.7. Enhanced Accessibility

AI-driven technologies improve accessibility for users with disabilities. Text-to-speech conversion and image recognition tools can make library resources more inclusive, ensuring that all patrons, regardless of their abilities, can access and benefit from the library's offerings.

### 3.8. Data-Driven Decision-Making

AI generates valuable insights from user data, aiding libraries in making data-driven decisions regarding resource acquisition, space utilization, and service improvements. These insights can inform collection development strategies and help libraries better understand user preferences and needs.

## 4. Challenges in Implementing AI in Library Services

There are also a number of challenges that libraries face when implementing AI, including:

**4.1. Expertise:** Libraries may not have the in-house expertise to develop their own AI solutions.

**4.2. Data privacy and Ethics:** Libraries need to be careful to protect the privacy of their patrons' data when using AI. Libraries also need to consider the ethical implications of using AI, such as the potential for bias and discrimination.

### 4.3. Privacy Concerns

AI relies on user data, which can raise privacy concerns. Libraries must implement robust data protection measures and ensure compliance with relevant regulations, such as GDPR or CCPA. Balancing the benefits of AI with the protection of user privacy is an ongoing challenge.

### 4.4. Cost and Resources

Implementing AI technologies requires a significant investment in hardware, software, and staff training. Smaller libraries may face budget constraints in adopting AI solutions. Additionally, ongoing maintenance and updates can also be costly.

### 4.5. Skill Gaps

Libraries may lack the technical expertise required to develop, implement, and maintain AI systems. Collaboration with external experts or organizations might be necessary to bridge these skill gaps. Training existing staff in AI-related tasks is another approach to address this challenge.

### 4.6. Ethical Considerations

AI algorithms can inadvertently introduce biases, impacting the neutrality of library services. Libraries must be vigilant in addressing bias and ensuring equitable access. Developing ethical guidelines and auditing AI systems for fairness and transparency is crucial to mitigate these risks.

## 5. Future Directions

The integration of AI in library services is an ongoing process, and the future holds promising possibilities. As AI technologies continue to advance, libraries can further enhance their services and adapt to the changing needs of patrons. Future directions include:

**Advanced Recommendation Systems:** AI-driven recommendation systems will become more sophisticated, providing patrons with highly tailored suggestions for reading materials, research topics, and events.

**Enhanced Virtual Reality (VR) and Augmented Reality (AR) Experiences:** AI-powered VR and AR applications could create immersive learning environments within libraries, enhancing research and education.

**Voice Recognition and Natural Language Processing:** Improved voice-activated interfaces will enable patrons to interact with library services using natural language, making access to information even more user-friendly.

## 6. Conclusion

The application of AI in library services offers a plethora of benefits, from improving user experiences to streamlining operations. However, libraries must address the associated challenges, including privacy concerns and ethical considerations, to ensure that AI integration aligns with their mission of providing equitable access to information. As libraries continue to evolve, AI will play an increasingly integral role in shaping the future of library services. By embracing AI and navigating the challenges wisely, libraries can remain vital hubs of knowledge and learning in the digital age.

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## INNOVATIVE LEARNING WITH AUGMENTED AND VIRTUAL REALITY TECHNOLOGIES: A JOURNEY INTO THE FUTURE OF EDUCATION

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### Abstract

*The integration of Augmented Reality (AR) and Virtual Reality (VR) into education represents a paradigm shift in the way students learn and engage with knowledge. This paper explores the transformative potential of Augmented Reality and Virtual Reality technologies in education and their ability to transcend traditional classroom constraints. A transformational change toward more engaging, immersive and successful learning experiences is being brought about through the integration of augmented reality and virtual reality into education. The notion that learning should not be restricted to physical classrooms, textbooks or geographic bounds is what motivates this voyage into the future of education. With their vibrant, engaging and intensely immersive learning environments, augmented reality and virtual reality technologies are redefining the conventional classroom. These technological advancements offer the ability to tackle a variety of educational issues, from improving student engagement and comprehension to providing individualized learning environments for various student demographics. Textbooks are no longer the only sources of knowledge and the classroom is no longer confined to four walls. A new era of learning—one that is dynamic, participatory and profoundly transformative—has arrived thanks to augmented reality and virtual reality.*

**Keywords:** Augmented reality (AR), Virtual Reality (VR), Extended Reality (XR), Artificial Intelligence (AI), Innovative Learning, Experiential Learning.

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### Introduction

The ability of humans to create and innovate has always been the foundation of education as the engine of development. The realization of our collective dreams—a future in which learning is not constrained by the constraints of physical classrooms, textbooks or geographical boundaries—is what augmented reality and virtual reality represent. Our educational landscape is changing drastically in the digital age. With the help of augmented reality and virtual reality, the classroom is no longer a static setting but rather a dynamic one where students may travel through time, examine the human body in detail, discover far-off galaxies and collaborate with classmates from around the world.

The foundation of development and empowerment has always been education, yet this is an area that is constantly changing to meet the shifting demands of society. We are at a turning point in the history of education in the digital age. The blending of augmented reality and virtual reality technology represents a change in how we impart knowledge and interact with it. We must acknowledge that our educational system is undergoing a significant shift as we stand at the nexus of traditional teaching and cutting-edge technology.

### Augmented reality and Virtual Reality definition

While Virtual Reality creates a totally immersive, computer-generated experience that replaces the actual world, augmented reality enriches the real world by adding digital features. Both technologies have uses in a variety of industries, including gaming, education, and healthcare as well as entertainment.

**Augmented reality** refers to a technology that superimposes digital data, such as pictures, movies, or 3D models, onto the physical world. Through the addition of computer-generated features, augmented reality improves the physical environment. Users can view and interact with these elements using smart phones, tablets, or AR glasses. Because it combines the real and virtual worlds, augmented reality enables users to interact with digital information while remaining conscious of their actual environment.

**Virtual Reality** is a technology that entirely submerges people in a simulated, artificial environment. In order to fully immerse oneself in a virtual Reality experience, it is customarily necessary to wear a specific headgear that covers the user's ears and eyes. Users of this immersive technology may feel as

though they have been transported to another setting or circumstance. Virtual Reality experiences can range from 360-degree video experiences that are more immersive to ones that completely replace the actual world.

### **Augmented reality and Virtual Reality in Education: Benefits**

Both augmented reality (AR) and virtual reality (VR) have many benefits for education, altering conventional teaching strategies and improving the learning environment as a whole. Some of the main benefits of augmented reality and virtual reality in education are as follows:

1. **Increased Engagement:** Augmented reality and virtual reality increase learning's interactivity and interest. Students are actively engaged in the educational material, which increases their motivation and interest in it.
2. **Better comprehension:** It might be difficult to comprehend abstract and difficult subjects using conventional approaches. Particularly in disciplines like physics and mathematics, augmented reality and virtual reality can offer visual and interactive representations that make it simpler for students to understand challenging concepts.
3. **Experience Learning:** Augmented reality and virtual reality offer students the chance to engage in experience learning by letting them explore virtual worlds and situations that would be difficult or expensive to replicate in the real world. For instance, students can study the human body, travel back in time, or perform science experiments virtually.
4. **Individualized Learning:** Augmented reality and virtual reality can adjust to different learning pacing and styles. They provide individualized learning opportunities that are tailored to each student's unique requirements and interests, enabling them to advance at their own pace.
5. **Accessibility and Inclusivity:** These technologies can help students with disabilities access education more easily. For instance, virtual reality can offer immersive experiences that cater to different learning methods, and augmented reality can deliver real-time text-to-speech translations.
6. **Practical Application:** Augmented reality and virtual reality make it possible to apply information and skills in the real world. For instance, students can build practical skills in virtual labs or practice problem-solving in a mock business environment.
7. **Gamification of Learning:** By making learning feel like a game, gamification components in augmented reality and virtual reality can inspire students. Competition, points, and incentives can all improve student engagement and enjoyment of the learning process.
8. **Remote and distance learning:** is made easier by augmented reality and virtual reality, enabling students to access educational materials and experiences from any location in the world. This is especially helpful for students who live in rural places or during emergencies.
9. **Cultural and Historical grasp:** Augmented reality and virtual reality may take students to various historical periods, cultural landmarks, or geographical areas, enabling them to gain a more thorough grasp of other cultures and historical periods.
10. **Interdisciplinary Learning:** By allowing students to examine history, science, art, and geography all at once inside a single immersive experience, these technologies promote interdisciplinary learning.
11. **Real-time Feedback and Assessment:** With the help of Augmented reality and virtual reality, students can monitor their progress and spot areas in which they need to improve.
12. **Safety Training:** Augmented reality and virtual reality can offer safe and realistic training environments for students to practice skills and procedures without danger in industries like healthcare and aviation.
13. **Career Preparation:** By enabling students to use industry-standard software and tools in virtual environments, augmented reality and virtual reality can help students become ready for professions in sectors like architecture, engineering, education, and design.



## **Pedagogical Frameworks for the Integration of augmented reality and virtual reality**

To ensure that these technologies effectively improve the learning experience, pedagogical frameworks and tactics must be carefully considered when integrating augmented reality and virtual reality into education. Here are several pedagogical frameworks and methods for incorporating augmented reality and virtual reality into education:

### **1. Experiential learning and constructivism**

Theory: Constructivism places a strong emphasis on how knowledge is actively constructed by students via experiences. According to theories of experiential learning, students learn best through practical, hands-on experiences.

Application: Augmented reality and virtual reality give students the chance to investigate and engage with the content, encouraging active learning. In order to increase the significance of learning, teachers might provide exercises and simulations that let students build their own understanding.

### **2. Bloom's Taxonomy:**

Theory: This theory divides learning into six categories, ranging from simple knowledge recall to higher-order thinking abilities like analysis, synthesis, and assessment.

Application: Different levels of Bloom's Taxonomy can be addressed with Augmented reality and virtual reality. They can support higher-order thinking (such as problem-solving in a simulated environment), comprehension (such as understanding scientific concepts), and information acquisition (such as historical facts).

### **3. Inquiry-based learning:**

Theory: behind inquiry-based learning Students are encouraged to actively seek answers by asking questions, researching subjects, and conducting investigations. It encourages inquiry and skepticism.

Application: By enabling students to research virtual worlds, carry out experiments, and explore them, augmented reality and virtual reality can assist inquiry-based learning. Teachers can create situations that encourage research and discovery.

### **4. Gamification and Game-Based Learning:**

Theory: gamification combines game components (such as leader boards, badges, and points) with non-game situations to engage and inspire students. Game-based learning involves utilizing instructional video games.

Application: Gamification features can be included into Augmented reality and virtual reality to boost motivation and engagement. Virtual reality -based educational games can offer engaging, interactive learning opportunities.

### **5. The flipped classroom approach**

Theory: The flipped classroom paradigm turns conventional teaching strategies on their heads. Before class, students independently examine the material, and discussion, problem-solving, and active learning take up the majority of the class period.

Application: Augmented reality and virtual reality can be utilized to develop interesting pre-class materials that students experience before to participating in live or recorded conversations.

### **6. Collaborative Learning:**

Theory: Collaborative learning promotes teamwork, information sharing, and problem-solving among students.

Application: By providing shared virtual experiences, augmented reality and virtual reality can support group learning. Students from various regions can work together on assignments, carry out virtual experiments, or tour historic sites virtually.

## **7. Authentic Learning:**

Theory: Authentic learning emphasizes relevance and usefulness and encourages real-world uses of information and skills.

Application: By mimicking real-world situations, augmented reality and virtual reality can produce authentic learning experiences. For example, healthcare students can practice patient care in virtual hospitals, honing their abilities in a secure setting.

Educators should carefully select and adapt these pedagogical frameworks to align with their learning objectives, student needs and the subject matter. Effective integration of augmented reality and Virtual Reality in education involves not only the technology but also thoughtful instructional design that leverages these frameworks to maximize learning outcomes.

## **Challenges and Things to Think About**

While augmented reality and virtual reality have many advantages for education, there are also a number of difficulties and factors to take into account when implementing them. The following are some of the main issues and things to think about while using Augmented reality and virtual reality in education:

### **1. Technical Barriers:**

Hardware Access: Specialized hardware is needed for virtual reality in particular, such as headsets and controllers, which can be expensive and may not be affordable for all students. Technical Issues: System requirements, compatibility issues, and technical malfunctions might interfere with learning and necessitate continuing technical help.

### **2. Resource-intensive Content Creation and Duration:**

It might take a lot of time and resources to produce excellent augmented reality and virtual reality content. To create or modify content, educators may require support services and training. For learning to be successful, it is crucial that the content be accurate, pedagogically solid, and engaging.

### **3. Equity and Access:**

The Digital Divide: Not all students have equal access to augmented reality and virtual reality technology, which can exacerbate educational disparities.

Accessibility: It's essential to make sure that augmented reality and virtual reality content is usable by students with disabilities. This takes sensory, motor, and cognitive limitations into account.

### **4. Teacher Training and Professional Development:**

Digital Literacy: Teachers must receive professional development to learn how to use augmented reality and virtual reality products successfully for educational reasons.

Pedagogical Skills: By incorporating augmented reality and virtual reality into the curriculum, teachers can use these technologies to enhance student learning by modifying their pedagogical strategies.

### **5. Privacy and Ethical Issues:**

Data Privacy: To secure student information, strict privacy requirements must be followed when collecting and maintaining student data in augmented reality and virtual reality settings.

Content Appropriateness: It's crucial to make sure that augmented reality and virtual reality content is suitable for children of all ages and complies with national and state educational requirements.

### **6. Cost and Budgeting:**

Initial Investment: Putting augmented reality and virtual reality into practice can be expensive because it requires spending money on hardware, software, creating content and maintaining it.

Sustainability: Long-term planning must account for ongoing expenses such as updates, maintenance and content creation.

**7. Curriculum Integration:**

Alignment with Learning Objectives: To guarantee that augmented reality and virtual reality improve rather than hinder the learning experience, they should be in line with educational objectives and curriculum standards.

Time Allocation: It might be difficult to decide how much class time should be devoted to AR and VR activities and how they fit into the overall curriculum.

**8. Content Relevance:**

Subject Matter Relevance: Not all themes or topics may benefit equally from augmented reality and virtual reality. Finding the areas where these technologies can have the biggest influence requires careful thought.

Balancing information: In order to maintain a well-rounded educational experience, it is crucial to balance augmented reality and virtual reality information with other teaching approaches.

**9. learning curve:**

Student learning curve: Students may first struggle with technology and require some time to become used to new teaching methods.

Teacher Learning Curve: When incorporating augmented reality and virtual reality into their teaching methods, educators may also experience a learning curve.

**10. Evaluation and Assessment:**

It might be difficult to create efficient assessments for augmented reality and virtual reality experiences. It could be necessary to modify or add to traditional assessment techniques. A systematic strategy, collaboration between educators, administrators, and technology experts, as well as ongoing review and modification of augmented reality and virtual reality deployment tactics are necessary to address these issues. When used effectively, augmented reality and virtual reality can offer worthwhile, immersive learning experiences that improve education's overall efficacy.

**Future Trends and Their Consequences**

The use of augmented reality and virtual reality in education is expected to develop and change significantly in the next years. As technology develops, a number of significant trends and implications are influencing how AR and VR will be used in education in the future:

**1. More Accessible Hardware:**

As more affordable headsets and devices hit the market, augmented reality and virtual reality hardware is becoming more accessible. Lessening entrance hurdles, increased accessibility will enable more students and institutions to integrate augmented reality and virtual reality into their learning processes.

**2. Wider Subject Offerings in Content Libraries:**

The subject offerings in content libraries for educational augmented reality and virtual reality experiences are expanding. It will be simpler for teachers to incorporate augmented reality and virtual reality into different curriculum and instructional scenarios thanks to the abundance of resources available to them.

**3. Enhanced Interactivity and Immersion:**

New developments in augmented reality and virtual reality technology will result in experiences that are both more interactive and immersive. Students will gain from more relevant and interesting learning settings that encourage in-depth comprehension and material retention.

**4. Improved cooperation and Social engagement:**

Even in distance learning environments, augmented reality and virtual reality platforms are adding elements that encourage cooperation and social engagement among students. These features will promote collaboration, teamwork, and group projects in online settings, generating a sense of participation and community.

**5. Artificial intelligence (AI) integration:**

Augmented reality and virtual reality platforms are incorporating Artificial intelligence -powered analytics and adaptive learning algorithms. Adapting educational experiences to the requirements of each student and offering relevant content and support.

**6. Extended Reality (XR):**

Extended Reality is a burgeoning immersive technology category that incorporates augmented reality, virtual reality, and mixed reality. It provides a range of experiences, from wholly virtual to only slightly augmented, enabling a variety of educational uses.

**7. Lifelong Learning and Professional Development:**

The usage of augmented reality and virtual reality for lifelong learning, professional development, and skill up skilling is growing. To enhance their vocations and skill sets, adults and professionals will have access to immersive training and educational experiences.

**8. Assessment and analytics:**

Incorporated augmented reality and virtual reality platforms will offer educators improved assessment tools and data analytics that will give them insightful information about student performance. Teachers can better monitor students' development and modify the curriculum to fit each student's needs.

**9. Ethical Issues and Digital Citizenship:**

As the use of augmented reality and virtual reality increases, concerns about digital ethics, privacy, and responsible use will gain ground. The proper use of augmented reality and virtual reality, as well as instruction on digital citizenship, will become crucial components of digital literacy education.

**10. Integration with Traditional Learning Methods:**

In the future, blended learning environments will be more prevalent as augmented reality and virtual reality are more fully integrated with conventional teaching techniques. The advantages of technology and the value of face-to-face encounters will be balanced by this integration.

**Conclusion**

A transformational path toward more engaging, immersive, and successful learning experiences is represented by the integration of augmented reality and virtual reality into education. As we've seen, augmented reality and virtual reality provide a variety of benefits, including raising comprehension and engagement levels in students as well as encouraging experiential learning and personalisation. Future learners—students who are better prepared to succeed in a dynamic, digital world—could be created using these technologies, which have the power to completely alter the educational landscape.

This change is not without its difficulties and limitations, though. To fully utilize augmented reality and virtual reality in education, there are a number of issues that must be solved, including technical obstacles, equality issues and the requirement for teacher training. Additionally, ethical issues, high-quality material and assessment techniques are crucial components in ensuring that these technologies be applied successfully and responsibly. augmented reality and virtual reality are strong drivers for transformation in education, not just tools. They may design inclusive, interesting, and flexible learning environments that equip students for success in the digital era.

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## TECHNOLOGY- A CATALYST TO TEACHING LEARNING PROCESS

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### Abstract

**Technology Integration in Education:** Now think of a situation, where you are teaching the topic 'Rusting of iron' to the secondary students. How would you convey this concept to your students? The conventional pedagogical approach is presenting the content through lecture method. But, how will you present the concept in a technology-enabled learning environment. In this case, you can use a 'video program' or 'simulation' for teaching 'rusting of iron'. But as teacher you will make sure that the selected technology is appropriate for teaching 'rusting of iron'? When selecting the technology, you should take into account the nature of topic/content going to be transacted in the classroom. You should also choose pedagogy appropriate to the topic. Thus, it might be clear to you that, to teach any topic (or content), you should select an appropriate technology taking into account both pedagogy and topic. Whenever technology is used to transact any topic that describes the technology integration in teaching-learning.

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### Technology Integration in Education

Now think of a situation, where you are teaching the topic 'Rusting of iron' to the secondary students. How would you convey this concept to your students? The conventional pedagogical approach is presenting the content through lecture method. But, how will you present the concept in a technology-enabled learning environment. In this case, you can use a 'video program' or 'simulation' for teaching 'rusting of iron'. But as teacher you will make sure that the selected technology is appropriate for teaching 'rusting of iron'? When selecting the technology, you should take into account the nature of topic/content going to be transacted in the classroom. You should also choose pedagogy appropriate to the topic. Thus, it might be clear to you that, to teach any topic (or content), you should select an appropriate technology taking into account both pedagogy and topic. Whenever technology is used to transact any topic that describes the technology integration in teaching-learning

### Introduction

Technology integration means teaching a subject which exists in the curriculum via technology as an instructional tool (Misirli, 2016). So, technology is a tool to transact the curricular content. "Technology integration is the application of technology to facilitate learning through different mediums, provide opportunities for student-centric learning, engage learners, and allow for differentiation and learning preferences" (Yemothy, 2012).

Davies & West (2013) defines technology integration "as the effective implementation of educational technology to accomplish intended learning outcomes. We consider educational technology to be any tool, piece of equipment, or device-electronic or mechanical-that can be used to help students accomplish specified learning goal". Educational technology includes instructional technologies that teachers use for instructional delivery and learning technologies that students use for accomplishing learning objectives. Thus, technology integration is nothing but the use of technologies or Medias in the teaching-learning process.

For example, when a teacher uses 'computer' to show an 'online video programme' during the teaching-learning process, this is one of the applications of technology. When presentation software like, PowerPoint is shown to present a topic, then technology is being utilized. Similarly, a teacher uses 'mobile phone' to video record an incident and that is used to teach any concept is also an application of technology. If the teacher directs the students to search 'internet' and explore the latest information about the topic being taught, technology is part of the teaching-learning process. Here you can see that,



‘computer’, ‘PowerPoint’, ‘mobile phone’, ‘online video program’, and ‘internet’ are technologies. These technologies are integrated in the teaching-learning process while transacting the use of such technologies (digital devices and application software tools) helps teachers to effectively transact the topic and achieve the desired learning objectives. Thus, whenever technology is utilized in the teaching-learning process, it implies technology integration

### **Need for Technology Integration and Challenges**

Why technology is integrated in education? One of the reasons of technology integration is to enhance the quality of education (teaching and learning). The quality of teaching-learning depends on various parameters such as school and higher education policies and practices, curriculum, teachers, institutional designs and strategies, institutional leadership, students and teaching-learning resources, etc. The ISID (n.d.) says, “merely providing adequate infrastructure, teaching -learning material, adequate teaching and non-teaching staff, providing conducive atmosphere in the school for learning are not sufficient requirements towards the quality education. Along with this, components of the curriculum, viz. syllabus, pedagogy, examination, affiliation and accreditation standards”. So, you may use the available technologies for teaching so that learning is more effective and it raises the quality of teaching-learning.

The second aspect is the ‘access’ to teaching-learning resources. You might have seen teachers using ‘textbook’ as the major teaching resource. You can also use various technologies along with the textbooks for teaching. Like for example, technologies such as video, text, e-book, discussion forum, social media, computer, mobile phone, internet, etc. Even though there exists digital divide, many technologies are accessible for both teachers and students. Since access to technologies are easy, it is recommended to integrate technology wherever possible.

Third, the ‘equity’ issues to a great extent can be addressed using technologies. You are aware that many educational institutions have computer labs and internet facilities. When educational institutions organize the facilities for technology-enabled teaching, students irrespective of their family financial status, gender and caste, etc., can avail the benefit of technology. This enhances the opportunity to avail technology-enabled education by all sections of the society. The SWAYAM (portal for MOCC) is an initiative in this direction. Through SWAYAM platform, higher education aspirants can enroll in various academic courses. Similarly, Swayamprabha, National Digital Library, etc., also helps students to access quality teaching learning resources irrespective of their demographic profile.

Fourth is the change in ‘trends in learning’. The students of twenty century are called digital natives. They prefer to learn through connected networks, collaboration and sharing information. Learning through networked environment is the basic principle of ‘connectionist’ approach of learning. So, along with learning approaches such as behaviorism, cognitivism and constructivism, the approach of connectionism has gained importance and can be easily made possible through technologies. In order to support the ‘trends in learning’ and needs of twenty century students, technology integration should be made possible and encouraged. The National Education Policy (2020) mentions technology integration is needed “to support teacher preparation and development; improve teaching, learning and evaluation processes; enhance educational access to disadvantaged groups; and streamline educational planning, administration and management”. Therefore, technology integration has implications relating to various aspects of teaching learning.

### **TECHNOLOGY INTEGRATION MODELS**

There are many digital devices and digital tools (application software’s). You may be using some of them like computer, mobile phone, presentation software (Microsoft PowerPoint, open office, etc.) and social networking site (Face book, WhtasApp, Twitter, etc.), video programme, etc., in your teaching. On what basis are you selecting and using such technologies? To select a suitable technology, you needs to take into account some factors.

### Apple Classrooms of Tomorrow (ACOT) Model

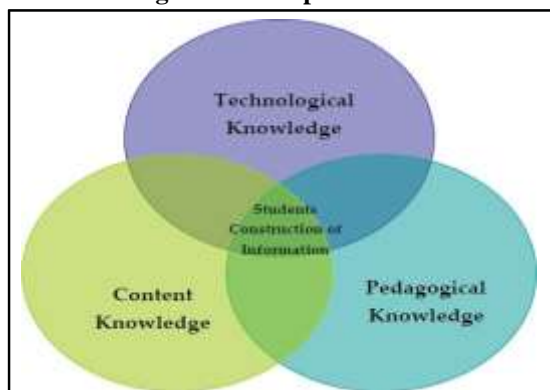
ACOT initiated by APPLE Company is one of the first models that describes media (or technology) integration. In 1985, the Apple Inc started a project to identify the impact of routine use of technology by teachers and students of public schools, Universities and research agencies in US. The project continued for long 10 years. In this project, teachers were asked to integrate different technologies like computers, video disc players, video cameras, scanners, CD ROM drives, modems, online communication devices, printers, laser discs, etc. in the instructional process at five different levels that is entry, adoption, adaptation, infusion, and transformation as you see in figure 1 (Dwyer et. al., 1991). Technology is used as a tool to support learning across the curriculum and the classrooms serves as multimedia environment, where students and teachers use textbooks, manipulative, overhead projectors, televisions, etc., as well as computers. The operating principle is to use the media that best supports the learning goal (Dwyer et. al., 1991). There after the effect of technology integration was studied. The research project identified that, technology in a big way enhances the effectiveness of teaching and learning.

Entry	Teacher uses technology to deliver curriculum content to students
Adoption	Teacher directs students for conventional use of tool-based software
Adaptation	Teacher encourages adaptation of tool-based software by allowing students to select and modify a tool to accomplish the task at hand
Infusion	Teacher consistently provides the infusion of technology tools with understanding, applying, analyzing and evaluating learning tasks.
Transformation	Teacher cultivates a rich learning environment, where blending choice of technology tools with student-initiated investigations, discussions, compositions, or projects across any content area is promoted.

**Fig. 1: ACOT Model: Levels of Integration**

(Source: <http://trojantechteachers.weebly.com/levels-of-technologyintegration.html>)

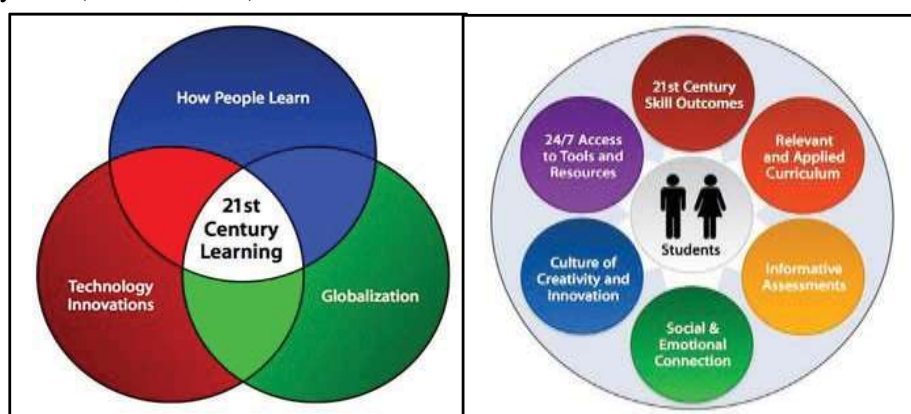
Realizing the progress of technology and its impact on education, the same project was extended giving rise to the second phase called Apple Classrooms of Tomorrow-Today (ACOT2). “Apple Classrooms of Tomorrow—Today (ACOT2) is a collaborative project with the education community to identify the essential design principles for the 21<sup>st</sup> century high school focusing on the relationships that matters most: those between students, teachers, and curriculum” (Apple Inc, 2008). The project was more goal oriented in the sense, it tried to evolve answers for various questions like, what is requirement of students regarding the learning environment? What are their expectations in the classroom? What factors motivate them to stay in schools? etc. To meet those goals, a three phased strategy was formulated. Let us observe these phases. In the first phase, the design principles (Fig.2) for twenty first century schools were developed. The design principles were the guiding philosophy of teaching-learning process. Before undertaking teaching, teachers must be well aware of the twenty first century learning outcomes. Those learning outcomes may be achieved through collaborative efforts and with the help technology. The learning is optimized for twenty first century. “Twenty-first century learning is at the confluence of three major influences: globalization, which increases global interdependence and competition; technology innovations that enable more engaged teaching and learning and provide 24 by 7 access to content and people; and new research on how people learn” (Apple Inc, 2008) (Fig.2). In the second phase, the design principles were practically implemented among the high school students through different technological mediums. “The third phase, ACOT2 will take these design principles and apply them to a bold project: 200 Days for a Lifetime of Success, a freshman year high school curriculum specifically designed to prepare students for success in life and work in the 21<sup>st</sup> century” (Apple Inc, 2008). Thus, Apple Classrooms of Tomorrow (ACOT) Model focuses on technology integration in five phases to develop the twenty first century skills among students.

**Fig.2: How People Learn**

(Source: file:///G:/PGDET%20Revision/Course%203/ACOT2\_Background.pdf)

### **Pierson's Technology Integration Model (Modified)**

Pierson (1999) defined technology integration as teachers utilizing content, technological and pedagogical expertise effectively for the benefit of students learning. The Pierson's Technology Integration Model (Modified) comprises of three components; content, pedagogy and technology as basis of technology integration. These components gave rise to three intersecting circles describing three types of knowledge. They are content knowledge, pedagogical knowledge and technological knowledge. Content knowledge refers to the teachers understanding about the content/subject matter going to be transacted in the classroom. While, understanding of teaching methods, classroom management styles, evaluation strategies, etc., denotes the pedagogical knowledge of the teacher. The technological knowledge pertains to the operational skills and ways of integrating technology in the instructional system (Pierson, 1999).

**Fig.3:Pierson's Technology Integration Model (Modified)**

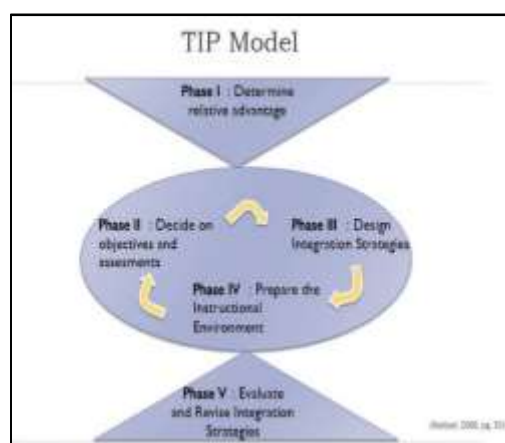
(Source: Pierson, 1999; Woodbridge, 2004)

As per Pierson's technology integration model, teachers should have adequate understanding of the content, pedagogy and technology to successfully integrate technology in the teaching-learning process. Later Woodbridge (2004) modified the Pierson's technology integration model by adding fourth component that is 'Students Construction of Information'. It is a fact that, unplanned use of technology in teaching will not help students for construction of knowledge. Teachers needs to take into account the content, pedagogy and technology and should systematically plan for integration of technology. Then, students can actively engage in the learning process and construct knowledge with the support of the teacher. Thus, the 'Students Construction of information' is the end result of effective integration of technology. Let us take an example. A teacher helps her students to understand the concept of

‘nuclear energy’. For this the teacher should definitely have the content knowledge (nuclear energy). You know that, nuclear energy has both advantages and disadvantages. So rather than mentioning the concept and definition of nuclear energy, the teacher can also conduct a debate regarding the advantages and disadvantages. So, teacher has to apply his/her pedagogical knowledge and technological knowledge so that an appropriate pedagogy and technology is selected to transact the content. Here a debate (pedagogy) may help teacher to engage student’s in discussion that would help them freely express their arguments about the advantages and disadvantages. The teacher can also create a discussion forum. In discussion forum also students can freely express their views. The participation of students in the debate and discussion forum would help them to broaden their understanding and construct newer knowledge. Thus, the use of technology helps students in construction of knowledge by themselves. So, whenever you integrate technology using Woodbridge model, then you should have content, pedagogical and technological knowledge. Along with that, you should judiciously select a technology that will enable students to construct knowledge of their own.

### Technology Integration Planning (TIP) for Teachers

A Mathematics primary teacher is planning a technology-enabled learning activity to teach the concept of ‘addition’ to her students. While planning the teaching session, teacher might have gone through different stages/thoughts like, he/she may ask her colleagues about the best technological resources available to teach addition, search internet to identify a suitable technology, etc. Every teacher passes through certain stages/thoughts before organizing a technology-enabled teaching session. The TIP model supports such a thinking process. TIP model helps teachers themselves ask various questions before they really conduct a technology-enabled activity.

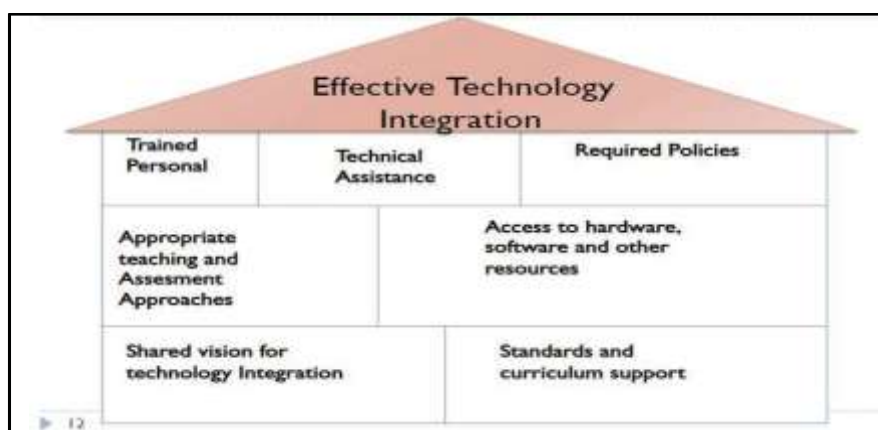


**Fig. 4: TIP Model (Source: <https://slideplayer.com/slide/8746325/>)**

The TIP Model for Teachers, is a model that provides teachers guidance and ways to address issues while integrating technology. Wiencke and Roblyer (2004) describes the TIP model as “five-phased Technology Integration Planning (TIP) Model (which) was designed to help teachers plan for, implement, and assess their use of technology in instruction...” (Learn Tech Lib, n.d.). TIP suggests teachers the ways to address challenges and problems that arises during the integration of technology (Roblyer, 2006). As you see in figure 4, the TIP model has five phases (Roblyer, 2006) and teachers need to ask themselves questions at each phase. The five phases of the TIP model are as follows:

- i) **Determining relative advantage:** In the first phase, ‘determining relative advantage’, the teacher focuses on questions such as; is there any issue with my present teaching styles and instructional processes? What is the real issue I am addressing in teaching? Why should I think of integrating a technology? How technology will offer better solutions to my teaching problems? In what way integrating technology is an advantage in relation to other teaching styles? In broad, first phase addresses two questions; the issues and relative advantage of teaching with technology.

- ii) Decide on objectives and assessments:** The second phase ‘decide on objectives and assessments’ is related to the learning objectives and assessment techniques. The teacher themselves asks the following questions in the second phase. What learning outcomes are expected out of children from a technology-integrated teaching method? How can I assess my students and what are the best possible ways of assessment? Whether tests alone are sufficient? Or else should I use check list or rubric? Thus, second phase describes objectives of technology integrated teaching and its assessment.
- iii) Design integration strategies:** Third phase focuses instructional design. Instructional design is related to various factors such as objectives of teaching, topic going to be transacted, etc. In this stage teacher asks questions like, which technology-enabled teaching approach would best work for a particular learning objective? How can I enable students to use technology? What teaching method is good for groups and single student? Such questions would help the teacher to develop appropriate technology integrated instructional design.
- iv) Prepare the instructional environment:** In the fourth phase, questions focus on infrastructural and technical facilities. Teacher asks questions like, is there availability of adequate hardware and software for integration? What technologies are needed to carry out technology integrated teaching? How would I arrange and organize the technological resources to support my teaching, etc. Thus, fourth phase helps teacher to check essential facilities to conduct technology integrated teaching. The essential components required to conduct an effective technology integrated teaching are shown in figure 5.
- v) Evaluate and revise integration strategies:** The fifth and final phase provides insights for reflection and developing strategies for improvement. After carrying out the real technology integrated teaching, teacher reflects on the teaching session so as to identify the shortcomings and problems of technology integration. In this stage, questions like, whether the technology integration was successful? Whether I have succeeded in delivering the content in meaningful ways? What worked well? Is there any shortcoming in technology integration? What could be improved so that technology integrated teaching will be more effective in future? These questions are self-evaluative questions guiding the teacher for organizing better technology integrated teaching in future.



**Fig.5: Essential Components for Effective Technology Integration**

(Source: <https://slideplayer.com/slide/8746325/>)

Some other Technology Integration models are as follows,

- Technological Pedagogical Content Knowledge (TPACK) Framework.
- Systematic ICT Integration Model.
- Generic Model or PST Model.
- Substitution Augmentation Modification Redefinition (SAMR) Model



**Conclusion:** The teaching can be supplemented with technology so as to actively engage students in the learning process and better understand the subject matter. Many more factors support technology integration. We have discussed the need for technology integration. Technologies like social media, flipped learning, discussion forum, etc. are available today. Even technologies like, 3D printing, artificial intelligence, virtual reality also exists. This Unit also had given a detailed list of available technologies. A teacher is free to select any available technology and use them for delivering subject content. The selection depends on various factors like subject taught, nature of content, age level of students, etc. However, teachers at times finds difficult to select and integrate an appropriate technology in the teaching-learning process. This led to development of guiding principles/frameworks that helps teachers integrate suitable technology in the teaching process. Over the time many technology integrations models have evolved. In this unit we have discussed about various technology integration models of which TPACK, SAMR, TIM, etc., have gained attention and are very popular. These frames works guides teachers to select a suitable technology for their teaching. You may use any of these technology integration models to select an appropriate technology for teaching and organizing a technology-enabled learning environment

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## CHATGPT IN EDUCATION: AN OVERVIEW

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### Abstract

*AI is a wonderful invention of this new era. The discovery of AI is an evidence to another step forward in the field of technology by human. Each of these technological innovations has led to the transformation of the education sector also. ChatGPT is the most recent AI's newborn baby. It has sparked a revolution since its debut. If this chatbot named ChatGPT enters the field of education, there will be an unimaginable changes in the teaching-learning process. It is literally a "Kamadhenu" for the students. It is a teacher who lives with students at their own home. It helps students to do homework, project work, assignments etc. It encourages self-learning in students. It writes its own poem, creates and tells the self-created tales. It solves the puzzles. Predicts future events. It has unparalleled thinking power. It disproves the claim that machines do not have feelings. It is a teacher for teachers. It helps teachers to do lesson planning. Its use in the field of education will overcome the shortage of teachers in schools and colleges. It has a human-like response that delivers very accurate and specific information in a very attractive format very quickly. It feels very natural even though it is artificial intelligence. Its use is free. This is a new guest for the field of education which should be welcomed wholeheartedly by all educationists. Because, we will benefit a lot from this guest in the coming days. Educationists should encourage its use in the field of education.*

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## INTRODUCTION

This new century is being described as the era of artificial intelligence. The revolution brought about by artificial intelligence in the field of technology is unimaginable. No one could have imagined that the development of this kind of technology could be made possible by humans. Every new step in science and technology has led to the evolution of the education sector also. Every advancement in technology has brought about a transformation in the field of education too. Radio, T.V., Computer, Smartphones Internet...whenever there are innovations in the field of technology, the education sector has not missed its benefits. Artificial Intelligence is one among them. Extensive researches have been done, are being done and are yet to be done in order to take advantage of artificial intelligence in the field of education. Face recognition, image recognition, object recognition, speech recognition, automation, handwriting recognition...etc. have been studied on whether the following can be helpful in the field of education.

**ChatGPT** is an artificial intelligence whose invention is a mirror held up to the unparalleled genius of humans. If it is used effectively in the field of education, there is no doubt that the image of the field of education will be changed. It is a boon tool for learners, teachers and educators alike. There is a need to create awareness about its use in the field of education, especially among school children in rural areas. There is a need to promote its use among teachers as well. In this article, the author sheds light on the importance of using **ChatGPT** in the field of education.

**ChatGPT** is an artificial intelligence program developed by OpenAI, an online tool that literally feels like having a conversation with a human. Amazon's Alexa, Apple's Siri, Samsung's Bixby, Microsoft's Cortana are its sequels. However, they are all being used for commercial purposes. **ChatGPT** is different from all of them. An extended form of **ChatGPT** is **Chat Generative Pre-trained Transformer**. In simple terms it is a type of Chatbot. It has two web versions, namely GPT-3.5 and GPT-4. GPT-3.5 is free for all users. Although, it is also very fastest model. GPT-4 is very advanced and paid version.

It was launched a few days ago, in November 2022 itself. It has already sparked a revolution in the field of technology. It is a platform that provides the requested information specifically. It is very different from search engines. There are accusations that artificial intelligence has no emotions.

However, if you talk about it, you will feel that the accusation is false. Its intelligence to answer not only the information of the past but also the things that may happen in the future astounds everyone. "What would Abdul Kalam have said if he had been with us during the success of Chandrayaan-3?" If we ask the *ChatGPT*, it will give us an answer that, to the best of its knowledge, Abdul Kalam himself has said that.

If you ask it, it will write a poem. It tells the tales. It solves the puzzles. It translates the languages. It detects the plagiarism. It decodes programmed codes also. They are in the form of text chatting. The way it provides the requested information is surprising. Very well organized texts, its presentation style, step-by-step presentation of information, quality of information, length of information, simple language, and attractive format all attract the readers.

It has unparalleled thinking power. It knows how to think like a famous poet, like a famous scientist, like a famous scholar, like a famous thinker, like a famous engineer, technician, educationist, philosopher so on.

Dealing with it does not feel like a machine. It gives the feeling of dealing with someone with a heart. Its sensitivity, responsiveness, care taking are liked by the users.

Let's find out how *ChatGPT* benefits these three;

- *ChatGPT for Learners*
- *ChatGPT for Teachers*
- *ChatGPT for Administrators*

#### **ChatGPT for Learners:**

*ChatGPT* is an artificial intelligence program that students enjoy a lot. It is a wonderful tool to promote student learning. It is nothing but "*Kamadhenu*" which fulfills the demands of the students in a moment. It provides students with the information they ask for at their fingertips. For students it is like having a 24x7 teacher who lives with them at their own home.

The benefits to the students are as follows;

It is like having a partner for students to do homework. Suppose a student is preparing a project or assignment on 'Vertebrates and non-vertebrates', when he doesn't get the information, just he types "Prepare me an assignment on Vertebrates and Non-Vertebrates" in the *ChatGPT*'s chat box and sends a message. *ChatGPT* prepares the most amazing, accurate, comprehensive assignment in a moment. Essay on any subject, answer to any question, explanation of any concept, cause of any phenomenon, examples, differences, statistics, data, solution to any problem, clarification of any doubts will be given to the student within a click of the chat box. It explains complex concepts in very simple language. Language, Grammar, Mathematics, Science, Humanities, General Knowledge, Mental Ability, Current Affairs etc. information is available here to the students. Here students can also translate the text from one language to another language.

It is like a study mate for students. It also gives many tips for essay writing, assignment writing, and project report preparation. Students can use this as a brainstorm. It encourages creativity in students. With the help of this, students can prepare flash cards, notes etc. A student can use it for proofreading the work he has done.

#### **ChatGPT for Teachers:**

It is also a powerful professional development tool for teachers. This will enhance the teacher's subject mastery, teaching skills, assessment techniques. This tool is very useful for teachers to carry out effective teaching. Suppose a science teacher asked for suggestions for learning activities to create while preparing his lesson plan for teaching 'Photosynthesis', would list dozens of activities that could be done to help students understand the concept of photosynthesis. When asked what videos suit to show students to teach photosynthesis, it suggests helpful videos which are available on websites like Khan Academy, Bozeman Science etc.

If a teacher wants to conduct a test on any subject, it will prepare a question paper within a moment with what type of questions and what number of marks he wants. Suppose a science teacher wants to create a 10-mark question paper on topic of 'Cell Biology'. All he needs to do is make a request to this *ChatGPT*. A question paper of 10 marks based on blue print with answers will be prepared within no time.

It gives teachers ideas to teach complex concepts in a very simple manner. It also prepares and delivers any class syllabus. It guides the teacher to accomplish the teaching objectives. It helps in grading student work. It prepares rubrics for assessment. It detects if students have copied, plagiarized. It helps in preparing learning materials for children with special needs. It provides knowledge to the teachers about the current trends, researches, new approaches, current trends in the field of education and keeps them up to date. In a sense it is a teacher of teachers.

#### **ChatGPT for Educational Administrators:**

*ChatGPT* is helpful not only for students, teachers but also for educational administrators. *ChatGPT* provides good advice to rulers in managing day-to-day administrative functions, planning, decision making, organizing, budgeting. It circulates information about educational policies. It shares the most reliable information about the educational trends such as National Curriculum Framework, Right to Education Act, Sarva Shiksha Abhiyan, National Secondary Education Abhiyan, National Higher Education Abhiyan, National Education Policy, Educational Commissions...etc. It suggests solutions to the pressing problems in the field of education.

#### **Pre-requisites of ChatGPT:**

- **Web Browser:** Since there is no official mobile app for *ChatGPT*, it should be used only on the web version.
- **Internet:** As this is an online platform, internet facility is required to avail this service.
- **An Account on ChatGPT:** Users must sign up on *ChatGPT* to use this service. Signup can also be done through existing e-mail accounts.

#### **Method of use:**

Access to the domain "<https://chat.openai.com>" is required. Since it is text based, users have to type the question in the chat box and send it. The answer comes immediately. If the same conversation continues, it will be saved in that conversational thread.

A user can view that thread anytime. Its link can be shared with others and can be deleted. Users can start a new chat again.

For example, if user send a message "Write a poem on Mother", that poem will be ready within no time. It writes poetry like a famous poet very rhetorically.

#### **Advantages of ChatGPT in Education:**

**Personalized Learning:** This tool also promotes learning by giving each student the information he or she wants individually.

**Promotes self-learning:** Students can prepare projects, assignments, essays, notes, flash cards etc. with its help. Complex concepts can be understood very simply. It gives suggestions to nurture creativity in students. A student can get any information instantly with the help of it. Translation technology is a very useful technology for students.

**Immediate Response:** We get a reply within seconds of typing any query in the chat box and sending it. This saves time.

**24x7 Access:** This service is available round the clock. If a student wants to learn even after the school session, it serves him.

**Accurate and specific information:** Searching for a piece of information in other search engines will yield numerous search results. And those search results may not contain the information we asked for.

But, this is not so. Gives very specific information we asked for. Here the concept of searching different websites for the information we need does not come.

**Free Access:** We do not have to pay any fee to avail this service. It is a free and open service available to all.

**Professional Development:** It guides teachers to prepare lesson plans more effectively, prepare question papers, design activities, select teaching methods, select teaching aids, prepare learning materials, adopt innovative teaching models, conduct demonstration-experiments, conduct educational research, and guide teachers in their professional development. This is helpful for teachers to detect whether student work is original or plagiarized. It prepares rubrics for teachers to assess. It guides teachers to prepare e-content.

**Discretionary Warning:** Although *ChatGPT* provides all of this guaranteed information, it urges you to use that information with discretion. It freely admits that it is not a human replacement system, although it is very efficient at providing any information. Ethical considerations are advised before using any information.

**Attractive Format:** It provides information in a very attractive format. Its presentation style, step-by-step expalination, level of information is very appreciable.

**Helps in Research:** It is also very helpful tool for researchers also. It educate the researchers about problematic research areas, research methodologies, tools and techniques of data collection. It suggests the suitable tools to analyses the data. It also suggests the suitable citations for the researchers regarding their research topic. By all means, it is true that *ChatGPT* is a great companion for students, teachers and educational administrators.

#### **Disadvantages of *ChatGPT* in Education:**

**Dependency:** Students are likely to become completely addicted to this technology. The originality of students can be affected by this technology. Students may lose the ability to think independently.

**Dampens the students' creativity:** With this technology, students ask questions, get answers, copy and paste the same. It destroys creativity in students. And this can lead to plagiarism issues.

**Lacks human-like responsiveness:** Man is man after all. A machine is a machine. The emotional and social development that students can achieve by interacting with humans cannot be achieved by interacting with this machine.

**Needs Computer and Internet:** It is expensive for poor students from the rural areas for those children who are not able to afford computers, mobile phones and internet.

**Vague and Inaccurate Information:** All information found here cannot be guaranteed to be reliable. It doesn't know the information after September 2021. These are the disadvantages of *ChatGPT*.

#### **CONCLUSION**

In terms of its performance, it is not an exaggeration that to say *ChatGPT* is the AI of AI. It is still under development. It looks a lot better in future than what already works amazingly. There is no doubt that this will give more strength to the education sector. Educational technologists should encourage the use of this *ChatGPT* in the teaching-learning process. There is no doubt that it will be a powerful learning tool for students, teachers, researchers, educationist and parents also. It cannot be denied that more in-depth studies should be done on its pros and cons. However, it is true that the pros outweigh the cons. It is like a new guest for the field of education. This guest should be warmly welcomed by the educationists. Because, this is very beneficial for the education sector.

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## ACCESSIBILITY & USABILITY OF CLOUD COMPUTING AMONG B.ED TEACHER EDUCATORS AND TEACHER TRAINEES

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### Abstract

*Nowadays, classroom learning is changing and students are becoming more technology conscious which means that we have to consider modern technologies as a part of our teaching-learning process. Cloud computing is one of the latest technologies that we have today. The education system has evolved into a continuous process of expanding, developing and improving essential eLearning solutions. Therefore, e-learning systems that will be able to keep up with technical progress are needed. Cloud storage, which is highly flexible and provides users with virtual machine tools, can radically alter the educational landscape of the future. The purpose of the study is to examine the accessibility & usability of Cloud computing among B.Ed Teacher Educators and Teacher Trainees. A survey method has been adopted in this regard. Through simple random sampling technique 150 respondents have been selected who were currently enrolled in the Colleges of Teacher Education, affiliated to Ballari University. This is a quantitative study which has been carried out through an online survey. Appropriate statistical techniques have been used to analyze the collected data. The study shows that there is no significant difference in the mean score of male and female teacher educators & teacher trainees when it comes to accessibility & usability, interest with cloud computing between them B.Ed Teacher educators and teacher trainees. We can conclude that cloud computing can create ecosystem in where everything in a classroom becomes virtual reality.*

**Key words:** *Cloud computing, Collaboration, Digital services, B.Ed. Teacher Trainees and virtual reality.*

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### Introduction:

A generally used term for everything that entails the delivery of hosted services over the Internet is cloud computing. These services can be classified into three key categories or types of cloud computing: infrastructure as a service IaaS, platform as a service PaaS and software as a service SaaS. Nevertheless, each sector is certain to be characterized by its own technological dynamics. For the purpose of calculating future cloud computing trends, we need to consider how it is affecting specific sectors such as financial services, retail, healthcare, education and manufacturing.

Cloud computing is gaining popularity due to the rapidly changing scalability and efficient resource utilization; it is also suitable for environments with limited resource resources. Demand for education is accelerating, necessitating the creation and enhancement of e-learning solutions (Surbhi Gangwar et al. 2021).

Learning in the classroom continues to evolve, and students are increasingly attracted to technology. The most recent innovations that can help society enhance its teaching and learning processes in this fast changing world need to be taken into account. The term is frequently used to describe the technology that allows computing power to be distributed on the Internet. The term "cloud" refers to the internet, which has made it possible and changed perceptions about improving students. Cloud based technology refers to the use of the Internet for accessing information and programs. These solutions can be provided through cloud computing. This is a network of computing resources that are available only around the world, and can be shared. They provide educational institutions with a range of new possibilities, which are not available in existing IT models. In fact, the integration of software and assets you own with software and services in the cloud provides you with new choices for balancing system management, cost, and security while helping to improve services (J S Ananda Kumar, et al. 2017). What is it in the cloud? Right now, a lot of what you need is on your computer or in the data center. For instance, schools and universities that need to upgrade their old systems or expand services can use email on the cloud in many cases for free. The cloud facilitates the availability of critical access for

students, teachers, faculty, parents and staff at any time. Information using any device from anywhere in the world. The opportunity of the cloud can be exploited by your institution as it plans its data center strategy over a period of time(Mallikharjuna Rao, et .al 2010 )..

### **Cloud computing in Education:**

The possibilities of cloud computing to improve effectiveness, cost and convenience A number of American educational institutions are recognising the education sector. It was a pleasure for some universities to be able to use huge computing capacity via cloud computing in their research. Cloud computing has become a trend for some education institutions, which have already outsourced their use of student's email services and now are beginning to make use of lower level servers in areas like data storage (J S , A. Sultan, N 2013 ).

School cloud computing will expand what's in class to outside the classroom. This will allow students to take advantage of the comfort of their homes and have access to what they are learning in class. Cloud computing can also be beneficial to both students and teachers. They can make their course materials and study material available on the internet, where children will be able to access them later.

The entire school's records are transferred to an outside cloud server. The Offline Cloud Server is operated by a 3rd party provider. The fact that schools can store all of their data at one interface, which saves them time and money, makes this an extremely useful tool for schools and education institutions. Cloud computing in the education sector is a type of cloud that transfers data from school systems to an external cloud server, which is hosted by one of the service providers. This approach would allow the administrator to save costs and resources needed for data storage, while supporting teachers and students by using virtual materials and educational environments(Gordon Gottsegen).

Schools are benefiting from integrating cloud computing and education in a number of ways. Administrators can save money by moving their IT services to an offsite environment, which means they won't need to update software, configure servers and install security measures. And despite the fact that many schools do not have enough IT staff, trusting a third party to store data and manage it in cloud environments will free up education budgets.2022

### **Cloud Computing Important in Education:**

According to a report, by 2027 the cloud computing market in education is expected to be worth USD 89.53 billion and it will have more than 9.5 million users. Cloud computing has an important role to play in education, as it is increasingly convenient and less complicated for students. Even after the pandemic, when schools began to adopt digital tools that were fast and scale unseen before, cloud technology in education became widely accepted. In education, there's a lot of benefits to cloud computing. convenience and enhanced effectiveness for both students and teachers are the first. Teachers are easily able to give explanations as students have more resources at their disposal. Furthermore, students have a higher interest in eLearning resources that are updated and interesting as compared to the outdated textbooks. To all parties, cloud technologies for learning are a win win situation. Kingson Jebaraj 2023

### **Characteristics of Cloud Computing**

**Flexibility:** With cloud hosting, it's easy to grow and shrink the number and size of servers according to your needs. In doing so, the cloud's resources are either increased or decreased. Cloud computing is a fantastic benefit to businesses, particularly when demand increases suddenly, because it allows them to adjust their plans as required by changes in business size and needs.

**Instant:** The cloud will give you everything you need right away.

**Flexibility:** it's easy to grow and shrink your server capacity, depending on what you need with cloud hosting. This increases the cloud's resources, or decreases them. Cloud computing is a great benefit to enterprises, especially in the case of an unexpected increase in demand, by allowing them to change

their plans according to changing operational size and needs. Instant: the cloud will give you everything you're looking for right away.

**Reliability:** Hosting is delivered on an alternate server partition, which will receive the resource such as disk space from a massive network of underlying physical servers instead of being housed in just one physical server. If a server is down, it'll have no effect on availability since the virtual servers are continuing to draw resources from other networks of servers.

**Physical Security:** The underlying physical servers remain in the data centre, and so they benefit from security measures taken by those centres to avoid people being able to access or disturb them at their premises.

**Outsource management:** Someone else will manage your computing infrastructure while you're in charge of the business. There's no need to worry about management or deterioration.

Let's understand the features that will be essential for building educational apps using cloud computing.



Fig.1: Features of Cloud computing

There is much scope for studying cloud computing in a college's information system, given that it has access to all the data at any time. Development of Cloud computing for college information system provides services like on demand self services, broad network access, virtualization, low cost software's, multiple accountabilities, services orientations, also it gives the advanced security technologies.

By outsourcing their students' email service, some education institutions have been the first to make a move towards Cloud Computing (2010). An email is a fundamental, reasonably standard form of communication. Services, which are easy to obtain and seem not essential for the reduced annual mission, can be obtained readily by third parties. Both Google and Microsoft offer email services for free to the educational sector. In a number of countries, this is a sector.

For educational purposes, e.g. data storage, educational institutions have also begun to use lower level cloud services. It can be the case where data protection is of low importance, e.g. for example when video and audio are available as open educational resources. Another use for the cloud computing that's beginning to appear in education is hosting of institutional learning management systems (LMSs) in the cloud. It makes sense to outsource the maintenance of Learning Management Systems, such as Blackboard or Moodle to a third party. For the cost of purchasing, maintaining and providing for institutions who cannot afford to pay for hardware and software of their own.

Cloud computing is made up of three layers. These layers shall be used by businesses according to the services they provide. Infrastructure Platform Application. The advantages of cloud computing in education: It cuts the cost of information technology and data management. Enhancing access to the

learning materials. Makes it easy for students to work and collaborate on a virtual basis. Provides educators with an online tool for completing tasks and keeping track of homework. If needed, it makes the transition to virtual learning easier.

### Objectives:

1. To measure the Interest towards Cloud computing among B.Ed Teacher Educators and Trainees.
2. To examine the accessibility & usability of Cloud computing among B.Ed Teacher Educators and Teacher Trainees.

### Hypotheses:

Ho: 1 There is no significant difference between the mean scores of Interest towards cloud computing among B.Ed. Teacher Educators and Teacher Trainees.

Ho: 2 there is no significant difference between the mean scores of accessibility of Cloud computing among B.Ed. Teacher Educators and Trainees.

Ho: 3 there is no significant difference between the mean scores of usability Cloud computing among B.Ed Teacher Educators and Trainees.

**Method & Materials:** The study is descriptive in nature and the methods used are based on surveys. In selecting 150 (B.Ed Teacher Educators is male 25 and female 25 and Trainees is male 50 & female 50) samples from College of teacher education from 2 institutions in Ballari City, the researcher has used a random sampling method. Data were collected by means of a semi-structured questionnaire through Online (Google forms) , Statistical techniques were employed by the researcher were **Mean, SD** and **Paired t-test** to assess their interest and to analyzed the obtained data through descriptive and Inferential technique used SPSS version 20.0 software.

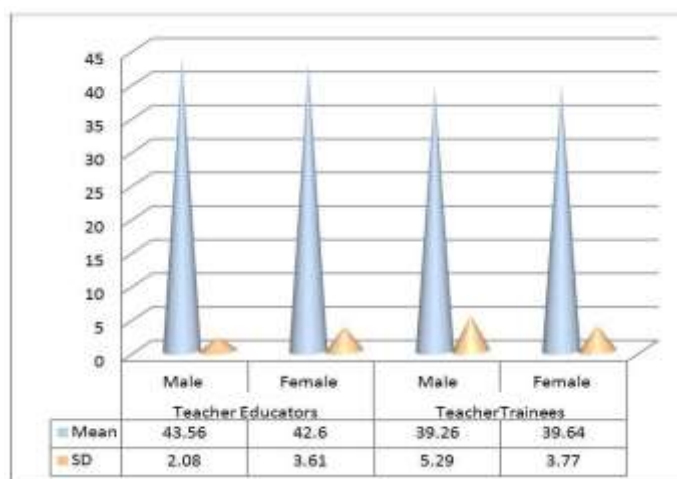
### Results:

**Objective1:** .To measure the Interest towards Cloud computing among B.Ed Teacher Educators and Trainees.

**Ho :1** There is no significant difference between the mean scores of Interest towards cloud computing among B.Ed Teacher Educators and Teacher Trainees.

**Table 1: Shows that male and female in B.Ed. teacher educators and teacher trainees is interest towards in cloud computing**

Group	Gender	N	Mean	SD	t- test	p-value	Remarks
Teacher educators	Male	25	43.56	2.08	1.3045	0.2044	NS
	Female	25	42.6	3.61			
Teacher trainees	Male	50	39.26	5.29	0.4038	0.6881	NS
	Female	50	39.64	3.77			



**Bar graph 1: represents the mean scores of male and female in B.Ed teacher educators and teacher trainees interested in cloud computing .**

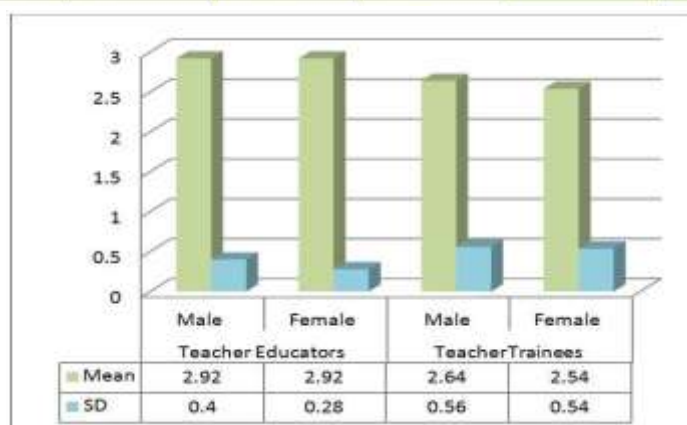
The above table 1 and Bar graph shows t-value Of 1.3045 in Teacher educators & 0.4038 Teacher Trainees and p-value is 0.2044 in TE & 0.6881 in TT . Male M=43.56 in TE & 39.26 in TT ,SD=2.08 in TE & 5.29 in TT and Female M=42.6in TE & 39.64 in TT ,SD=3.61in TE & 3.77 in TT. Here p-value is ( $p > .05$ ) higher than the .05 level of significance. Hence hypothesis is accepted at .05 level of significance. It means there is no significant difference between mean scores of interest towards cloud computing among B.Ed teacher educators and teacher trainees.

**Objective 2:** To examine the accessibility & usability of Cloud computing among B.Ed Teacher Educators and Teacher Trainees.

**Ho: 2** There is no significant difference between the mean scores of accessibility of Cloud computing among B.Ed Teacher Educators and Trainees.

**Table 2: Shows that male and female in B.Ed teacher educators and teacher trainees accessibility of Cloud computing**

Group	Gender	N	Mean	SD	t- test	p-value	Remarks
Teacher educators	Male	25	2.92	0.4	0.00	1	NS
	Female	25	2.92	0.28			
Teacher trainees	Male	50	2.64	0.56	2.3881	0.0252	S
	Female	50	2.54	0.54			



**Bar graph 2: represents the mean scores of male and female in B.Ed teacher educators and teacher trainees accessibility of Cloud computing.**

The above table 2 and Bar graph shows t-value Of 0.00 in Teacher educators & 2.38 Teacher Trainees and p-value is 1 in TE & 0.025 in TT . Male M=2.92 in TE & 2.64 in TT ,SD=0.4 in TE &



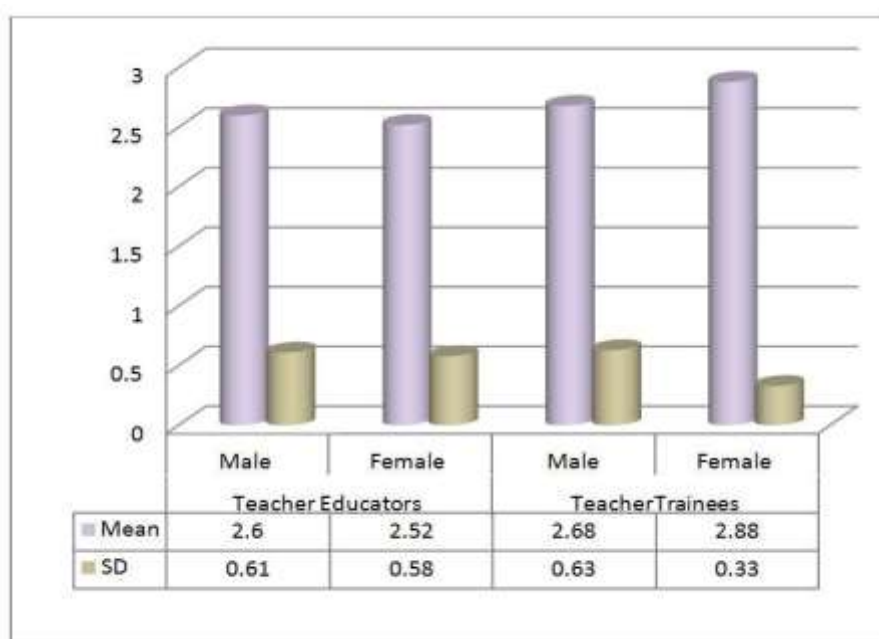
0.56 in TT and Female M=2.926 in TE & 2.54 in TT, SD=0.28 in TE & 0.54 in TT. Here p-value is ( $p > .05$ ) higher than the .05 level of significance. Hence hypothesis is accepted at .05 level of significance. It means there is no significant difference between mean scores of accessibility in cloud computing among B.Ed teacher educators. But p-value is ( $p < .05$ ) less than the .05 level of significance. Hence hypothesis is Rejected at .05 level of significance. It means there is a significant difference between mean scores of accessibility in cloud computing among B.Ed teacher Trainees.

**Objective 2:** To examine the accessibility & usability of Cloud computing among B.Ed Teacher Educators and Teacher Trainees.

**Ho: 3** There is no significant difference between the mean scores of usability Cloud computing among B.Ed Teacher Educators and Trainees.

**Table 3: Shows that male and female in B.Ed teacher educators and teacher trainees usability of Cloud computing.**

Group	Gender	N	Mean	SD	t- test	p-value	Remarks
Teacher educators	Male	25	2.6	0.61	0.6823	0.4983	NS
	Female	25	2.52	0.58			
Teacher Trainees	Male	50	2.68	0.63	1.5492	0.1344	NS
	Female	50	2.88	0.33			



**Bar graph 3: represents the mean scores of male and female in B.Ed teacher educators and teacher trainees usability of Cloud computing.**

The above table 3 and Bar graph shows t-value Of 0.68 in Teacher educators & 1.54 Teacher Trainees and p-value is 0.49 in TE & 0.13 in TT. Male M=2.6 in TE & 2.68 in TT, SD=0.61 in TE & 0.63 in TT and Female 2.52 in TE & 2.88 in TT, SD=0.58 in TE & 0.33 in TT. Here p-value is ( $p > .05$ ) higher than the .05 level of significance. Hence hypothesis is accepted at .05 level of significance. It means there is no significant difference between mean scores of usability in cloud computing among B.Ed teacher educators and teacher trainees.



## Discussion

Moreover, cloud computing makes it easier for teachers and students to become familiar with cloud computing so that they can get the benefits of its usefulness which will increase their motivation and efficiency. In order to validate the proposed solution, surveys shall be conducted as a research design. The results reveal that professionals in educational institution and academia are very supportive of the proposal to improve higher education (Bayan Hashr Alamri 2015). The present study also has similar results.

**Conclusion :** The idea to use cloud computing in higher education is not new. In the College of Teacher Education in Ballari, this research aims to use cloud computing technology in higher education. In order to address the problems associated with the learning process, the aim is to improve the level of higher education in cloud computing and its usability. Furthermore, a plan for the implementation of cloud computing in higher education by teachers and students will be developed from this research. In the first place, provide students with an introduction to cloud computing by providing them with a basic course on cloud computing. Second, apply online classes and virtual laboratories based on the cloud environment. Thirdly, the effectiveness of Cloud computing technology for all sectors is measured. In order to assess the proposal, a survey is carried out. According to the results of the survey, the majority of teachers educators and teachers trainees in the College of Teacher Education in Ballari agree to use cloud computing with traditional teaching and learning methods in order to increase the level of education in the College of Teacher Education in Ballari.

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## UTILIZATION OF LEARNING MANAGEMENT SYSTEM AMONG M.ED AND B.ED STUDENTS

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### Abstract

*The rapid advancement of technology has made a remarkable impact in the field of education. Technology in education makes a positive contribution to the lives of teachers and students in different forms. In recent years the availability of tools for teaching have changed dramatically from chalk, blackboards and overhead projectors to Learning Management Systems. The Learning Management System brings out different experiences and perceptions for students and teachers. It drives students to develop independent learning. LMS will become one of the platforms used by teachers and students who use it in large numbers to support learning. The various LMS platform such as Google Classroom, Edmodo, Schoology, Moodle, and Blackboard Learn etc are in common use. LMS also allows teachers and students to develop new ways of communication through the use of learning media that are always updated according to the times. The main aim of the study is to find out the opinion of M.Ed and B.Ed students towards Learning Management System. The study was descriptive in nature and employed a Survey method. Sample of the study were 50 students pursuing M.Ed in main campus of Vijayanagara Sri Krishnadevaraya University in Ballari and 100 B.Ed students from one of the teacher education institution in Ballari City were selected through simple random sampling technique. For obtaining the data semi-structured questionnaire were used and the data were analyzed through appropriate statistical techniques. The Results of the present study reveals that there is no significant difference between male and females' opinion towards learning management system. It is to suggest that implementation of LMS in teacher education institutions can change the teaching-learning process in an innovative manner.*

**Keywords:** *LMS, M.Ed and B.Ed students, utilization, learning and technology*

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### Introduction

A remarkable impact on learning was made by the rapid development of technology (Rizal et.al 2020) Technology in education has a positive impact on the lives of teachers and students in several ways (Turan İ. 2010). In recent years the software tools available for teaching have changed dramatically from chalk, blackboards and overhead projectors to Learning Management Systems (Klobas & McGill, 2010) Different experiences and views of students and teachers are drawn from the Learning Management System. The Learning Management System is becoming a platform for teachers and students, which they use to support education in large numbers. Different Learning Management System such as Google Classroom, Edmodo, Schoology, Moodle and so on. (Denita Azzahra Ramadania 2021) The Learning Management System allows students to learn wherever they want, at any time. Students may take advantage of the opportunity to participate in courses whenever and wherever they like, which will enable them to gain a sense of accomplishment while learning at an individual pace thereby maximizing their educational experience (Jess Obana, 2021). The Learning Management System have begun to introduce interactivity tools, for example blogs, wikis, chat rooms and discussions features that may facilitate constructivist approaches to education in contrast with traditional transmission models (S Lonn & Teasley, 2009 Rubin et al. 2009). Learning Management System provide better classroom experience for learners(joel vas 2022) . It makes learning self-paced - students are allowed to learn according to their need either faster or slower. It makes learning self-controlled- students are allowed to select content and tools relevant to their diverse interests. LMS learning preferences and skill levels. It enables the teachers to track and report students' activities and improves their academic performance. LMS in education is its centralized source of learning. It will allow educational institutions to store all of their e learning content in one place and prevent it from spreading throughout the various location. It is only if a learning experience is relevant and authentic

that it has any meaning. An LMS allows students to participate in hands on, practical and real world activities that enable them to develop a satisfactory learning experience (Sundar Narasimhan 2023). LMS usage ensuring efficiency as well as reliability for learners (Edly 2021)

The Learning Management System makes it possible for students to learn autonomously and in collaboration. Learning Management System is an user friendly for learners. The function of the Learning Management System software, which will allow teachers to create and integrate learning materials for their students. Teachers will have the ability to track homework, study progress, develop tests for students, check on learning and communicate its effectiveness. To make the whole process of education a fun and exciting one.



**Fig. 1: Features of Learning Management System**

### **Learning Management System in Education**

A Learning Management System is software that aims to manage and support efficient learning. It allowing instructors to upload content for the course and allow learners to access it. Both face to face and virtual learning classes are supported by the learning management system. Besides, it facilitates communication of all relevant data as well as monitoring and recording the development of students. But it's helping the teachers to work more effectively. (Share via 2022) Learners enjoyed participating in the discussion forum as well as creating ways to interact with the course mates and lecturers (Farah Damia Mohd Nasir et.al 2021) LMS can be a great tool for teachers it gives the freedom of unlimited customization options. (Sundar Narasimhan 2023) Learning Management System played a vital role in the adaptive technology in learning as tools among disabled students Learning Management System tools make the improvement in learning among learners.

A number of universities in the world have established learning management systems that are intended to help. Connect students and lecturers without the confines of the traditional classroom. It's an environment, and it has Digital Software. Which also provides management of user learning interventions to provide students with learning content and resources. (Nor Azura Adzharuddin and Lee Hwei Ling 2013) In India also many universities are using LMS like private, IIT's, central and state universities for effective learning of students.

Study found that Accessibility of online materials, with students rating its contribution to their learning is more high Kathryn A. Holmes 2018. In the same way the other study conducted by Students felt that while web sources allowed them to become independent learners by using LMS tool Azzendine Lansari et.al 2010. The recent studies revealed that LMS is a web based system for the distribution management and retrieval of course materials with the capacity to interact and create their project sites and that programming languages such as Pascal and Java can be thought Successfully using a Web Based Software Environment Using an LMS with support of peer collaboration Lust

Elen and clarebout ,2013 and Nadire Cavus 2006. Study found that utilization of Learning Management System had a beneficial effect on academic performance among students Muhammad Furqon 2023

### Objectives of the study:

1. To understand the Functionality and features of LMS among M.Ed and B.Ed students.
2. To find out the student participation and learning through LMS among M.Ed and B.Ed students.
3. To study the self learning and collaborative learning through LMS among M.Ed and B.Ed Students.

### Hypotheses of the study:

1. There is no significant difference between mean scores of male and female M.Ed students towards maximize their participation and learning through LMS.
2. There is no significant difference between mean scores of male and female B.Ed students towards maximize student participation and learning through LMS.
3. There is no significant difference between mean scores of male and female M.Ed students towards self learning through LMS.
4. There is no significant difference between mean scores of male and female B.Ed students towards self learning through LMS.
5. There is no significant difference between mean scores of male and female M.Ed students towards Collaborative learning through LMS.
6. There is no significant difference between mean scores of male and female B.Ed students towards Collaborative learning through LMS.

**Material and methods:** The study was descriptive in nature and employed a survey method. Sample of the study were 50 students pursuing M.Ed in main campus of Vijayanagara Sri Krishnadevaraya University in Ballari and 100 B.Ed students from one of the teacher education institution in Ballari City were selected through simple random technique. For obtaining the data semi-structured questionnaires were used and the data were analyzed through appropriate statistical techniques.

### Results:

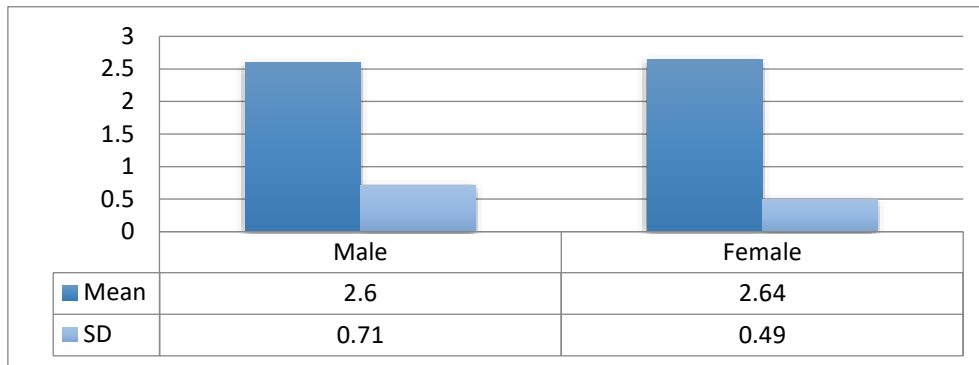
**Objectives 1:** To find out the student participation and learning through LMS among M.Ed Students.

**H<sub>01</sub>:** There is no significant difference between mean scores of male and female M.Ed students towards Maximize their participation and learning through LMS.

**Table 1: Comparisons of male and female M.Ed students towards Maximize their participation and learning**

Gender	N	Mean	SD	t-test	p-value	S/SN
Male	25	2.6	0.71	0.296	0.7698 ( $p>.05$ )	SN
Female	25	2.64	0.49			

Bar graph 1: Comparisons of male and female M.Ed students towards Maximize their participation and learning



The above table 1 and Bar graph 1 indicates t-value of 0.296 and p-value 0.7698 Male  $M = 2.6$   $SD=0.71$  and Female  $M = 2.64$   $SD=0.49$  here p-value is ( $p>.05$ ) higher than .05 level of significance. Hence the above null hypothesis is rejected at .05 level of significance. It means that there is no significant difference between mean scores towards maximize their participation and teaching through LMS among M.Ed students.

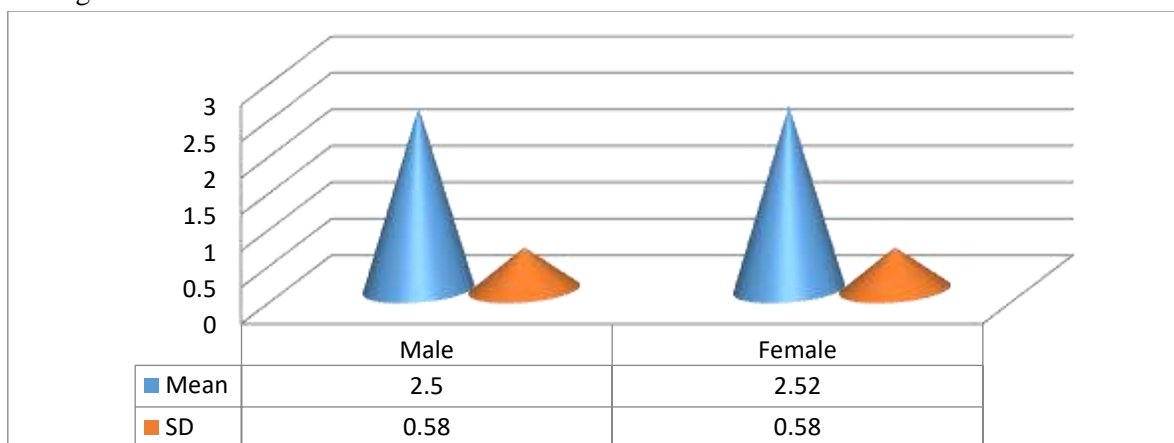
**Objectives 2:** To find out the student participation and learning through LMS among B.Ed students.

**H<sub>0</sub> 2:** There is no significant difference between mean scores of male and female B.Ed Students towards Maximize their participation and learning through LMS.

**Table 2: Comparisons of male and female B.Ed students towards Maximize their participation and learning**

Gender	N	Mean	SD	t-test	p-value	S/SN
Male	50	2.5	0.58	0.2346	0.815 ( $p>.05$ )	SN
Female	50	2.52	0.58			

Bar Graph 2: Comparisons of male and female B.Ed students towards Maximize their participation and learning



The above table 2 and Bar graph 2 indicates t-value of 0.2346 and p-value 0.815 Male  $M = 2.5$   $SD=0.58$  and Female  $M = 2.52$   $SD=0.58$  here p-value is ( $p>.05$ ) higher than .05 level of significance. Hence the above Null hypothesis is rejected at .05 level of significance. It means there is no significant difference between mean scores towards maximize their participation and learning through LMS among B.Ed students.

**Objectives 3:** To study the self learning through LMS among M.Ed Students.

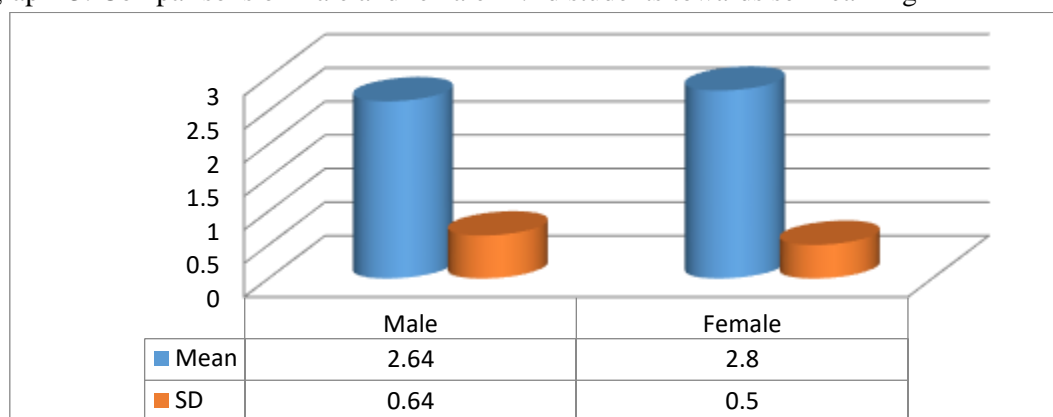
**H<sub>0</sub> 3:** There is no significant difference between mean scores of male and female M.Ed Students towards Self learning through LMS.



**Table 3: Comparisons of male and female M.Ed students towards self learning**

Gender	N	Mean	SD	t-test	p-value	S/SN
Male	50	2.48	0.77	2.0093	0.0559 ( $p>.05$ )	SN
Female	50	2.72	0.61			

Bar graph 3: Comparisons of male and female M.Ed students towards self learning



The above table 3 and Bar graph 3 indicates t-value of 2.0093 and p-value 0.0559 Male  $M = 2.64$   $SD=0.64$  and Female  $M = 2.8$   $SD=0.5$  here p-value is ( $p>.05$ ) higher than .05 level of significance. Hence above Null hypothesis is rejected at .05 level of significance. It means there is no significant difference between mean scores towards independent learning through LMS among M.Ed students.

**Objectives 4:** To study the self learning through LMS among B.Ed Students.

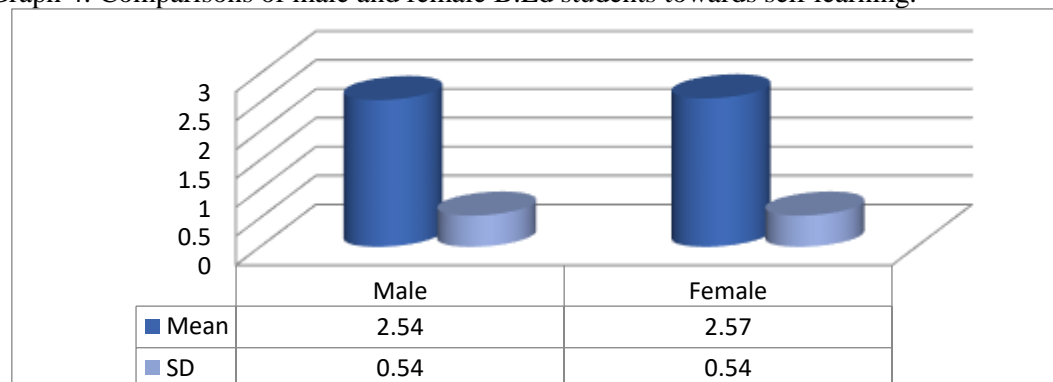
**H<sub>0</sub> 4:** There is no significant difference between mean scores of male and female

B.Ed Students towards Self learning through LMS.

**Table 4: Comparisons of male and female B.Ed students towards self learning.**

Gender	N	Mean	SD	t-test	p-value	S/SN
Male	50	2.54	0.54	0.3825	0.7029 ( $p>.05$ )	SN
Female	50	2.57	0.54			

Bar Graph 4: Comparisons of male and female B.Ed students towards self learning.



The above table 4 and Bar graph4 indicates t-value of 0.3825 and p-value 0.7029 Male  $M = 2.54$   $SD=0.54$  and Female  $M = 2.57$   $SD=0.58$  here p-value is ( $p>.05$ ) higher than .05 level of significance. Hence above Null hypothesis is rejected at .05 level of significance. It means there is no significant difference between mean scores towards self learning through LMS among B.Ed students.

**Objectives 5:** To study the collaborative learning through LMS among M.Ed Students.

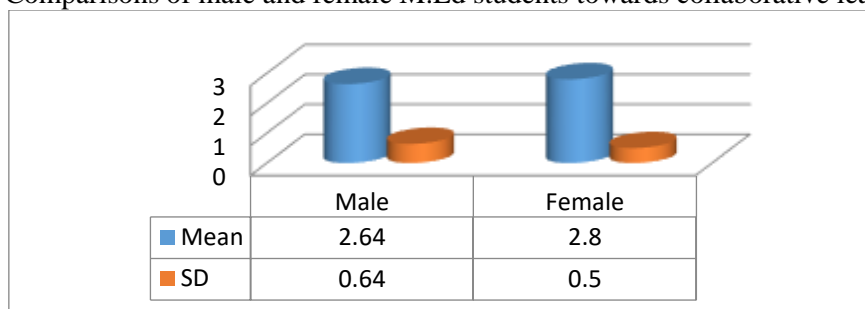
**H<sub>0</sub> 5:** There is no significant difference between mean scores of male and female

M.Ed Students towards collaborative through LMS.

**Table 5: Comparisons of male and female M.Ed students towards collaborative learning.**

Gender	N	Mean	SD	t-test	p-value	S/SN
Male	50	2.64	0.64	1.6928	0.1034 ( $p>.05$ )	SN
Female	50	2.80	0.50			

Bar graph 5: Comparisons of male and female M.Ed students towards collaborative learning



The above table 5 and Bar graph 5 indicates t-value of 1.6928 and p-value 0.1034 Male  $M = 2.64$   $SD = 0.64$  and Female  $M = 2.80$   $SD = 0.50$  here p-value is ( $p>.05$ ) higher than .05 level of significance. Hence above Null hypothesis is rejected at .05 level of significance. It means there is no significant difference between mean scores towards collaborative through LMS among M.Ed students.

**Objectives 6:** To study the collaborative learning through LMS among B.Ed students

**H<sub>0</sub> 6:** There is no significant difference between mean scores of male and female

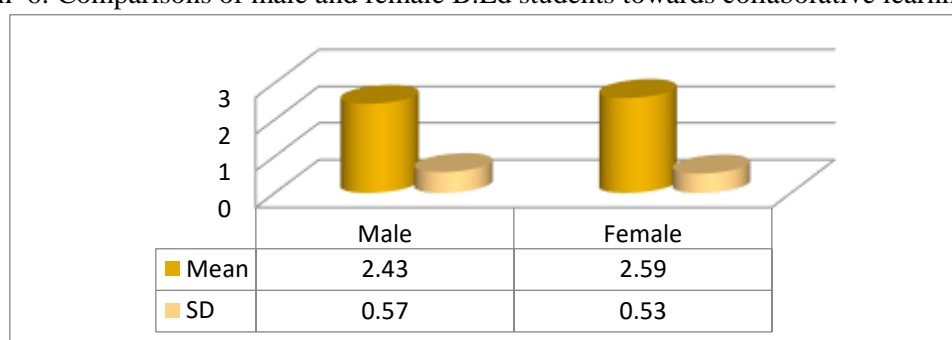
B.Ed students towards collaborat

ive through LMS.

**Table 6: Comparisons of male and female B.Ed students towards collaborative learning**

Gender	N	Mean	SD	t-test	p-value	S/SN
Male	50	2.43	0.57	1.9104	0.059 ( $p>.05$ )	SN
Female	50	2.59	0.53			

Bar graph 6: Comparisons of male and female B.Ed students towards collaborative learning



The above table 6 and Bar graph 6 indicates t-value of 1.9104 and p-value 0.059 Male  $M = 2.43$   $SD = 0.57$  and Female  $M = 2.59$   $SD = 0.53$  here p-value is ( $p>.05$ ) higher than .05 level of significance. Hence hypothesis is rejected at .05 level of significance. It means there is no significant difference between mean scores towards collaborative through LMS among B.Ed students..

**Discussion :** Accessibility of online materials, with students rating its contribution to their learning is more high Kathryn A. Holmes 2018 the findings of the study reveals that there is no significant difference between mean scores towards maximize their participation and teaching through LMS among M.Ed and B.Ed Students felt that while web sources allowed them to become independent learners by using LMS tool. The same results were found in the study of Azzendine Lansari et.al 2010. In the same way the another supportive studies also found that there is no significant difference between mean scores towards self learning through LMS among M.Ed and B.Ed students. LMS is a web based system for the distribution management and retrieval of course materials to support peer collaboration by

providing students with the capacity to interact and create their project sites Lust, Elen and clarebout, 2013. The findings of the study reveals there is no significant difference between mean scores towards collaborative through LMS among M.Ed and B.Ed students.

**Conclusion:** It is suggested the potential of Learning Management Systems to change how education is carried out in institutions. In addition, the whole process of knowledge creation and dissemination can be drastically improved so that there's room for innovation and creativity by making learning student centric. However, the effective implementation of these measures is a challenge. It is possible to make classroom activities more engaging and inclusive by taking steps towards the implementation of learning management systems in institutions. LMS create an environment of creative exchange and build a shared experience that would be beneficial for the learning (Parimala Veluvali 2021)

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## EDUCATIONAL APPS AS EMERGING TECHNOLOGY IN A PRESENT SCENARIO

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### Abstract

*Today, using spare time to learn is the key demands of Technology enabled education field. With the characteristics of portability, educational Apps highly fit for this kind of demands, and contribute to the learning style on the fingertip, it becoming the new growth direction and growing point of mobile education. The understanding of the present situation and Prospect of educational Apps is the basis for further research on educational Apps. Based on introduction of educational Apps, this paper discussed the opportunities of educational Apps, the use habit of the user, mobile learning and online education which create good conditions for the development of educational Apps. Although educational apps have emerged as an easily available and accessible alternative to classroom learning, particularly at the time of pandemics like COVID-19, no research has attempted to identify learners' intentions behind the usage of different educational apps. The current study developed a valid and reliable research instrument to measure the motivations behind using educational apps. This paper shows gratifications behind learners' intention to use educational apps: academic assistance, convenience, entertainment, social influence, novelty, engagement and activity.*

**Key Words:** Technology, Learning, Online teaching, etc.,

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### Introduction:

The COVID-19 pandemic has brought about a rapid shift in the way education is delivered, with online teaching and learning becoming the new normal. In this era of online teaching, educators are exploring new technologies to make the learning experience more interactive, engaging, and effective for students. With the abundance of free apps for online teaching available, educators can now make the learning process more streamlined and efficient for their students.

Educational apps have made a phenomenal change in the way we manage classrooms and schools, and in the way we learn. The best part about these apps is the availability of information at our fingertips in different forms. Many of these educational apps have served as a one-stop learning solution where many things in terms of academic aspects can be achieved at the same place, rather than having to go for different sources.

There are plenty of educational apps available these days that serve different purposes. You can use them to study, to stay organized, to be productive and what not.

Many of the educational apps can be accessed absolutely free of cost. There are also some apps of which the basic version is available for free, but would require subscription plans and in-app purchase options to use advanced featured. Also, there are fully paid apps that can be downloaded only by paying a certain amount of money.

### 1. Duolingo

Duolingo is an American educational technology company that produces learning apps and provides language certification. Founded in 2011 by Luis von Ahn and Severin Hacker, it has become one of the world's most popular online learning platforms.

Yes, the popular language learning app is available for free. Duolingo offers over 95 different courses in 23 languages that include English, Turkish, Spanish, Russian, Latin and much more.

The learning process in Duolingo is mostly game based that makes language learning enjoyable and fun. The visual elements of the flashcard-like game in the app give you a better understanding of the words. It also helps you to build your vocabulary and improve your speaking skills.

You can also attempt tests to analyse your proficiency in the language you are learning. The app monitors your learning progress and performance, giving you an idea of what part of your learning needs more attention.

Duolingo app helps you to master all aspects of language learning, be it reading, writing or speaking. It is available for download in

### Google

**Play Store:-** ([https://play.google.com/store/apps/details?id=com.duolingo&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.duolingo&hl=en_IN&gl=US))

**App Store:-** (<https://apps.apple.com/us/app/duolingo-language-lessons/id570060128>).

### 2. SoloLearn

Technology has brought the world closer by helping them stay connected and it will continue to happen in the future as well. Therefore, knowledge in coding is expected to be an essential requirement in the days to come.

Many educational institutions have already introduced the subject to their students from a young age. There are educational apps for that extra support or to help the students to advance to the next level of learning to code, and SoloLearn app is one of the best choices.

SoloLearn app comes with over 25 programming courses and a library with plenty of free code learning content under different topics for learners with any knowledge level, from beginners to experts. The app also keeps posting new content on a daily basis.

The app also comes with a community of over 40 million coding students, where they hold discussions based on various topics, solve problems and create new content to practice coding.

The app is available for download in both

### Google

**Play Store:-** ([https://play.google.com/store/apps/details?id=com.sololearn&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.sololearn&hl=en_IN&gl=US))

**App Store:-** (<https://apps.apple.com/us/app/sololearn-learn-to-code-apps/id1210079064>).

### 3. Khan Academy

Khan Academy is another popular educational app that is available for free. The online learning platform is perfect for students as well as adults who are looking to improve their knowledge. Khan Academy app offers over 4000 courses in different subjects, including Maths, Science and Humanities, all based on NCERT or CBSE syllabus. The app also comes with a free, personalised learning library. Khan App features videos, interactive exercises and articles on different subjects that allow in-depth learning. It also has a personalised dashboard for each learner where they can view their learning progress.

Khan Academy app is available for download in both

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=org.khanacademy.android&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=org.khanacademy.android&hl=en_IN&gl=US))

**App Store:-** (<https://apps.apple.com/us/app/khan-academy/id469863705>).

### 4. TED

TED, the popular platform known for TED talks by experts from all walks of life gives you access to all of its content for free. The app features over 3000 TED Talk videos based on different topics, all presented by renowned musicians, tech geniuses, business giants and others who have proven their worth in their respective fields.

In the app, you can browse through the TED Talks library to access the video of your choice. The videos come with subtitles in over 100 languages. You can also listen to podcasts in the app.

If you have no idea as to which video to choose, you can use the "surprise me" feature for video suggestions. TED app also has bookmark feature to bookmark your favourite videos. TED app is a great source if you are looking to fulfil your curiosity or if you want to improve your knowledge.

The app is available for download in both

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=com.ted.android&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.ted.android&hl=en_IN&gl=US))

**Play Store:-** (<https://apps.apple.com/us/app/ted/id376183339>)



### 5. Lumosity

Lumosity is a well-known brain training app that you can access for free. The app helps you to achieve the goal of enhancing your skills, in terms of memory, critical thinking, problem solving and flexibility through games.

You can start with a free 10-minute FIT test to set your baseline scores, and to see where you stand compared to your peers. The app also features over 40 activities that challenge your memory, logic, language skills and much more. You can also go for personalised challenges based on your preferences and training habits.

Lumosity app also provides you with training insights which helps you to understand your strengths and weaknesses as you progress. Your gameplay analysis provided by the app helps you to better identify your cognitive patterns.

Lumosity app is available for download in both

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=com.lumoslabs.lumosity&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.lumoslabs.lumosity&hl=en_IN&gl=US))

**Play Store:-** (<https://apps.apple.com/us/app/lumosity-brain-training/id577232024>).

### 6. Photomath

Photomath app can be a saviour when you struggle with your math problems. Did you know that the app is available for free?

The app comes handy when it comes to solving any Math related problems, from simple ones of which you need to check the answers to difficult problems you are having a hard time solving. All you have to do is to click a picture of an equation or scan it and upload it in the app. In return, you will get the step by step solution to it so that you get an idea of what needs to be done or where you went wrong.

Photomath app is available for download in both

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=com.microblink.photomath&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.microblink.photomath&hl=en_IN&gl=US))

**App Store:-** (<https://apps.apple.com/us/app/photomath/id919087726>)

### 7. Merriam-Webster Dictionary

Merriam-Webster dictionary, the popular American dictionary, is available in its app form and is absolutely free. Finding a right word or figuring out its meaning, it is a great accompaniment when you are learning English language. It is one of the most commonly used dictionaries around the world and is often used for reference, learning and building your vocabulary.

The app also features word games and quizzes that help you to learn new words and test your vocabulary. The word of the day feature in the app is also a great way to learn new words in the app.

Apart from the meaning of a particular word, you can also find synonyms, antonyms and example sentences that help you to understand how that word is used in a sentence. Another feature is the audio pronunciations by native English speakers so that you learn to accurately pronounce it.

Merriam-Webster dictionary app is available for download in both

**GooglePlayStore:-**

(<https://play.google.com/store/apps/details?id=com.merriamwebster&hl=en&gl=US>)

**App Store:-** (<https://apps.apple.com/us/app/merriam-webster-dictionary/id399452287>).

### 8. Grammarly

Grammarly is another popular app that helps you in language learning. It can be termed as a writing assistant that helps to correct and edit your grammar, spelling and punctuation as you type.

Grammarly can be considered a proof read app that helps you to identify errors in your writing by checking it for issues. It also notifies you about the errors and guides you about what should be written instead.

The app also comes with advanced features, such as synonyms, that help you to improve your vocabulary, spelling and writing skills.

Grammarly app is available for download in

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=com.grammarly.android.keyboard&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.grammarly.android.keyboard&hl=en_IN&gl=US))

**Play Store:-** (<https://apps.apple.com/us/app/grammarly-keyboard-editor/id1158877342>).

#### 9. Timetable

Timetable app helps students to easily manage their school/university life. You can enter all your academic schedules in the app and get reminded so that you would not miss out on them.

Apart from class timings, you can also enter schedule details for home works, exams, tests and assignments, as in the timings, due date, name of teacher, etc. The app notifies you when about the schedules on time, and also reminds you to study. Another feature is that the app mutes your phone automatically during your study time. The schedules are organised in the app as a table or grid. You can also search for a particular task in the app.

Timetable app is available for download in the

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=com.gabrielittner.timetable&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.gabrielittner.timetable&hl=en_IN&gl=US)).

#### 10. Daylio

Daylio is not exactly an academic related app. It is rather a mood tracker app that helps you to keep track of your mental health.

Daylio app acts as a private journal where you can note down anything about yourself. You can customise the app based on your personal needs. It helps you to analyse your habits, keep track of your emotional needs and helps you to realise the factors that affect your mood both positively and negatively.

Daylio app is available for free in

**Google Play Store:-** ([https://play.google.com/store/apps/details?id=net.daylio&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=net.daylio&hl=en_IN&gl=US))

**Play Store:-** (<https://apps.apple.com/us/app/daylio-journal/id1194023242>).

#### 11. LiveCarta

Livcarta app is a digital library with all books and learning materials in it available for free. You can read the books in offline mode as well.

You can use your LiveCarta account to sync all the reading resources across different devices you use. You can also read the books, add highlights and notes and sync the changes made across the devices. The app also comes with features where you can search for keywords within the book or a specific chapter. The read aloud feature allows you to listen to the stories anytime, anywhere. You can also customise the read aloud feature, in terms of voice, speed and pitch.

LiveCarta app is available for download in

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=com.teqspring.apps.livcarta&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=com.teqspring.apps.livcarta&hl=en_IN&gl=US))

**App Store:-** (<https://apps.apple.com/us/app/livcarta/id1505717341>).

#### 12. Study Tips

Study Tips is the app you need if you are looking for study hacks. The app gives you tips to study and also to remember more information in less time.

Study Tips app consists of a list of tips and tricks to learn that will help you achieve the different academics related goals. The app helps students to better manage their time and be productive, and also to develop good study habits.

The different tips provided by Study Tips app include those for studying effectively, maintaining the environment for learning, remembering information within a quick span of time, preparing for tests and exams, and so on.

Study Tips app is available for download in

**GooglePlayStore:-** ([https://play.google.com/store/apps/details?id=studio.love.sweet.studytips&hl=en\\_IN&gl=US](https://play.google.com/store/apps/details?id=studio.love.sweet.studytips&hl=en_IN&gl=US)).

### **CONCLUSION:**

Apart from the above-mentioned apps, there are many more educational apps that are available for free. These apps help students be more responsible and committed towards their academic goals. Also, they get to organise and maintain their school/college life, and also to be productive without losing focus. Most of these apps come with different elements, such as gamification and colourful, eye-catching interface that make it appealing to users. It interests them as the elements make the app more fun. As we mentioned earlier, the different apps serve different purposes. You can look for the best, free-to-use educational app that suits you and helps you to achieve all your academic goals.

### **Web resources:**

<https://www.edsys.in/free-educational-apps-for-students/>

<https://www.duolingo.com/>

<https://www.sololearn.com/>

<https://www.khanacademy.org/>

<https://ed.ted.com/>

<https://www.lumosity.com/en/>

<https://photomath.com/en>

<https://www.merriam-webster.com/>

<https://www.grammarly.com/grammar-check>

<https://daylio.net/>

<https://livecarta.com/>

## EDUCATIONAL BENEFITS OF MULTIMEDIA FOR TEACHING LEARNING PROCESS

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### Abstract

*This paper describes some major points about educational software. This paper makes the strong claim that educational software is a revolutionized approach to bring fruitful reform in education sector. The headlines: How educational software benefits teacher, importance of educational software, impact of educational software, addresses the claims made in this paper. Educational software refers to all computer software or application used by students and teachers alike to make learning effective and efficient. Some educational software are self-directed in such a way where student can learn with their own pace and interest. Research has shown that student learn meaningfully with diverse approach of teaching. So, multimedia is making impactful work in this direction. This paper discuss how educational software can benefit school in providing quality education. It is found that for software to have beneficial impact teacher should be well trained in using this software. So, here teacher has to play a crucial role. Society should move as generation moves. Since, technology is making impact in every sector it was evident that education sector too can be improved by the use of technology. Online education system has evolved as a boon in the educational reform. Day-by-day various software are been developed to make the education more effective and efficient. This paper points out various important concepts related to education software. The paper begins with an introduction, discusses what is educational software, impact of educational software in education sector, describes how educational software benefit teachers, states importance of educational software. Finally it ends by concluding that educational software is making revolutionized impact for improving the quality of education.*

**Key words:** Software, Multimedia, Online education.

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### Introduction

The traditional way of education was limited to learning through books as main source of instruction. Nowadays many technological tools, devices or computer software have emerged to provide different modes of learning. Online education can be considered as a boon in reforming education sector. The computer software and application developed so far for educational purpose is ensuring deployment of quality education and meaningful learning. Educational multimedia device are also making huge impact in improving the quality of education. According to (Sethi, 2005); (Mayer, 2001) Multimedia refers to the integration of two or more different information media within a computer system. These media can include text, image, audio, video, and animation. Vaughan (2011) defined multimedia as a combination of digitally manipulated text, photographs, graphic art, sound, animation, and video elements. As the involvement of technology is increasing in education sector teacher has huge responsibility to ensure its correct use. Educational technology is not, and never will be transformative on its own, however. It requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals, and use it for engaged learning projects (Carlson 2002). Darling-Hammond and Berry (2005) suggest that "For widespread change to occur, teachers need to incorporate the opportunities of the emerging technological infrastructure into their overall curricular thinking" (P.199). The role of the classroom teacher is the crucial factor in the full development and use of technology in the schools (Trotter, 1999). In the traditional model of education, the teacher was responsible for disseminating information to students. The student's primary responsibility was to consume and retain as many of the facts and figures as they could. "Teacher get new competencies and new roles in a multimedia-learning environment. Besides having a broad knowledge base, teacher have to offer pedagogical guidance and supervision by inspiring, motivating and guiding students in their search for knowledge" (Andersen & Brink, 2013, p.13). Research has shown that different students learn better in different ways; there are

visual learners, tactile learners, and auditory learners. Also, different subjects and topics are often more understandable when taught in different ways. The use of several media of instruction facilitates the movement of information from short term memory into long term memory (Pashler, McDaniel, Rohrer, Bjork, 2008). So, use of various computer software or application will be an impactful reform to ensure quality of education. Educational software are the computer application that are used by teacher and students alike to enhance the quality of education.

### **Objectives of the paper**

The objectives of this paper are follows:

1. To understand major points related to educational software.
2. To know the impact of educational software in enhancing the quality of education.
3. To know the importance of educational software in education sector.

### **Methodology**

The paper has constructed on the fulfilment of the objectives of this paper. It is based on secondary sources like journals, books, websites, etc. The paper follows the descriptive method.

### **Educational software**

According to (chen, 2023) Educational software describes computer applications that are made to enhance the learning process. This is a large domain that includes software made for different types of people: students, teachers, administrators, mentors, and others. The software can also be made for different types of education: traditional classrooms, self-directed learning, asynchronous lessons, and others. In a classroom, educational software can provide functions, such as automatically grading multiple-choice assignments using formatted cards, or allowing students to submit digital assignment from home through a learning management system. Teachers can also evaluate and monitor assignment submissions and automatically calculate a final grade. Educational software allows a classroom to function more efficiently and facilitate learning.

Educational software is a massive, all-encompassing term used to refer to all kind of software designed for use in education sector. It involve all the computer software used by teacher and student alike to make some part of education more effective and efficient

Education software helps teachers, admins, learners, and parents all at the same time. These solutions provide users a variety of advantages, ranging from better visibility and content distribution to analytics and improved forms of communication educational software are more advantageous since they also provide improved efficiency, efficacy, smart content, enhanced communication, consolidation of data and information (Development, 2022).

There are many education software, (TINGJUIKE, 2020) states some examples of educational software. They are as follows:

#### **1. The Google classroom**

In most learning institutions, all students want to complete and make plan of their assignments and homework in time. And the teachers are expected to review, mark, and to do grading within a certain period of time. The process above is essential, and it is upsetting for everyone. But there is an amazing way that can be streamlined well. This flawed and efficient way is through the use of Google classrooms. As it is the last solution to achieve the results. This means that the use of Google classroom is an important classroom of kinds. As it can be used for sending out notices, carrying out discussions, creating classes, submitting assignments and grading of marks, asking for remarks and getting answers, sharing of ideas, and many more.

#### **2. The khan Academy**

The khan academy is one of the tops always that secures the highest spot on the education software on the free learning services application for the students. This educational software is aiming to improve and to provide free, world-class education for curious minds all over the world. This system is always

delivering the best feedback from those who are already using it. The Khan Academy has unique tactics when it drives knowledge to the students, as all topics are in the form of video tutorials. The types of videos being displayed are recordings of drawings on virtual blackboards as a teacher is giving lectures. The narrator in place plays a vital role for each lesson by using the drawings, which is simple and easy. This software well provides online courses that a student can rely on for the preparation of standardized tests. E.g., the SAT, LSAT, MCAT, and much more. Khan Academy offers to learn in multiple languages, practical exercises, and progress tracking.

### **3. Duolingo**

It mostly takes a lot of time to learn and practice a new language, as it is not a simple task. If the learning techniques are not adaptable for learning, then it will lose the focus and interests for the students. This software has made the language used to pass out knowledge to be a cakewalk. One is in place of learning various languages like English, French, Mandarin, Spanish, Latin, and much more. Learning here starts by use of simple basic pictures labelling various games and goes in levels. After completing a given level, there are the different and advanced kind of engaging games will improve your personal lexis and skills for grammar. Using the Duolingo is very efficient as one can set daily goals. And the application can make tracks on your daily performance to give insights.

### **4. Photomath**

As for many students, math has been a hard puzzle kind of the subject. Although the age or standard it has been challenging. Such hard days are over as you can be able to learn and able to solve any kind of complex math problem easily by use of this application that enabled by the educational software called Photomath. Statistically, this application has been listed as one of the best for students to learn math. The learning process employed in the Photomath is simple, pretty and hopeful. You can take a picture of the handwritten or even printed question. Then the application by itself will be able to teach you on how the math problem can be solved step by step by explaining and giving instructions. The Photomath app features multiple mathematical solving methods, animated instructions, exact calculators, interactive graphs, scan printed or handwritten math problems. And there is no need of internet when using this app, making it to be cost-effective.

### **5. Kahoot**

Mostly, educational software that has an shared quiz has the ability to rush the process of learning hence taking it to higher levels. Students, most of the time, will be feeling aid whenever they are getting answers right. In this regard, use of Kahoot is suggested to be one of the best apps for learning for students that prefer using quizzes. Kahoot has ready-made quizzes covering all topics where a student can make a choice of the topics and able to join live quizzes with others. The application as well enables the student to be able to make quick quizzes and challenge friends for race. Students can also use the Kahoot for ends when being offline and it is pretty simple. The teacher can create a quiz in this software and show it on the whiteboard or even using a projector. Students will be able to join by use of their respective pins and making an attempt to the questions given in the app. The Kahoot features are; it is easy to create a game, play over 200 live contests, and it hosts live quizzes on very big screens.

### **Types of educational software**

An online education software has been an integral teaching tool for teachers as part of their lessons. The implementation of these systems in classrooms has enhanced performance of students and teachers alike. There are numerous educational software available for various subjects. However, educational software firms have started to create educational apps for students and teachers to utilize as a teaching and learning tool. The following are the kinds of educational software that an educational institution must implement. (Nagata, 2017) Describes the following types of educational software.

#### **1. Authoring System.**

This helps teachers in developing their own instructional software. They could build electronic flash



cards of index cards for teaching children on specific concepts. Furthermore, they could build multimedia content such as lessons, reviews, and tutorials. One could even consider web alternatives, since web authoring systems help teachers in building multimedia content that could be used on a website.

## **2. Graphic Software.**

Students could use graphic software for capturing, creating, and changing images that are available on the web, on the program itself, or online images available. It is particularly useful for building online presentations.

## **3. Reference Software.**

Teachers could include reference software in research projects. Reference software allows students access thesaurus, encyclopedia, atlases, and dictionaries.

## **4. Desktop Publishing.**

A desktop publishing software is used for creating and designing newsletters, handouts, and flyers. Teachers could use the software to inform students and parents on activities or events that are taking place in school. Desktop publishing software use is a must-have skill for new graduates and thus high schools are now teaching students how to use desktop publishing suites like Adobe Create Suite and Microsoft Office.

## **5. Tutorial Software.**

Through tutorial software, teachers could teach students new lessons and give them a platform through which they could learn the lesson at their own pace. Tutorial software consists of giving students new information for learning, giving them time to practice it and evaluate their performance.

## **6. Educational Games.**

There are several educational gaming software available. Education software companies combined gaming and education into one. This kind of software is very effective for younger children since it motivates them to learn.

## **7. Simulations.**

Simulations software lets teachers teach students via virtual experience. For example, students could use this software to acquire experience of flying a plane.

## **8. Drill and Practice Software.**

Teachers could include drill and practice software for strengthening the current skill set of students. This software is beneficial when teachers prepare students for tests and exams.

## **9. Math Problem Solving Software.**

This kind of software makes it possible for math teachers to strengthen the students' problem solving skills. Furthermore, science teachers could use this software for doing science experiments.

## **10. Utility Software.**

A utility software aids teachers in preparing quizzes, tests, and even serves as a grading book. Teachers who are non-tech would find this software easy to learn and use.

## **11. Special Needs Software.**

Online education software also includes special software that is developed for addressing the needs of a student who has special needs. The system is combined with assistive software that provide students with special needs an effective learning platform. Examples include speech synthesizers, computers that read text aloud, and multimedia software that targets certain learning disabilities.

Definitely, educational institutions have become more diverse and thus they could not risk being simple education temples. Using an educational software has become vital for schools at present.

Impact of educational software in field of education sector

Educational software has had a significant impact on the education sector. Here are some key ways it

has influenced education:

- **Enhanced Learning:** Educational software provides interactive and engaging learning experiences, making it easier for students to understand complex concepts through multimedia elements like videos, animations, and simulations.
  - **Personalization:** It allows for personalized learning experiences, as students can progress at their own pace and receive tailored content based on their abilities and interests.
  - **Accessibility:** Educational software has made education more accessible to a wider audience, including individuals with disabilities. It can be adapted to accommodate different learning styles and needs.
  - **Global Reach:** Online educational software has the potential to reach students globally, breaking down geographical barriers and providing access to quality education in remote areas.
  - **Data Analytics:** Educational software can collect data on student performance, which can be used by teachers to identify areas where students may need extra help and to improve overall curriculum design.
  - **Cost Savings:** It can reduce the costs associated with traditional textbooks and materials, as digital resources are often more affordable and easily updated.
  - **Continuous Learning:** It promotes lifelong learning by offering a wide range of courses and resources for learners of all ages, fostering a culture of continuous education.
  - **Teacher Support:** Educational software can assist teachers in managing classrooms, tracking student progress, and creating customized lesson plans.
  - **Adaptive Learning:** Some educational software utilizes artificial intelligence to adapt content to each student's level, providing challenges where needed and support where necessary.
  - **Skill Development:** It offers opportunities for developing digital literacy and computer skills, which are increasingly important in today's technology-driven world.
- However, it's important to note that the impact of educational software can vary depending on its quality, implementation, and the support provided to both teachers and students. It's not a replacement for effective teaching but rather a valuable tool that can enhance the educational experience when used thoughtfully.

How Educational software benefits teachers in enhancing the quality of education?

Teaching students with diverse mentality is a complex process. But with the advancement in educational technology, this process is becoming easier for teachers and more engaging for students who are then motivated to keep learning. Essential skills (2021) provides some of the benefits that teachers receive from educational software

- **Content organization and unlimited access:** With online educational software, the materials are stored in the cloud making it easy to organize lessons and access them whenever and wherever. Furthermore, the material can be accessed from different devices making it convenient for students. This has proven especially beneficial for distance and remote learning.
- **Better control of experience:** Every student does not learn the same way as others. While teaching, a teacher has to take individual differences of the student into account. To cater this need, educational software is providing a variety of ways of learning. This applies to both teachers and students- teachers can prepare personal programs for individual students depending on their level and students have the option to learn on their own pace.
- **Communication and Feedback:** Online learning resources allow for collaboration between students within a class making it easy for students across geographies to work together and further breaking down the barriers of a classroom.
- **Increased Student Engagement:** For learning to be meaningful and effective, students should be active in the learning process. So, some educational software are addressing this need.

Current attention spans are at a record low and therefore the requirements of keeping kids engaged in a classroom is as high as ever. A major benefit of using educational software for elementary students as a learning tool is improved engagement. Online educational software encourages interactivity with multimedia content, making it more fun than just reading a book. This is especially important for elementary school students, who are much harder to engage than adults. Multimedia content has proven to stimulate the curiosity of young learners.

- **Reduced Workload for Teachers:** With automated features, educational software for schools makes it easier to manage time-consuming activities like grading assignments and checking homework. Online learning resources can also help to unburden teachers from the repetitive teach, review and test cycle for basic skills. This frees up time for other activities such as working one-on-one with struggling students or creating new lesson plans.
- **Personalized Learning Experience:** Not every student learns in the same way, or at the same pace. Students have different learning styles and various skill levels making it challenging for teachers to plan classroom sessions. Educational software for elementary students addresses this challenge by providing every student with the individualized learning experience and attention they need. By incorporating auditory, visual, and tactile typing activities, interactive online learning programs help ensure that every student has an opportunity for success.
- **Tracking Student Progress:** One of the main features of educational software for schools is the ability to automatically track student progress, their strengths, and weaknesses. This helps identify learning gaps and assist teachers in developing targeted intervention strategies for their students.

### Conclusion

There is need to bring reform in education system to enhance its effectiveness and efficiency. Various multimedia device and educational software are making revolutionary impact in education sector. By a view at various major points related to educational software it can be concluded that educational software is benefitting teachers in enhancing the quality of education. Also day by day various new software are developing to ease the process of teaching and learning. Teacher plays a crucial role in using these software application. So, they should be well trained to operate and use such application. For effective use of multimedia in education teacher must develop their own educational multimedia applications. By doing so teacher will be well acquaint in using it. As technology advances new software are developing to make revolutionary change in education system. This change can only be possible when there is well collaboration between student, teacher and parents. The use of educational software in education pushes students to inquire about all that is new and to engage in discussions and to express their opinions about what they have learned. The main principle for learning to take place is student to be an active participant in learning process. As of now it can be seen that educational software are well equipped in addressing such issues. In some remote areas, some school teachers are not equipped with such facilities. So, effort should be made that more and more teachers are well informed about various aspect and trends related to educational technology. So, they can use it as tool to enhance effectiveness of education.

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## STEM VIRTUAL LABORATORY: A HANDS-ON EXPERIENCE

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### Abstract

*This study presents the results of an achievement test designed to assess the proficiency of the students in the field of electronics and Arduino-based activities. The test was administered to a group of 9<sup>th</sup> grade CBSE School students, to evaluate their understanding of fundamental electronic principles and their practical skills in programming and executing Arduino-based projects. The achievement test was structured to encompass both theoretical knowledge and hands-on application, consisting of multiple-choice questions, writing the pre-designed coding and practical exercises. Participants were required to demonstrate their comprehension of electronics concepts, such as circuit analysis, component identification, and basic troubleshooting, as well as their ability to execute the pre-designed coding program and functional Arduino projects. The study examines the overall performance of participants, shedding light on areas of strength and weakness in their electronics and Arduino skills. Additionally, it explores the influence of prior experience and educational background on test outcomes, providing valuable insights into the factors that contribute to success in these domains. The findings from this achievement test contribute to our understanding of the effectiveness of electronics and Arduino education, highlighting areas where learners may need additional support and emphasizing the importance of hands-on practical experience in complementing theoretical knowledge. Furthermore, the results offer educators and curriculum developers valuable feedback for optimizing instructional strategies and designing targeted interventions to enhance students' proficiency in electronics and Arduino-related activities.*

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### Introduction:

In today's fast-paced world, the fields of Science, Technology, Engineering, and Mathematics (STEM) are advancing at an unprecedented rate. These disciplines are the driving force behind innovation and progress, shaping our understanding of the world and pushing the boundaries of human knowledge. As STEM education becomes increasingly critical, the demand for effective and accessible learning tools has never been greater. Enter the Virtual Laboratory, a revolutionary solution that brings the laboratory experience to the digital realm. Virtual laboratories, or "virtual labs" for short, are immersive online environments that enable students and researchers to conduct experiments, analyse data, and gain practical skills without the need for physical facilities or equipment. This innovation is reshaping the landscape of STEM education and research, offering numerous advantages that extend far beyond traditional laboratory settings. In this exploration of virtual laboratories for STEM, we will delve into the transformative potential of these digital platforms. We will examine how they are redefining the way students and professionals engage with scientific concepts, conduct experiments, and collaborate with peers across the globe. We will also explore the diverse range of STEM disciplines that benefit from virtual labs, from biology and chemistry to computer science and engineering. In conclusion, the advent of virtual laboratories is ushering in a new era for STEM education and research. They offer an exciting opportunity to democratize access to high-quality laboratory experiences, foster innovation, and empower the next generation of scientists, engineers, and technologists. This exploration will shed light on the boundless possibilities and transformative potential of virtual laboratories in the ever-evolving world of STEM.

### Objectives:

The grade 9 students will be able to

1. **Understand Scientific Inquiry:** Develop an understanding of the scientific method and inquiry process by engaging in virtual experiments and investigations.

2. **Acquire Laboratory Skills:** Acquire fundamental laboratory skills, including drawing the circuit diagrams, studying the components, and executing the coding through hands-on simulations.
3. **Conceptual understanding:** Deepen knowledge of key STEM concepts such as physics principles, Arduino through interactive experiments.
4. **Problem – Solving Skills:** Enhance problem-solving abilities by addressing real-world STEM challenges using virtual tools and experiments.
5. **Experimental Design:** Learn how to design and plan experiments, considering variables, controls, and hypotheses to test scientific ideas.
6. **Programming and coding skills:** Develop introductory coding skills, particularly in contexts related to STEM fields such as programming Arduino devices or using computational tools for data analysis.
7. **Critical Thinking and Inquiry-Based Learning:** Foster critical thinking skills by encouraging students to ask questions, make predictions, and form hypotheses before conducting virtual experiments.
8. **STEM Career Exploration:** Introduce students to various STEM career paths and inspire interest in potential future careers related to STEM fields.
9. **Adaptation and Innovation:** Encourage adaptability and innovation by allowing students to experiment with different approaches and iterate on their ideas.
10. **Real- World Applications:** Connect virtual laboratory experiences to real-world applications, showing how STEM concepts are used in various industries and professions.

These learning objectives can serve as a foundation for designing a virtual laboratory program for grade 9 students, ensuring that it provides a well-rounded educational experience encompassing essential STEM skills and knowledge.

#### **Benefits of virtual laboratory for STEM:**

Virtual laboratories offer numerous benefits for students in STEM education. These advantages enhance the learning experience and help students develop critical skills and knowledge. Here are some of the key benefits:

1. **Accessibility:** Virtual labs provide access to laboratory experiences for students who may not have access to physical laboratories due to limitations such as budget constraints, space, or location. This widens participation and promotes inclusivity in STEM education.
2. **Safety:** Virtual labs eliminate the risks associated with handling hazardous materials and conducting potentially dangerous experiments. Students can explore concepts without concerns about safety hazards.
3. **Cost- Efficiency:** Setting up and maintaining physical laboratories can be expensive. Virtual labs reduce costs associated with equipment, materials, and maintenance, making STEM education more budget-friendly.
4. **Flexibility:** Virtual laboratories allow students to conduct experiments at their own pace and convenience, accommodating different learning styles and schedules.
5. **Repetition and Mastery:** Students can repeat experiments as often as needed to reinforce their understanding and skills. This repetition fosters mastery and confidence in STEM concepts.
6. **Interactivity:** Virtual labs often incorporate interactive simulations and multimedia, making learning engaging and dynamic, it enhances students' understanding of abstract scientific concepts.
7. **Access to Advanced Equipment:** Virtual labs can simulate access to high-end, expensive equipment that may not be available in traditional classrooms, providing students with unique learning opportunities.
8. **Data Analysis Skills:** Students can practice coding, analysis, and interpretation, essential skills for scientific inquiry, through virtual experiments and simulations.



9. **No Time Limitations:** Students can spend more time exploring complex concepts and experiments without the constraints of limited class periods.
10. **Self-Paced Learning:** Virtual labs enable self-directed learning, allowing students to choose experiments and topics that align with their interests and learning goals.
11. **Accessibility to Diverse STEM Disciplines:** Students can explore a wide range of STEM disciplines, same virtual environment.
12. **Remote Learning and Collaboration:** Virtual labs support remote and online learning, enabling collaboration among students regardless of geographical locations, fostering teamwork and communication skills.
13. **Real – World Applications:** Many virtual labs connect STEM concepts to real-world applications, helping students understand the practical relevance of what they're learning.

Overall, virtual laboratories for students in STEM education offer a versatile and inclusive learning environment that complements traditional teaching methods and equips students with the skills and knowledge needed to thrive in STEM disciplines.

#### **Designing a virtual laboratory for STEM:**

Designing a virtual laboratory for STEM activities involves careful planning and consideration of various elements to create an effective and engaging learning environment. Here is a design framework:

1. **Define Learning Objectives:** Clearly articulate the specific STEM concepts and skills that the virtual laboratory aims to teach or reinforce.
2. **Identify Target Audience:** Determine the age group, educational level, and prior knowledge of the participants to tailor the virtual lab accordingly
3. **Select Virtual Lab Platform:** Choose or develop a suitable virtual lab platform that aligns with the learning objectives and offers the necessary features, such as simulations, data analysis tools, and interactivity.
4. **Curriculum Integration:** Align the virtual lab with the existing curriculum or educational standards to ensure it complements classroom learning.
5. **Content Creation:** Develop or curate content, including interactive simulations, videos, text-based explanations, and assessment materials.
6. **Accessibility and Inclusivity:** Ensure that the virtual laboratory is accessible to individuals with disabilities and follows universal design principles.
7. **Data Analysis Tools:** Integrate tools for data collection and analysis, allowing students to draw conclusions from experiments and observations.
8. **Collaboration and Communication:** Implement features that enable students to collaborate with peers and instructors, fostering a sense of community and teamwork.
9. **Feedback and Assessment:** Provide instant feedback on activities and assessments to help students gauge their progress and make improvements.
11. **Progress Tracking:** Develop a system for tracking student progress, allowing educators to monitor performance and provide targeted support.
12. **Quality Assurance:** Regularly update and test the virtual lab to ensure it remains accurate, error-free, and aligned with educational goals.
13. **User Training:** Provide training materials or sessions to help educators and students make the most of the virtual laboratory.
14. **Evaluation and Feedback:** Collect feedback from users and educators to continuously improve the virtual lab's content and functionality.
15. **Scalability and Sustainability:** Plan for scalability to accommodate a growing user base and ensure the long-term sustainability of the virtual lab.

By above design framework, you can create a virtual laboratory for STEM activities that effectively supports learning, engagement, and skill development in the fields of science, technology, engineering, and mathematics.

**Methodology:** Designing a methodology for an achievement test conducted for ninth-grade physics students related to electronics and Arduino activities requires careful planning to ensure the assessment aligns with the learning objectives and accurately measures student knowledge and skills. Here's a step-by-step methodology for conducting such a test:

1. **Define Learning Objective:** The objectives should be based on the physics curriculum and the integration of electronics and Arduino concepts.
2. **Select Test format:** Choose an appropriate test format, which may include multiple-choice questions, short-answer questions, hands-on practical exercises. Consider using a mix of formats to evaluate different aspects of learning.
3. **Develop Test Content:** Create or select test questions and tasks that align with the defined learning objectives. Ensure that they cover a range of topics related to electronics, Arduino programming, and their application to physics concepts.
4. **Pilot Testing:** Administer the test to a small group of students to identify any issues with the questions, instructions, or format. Revise the test based on feedback and results.
5. **Test Administration:** Plan the logistics of test administration, including the test duration, location, and any required materials or equipment. Ensure a controlled and distraction-free testing environment.
6. **Pre- Test Preparation:** Provide students with any necessary information about the test format, content, and expectations. Offer review materials or practice questions to help students prepare.
7. **Test Implementation:** Administer the test to the ninth-grade physics students as per the predetermined schedule by ensuring fairness and consistency.
8. **Monitoring and Assistance:** Have test proctors available to monitor the test-taking process and provide assistance if students encounter technical issues or need clarification on instructions.
9. **Scoring Rubrics:** Develop clear and comprehensive scoring rubrics for all types of questions and tasks to ensure consistent and fair evaluation.
10. **Data Collection:** Collect data on student responses and performance during the test administration. Ensure the confidentiality and security of test results.
11. **Data Analysis:** Analyse the test data using appropriate statistical methods to assess student performance, identify areas of strength and weakness, and draw meaningful conclusions.
12. **Reporting and Feedback:** Provide individualized feedback to students, summarizing their performance and highlighting areas for improvement.
13. **Continuous Improvement:** Continuously review and refine the test and assessment methods to improve their validity, reliability, and effectiveness in measuring student achievement in electronics, Arduino, and physics concepts. By above methodology, conducted an achievement test effectively assesses ninth-grade students' knowledge and skills in electronics and Arduino activities and providing valuable educational improvement. Students were trained to use the Tinkercad software for testing the electronic and Arduino activities.



The below questionnaire has been prepared by a subject expert, which contains 20 marks of multiple-choice questions and a descriptive question. The questionnaire contains six practical questions in which students can select one of the questions and need to execute the program with output, which has a weightage of 10 marks.

NAME : \_\_\_\_\_

GRADE: IX

MARKS : 30

**I. CHOOSE THE CORRECT ANSWER:**

**(10X1=10)**

1. Arduino IDE consists of 2 functions. What are they?

- a) Loop() and build() and setup()
- b) Build() and loop()
- c) Setup() and build()
- d) Setup() and loop()

2. Arduino Codes are referred to as \_\_\_\_\_ in the Arduino IDE.

- a) sketches
- b) drawing
- c) links
- d) notes

3. The Arduino board is also called a \_\_\_\_\_.

- a) Microprocessor
- b) Timer
- c) Oscillator
- d) Microcontroller

4. To ground the circuit \_\_\_\_\_ pin is used in Arduino.

- a) PIN
- b) GND
- c) RESET
- d) None of the above

5. Which of the following is true regarding a seven segment display ?

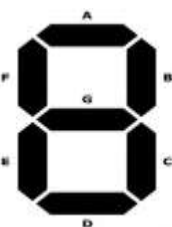
- a. a seven segment IC comprises 7 pins.
- b. the range of digits a 7 seven segment display can display is (1-8)
- c. a seven-segment display consists of 10 LEDs

d. The two types of 7 seven segment displays are Common Cathode and Common Anode type.

6. The device that converts electrical energy into mechanical energy is

- a. Electric motor
- b. Seven segment display
- c. LED
- d. LCD

7. Which of the following segments are enabled in a 7-segment display when a digit '0' is displayed on the screen?



- a. a,b,c,d,e,f
- b. a,b,c,d,e,f,g
- c. a,b,c,d
- d. a,b,c

8. An LED is said to be ON if the logic is \_\_\_\_\_?

- a. Null
- b. Low
- c. High
- d. None of the above

9. Changing the polarity (positive and negative terminals) of the electric motor results in

- a. Increasing the speed of the motor
- b. Slowing down the speed of the motor

- c. Changing the direction of rotation of the motor
- d. No change in the rotation of the motor.

**10. Assertion:** Program written using arduino software (IDE) are called blocks

**Reason:** IDE uses a compiler to translate code in a simple language that the computer understands.

- (a) Both Assertion (A) and Reason (R) are the true and Reason (R) is a correct explanation of Assertion (A).
- (b) Both Assertion (A) and Reason (R) are the true but Reason (R) is not a correct explanation of Assertion (A).
- (c) Assertion (A) is true and Reason (R) is false.
- (d) Assertion (A) is false and Reason (R) is true.

**II. Match the following:**

**(4 x ½ = 2)**

Column I	Column II
1. Arduino	a. Analog reference
2. AREF	b. Executes repeatedly in the main program
3. Setup()	c. Starts after power-up or reset
4. loop()	d. Open-source electronic prototyping platform

**III. Expand the following:**

**(4 x ½ = 2)**

- a. LCD
- b. TX-RX pin
- c. PWM
- d. IDE

**IV. Identify the error in the following and rewrite with the correct syntax. (4 x 1 = 4)**

- a. PINMODE(9,OUTPUT)
- b. digitalwrite(10,High)
- c. VOIDSETUP()  
{Pin mode(5,input);  
}
- d. voidloop()  
Digitalwrite(7,low)  
delay(100)

**V. Write any four applications of a seven-segment display used in our daily usage. (2m)**

**VI. Practical Questions (any one):**

**(1x10=10)**

1. Using tinkercad construct a circuit using Arduino to blink a LED which is connected to the 13<sup>th</sup> digital pin.
2. Construct an electronic circuit using a 7-segment display and show the display of 4,7,9, A and H.
3. Write an Arduino program to beep a buzzer connected to 9<sup>th</sup> digital pin and execute the same using tinkercad.
4. Construct an electronic circuit to rotate a motor a) with a transistor b) using slide switch
5. Write an Arduino program to construct 2 LED PATTERN and execute the same using tinkercad.
6. Construct an electronic circuit to rotate a motor a) with a push button switch  
b) with another motor connected parallel to it.

**Practical exam conducted for the grade 9 students:**

The sample photographers of the students during the conduct of exam.

**Result and discussion:**

Statistical methods play a crucial role in understanding the performance of students on achievement tests.

Here's a grading scale and score ranges for achievement test:

- A (Excellent): 22.5 - 30 marks
- B (Good): 15 - 22 marks
- C (Satisfactory): 0 – 14.5 marks

Students who score between 22.5 - 30 marks will receive an "A" grade, those who score between 15 - 22 marks will receive a "B" grade, and those who score between 0 – 14.5 marks will receive a "C" grade.

Total number of 9<sup>th</sup> grade students attended the test: 75

Grading scale & score range	Number of students in each grade	Category
Grade A (22.5 - 30 marks)	39	Excellent
Grade B (15 - 22 marks)	24	Good
Grade C (0 – 14.5 marks)	12	Satisfactory

**Conclusion:** In conclusion, the use of virtual laboratories for STEM activities among grade 9 students offers a promising avenue for enhancing their educational experiences and preparing them for the challenges of a technology-driven future. This study has highlighted that the 39 students performed excellently in the test conducted, 24 students performed good in their test and only 12 students have done in a satisfactory manure. This result shows that virtual laboratories have emerged as a

transformative tool in STEM education for grade 9 students, offering an array of benefits that extend beyond traditional classroom experiences. By providing accessibility, safety, flexibility, and enhanced learning opportunities, virtual labs empower students to develop critical STEM skills and knowledge that will prepare them for a future where technology and innovation are paramount. However, their continued success hinges on ongoing research, development, and commitment to inclusivity and quality in STEM education.

**Review of Literature:**

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2. *The Development of Virtual Laboratory-based STEM Approach Equipped Feedback to Improve Critical Thinking Skills on Acid-Base Concept* Dewi R. Trisnaningsih<sup>1</sup> Parno Parno<sup>2,\*</sup> Agung M.Setiawan<sup>1</sup>, *Advances in Engineering Research, International Joint Conference on Science and Engineering (IJCSE 2021)*, volume 209 2021.
3. *STEM VIRTUAL LAB: AN ALTERNATIVE PRACTICAL MEDIA TO ENHANCE STUDENT'S SCIENTIFIC LITERACY* Ismail<sup>1,2\*</sup>, A. Permanasari<sup>1</sup>, W. Setiawan, *Journal Pendidikan IPA Indonesia JPPI* 5 (2) (2016) 239-246.



## A STUDY ON ATTITUDE TOWARDS BLENDED LEARNING AND ICT AMONG STUDENT TEACHERS OF KALABURAGI CITY

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### Abstract

*The world quickly transitions to digital media and information and communication technology, ICT and blended learning are playing an increasingly significant role in education. The present study aimed to find out the attitudes of student teachers towards Blended learning and ICT. In the present study, the investigator has employed the 'survey method'. The sample consisted of 200 B.Ed. student teachers from various Colleges of Education from Kalaburagi city selected by random sampling technique. Data were analyzed using frequency and percentage. According to the current investigation, the majority of B.Ed. student teachers have a favorable attitude towards using blended learning and ICT in the teaching and learning process. In order for the B.Ed. student teachers to become proficient with using those applications and develop a high level of positive attitude toward using Blended learning and ICT, it is important that many innovative techniques and methods of Blended learning and ICT application can be introduced to them during their pre-service training.*

**Keywords:** Attitude, Blended learning and Information and communication technology.

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### Introduction:

Learning is a complicated process that shouldn't be limited to a school environment or classroom. Information and communication technologies are the processes, methods of searching, collecting, storing, and processing, providing, distributing information. It is obvious that the use of information and communication technology (ICT) in education benefits the learning process. Developments in the information age have had impacts on education as well as on most of the fields. New perspectives in the education-learning process have emerged as a result of this effect. Some of these paradigms is electronic learning (e-learning) distance learning and blended teach (Yurdugul&Alsancak-Sirakaya, 2013) these educational paradigms has been evolved to use the ICT. ICT includes both the internet-enabled world and the wireless network-powered mobile world. The numerous chances and advantages that ICT creates are not available to institutions without ICT skills; nonetheless, blended learning is a type of education that combines traditional classroom instruction with online digital media. Both the teacher and the students must be present in person to use this method. A formal or informal educational program called blended learning combines traditional classroom instruction with online digital media. Both the teacher and the student must be there in person. Introduction of information and communication technology (ICT) provide solutions for various problems faced by a teacher in a real classroom situation. By incorporating computers into their teaching and learning processes, teachers are given more innovative ideas. The soft skills of the teacher have strengthened their accountability; we may say that ICT proficiency is a key component of the soft skills. So the need of ICT in B.Ed. is very vital, so student teacher should have a necessary knowledge about ICT at Bachelor of Education level. To satisfy the unique requirements of each learner, the work of teachers and teacher educators is multifaceted. However, as the world quickly transitions to digital media and information and communication technology, ICT and blended learning are playing an increasingly significant role in education and will continue to do so throughout the 21<sup>st</sup> century.

This paper highlights the "A study on Attitude towards Blended learning and ICT among student teachers of Kalaburagi city"

### Review of related literature:

**1. Arthi S, Dr.Tamilselvi B (2016):** Study entitle "A study of the attitude towards ICT among B.Ed. student teachers in Namakkal District". Normative survey method of research was adopted. The sample consisted of 724 B.Ed. student teachers from ten Colleges of Education from Namakkal District selected

by random sampling technique. Data were analyzed using mean, standard deviation and 't' test. The study revealed that majority of the Male (42.6%) B.Ed. student teachers had high level of attitude towards ICT whereas majority of the Female (40%) B.Ed. student teachers had medium level of attitude towards ICT.

**2. Jayalakshmi,B (2018):** A study on attitude towards ICT and blended learning among B.Ed. students in Kancheepuram District under the objectives of: To find out the difference in the means scores of attitude towards ICT and blended learning among B.Ed. student's based on gender (boy/girl), age (below 25 years/above 25 years) and found out that (a) There is a significant difference found between male and female students in attitude towards ICT, but not for blended learning. And (b) There is no significant differences exist.

#### **Objectives of the study:**

1. To find out the attitudes of student teachers towards Blended learning.
2. To find out the attitude of student teachers towards ICT.

#### **Hypotheses of the study:**

1. Student teachers have favorable attitude towards Blended learning.
2. Student teachers have favorable attitude towards ICT.

**Method adopted in the study:** In the present study, the investigator has employed the 'survey method'.

**Selection and construction of the tool:** In order to achieve the objectives of the study, the investigator used two separate self-prepared questionnaires. The investigator referred various books and journals to have clarity of concept and in addition to their information's investigator consulted some subject experts about the content for the development of the tool. Based on the expert's suggestions investigator has modified certain items and finalized the questionnaire. The final draft of the Student teachers attitude towards Blended learning questionnaire consists of 10 items (5- positive & 5-Negative). And another student teachers attitude towards ICT questionnaire consists of 10 items. There choices were given for each item in the form such as, agree, disagree and neutral, in three columns.

**Population and Sample of the study:** In this study, all the student teachers studying in B.Ed. at various colleges located in Kalaburagi city, Karnataka have been taken as the population for the study. A good sample must be representative of the entire population for this study, 200 samples has been collected using random sampling technique.

**Statistical Technique used:** The data obtained was analyzed by calculating frequency and percentage.

#### **Data analysis and Interpretation:**

*Table 1: Student teachers attitude towards Blended Learning.*

SI. No	Item	Agree%	Disagree%	Neutral%	Attitude
1	I believe face-to-face learning is more effective than online learning	95 (47.5%)	42 (21%)	63 (31.5%)	Negative
2	Do we have network or internet connectivity issues	147 (73.5%)	42 (21%)	11 (5.5%)	Negative
3	Blended learning helps teachers and students to think in-depth about a subject	148 (74%)	31 (15.5%)	21 (10.5%)	Positive
4	Blended learning activities are interactive	92 (46%)	48 (24%)	60 (30%)	Positive
5	Blended learning enhances the interaction between teachers and students	125 (62.5%)	41 (20.5%)	34 (17%)	Positive
6	Unlike the conventional style, it minimizes human contact.	178 (89%)	7 (3.5%)	15 (7.5%)	Negative

7	Blended learning enhances my learning abilities.	172 (86%)	11 (5.5%)	17 (8.5%)	Positive
8	With blended learning, there are multiple ways to get information.	181 (90.5%)	8 (4%)	11 (5.5%)	Positive
9	The use of blended learning fosters students' laziness.	116 (58%)	21 (10.5%)	53 (26.5%)	Negative
10	Some subjects are better addressed in physical classes.	179 (89.5%)	21 (10.5%)	-	Negative

The above table 1 showed that summatively, 90.5% of the respondents with blended learning the information are obtained by more than one way. 89.5% of the respondents agreed that some topics are better treated in physical classes while 10.5% disagreed. 89% of respondents making majority agreed that Blended learning reduces the touch of human unlike the traditional style while minority 3.5% disagreed. 86% of respondents agreed that the blended learning improves their learning skills. Furthermore, 62.5% of respondents agreed that Blended learning enhances the interaction between teachers and students while 20.5% respondents disagreed. 74% of the respondents agreed that Blended learning helps teachers and students to think in-depth about a subject while 15.5% disagreed. However, 58% majority of the respondents agreed that blended learning encourages laziness while a substantiate number 10.5% disagreed. 73.5% of the respondents agreed that the major challenge is network or internet connectivity issues. 47.5% agreed that they believe face-to-face learning is more effective than online learning while 21% of respondents disagreed.

**Table 2: Student teachers attitude towards ICT**

SI. No	Question	Agree %	Disagree %	Neutral %
1	I am interested in incorporating new ICT technologies into the classroom.	186 (93%)	5 (2.5%)	9 (4.5%)
2	I am very confident when using ICT in the classroom.	169 (84.5%)	18 (9%)	13 (6.5%)
3	I like that my methodology is based on the use of ICT	173 (86.5%)	8 (4%)	19 (9.5%)
4	I would like to communicate and share information with my friends by using ICT	193 (96.5%)	-	7 (3.5%)
5	I believe that ICT makes learning activities more fascinating.	186 (93%)	10 (5%)	4 (2%)
6	I believe that ICT gives me opportunities to learn many new things	197 (98.5%)	-	3 (1.5%)
7	I think ICT makes student teachers more effective learner	178 (89%)	16 (8%)	6 (3%)
8	I think use of ICT in classroom is easy	187 (93.5%)	4 (2%)	9 (4.5%)
9	I believe that the use of ICT help to create digital learning resources (Blogs, Slide share, Mind-maps, etc.)	198 (99%)	-	2 (1%)
10	I believe that use of ICT enhances teaching-learning experience	196 (98%)	-	4 (2%)

From the above table 2 it was founded that majority 99% of the student teachers agreed that the use of ICT help to create digital learning resources (Blogs, Slide share, Mind-maps, etc.). 98% of the respondents believe that use of ICT enhances teaching-learning experience. 98.5% of respondents believe that ICT gives them opportunities to learn many new things. 96.5% of respondents agreed that they would like to communicate and share information with my friends by using ICT. Furthermore,

93% of respondents agreed that they interested in using new ICT tools in the classroom and believe that ICT makes the study activities more interesting while 7.5% of the respondents disagreed. 89% of the respondents think ICT makes student teachers more effective learner while 8% of respondents disagreed. However, 84.5% of the respondents are very confident when using ICT in the classroom while 9% respondents disagreed.

**Conclusion:** One of the areas of education that has been impacted by the speed of technological progress is teaching and learning. According to the current investigation, the majority of B.Ed. Student teachers have a favorable attitude towards using blended learning and ICT in the teaching and a learning process. In order for the B.Ed. student teachers to become proficient with using those applications and develop a high level of positive attitude toward using Blended learning and ICT, it is important that many innovative techniques and methods of Blended learning and ICT application can be introduced to them during their pre-service training. The results of this study have important implications for how policymakers should focus on students and support them.

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## ARTIFICIAL INTELLIGENCE IN EDUCATION: OPPORTUNITIES AND CHALLENGES

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### Abstract

*Every aspect of life has been touched by technological advancements over time. Since technology has invaded every part of our lives as it has been more readily available, we now demand that every device we use be as technologically advanced as possible. Schools have also embraced technology as an integral part of their education process. Although technology has always been a significant part of education, there is a growing trend in education to incorporate contemporary methods and technologies in order to enhance the learning environment. With the rise of Artificial Intelligence (AI) in education, there are many different ways it is being used to help students learn. Chatbots, Virtual Reality, Learning Management Systems, and Robotics are a few technologies with AI that are already affecting and will affect education in every way. Despite the numerous advantages of employing AI in the field of education, it is imperative to confront and overcome certain limitations and obstacles. Among these challenges, a prominent concern is guaranteeing equal access to AI-driven educational tools and platforms for students, irrespective of their economic circumstances or geographic location. Furthermore, there are apprehensions regarding the likelihood of AI reinforcing pre-existing biases and inequities within the education system. While ongoing endeavors aim to integrate AI into educational settings, the acceptance and implementation of these novel instructional technologies largely hinge on the perspectives and leadership of educators responsible for guiding and conducting lessons. Moreover, numerous educators express concerns about the potential of AI-driven tools to supplant human interaction and impact the overall quality of classroom teaching. In the forthcoming years, it will be essential to ensure that AI is employed in a manner that enriches the role of human educators rather than substituting them. There are several challenges to the use of AI in education. Some are common to the use of AI across sectors. The present paper aims to identify the impact of artificial intelligence on the educational process, present some of the applications of AI in education, and highlight the perceived benefits of the application along with challenges.*

**Keywords:** Artificial Intelligence, Technology, AI & Education

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### Introduction:

The era of 21<sup>st</sup> century is often regarded as the era of technology. Today, technology plays an important role in our life. The technological advances made over the years have impacted every field of life. Every aspect of life has been touched by the technological advancements over time. Since technology has invaded every part of our lives as it has been more readily available, we now demand that every device we use be as technologically advanced as possible. The pillars of any sound educational system are well-trained and scholarly teachers. While they should be continuously trained to imbibe the changing pedagogical approaches, introducing Artificial Intelligence -based technologies in Education can lead to student-centric teaching-learning processes. Technology has always been crucial to education, but due to the increased accessibility of smart devices and web-based curricula, its use is now more common than ever. With the rise of Artificial Intelligence (AI) in education, there are many different ways it is being used to help students learn. There are three ways in which AI tools can assist students in making them better learners and they are: AI-Directed Learning, AI-Supported Learning and AI-Empowered Learning. Here are a few technologies with AI that are already affecting and will affect education in every way. Chatbots, Virtual reality, Learning Management System (LMS) and Robotics are few technologies with AI that are already affecting and will affect education in every way.

Understanding effective Artificial Intelligence, Du Boulay (2016) gave a deeper understanding of how artificial intelligence brings significant partner in Learning. Garito (1991) addresses the impact of AI on the educational sector way before AI became as advanced as it is in the 21st century. Barton (2020), examined the impact of artificial intelligence in education and teaching alternatives remotely during the pandemic. Gates even believes that AI will be able to improve human Learning in various ways. Based



on these beliefs, we want to understand the effectiveness of artificial intelligence in education during pandemics and future Learning (Güzer & Caner, 2014; Engeström & Sannino, 2010).

**Benefits of Artificial Intelligence:** Paradigm One is characterized as AI-directed, learner-as-recipient, that is While the learner functions as the service recipient to follow the designated learning routes, AI represents the domain knowledge and guides the learning processes. One of the largest trends in education is personalization. Students now have a personalised approach to learning programmes based on their own distinct experiences and interests thanks to the application of AI. AI tutors and chatbots are a perfect solution in these situations. While no chatbot can truly replace a teacher, AI tools can help students sharpen their skills and improve weak spots outside of the classroom. AI can help students find answers to their most frequently asked questions in seconds through support automation and conversational intelligence. Paradigm Two, What is important, though, is how fully and how the learners' data is incorporated into the AI system in order to enhance the student model, reflect various facets of the student's learning status, and provide adaptive, AI-supported learning and instruction. AI-supported tools make learning accessible to all learners, anytime and anywhere. Each student learns at their own pace, and 24/7 access makes it easy for students to find what works for them without waiting for a teacher. In addition, students from all over the world can have access to high quality education without having to travel and live. AI-supported, learner-as-collaborator. Paradigm Three, the goals of AI-Empowered Learning are to provide students full control over their learning, to optimize AI methods to deliver in the moments insights into emergent learning, and to rethink the changes in learning that AI has brought about in intricate, inter connected leaning systems. This paradigm, AI-empowered, learner-as-leader to facilitate learner agency, empowerment, and personalization, enable learners to reflect on learning and inform AI systems to adapt accordingly, and lead to an iterative development of the learner-centered learning. Virtual Reality (VR) is the another important way to facilitate learning. Virtual reality technologies have a very special opportunity to produce real educational experiences. In virtual reality, students will be able to explore and interact with the complicated concepts in hands on way. For instance, virtual reality may allow students to experience a more realistic scenario of the world such as historical events, scientific experiments and complex machines that would give them an engaging and memorable learning experience. In addition, virtual reality has the potential to break down boundaries of time and space so that students can learn from anywhere in the world while exploring places they may not otherwise have access to. Another aspect of AI is Learning Management System. The improvement of efficiency and time management is crucial for setting up a Learning Management System in training institutions. In order to create the complete e-Learning LMS solution, it is important to integrate features such as calendars, student forums and communication channels. Whether it is online learning or face-to-face teaching, LMS has features for everyone. LMS has evolved to become an essential teaching tool, and it's no longer luxuries but a necessity of the modern era. Even in the face of unfavourable circumstances, this system is helping to keep learning going.

**Challenges:** AI can support teaching and learning but new ethical implications and risks emerge with the development of AI applications in education. Teachers may fear that an intelligent tutor system, an application of AI, can replace them. AI systems require large quantity of data, including student and staff information, which is confidential and leads to serious privacy issues. AI is very expensive compared to installation, maintenance and repair costs. The use of such advanced technology is possible only by heavily financed education institutions. When this technology is over-relied it can cause a lack of personal connection and harm users from this perspective. Other risks are like over addiction of use of AI, communication barrier, Decreases the thinking power of the students and Laziness in students.

**Conclusion:** Artificial intelligence is the biggest education change in history. The biggest contribution that AI could make to education in the Indian context would be to promote the idea of learning as learner-centred. As already discussed there are numerous benefits of artificial intelligence for teachers,



students and administrators, the possibilities of AI are also impressive. But still there are few very important challenges like how to shield students' privacy at the time of using data to help them. Artificial intelligence is an unusual technology with the potential to both harm and help us, Microsoft co-founder and now philanthropist Bill Gates urged. So to ensure it's a boon, we should put AI to work improving health and education. The main aim of AI is to facilitate the work of the human resource (teachers) but not to replace it.

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## A STUDY OF PERCEPTION AND ATTITUDES TOWARDS E-LEARNING AMONG B.ED TEACHER TRAINEES

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### Abstract

*Learning has been the key component of any civilization progress. Whichever might be era, the process of learning always existed in society, whether formally or informally. While talking about formal education, one can observe that, over the ages, this education system across the globe has undergone various changes. With the changing times, the overall set-up of the education system had to go through various reforms. The present study seeks to understand the perceptions and attitudes about e-learning among the teacher trainees of department of education (B.Ed) Karnataka State Akkamahadevi Women University, Vijayapura. Today we are acquisition in a global knowledge society. The quickly changing dynamics of current society demand for consistently learning so as to get personalized to the changes that are happening in every sector of our livelihood. The concept that is popularly known as e-learning has occupied a significant place in the education system across the globe. The COVID-19 pandemic has highlighted the importance of e-learning and it has started penetrating deeply in institutions worldwide including developed nations. Also identifying and understanding the role of library in the context of e-learning is the scope of this study.*

**Keywords:** Perception, Attitudes, e-Learning, Teacher Trainees.

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### Introduction

The definition of e-learning can be presented in a variety of ways depending on the technologies being used, such as CD-based learning, mobile learning, online learning through existing platforms like Zoom, Google meet, Goto-meeting, web-based learning through podcasts, learning management systems (LMS), instant messaging, MOOCs, and more. This indicates that the notion has been developed in many ways to reflect changing requirements and times. The following significant types of e-learning that are currently widely used are the main subjects of the current study.

E-learning is a distinctive kind of education that makes use of information and communication technologies. Information Communication Technology (ICT) aids in the process of teaching and learning. Does this imply that the fundamental concepts of e-learning are the same as those of traditional classroom learning, with the delivery method being different? This cannot be viewed as merely a format or medium variation. This is due to the possibility that the influence that both formats have will be very different. The justification for utilizing computers in education is not that they offer any intrinsic educational advantages, but rather that they make the adoption of efficient teaching strategies easier. It will not be effective if we just repackage our current dominant ways into e-learning, as Garrison (2011) has noted. Additionally, we must be certain about the type of educational experience we intend to provide.

Since self-paced, geographically unrestricted learning is possible through e-learning, learning can be more flexible. It is thought to be crucial for promoting lifelong learning. E-learning platforms have been utilized as a quick fix for the closure of educational institutions over the past few years. Due to the COVID-19 pandemic, technology use in education has rapidly increased over the past two years in terms of distant learning online using a variety of methods and platforms. Around the world, diverse e-learning media are being used more frequently by students, instructors, and facilitators (Adedoyin & Soykan, 2020; Alqahtani & Rajkhan, 2020; Agormedah et al., 2020).

One of the foundational theories of learning is cognitivism. This theory is concerned with how the mind organizes, stores, and retrieves information. It views the brain as a computer's processor. As a result, learning is seen by cognitivism as a mental activity that goes beyond outward behavior. The

cognitive processes of the mind, which include motivation and creativity, are significant learning components that link environmental stimuli and student response.

**Constructivism:** In accordance with this method of learning, learning occurs when a person creates knowledge as a result of their experiences in the outer world. The fundamental concept of constructivism is that learning happens as students build on what they have already learned to acquire new knowledge. Due to the fact that students already possess some knowledge from earlier experiences, this knowledge "shapes the new or modified knowledge they gain from the new learning experiences" (Bryceson, 2007).

Since e-learning makes it simpler to use technology while studying, it is necessary. It offers the choice of remote learning regardless of location. E-learning is required due to its advantages, which include adaptability, effective use of audiovisual content, and engagement from instructors and students all over the world. Additionally, a deeper comprehension of the necessity for e-learning is required.

### **Role of library for e-Learning:**

The researcher is interested in learning the purpose of using e-learning systems by the learners, how extensively they are adopting e-learning, and what are their views and perceptions about e-learning. This is because e-learning is necessary and important, and because they understand the roles of library professionals in the overall scenario. The study's sample includes B.Ed teacher trainees in the department of education Karnataka State Akkamahadevi Women University, Vijayapura who are enrolled in various methods. Through the questionnaire, we were able to learn about their opinions and perspectives of online learning. The primary focus of academic library is on the learning materials that assist the teaching-learning process. Libraries need to be ready to accept and take on new tasks as the nature of learning is changing. In the 21<sup>st</sup> century's knowledge society, where e-learning is becoming more popular, librarians must be ready to better serve students. The use of e-learning platforms by students must be effectively engaged by library professionals, even if they are not directly participating in the program or course. By developing engaging and proactive information literacy sessions, taking part in and embedding e-learning efforts, and providing critical feedback to developing and existing e-learning programs, libraries and library professionals within the institutions can work as partners in transforming pedagogies.

The discussion that was just had demonstrates that in the 21<sup>st</sup> century, e-learning will continue to have a big impact on both the system of education and the lives of students. Therefore, it would be suitable and crucial to research students' attitudes and beliefs on e-learning. Because they are both professionals in the library and information fields, the researcher is particularly interested in understanding the present and potential future responsibilities of this relatively new field of online education. Library and information professionals, who are an integral component of the educational system, need to be aware of this change in the educational system in order to position themselves in this rapidly changing context.

### **E-learning formats**

1. Using various Learning Management Systems (LMS), there is online teaching and learning: Systems of software used to conduct or manage the classroom in a virtual setting are referred to as learning management systems. Students can access course information, lectures on video or audio, assignments, discussion boards, and exams through these platforms at any time and from any location. There is a wide range of open-source and commercial learning management system software available. Additionally, several schools are creating their own learning management systems according to their unique requirements.
2. Existing online teaching and learning using various methods Institutions are using a variety of platforms and tools for synchronous online teaching and learning. Because there was no other

means to reach the children when the schools were closed and there were no physical classes, these instruments were highly useful during the COVID-19 pandemic.

3. **Massive Online Open Courses (MOOCs):** In recent years, education has undergone another innovative, amazing phase. Massive Online Open Courses, or MOOCs, are provided by a number of colleges or universities and are supported by specific organizations or platforms. The available courses are open, adaptable, and have no regional restrictions.
4. **Computer Managed Learning (CML):** Computer-managed instruction, also known as computer-managed learning, manages and evaluates learning processes. This system performs a variety of tasks, including developing tests, evaluating the results of the tests, and keeping track of the learners' progress. Additionally, it uses data bases of information to operate. These databases contain the informational nuggets that learners must learn along with the rating criteria to establish preferences for the teaching process.
5. **Adaptive online Learning:** An alternative kind of online learning called adaptive e-learning modifies course contents to meet the needs of each individual learner. To create student-driven instructional techniques, this e-learning examines variables like abilities, student performance, and goals. The key component of adaptive e-learning systems, artificial intelligence is significant in knowledge management. Additionally, technology enables teaching tools to pinpoint and highlight areas where students need to develop.
6. **Collaboration Online Learning:** In the modern learning method known as collaborative e-learning, multiple students work together to study and achieve their learning objectives.
7. **Interactive Online Learning:** With interactive e-learning, senders can also be recipients and vice versa, enabling two-way communication. Based on the messages given and received, the teachers and students can alter their teaching and learning procedures.

#### **Objectives of the Study:**

1. To understand the purpose and motivation to take up e-learning by student teachers.
2. To examine the extent of usage of different e learning systems.
3. To understand the perceptions and experiences of various e-learning systems.

#### **Research Questions:**

1. What are the attitudes, perceptions and experiences of teacher trainees about various learning systems?
2. To comprehend the extent of usage of different e-learning systems.
3. What is the enjoyment in e-learning?
4. What is the role do library need to play in the context of e-learning?

#### **Research Methodology of the Study**

This is an investigative study that attempts to understand and explain the attitudes and perceptions of B.Ed teacher trainees about e-learning. Also the attempt is made to understand the role of library in the e-learning process. This involves of library present position in the e-learning environment and the prospective role that they would need to take up.

The present study has used the survey method to collect the data from student teachers. In the survey method, the data is collected from the specific samples. "The survey research enables quantitative or numeric description of trends, attitudes and opinions of the population (Creswell, 2011)." The survey does not study the entire population, but it studies the sample that represents the population and draws conclusions for the population.

#### **Statement of the Problem:**

Today e-learning is the major component of the whole education system. It facilitates a flexible, self-driven mode of education which is not limited to any geographical boundaries. The learners, though admitted to one particular institution in the country, could take up the online courses from any other

institution across the globe. That means education is not restricted to the physical classroom like conventional education. This is a significantly new phenomenon in developing countries like India. E-learning was started in a few institutions in India in the couple of decades. The pandemic was the period when the process of adopting and implementing e-learning started accelerating at a very fast pace due to institutional lockdown. Hence the title of the present research study is ‘A Study of Perceptions and Attitudes towards e-Learning among B.Ed Teacher Trainees’.

### Scope of the Study:

The researcher has been focusing on the study of perceptions and attitudes about e-learning among B.Ed teacher trainees. The scope of study would have been much narrow with a homogeneous population. Hence the researcher has narrowed down the study restricted to the department of education, Arts, and Science teaching method teacher trainees of Karnataka State Akkamahadevi Women University, Vijayapura.

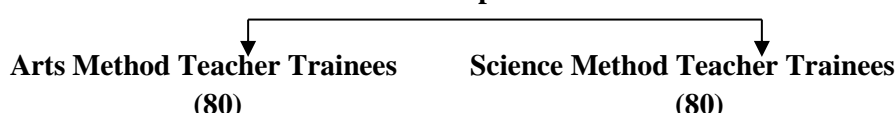
### Sample of the Study:

The researcher had to adopt different sampling strategies to collect the responses from the student teachers. The researcher has used the non-probability sampling method to collect data from teacher trainees from the department of education in Karnataka State Akkamahadevi Women University, Vijayapura. "Non-probability sample refers to a sample that has not been chosen by a random selection method. Essentially, this implies that some units in the population are more likely to be selected than others" (Bryman, 2012). A Snowball Sampling technique is applied to get the response from student teachers as the population was scattered and the researcher did not have direct contact with the sample.

**Table No: 01**

Sl.No	Responses	Samples
1.	Total questionnaires received	167
2.	Questionnaires rejected due to incomplete information	7
3.	Questionnaires considered for analysis	160

### Sample



**Tool for the Study:** The questionnaire has circulated in the way of online (in the form of Google forms). In the beginning web questionnaire for the B.Ed teacher trainees (in the form of Google forms) were sent to the WhatsApp group the request was made to them to forward the questionnaire to their respective classmates. Most of the student teachers responded promptly and forwarded the questionnaire to their classmates. Many of the student teachers filled up the data in the questionnaire submit through the Google form.

**Data Collection of the Study:** The response rate increased after having direct contact with the teacher trainees, and the responded right away to the Google survey. However, in a small number of the student teachers, the researcher was unable to speak directly with the responder. In these situations, the researcher was required to repeatedly follow up with the student teachers in order to collect their data.

**Data analysis and interpretation:** This article analyzes and presents data collected from 160 teacher trainees who are enrolled in B.Ed programs in the education department of the Karnataka State Akkamahadevi Women University in Vijayapura. The opinions of the student teachers, who are from the Arts/Science streams, on e-learning have been recorded and examined in the following section. As previously mentioned, the data was acquired through giving student teachers questionnaires. The descriptive statistics and data frequency tables were examined and made using MS-Excel.

The teacher trainee's attitudes and perceptions on e-learning were sought through the following statements. These statements are based on the variables or the characteristics pertaining either to the systems or the users of the systems. The variables self-efficacy, willingness, comfort are the user characteristics while, quality and facilitating conditions are the system characteristics. This question attempts to analyze the perceptions of students regarding e-learning on the basis of different variables.

**Table No: 1 Teacher Trainees perception towards e-learning on different parameters**

<b>I have necessary skills and capacities for e-learning. (self-efficacy)</b>						
<b>Stream</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>	<b>Total</b>
Arts Method Teacher Trainees	17 (21.25)	5 (6.25)	1 (1.25)	15 (18.75)	42 (52.50)	80 (100)
Science Method Teacher Trainees	15 (18.75)	8 (10.00)	00	10 (12.50)	47 (58.75)	80 (100)
Total	32 (20.00)	13 (8.12)	1 (0.62)	25 (15.62)	89 (55.62)	160 (100)
<b>I am willing to continue with e-learning even after the institutions reopen physically. (Motivation/ willingness)</b>						
<b>Stream</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>	<b>Total</b>
Arts Method Teacher Trainees	18 (22.50)	3 (3.75)	1 (1.25)	22 (27.50)	36 (45.00)	80 (100)
Science Method Teacher Trainees	12 (15.00)	2 (2.50)	00	25 (31.25)	41 (51.25)	80 (100)
Total	30 (18.75)	5 (3.12)	1 (0.62)	47 (29.37)	77 (48.12)	160 (100)
<b>I am comfortable with using different e-learning systems. (Comfort)</b>						
<b>Stream</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>	<b>Total</b>
Arts Method Teacher Trainees	2 (2.50)	1 (1.25)	00	32 (40.00)	45 (56.25)	80 (100)
Science Method Teacher Trainees	5 (6.25)	00	00	38 (47.50)	37 (46.25)	80 (100)
Total	7 (4.37)	1 (0.62)	00	70 (43.75)	82 (51.25)	160
<b>I am satisfied with the quality of content delivered through e-learning mode. (Quality)</b>						
<b>Stream</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>	<b>Total</b>
Arts Method Teacher Trainees	0	0	0	25 (31.25)	55 (68.75)	80 (100)
Science Method Teacher Trainees	1 (1.25)	00	2 (2.50)	21 (26.25)	56 (70.00)	80 (100)
Total	1 (0.62)	00	2 (1.25)	46 (28.75)	111 (69.37)	160
<b>Facilitating conditions for e-learning (in terms of availability of necessary infrastructure) are favorable. (Facilitating Conditions)</b>						
<b>Stream</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>	<b>Total</b>
Arts Method Teacher Trainees	1 (1.25)	2 (2.50)	00	19 (23.75)	58 (72.50)	80 (100)
Science Method Teacher Trainees	00	00	1 (1.25)	20 (25.00)	59 (73.75)	80 (100)
Total	1 (0.62)	2 (1.25)	1 (0.62)	39 (24.37)	117 (73.12)	160

**Self-efficacy:** The result presented in table number 1 shows that 42 (52.50) the self-efficacy of Arts method B.Ed teacher trainees strongly agree less than the Science method teacher trainees 47 (58.75). The self-efficacy is users' confidence in her own capabilities while handling the technology or innovation gadgets. The Arts and Science methods teacher trainees result presented that 25 (15.62%) of the teacher trainees agree that they have necessary skills and capacities for e-learning. 89 (55.62%)



teacher trainees strongly agree on this statement. 01 (0.62%) teacher trainee is neutral about this statement. Very few students disagree 13 (8.12%) and strongly disagree 32 (20.00%) with this statement. We can infer that, teacher trainees are positive or confident about their skills and capacities to use e-learning.

**Motivation:** The result shown in the table 1 attempts to reveal the willingness or motivation to use e-learning. Arts method teacher trainees 36 (45.00%) strongly agree less than the Science method teacher trainees 41 (51.25). The result clearly indicates that 77 (48.12%) teacher trainees strongly agree on this statement. 47 (29.37%) teacher trainees agree with this, while 01 (0.62%) teacher trainee have no positive or negative opinion on this statement. 05 (3.12%) and 30 (18.75%) teacher trainees disagree and strongly disagree with this statement. This data implies that the teacher trainees are willing to continue with e-learning even when the institutions reopen physically. The students have experienced some benefits of e-learning and hence they are motivated to use e-learning even when the e-learning is the choice.

**Comfort:** The result shown in the above table 1 also depicts the level of comfort that the teacher trainees experience while using different e-learning systems. 70 (43.75%) teacher trainees agree that they are comfortable with the use of different e-learning systems. 82 (51.25%) students strongly agree with the statement. 01 (0.62%) teacher trainee is disagreeing while 07 (4.37%) teacher trainees strongly disagree with the statement. This result indicates that the teacher trainees' courses agree with the statement.

**Quality of content:** The result also explains the perception about the quality of content being delivered through e-learning mode. 46 (28.75%) teacher trainees are satisfied with the quality of content being delivered through e-learning mode. 111 (69.37%) of the teacher trainees are highly satisfied with the quality of content. 01 (0.62%) is highly dissatisfied with the quality of content delivered. That means the teacher trainees are strongly agreed about the quality of content being delivered through e-learning. This data implies that, maximum numbers of agree about the quality of content being delivered are able to comment on the quality of the content that was being delivered through e-learning mode.

### Enjoyment in e-learning:

The result presented so far has been dealing with different aspects of teacher trainees attitudes towards e-learning. Now another important aspect of e-learning is focused on this question, i.e enjoyment. Enjoyment or gaining happiness is a very important component of any activity. Learning could be successful when the learner is enjoying the process of learning. Enjoyment is one of the important aspects of the perceptions. The students were asked whether they enjoy e-learning or whether they like the process of e-learning. The mean, median and mode for this data is almost the same i.e., 3. This means, the data is almost symmetrical with the skewness of -.041.

**Table No: 1.2 Enjoyment in e-learning**

Statements	Frequency	Percent
Not at all enjoyable	8	5.00
There are quite a few challenges	13	8.12
Neutral	00	00
Yes, but I would like to enjoy a few things	91	56.87
Yes absolutely	48	30.00
Total	160	100

**Table No: 1.3 Do you enjoy e-learning?**

Valid	160
Mean	3.36
Median	3.00
Mode	3

Std. Deviation	1.120
Variance	1.254
Skewness	-.041
1= Not at all enjoyable, 2= There are quite a few challenges, 3=Neutral, 4=Yes, but would like to enjoy a few things, 5=Yes, absolutely	

Considering the frequency of this result, the maximum numbers of teacher trainees have a yes, but I would like to enjoy a few things response on the question whether they enjoy e-learning. However, there are almost numbers of positive responses. They say they are enjoying certain things. The above table no 1.3 suggests that the teacher trainees from all the streams have a consistent response with respect to enjoyment of e-learning.

The library strongly asserts that they play a crucial role in e-learning. As the library develops a strong resourceful support system for the teaching-learning activities, they stand with the same strength in the e-learning environment as well. Being relevant in the traditional role, librarians' scope of work is getting widened in the context of e-learning. Hence they play a crucial role in this. Libraries have been functioning as learning resources centre's that support the teaching learning activities that take place in the institution. They are making provisions of the services to their users in terms of physical and online information resources as well as in terms of space. Traditionally, libraries have been making provision for spacious reading rooms/study areas/discussion areas.

**Table No: 1.4 provision of space for e-learning**

Provisions for E-learning	Frequency	Percentage
None	18	11.25
Kindle Lab	00	00
Provision to listen to audio books	00	00
Space for Internet access	142	88.75
Audio Visual Room/cubicles for attending e-classes	00	00
Recording room for creating audio visual content	00	00
Total	160	100

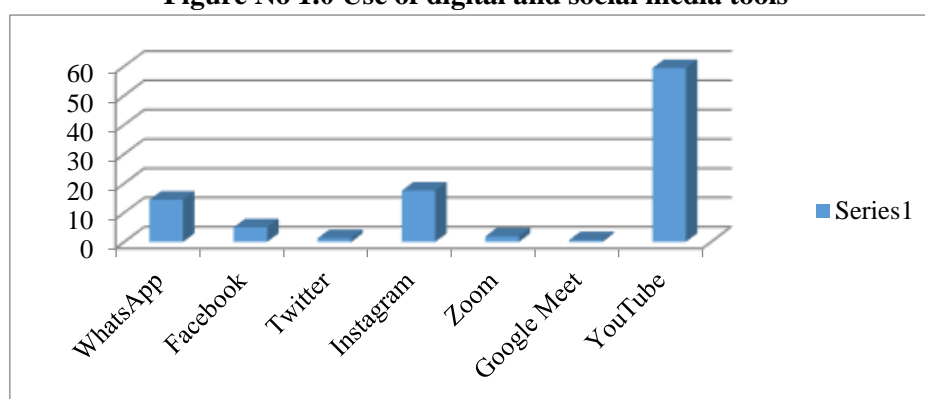
Now these needs are expanding. Apart from these individual and group study spaces, library need to provide the space to suit the requirements of e-learning. Department and University library (88.75%) is providing the space for internet access. The internet has become the major source of e-learning; the teacher trainees increasingly require access to it. The student teachers say that they are making provision for Audio Visual Room/cubicles for attending e-classes. Even though the teacher trainees are now attending the physical classes they need the space for attending e-classes like MOOCs and other online courses. Library has created recording rooms for the creation of audio visual content. University library have provided the space to listen to audio-books and the Kindle lab to read e-books. This data shows that the library is serious about their role in the e-learning environment and has taken positive steps towards their services in the new environment.

Digital and social media tools used in the library to reach out to the users: Another aspect of library services that complement e-learning activities are use of digital and social media tools. These tools act as the means to reach out to the users who might be located at distant places. Librarians worldwide are adopting different ways and means to stay connected with their users. Especially institutional lockdown during the pandemic made the institutions to look for different alternatives to establish communication with the users who are located at remote places. The data depicted in the following table 1.5 shows the use of these digital and social media tool.

**Table No 1.5 Use of digital and social media tools**

Digital/Social media tools	Frequency	Percentage
WhatsApp	23	14.37
Facebook	08	5.00
Twitter	02	1.25
Instagram	28	17.50
Zoom	03	1.87
Google Meet	01	0.62
YouTube	95	59.37

The results presented in table no 1.5 and figure 1.0 suggests that libraries are using different digital and social media tools to have contact with the users. Libraries are using various means to provide different information services using these media. University library is providing internet for using YouTube (59.37%) to keep their users informed about different activities and services. The library is also using different synchronous communication platforms like Instagram (17.50%) and WhatsApp (14.37%). Social networking tools like Facebook (5.00%), Zoom (1.87%) and Twitter (1.25%) are also being used by the teacher trainees in the library.

**Figure No 1.0 Use of digital and social media tools**

### Findings of the study:

- Teacher Trainees are motivated towards the use of e-learning. They are willing to continue with e-learning even after the onsite learning is available.
- Even after the department/university is physically open, the teacher trainees are using e-learning for up to 1-3 hours every day. Mobile is the most preferred device for e-learning for teacher trainees in department of education, Karnataka State Akkamahadevi Women University, Vijayapura. YouTube and Instagram are the most frequently used synchronous e-learning platforms
- MOOCs/SWAYAM are one such form of e-learning where student teachers can select any short-term course of their choice and students' teachers are aware of the MOOCs but their participation in MOOCs is low. Also, the rate of MOOCs completion is lower.
- The results reveal that the role of library includes three broader areas: Resources, Infrastructure and Training/Consultancy. Library is taking initiatives in direction to support the institutions to facilitate e-learning at a larger scale. The library is serious about their role in the e-learning environment and has taken positive steps towards their services in the new environment.

**Educational Implications:**

1. The Faculty Development Programmes (FDPs) and the Laboratory Information System (LIS) curriculum should both include e-learning and its different components, such as MOOCs/SWAYAM, LMSs, and digital pedagogies.
2. It is planned to create and promote fresh digital pedagogies that are suitable for e-learning. Adaptive e-learning techniques might be utilised in light of the different learner types.
3. For the effective application of e-learning at all levels, institutions must have clearly established e-learning policies. With the right regulations and routine oversight at the institutional and governmental levels, the students' difficulties with e-learning could also be lessened.
4. By giving library specialised responsibilities in e-learning programmes, institutions might enlist their direct assistance. To meet the evolving requirements of their patrons, library must continually acquire novel abilities.

**Conclusion:** Overall views about e-learning are positive attitudes among the teacher trainees. They have been gaining a number of advantages through e-learning as it offers flexibility, time management, and active engagement. E-learning helps the teacher trainees to develop 21<sup>st</sup> century skills. Most effectively it could enhance technology literacy among them. The teacher trainees are found to be confident and comfortable about e-learning. However, their response was strongly disagreeing regarding dissatisfaction with the self-efficacy and motivation/ willingness of e-learning.

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## ICT- INTEGRATION IN TEACHER EDUCATION

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### *Abstract*

*Globalization has brought changes in all fields of the society. One such changes, I am concentrating is on education system. Education system is under great pressure to adopt innovative methodologies and to integrate new technologies in the teaching learning process.*

*The omnipresent ICT has been an important topic because ICT could replace the teaching aids, tools, textbooks and chalkboards for the teachers. ICT implementation also need the teacher initiative to determine the suitable contents for their students, so they can create the opportunities for active learning under the changing scenario, there is a need to redefine the role of a teacher-educator. The mentor and student teacher wants to take a new role and responsibilities. Then we can bring changes in Education System through ICT in an effective manner. This paper explores the impact of ICT in teaching, ICT training inputs, objectives, role of ICT in curriculum, role of ICT on teacher educators.*

*Key words: ICT, Competency, skills, learner centered, LCD, PPT, ICT tools etc*

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### **INTRODUCTION:**

Advancement in technology is demanding to adopt newness in education field. Curriculum and curricular transactional strategies emphasize ICT in order to recognize the learner's ability to use modern educational technology. Web 1 browsing, use of LCD and PPT have improved the self-confidence of our learners in successfully meeting challenges of communication before versatile audiences. In education 87% of information enters our brain through eyes, 9% by ears and 4% via other senses. So visual aids gain much attention of student's more than verbal teaching. So there is a need of the hour that the teacher educators must integrate ICT in teaching process. It enlarges the sphere of dissemination of knowledge and information to Students. The integration of ICT enhances the knowledge, skills, new experiences both in teacher educator and students.

### **OBJECTIVES OF THE INTEGRATION OF ICT**

1. As "integrate" would imply, ICT should not merely be a bit part player, but rather, it should feature prominently in teacher education classroom.
2. "Integrate" also implies that ICT should be weaved tightly into other components of teaching practice to form a well-coordinated whole.
3. Students are expected to use technological tools directly in order to "enhance the teacher educators experience"

### **ROLE OF TEACHER EDUCATOR BY INTEGRATING ICT**

1. Act as a role model for pre-service trainees and in-service teachers, demonstrating the use of technology across the curriculum.
2. Encourage technology integration among the trainees, colleagues, teachers and parents.
3. Be involved in planning and implementing ICT in professional development training.
4. Be up-to-date with the latest technological developments and advise the institutions concerning technology advancements and upgradation
5. Interact through e-mail/forum/communities/blogging with trainees, participating schools, and parents.
6. Aid in the implementation of technology plans in the institutions.
7. Plan, design, and demonstrate the use of multimedia applications for instructional use through multimedia projects.
8. Examine a variety of evaluation and assessment tools including electronic portfolio assessment.
9. Become active, competent online users of telecommunication services and act as model in the use of internet as an instructional tool.



10. Direct trainees and teachers to digital resources that will be able to answer their questions.
11. 11. Address issues related to acceptable user policies, student safety, ethics, security, copyright, etc.,
12. Be involved in marketing the best practices of technology integration.
13. Manage the available resources more productively to face the ever increasing financial crunch.

### **SKILLS TO BE DEVELOPED TO INTEGRATE ICT**

- Information and Media Literacy Skills
- Creativity and intellectual curiosity:
- Interpersonal and collaborative skills:
- Self-direction
- Accountability and Adoptability:
- Social responsibility
- Communicate Effectively
- Analyze and interpret data
- Manage and priorities Tasks
- Engage in problem solving
- Ensure security and safety:

### **ROLE OF ICT IN THE CURRICULUM:**

One can generally differentiate three distinctive roles for ICT in the curriculum.

- Learning about ICT-ICT as a subject of learning in the school curriculum, such as computer literacy, computer sciences and information literacy.
- Learning with ICT- The use of various computer capabilities such as computation multimedia, internet or World Wide Web (WWW) as a medium to enhance instruction or as a replacement for other media without changing beliefs about the approach to and the methods of teaching and learning.
- Learning through ICT- here ICT is integrated so completely as essential tool in a course / curriculum that the teaching and learning of that course / curriculum is no longer possible without it.

### **ICT INPUTS FOR TEACHER AND TEACHER EDUCATOR**

- 1) There is shift from whole class to small group instruction.
- 2) Coaching occurs rather than lecture and recitation.
- 3) Teachers work with weaker students more often rather than focusing on brighter students.
- 4) Students are more actively engaged.
- 5) Students become more co-operative and less competitive
- 6) There is an integration of both visual and verbal thinking instead of the privacy of verbal thinking

### **INTEGRATING ICT INPUTS FOR TEACHER EDUCATORS**

For the successful implementation of ICT, teacher trainees, teachers and teacher-educators need to be trained in the following dimensions. The commercially available training programs are designed to provide exposure only to system soft. Ware, some of the application software and the basics of internet.

1. Awareness phase-The input should be to make the teachers aware of the importance and possibilities of ICT- the current trends and future projections.
2. Learning theories and technology, integration- Traditional and modern view of learning, shift from teaching to learning, constructivism, role of ICT in lifelong learning.
3. Basic hardware skills- Hands on experiences in operating the PC and laptops
4. Understanding System software- Features of desktop, starting an application, resizing, windows, organizing files (creating, editing, saving and renaming), switching between programs, copying etc.,

5. Using application/ productivity software- Word processing, spreadsheet, database, presentation, publishing, creation of Portable Document Format (PDF) files, test generation, data logging, image processing etc.,
6. Using multimedia- Exposure to multimedia CD ROMs in different subject, installing programs, evaluating CD ROMs, approaches to using CD ROMs, creating multimedia presentations.
7. Using internet: e-mail communications, forums, blogging, wiki - Subscription to mailing lists, e-mail and internet projects, web searching strategies (navigating, searching, and saving information) videoconferencing, designing web pages, freeware and shareware, evaluating website resources, virtual fieldtrips, learning opportunities using the web, and netiquette.
8. Pedagogical application of ICT tools-Specific use of application software in different subject appropriate ICT tools and pedagogy unit plan integrating ICT tools, approaches to managing ICT-based learning groups, assessment of learning, electronic portfolio and assessment rubrics, creating teacher and student support materials, supporting students with special needs.
9. Introduction to open source software - Concept, types, advantage, working on open sources application software.
10. Social, legal, ethical and health issues- Advantages and limitations of computer use, privacy violations, copyright infringement, plagiarism, computer security (hacking, virus, misuse, abuse and staying safe) healthy use (searing, light. sound, radiation, exercise)
11. ICT for professional persona productivity- ICT for administration, record keeping, reporting and transfer of information, attendance, research careers in computers and professional development opportunities.
12. Website use: As an advanced training website development, installation and use of server based applications, training in course management system, e-learning course content development using various authoring tools, audio/video /image editing, animation etc., can be introduced.

### **IMPACT OF ICT ON TEACHER-EDUCATORS AND STUDENT TEACHERS**

1. It acts as the gateway to world of information and enables teachers to be updated.
2. For professional development and awareness of innovative trends in instructional methodologies evaluation mechanism etc.,
3. For effective implementation of certain student-centric methodologies such as project-based learning which puts the students in the role of active researches and technology becomes the appropriate tool.
4. It is an effective tool for information acquiring- thus students are encouraged to look for information from multiple sources and they are now more informed than before.
5. It has enabled better and swifter communication, presentation of ideas are more effective and relevant.
6. The dissemination of ideas to a larger mass now seems possible due to technology.
7. Student-teachers are transformed into self-learners.
8. ICT creates awareness of recent methodologies and thus teacher educators feel empowered.

### **USES OF ICT IN TEACHER EDUCATORS**

- 1) ICT enhances the initial preparation by giving good teaching and training materials, use of simulators recording and feedback in teaching.
- 2) With the help of ICT, teacher's educators can access with colleagues, schools, institutions and universities, expertise, rich resources in cyber space.
- 3) ICT enable interaction with students over a physical distance.
- 4) Didactic software and intelligent tutoring systems can dramatically reduce the cost of teacher training.

- 5) ICT provides lifelong professional development by providing courses in a virtual situation, training on demand, orientation and refresher courses through video conferencing and online

**CONCLUSION:** Teacher educators get the best feedback on their teaching and have access to learning tools that put the most important skills in the 21st century within reach, teacher educators may learn and practice in different multimedia learning environments, and learn and teach through different teaching methods. e.g. E-problem-based learning, collaborative teaching and E-mentoring technology also create a perfect environment for Teacher educators to obtain the skills they need in real- life in digital world. As to conclude, teacher educator prepares students to enter the world through competitive way because they want to face ever expanding high-tech global market.

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## ELECTRONIC RESOURCE MANAGEMENT SYSTEM IN LIBRARIES-CHALLENGE AND PROSPECTUS

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### Abstract

*The growth of reliance on electronic resources in libraries has led to the recognition of electronic resource management as a new problem area and specialty within librarianship and to the development of a variety of electronic resource management systems and services that have been widely adopted by libraries. This paper discusses the development of some locally designed electronic resource management system and the challenges faced by the librarians in acquisition of electronic resource in the library. In the other hand this paper spread light on the development and availability of open source software to manage electronic resource.*

**Keywords:** Electronic Resources; Electronic Resource Management; ERMS; Open Source ERM.

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### Introduction-

Electronic Resource Management (also referred to as E-resource Management, or simply ERM) refers broadly to an evolving array of problems, tasks, processes and practices associated with the management of electronic resources such as databases, electronic journals and electronic books in libraries a closely related term is Electronic Resource Management System (or ERMS), which refers to systems that support “management of the information and workflows necessary to efficiently select, evaluate, acquire, maintain, and provide informed access to electronic resources in accordance with their business and license terms” (Anderson et al. 2004, p. 49). While the ERMS emerged from early e-resource management efforts, developments in both are now closely tied.

Electronic resources represent an increasingly important component of the collection building activities of libraries. “Electronic resources” refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. Tablet, laptop, Book kindle, etc they may either be accessed remotely via the Internet or locally. With Advancement of technology the libraries are moving towards digital resources, which are found to be less expensive and more helpful for easy access. These are helpful especially to distant learners who have limited time to access the libraries from outside by dial up access by the commonly available electronic resources mainly CD-ROMs, OPACs, and Internet etc., which are replacing the print media. Rapid and continuing innovation in web-based technology, standards, and business and publishing models and practices have made for an extremely dynamic and expanding e-resources marketplace. While libraries have been providing access to bibliographic databases for decades, provision of full text has become equally important – first through subscriptions to “aggregator” databases that combine bibliographic information with the text of journal and newspaper articles, and then through e-journals. Other types of resources that have appeared include databases that make the full text of historical materials available and searchable, electronic books (or e-books), and databases that integrate textual materials with digital media of various kinds – including photographs, music, and video. Significantly, the web’s rich and varied linking options have enabled many of these resources to provide new types of functionality and be tied seamlessly to one another.

As these changes have been taking place, libraries have needed to think seriously about the wide-ranging implications of the digital era for library collections and related practice. For example, as early as 1993, as Brain noted in his welcoming remarks for the Advanced Collection Management and Development Institute held in Chicago that focused on the growing reliance on information in electronic formats:

In the 1990s libraries began to see a dramatic increase in publication of and patron interest in electronic resources. Delivering materials to a user's computer desktop in digital form brought with it a multitude of considerations for providers of information in academic settings. Due to therapid acquisition of electronic resources libraries had to quickly create new workflows for technical processes such as managing and renewing license agreements and "processing" virtual products, as well as develop new communication structures and staffing workflows related to electronic resources (Gardner 2001).

**Electronic resource management (ERM)** is the practices and software systems used by libraries to keep track of important information about electronic information resources, especially internet-based resources such as electronic journals, databases, and electronic books. The development of ERM became necessary in the early 2000s as it became clear that traditional library catalogs and integrated library systems were not designed to handle metadata for resources as mutable as many online products.

#### Features of System

Features of some ERM systems include

- Supporting acquisition and management of licensed e-resources
- May be integrated into other library system modules or may be a standalone system

- May have a public interface, either separate or integrated into the OPAC
- Providing descriptions of resources at the package (database) level and relate package contents (e.g. e-journals) to the package record
- Encoding and perhaps publicly displaying licensed rights such as e-reserves, course packs, and interlibrary loan
- Tracking electronic resources from point of order through licensing and final access
- Providing information about the data providers, consortia arrangements, access platform
- Providing contact information for all content providers
- Logging problems with resources and providers
- Providing customizable e-mail alerting systems (e.g. notices to managers when actions are expected or required)
- Linking license documents to resource records
- Supports retrieval of usage statistics.

#### Challenges in Acquisition of Electronic Resources

The delivery of electronic resources has transitioned from physical formats such as tapes, 3.5" floppy disks, and CD-ROMs (CD) and DVDs to remote databases and the currently common format of delivery via the Internet. Since large amounts of data could be stored on a CD, companies began to offer their proprietary resources in this format rather than in print or on earlier electronic formats such as floppy disks. The CDs acted as early databases, allowing users to "search" the CD for data. The CDs were either used at individual workstations or networked to allow for simultaneous searching by multiple patrons. The acquisitions department had to begin working more closely with their systems or technology department in order to ensure that the material delivered on CD was made appropriately available. In contrast with today's current expansive publishing on the Internet, relatively few publishers and vendors produced CD products, so the workflow paths that were initially developed were addressed at an ad hoc level. As users grew comfortable with accessing content on their desktops rather than in print, publishers explored other options that would allow them to provide more frequent updates to their content, with quicker production times, and took advantage of an Internet-based format for delivery of materials. The move from CD- and remote database-delivered material to delivery via the Internet quickly gained popularity among library users; libraries nationwide cite a sudden and dramatic increase in purchases of electronic resources (Montgomery & Sparks, 2000, p. 13). In 2003 the Association of Research Libraries reported that in just ten years the average percentage of a member institution's total budget on electronic resources grew from 3.6% to 25% (Young & Kyriallidou, 2004).

#### Tasks and the Evolution of E-Resource Management

The new possibilities and issues associated with electronic resources have made their acquisition and implementation increasingly complex, which has raised ongoing staffing and workflow issues. As Geller (2006) has recently put it, where selection of print resources has traditionally been up to a subject selector who would determine how an item would fit with a library's or collection's subject, format, language and chronological criteria, ". . . the electronic resource, at the selection stage, must meet a set of criteria in addition to those we set up for print, and while it is still in the selection stage, this decision involves expertise and input from library staff members beyond the subject-selector group."

There are many examples of such criteria. For example, it must be determined whether there are any technical impediments to implementing and supporting a given resource within a library's or university's network or computing environment, and if its user interface is effective and well-designed. Other factors likely to require broader assessment have to do with a purchase or subscription as a business transaction. Perhaps most significantly, as Duranceau has expressed it, "libraries now exist in



a licensed world” . Licenses are of concern to most libraries because they may determine who may use a given resource, what use may be made of its contents, and what the consequences of unauthorized use might be – including possible legal or financial penalties. As electronic resources have come to be licensed instead of sold in the traditional manner, libraries have invested substantial and increasing amounts of time and energy to reading, understanding, negotiating, tracking and complying with such license terms (Soete and Davis 1999; Davis et al. 2008; Duranceau 2000a; Duranceau 2000b). This is especially true with respect to e-journals, which have tended to be offered in packages with complex terms pertaining to continuing financial commitments, cancellation limits, and ongoing access rights.

The substantial amounts of money that may be involved in a particular purchase have also led to significant changes in roles that library consortia play. As many have begun serving as brokers for their members in their dealings with vendors and publishers, they have enabled libraries to make better use of available funds or negotiate more successfully for other terms (Allen and Hirshon 1998). While this has generally been the case, a library may face choices and policy issues regarding whether to belong to consortia, which ones best address their concerns, what level of participation in its activities would be appropriate and cost-effective, who should represent the library in a consortium’s activities, and how to communicate developments to library administration and staff. There may also be complex decisions to make regarding choice of vendor. For example, while many libraries rely on one or more serials vendors to help expedite and rationalize ordering, payment and delivery for print and electronic serials, some large publishers have sought to deal directly with libraries.

Decisions regarding how best to present electronic resources to users must also be made. Many library catalog systems require manual processing to add or edit holdings information within the catalog. The frequent addition and deletion of content within electronic resources, especially aggregator databases and e-journal packages, make manual maintenance of that information problematic. In addition, many users desire only material available in full text electronic form; since catalog records might not precisely identify whether a resource contains electronic full text or specific holdings information, traditional library OPACs began to be seen as ill-equipped to serve as finding aids for their contents (Britten et al. 2000; Crum 2008). As a result, many libraries now represent the contents of such databases in their OPACs, in separate subject- or “A to Z” lists on their web pages, or a combination of these approaches.

#### Creating Locally Developed Electronic Resource Management System

As library staff expressed a need for a mechanism for clear communication about the status of a license being negotiated, an active resource needing maintenance, or a report of funds spent, most libraries began a series of paper lists or worksheets to assist them (Kennedy, Crump, & Kiker, 2004; Loghry & Shannon, 2000). As the number of electronic resources grew it became clear that the paper lists could not be effectively shared among the staff needing access to them. Library staff needed a computer program that was designed to hold all the information related to an electronic resource so that it could be viewed from all the stakeholders’ computer desktops, yet no such software existed. Without an off-the-shelf program available to assist them in organizing their resources, many libraries turned to their own library or university staff for assistance in creating one. Many universities attempted to create their own electronic resource management systems with varying degrees of success. Some created complete systems to manage many aspects of electronic resources processing at their libraries, while others focused their efforts just on specific aspects of managing the resources.

#### Open-Source Software’s in Electronic Resource Management

There are many open source software freely available in the market, in which several ERM are mentioned

**CORAL** is an Electronic Resources Management System consisting of interoperable modules designed around the core components of managing electronic resources. It is made available as a free, open source program.

**SUSHIPy** is a short Python class that allows libraries and other organizations to harvest counter statistics via the NISO SUSHI protocol. SUSHI Py is capable of reading a list of SUSHI services from

a CSV file or a MySQL database, and it can likewise write the resulting COUNTER report to a CSV file or a MySQL database.

SUSHI Py was developed because there is a notable lack of usable and well documented SUSHI harvesters. The few projects listed by NISO are several years old, appear abandoned, and are unnecessarily large. The goal of SUSHI Py is not just to be simple to use but also to be simple to understand. SUSHI Py is a proof of concept.

SUSHI Py is for the following people:

- Librarians and other electronic resource managers who want to implement SUSHI without paying big bucks for a commercial ERM client.
- Librarians and electronic resource managers who want a clear and documented example of how SUSHI works so that they can build their own custom implementation.

**Pycounter-** makes working with COUNTER usage statistics in Python easy, including fetching statistics with NISO SUSHI. Developed by the Health Sciences Library System of the University of Pittsburgh to support importing usage data into a in-house Electronic Resources Management system.

**Caliber-** is a free and open source e-book library management application developed by users of e-books. It has a cornucopia of features divided into the following main categories:

- Library Management
- E-book conversion
- Syncing to e-book reader devices
- Downloading news from the web and converting it into e-book form
- Comprehensive e-book viewer
- Content server for online access to your book collection

**SMDB** is a LAMP (Linux, Apache, MySQL, Perl) system. It uses its own module called webUtil to deal with web forms and templates. Combining webUtil with a couple of other Perl modules to deal with cookies and communication with MySQL database, you can build web applications very fast.

**ERMes** is a Microsoft Access database that requires Access 2007 (Windows) or Access 2008 (Mac) to operate. As of May 2010, ERMes is not compatible Open Office 3.2.1.

**E-Matrix** is the locally developed and hosted serial and electronic resource management system in use at the NCSU Libraries. This tool acknowledges that the issues associated with electronic resources mirror those that face our serial collection as a whole, regardless of format. E-Matrix therefore supports the effective management of the NCSU Libraries serial collection by managing print and electronic journals and databases.

NCSU Libraries does not currently maintain a public repository for the source code to E-Matrix, but can supply it on request (we're working on it!). Contact via email: "product name stripped of non-alphabetic characters" at lists.ncsu.edu

**Researcher-** is an award-winning integrated suite of open source products for locating and managing electronic information resources, designed for use by students and researchers in academic libraries. The four main modules of researcher are:

- CUFTS: Open Source Serials Management
- GODOT: Open Source Link Resolving
- dbWiz: Open Source Federated Searching
- Open Knowledgebase

Researcher enables libraries to provide students and researchers with streamlined access to an integrated array of information resources. Together, researcher's components deliver rich portal-type functionality, presenting a unified interface to research databases, library and union catalogues, internet search engines, and other electronic information sources.

**The Home Library Archive-** Categorize and keep track of your books by Library of Congress format. Automatically add new information from the Library of Congress or Amazon whenever you add a new book. Plain output appearance, but robust functionality under the hood.

**Esciurus-** is (or rather, will be) a desktop application that allows you to build and maintain your personal collection of e-books, in particular scientific publications. It will store not only these papers, but also associated metadata (author, title, bibliographic information, etc.), allowing for fast and intuitive retrieval.

It handles e-books in the upcoming ".epub" format (OCF/OPF), as defined by the International Digital Publishing Forum. The program is being developed in Java, it should therefore run on all major platforms.

**FreERMS** is an Electronic Resource Management System loosely based on recommendations in the Report of the Digital Library Federation ERM Initiative, and written in PHP using the symfony framework. FreERMS is designed to help libraries, especially consortia and other organizations with complex structure and purchasing arrangements, to manage and provide access to their licensed content.

At present, our development plans are:

- Refactor existing code
- Introduce features for management of administrative metadata
- Expand coverage to the single-title level

**CUFTS**-As a knowledgebase of over 575 full text resources, CUFTS provides Electronic Resource Management services, an integrated journal A-Z database, link resolving, and MARC records for your library.

**Conclusion:** The world moving towards print media to electronic media and it is great challenge for librarians to keep update his knowledge in the selection, acquisition and retrieval of electronic resource, it is not so easy as handling print document in past several years to till. Electronic resource need some special tools to manage, Librarian themselves identifying new ways in which to manage electronic resources in a given communication models from which to work. There are many Open source software available in the markets. By make use of them librarian can easily handle the e-resources of the library, electronic resource management systems is very essential in order to keep update with the knowledge of e-resource to reach the ultimate goal,

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## SIGNIFICANCE OF E-LEARNING, M-LEARNING AND W- LEARNING

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### *Abstract*

*The need for usage of technologies which removes the boundaries of time and location increases day by day today when information and accession to information gains importance. Effect of mobile learning to education is an issue to be researched in order to provide lifelong learning. Distance learning, electronic learning and mobile learning offer methods, which decrease the limitations of traditional education. This paper discusses the existing devices and technologies appropriate to realize mobile learning. Mobile learning as new stage of distance and e-learning is also examined. Key words: m-Learning, d-Learning, e-Learning, Education.*

*The fact that mobile devices are small and they have got with a lot of features despite their size increases interest for them. This increasing interest requires more study on these devices or causes the usage of these devices in more fields. The feature of mobile devices that enable educational atmosphere encourages individuals for their usage. Besides, it enables an educator who shares the information to contact more students independent of time and location with the usage of mobile devices in education. Mobile learning is explained in a detailed way in this study. Besides, the relation and differences between m-learning and e-learning are put forth with their details. On some important issues such as internet accession and usage status in Turkey, technological devices used in mobile learning and communication technologies are also studied.*

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### INTRODUCTION

Education in its general sense is a form of learning in which the knowledge, skills, values, beliefs and habits of a group of people are transferred from one generation to the next through storytelling, discussion, teaching, training, and or research. Education may also include informal transmission of such information from one human being to another. Education frequently takes place under the guidance of others, but learners may also educate themselves (autodidactic learning). Any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational.

Educational technology is the effective use of technological tools in learning. As a concept, it concerns an array of tools, such as media, machines and networking hardware, as well as considering theoretical perspectives for their effective application. Educational technology is not restricted to high technology. Nonetheless electronic educational technology has become an important part of society today. Modern educational technology includes (and is broadly synonymous with) e-learning, instructional technology, information and communication technology (ICT) in education. EdTech, learning technology, multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), flexible learning, web-based training (WBT), online education, virtual education, personal learning environments, networked learning, virtual learning environments (VLE) (which are also called learning platforms), m-learning and digital education.

### E-LEARNING

E-learning is commonly referred to the institutional use of networked information and communications technology in teaching and learning. E-learning is mostly associated with activities involving computers and interactive networks simultaneously. The computer does not need to be the central element of the activity to provide learning content. However, the computer and the network must hold a significant involvement in the learning activity.

What's the "e" in e-learning?

Has anyone defined what the letter 'e' in e-learning stands for? I have asked some colleagues.

They tell me it refers to 'enterprise', while others say it refers to 'electronic' like electronic mail. I have my own opinions about the 'e' in e-learning. I feel that the 'e' represents how we will increasingly acquire, store and disseminate knowledge.

❖ E-everything

I believe that the 'e' stands for 'everything'. It's common to think that e-learning only describes inline courses, synchronous or asynchronous. It's more. It's about using pre-study materials to prepare learners to get more out of a classroom training session or laboratory. It's about online assessment, qualification testing and certification. It's about facilitating collaboration, sharing ideas and encouraging learning from peers. And it's also about performance support in the form of job aids, checklists, electronic configurations, FAQs, proposals, libraries, etc. the 'e' in its fullest meaning should communicate to us that learning requires structured experiences, collaboration and performance bridges to facilitate a more skilled workforce.

❖ E-everyone

I believe that the letter 'e' also stands for 'everyone'. I shudder to think that workers who have access to computers and network connectivity will benefit from e-learning while those who do not will not. I worry about those of us who are less fortunate, not only poor in terms of socioeconomic status, but also poor in terms of learning opportunities. This extends to the vast majority of workers in factories, on construction sites and on farms who, due to work requirements, do not have ready access to e-learning. During his keynote address at the e-Learning 2000 conference Singapore, Jim Cavenague, general manager in at Hewlett-Packard Worldwide Education, revealed that HP Research Labs have been working on a low cost, portable e-learning device for middle and high school students that is targeted for release later this year.

❖ E-engaging

I believe the 'e' in e-learning stands for 'engaging'. I view this from both a user's and producer's point of view. For e-learning truly to have value to learners, it must transcend the current 'state of the art' model of 5-7 screens followed by a multiple-choice question. And it must engage the learner at bandwidths that the vast majority of workers have. My challenge to course developers: can we create online courses that are interesting, challenging and relevant to the learner population? I think so.

❖ E-easy

I believe the letter 'e' stands for easy. Specifically, that creating e-learning must be easy. Creating and publishing e-learning is currently way too difficult. The availability of tools that is native to e-learning is sparse. One such tool, Ready Go ([www.readygo.com](http://www.readygo.com)), appears to be heading in the right direction. But the current crop of tools, including Authorware and Tool Book II has not made the best transition to e-learning. Dreamweaver is a great tool for webmasters, but is quite challenging for us instructional design creative types. Last but not least, the 'e' stands for enough. You have most likely heard enough 'e' for while.

### Types of E-learning

E-learning may either be synchronous or asynchronous. Synchronous learning occurs in real-time, with all participants interacting at the same time, while asynchronous learning is self-paced and allows participants to engage in the exchange of ideas or information without the dependency of other participants' involvement at the same time.



## 1. Synchronous learning

## 2. Asynchronous learning

**BENEFITS AND ADVANTAGES TO E- LEARNING** There are many benefits and advantages to e-learning when compared with traditional classroom training. Some are obvious, some are not. Here are just a few of the key benefits and advantages of e- learning.

1. **e-Learning saves money**
2. **e-Learning is more effective**
3. **e-Learning is convenient and accessible**
4. **e-Learning provides a standard message**
5. **e-Learning can be updated more easily.**

**THE REASONS WHY E LEARNING FOR STUDENTS IS ESSENTIAL:** Technology has the power to transform education. It is essential to bring it into the classroom to empower learning. Why? Students need to be engaged with what they are doing to improve learning outcomes. Enables students to become thinkers/learners/risk takers in a sheltered environment. Learn not to rely on the teacher...be accountable themselves...become independent! Teaches digital literacy. Valuable employable skills in a digital world are learnt -appropriate online behavior, good digital citizenship, cyber safety, plagiarism, working with virtual teams, self-discipline in a virtual world, digital and global entrepreneurship, etc...

**M-LEARNING :** M-learning or mobile defined as "learning across contexts, through social and interactions, using personal electronic devices." A form of e-learning distance education, m-learners can use mobile device educational technology in many locations at their time convenience. M-learning technologies include handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids and materials

Objectives of m-learning

The common-objectives of m-learning are given below

- **Encourage anywhere, anytime' learning**
- **Reach underserved children**
- **Improve twenty-first century social interactions**
- **Fit with learning environments**
- **Enable a personalized experience**

**Differentiating e-learning from mobile learning:**

E-learning can be real-time or self- paced, also known as "synchronous" or "asynchronous" learning. Additionally, e- learning is considered to be "tethered" (connected to something) and presented in a formal and structured manner.

<b>e-learning</b>	<b>m-learning</b>
lecture in classroom or internet labs	learning anywhere, anytime
e-mail-to-e-mail	Instantaneous messaging
private location	no geographic boundaries
travel time to reach to internet site	no travel time with wireless internet connectivity

Because mobile devices have the power to make learning even more widely available and accessible, mobile devices are considered by many to be a natural extension of e-learning. Web-based learning Web-based learning is associated with learning materials delivered in a Web browser, including when the materials are packaged on CD-ROM or other media. The internet is more frequently becoming a part of our daily lives, and its presence in medical education is unmistakable. Web-based courses seem to dominate the attention of educators and students. If presentations at international conferences are any indication, the interest in this new instructional medium is indeed commanding. What is web-based learning? Web-based learning encompasses all educational interventions that make use of the internet (or a local intranet). There are currently three broad classifications or configurations within WBL: tutorials, online discussion groups, and virtual



patients. The distinctions between these configurations are often blurred, and in fact a given WBL intervention might use a combination of two or three, but the implications for teaching warrant a conceptual, albeit at times arbitrary, separation. Online tutorials are similar to face-to-face lectures. Ten Steps to Effective Web-Based Learning (From Cook and Dupras, JGIM In press)

1. Perform a needs analysis and specify goals and objectives
2. Determine your technical resources and needs
3. Evaluate pre-existing software and use it if it fully meets your needs
4. Secure commitment from all participants and identify and address potential Barriers to implementation.
5. Develop content in close coordination with website design
  - Capitalize on the unique capabilities of the Web by appropriately using multimedia, communication hyperlinks, and online
  - Adhere to principles of good webpage design (see reverse)
  - Prepare a timeline; plan for up-front time investment
6. Encourage active learning self- assessment, reflection, self-directed learning, Problem-based learning, learner interaction, and feedback
7. Facilitate and plan to encourage use by the learner
8. Evaluate both learners and course

**CONCLUSION:** Though e-learning, m-learning and Web-based learning are all related to each other, they have significant differences. Failing to recognize the fine differences between these concepts limits the pace of development of expertise, precludes precise communication with team members and stakeholders, and often reflects a poor understanding of available alternative solutions. Adequate use of the terminology Offers indisputable advantages. Referring to each concept appropriately not only conveys precise and accurate messages, but also entails correct actions and provides clear view of challenges, potentials, and trade- offs. In the end, recognizing subtle differences in language enables faster individual development, more accurate and discerning research, improved communication, and ultimately better products.

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## ADVANCED TECHNOLOGIES FOR EFFECTIVE CLASSROOM LEARNING

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### Abstract

Modern classrooms are quickly evolving into new learning spaces that are more flexible, adjustable, and collaborative. Colleges and universities are redesigning learning spaces to accommodate new instructional methods, and large lecture halls with sloped floors, fixed seats, and classrooms with fixed podiums and tablet-arm chairs are becoming a thing of the past. Students who grew up in the digital age and want interactive, learner-centered learning drive this transition. New classroom tools are altering how professors educate and evaluate student performance just by being present. Interactive information is encouraged, for instance, by giving classrooms network access and digital projectors. Furthermore, modern technologies offer the tools by which new educational technologies would become remarkably effective in creating vibrant learning environment. The authors of this paper attempted to describe how advanced classroom technologies can be successfully incorporated into the classroom, elaborate on successful technology integration, discuss the necessity and significance of advanced classroom technologies, and shed light on the benefits and difficulties of advanced classroom technology.

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**INTRODUCTION:** Classrooms rich with interactive whiteboards, document cameras and lecture capture systems support active-learning environments. Telepresence systems, along with video and web conferencing, expand classroom walls to include participants from anywhere in the world. Students, equipped with notebooks, tablets and smartphones, can learn at their own pace in classroom extensions that can be accessed at any time, from any place. IT leaders can better prepare for future classroom (and campus) needs — and meet current demands — by designing agile and secure networks and planning future budgets strategically. While the lecture — with an instructor standing at the front of a roomful of students, imparting his or her knowledge — remains the norm, new instructional models are evolving, shifting the focus to a student- or learner-centered environment.

### NEED AND IMPORTANCE OF ADVANCED CLASSROOM TECHNOLOGIES:

The **need and importance of advanced classroom technologies** in higher education are driven by several factors, all of which contribute to enhancing the teaching and learning experience for both educators and students:

- **Preparation for the Digital Age:** Equipping students with digital literacy skills is crucial in today's technology-driven job market. Familiarity with advanced technologies prepares students for the demands of the workforce.
- **Inclusivity:** Technology can provide accessible learning experiences for students with disabilities. Features like screen readers, captioning, and other assistive technologies ensure that education is inclusive and equitable.
- **Research and Innovation:** Higher education institutions can use advanced technologies to conduct research and drive innovation in fields like artificial intelligence, virtual reality, and data science.
- **Global Reach:** Online and blended learning models allow institutions to reach a broader international audience, attracting students from around the world.
- **Environmental Impact:** Reducing the need for physical resources, such as printed materials and classroom space, can contribute to a more sustainable and environmentally friendly educational system.
- **Scalability:** Advanced technologies can make it easier for institutions to scale their programs and accommodate a growing student population.

- **Continuous Improvement:** The data generated by advanced technologies can be used for ongoing assessment and improvement of educational programs, ensuring that institutions stay relevant and effective.
- **Security and Verification:** Technologies like Blockchain can enhance the security and trustworthiness of academic credentials, reducing the risk of fraud.
- **Enhanced Learning Experience:** Advanced classroom technologies offer more engaging and interactive learning experiences, which can improve student comprehension and retention. Interactive content, multimedia resources, and gamified elements make learning more enjoyable and effective.
- **Flexibility and Accessibility:** These technologies enable flexible learning options, including online and hybrid models, making education accessible to a broader range of students, including those with jobs, family responsibilities, or geographic constraints.
- **Personalization:** Advanced technologies, such as adaptive learning systems and AI-driven platforms, can tailor content and assessments to individual student needs and progress, leading to more personalized learning experiences.
- **Efficiency:** Digital tools streamline administrative tasks for educators, enabling them to focus more on teaching and less on paperwork. Learning management systems (LMS) also facilitate grading and communication, saving time and reducing administrative overhead.
- **Data-Driven Decision-Making:** Learning analytics and data collection can provide insights into student performance, helping educators identify at-risk students and make informed instructional decisions.
- **Global Collaboration:** With the aid of technology, students and educators can collaborate with peers and experts worldwide, facilitating international perspectives and cross-cultural exchanges.
- **Cost Savings:** Digital textbooks, open educational resources (OER), and online resources can reduce the cost of educational materials for students, potentially making higher education more affordable.

Advanced classroom technologies offer a wide range of advantages, but they also come with some disadvantages and challenges. Here's an overview of the pros and cons:

#### **ADVANCED CLASSROOM TECHNOLOGIES:**

Advanced classroom technologies in higher education refer to innovative tools, systems, and methods that enhance the teaching and learning experience in college and university settings. These technologies are designed to engage students, improve instruction, and support various aspects of the educational process. Some of the advanced classroom technologies in higher education include:

- **Learning Management Systems (LMS):** LMS platforms like Moodle, Canvas, and Blackboard provide a centralized hub for course materials, assignments, grading, and communication between instructors and students.
- **Online Learning and Virtual Classrooms:** These technologies enable remote or blended learning, allowing students to access courses and engage with instructors and peers online, often using video conferencing platforms like Zoom or Microsoft Teams.
- **Flipped Classroom Tools:** Educators use platforms like Edpuzzle, PlayPosit, or Kaltura to create and share video lessons, allowing students to review content outside of class and use class time for discussion and activities.
- **Lecture Capture Systems:** Lecture capture software and hardware like Panopto and Echo360 record classroom lectures, making them available for students to review later.

- **Virtual Reality (VR) and Augmented Reality (AR):** These immersive technologies are used to create interactive simulations and educational experiences, enhancing subjects such as science, engineering, and history.
- **Gamification and Game-Based Learning:** Platforms like Kahoot! Quizlet, and educational games help make learning more engaging and interactive.
- **Adaptive Learning Systems:** These platforms use data analytics to tailor instruction to individual students, providing personalized learning experiences.
- **Artificial Intelligence (AI) and Machine Learning:** AI-driven tools can provide insights into student performance, automate administrative tasks, and even create personalized content.
- **Interactive Whiteboards and Smartboards:** These devices allow instructors to create interactive presentations and engage students in the learning process.
- **3D Printing and Maker Spaces:** These technologies enable students to create physical objects, encouraging hands-on learning in fields like engineering, design, and art.
- **Mobile Apps:** Many institutions develop their own apps to facilitate communication, access course materials, and provide support services to students.
- **E-books and Open Educational Resources (OER):** Digital textbooks and open educational resources are often more affordable and accessible for students.
- **Learning Analytics:** Data-driven insights can help institutions and instructors identify at-risk students, monitor progress, and make data-informed decisions.
- **Video Conferencing and Webinars:** Tools like WebEx, GoToMeeting, and Adobe Connect facilitate remote meetings and webinars, often used for guest lectures or virtual collaborations.
- **Cloud-Based Tools:** Cloud services like Google Workspace for Education and Microsoft 365 offer collaborative document creation, storage, and sharing capabilities.
- **Accessibility Tools:** Technologies like screen readers and captioning software ensure that education is accessible to all students, including those with disabilities.
- **Robotics and Automation:** These technologies are often used in STEM disciplines to teach robotics, automation, and programming.
- **Blockchain for Credential Verification:** Some institutions are exploring Blockchain technology to securely and efficiently verify and share academic credentials.

The adoption of these advanced classroom technologies varies from one institution to another, and their effectiveness depends on factors such as faculty training, infrastructure, and the specific needs and goals of the educational program.

#### **ADVANTAGES OF CLASSROOM TECHNOLOGIES:**

- **Cost Savings:** Digital textbooks, open educational resources (OER), and online materials can reduce the cost of education for students.
- **Data-Driven Decision-Making:** Learning analytics and data collection provide insights into student performance, helping educators make informed instructional decisions.
- **Preparation for the Digital Age:** Students develop essential digital literacy skills that are valuable in today's workforce.
- **Inclusivity:** Technology can create accessible learning experiences for students with disabilities, ensuring education is equitable.
- **Environmental Impact:** Reducing the need for physical resources, such as printed materials, can contribute to a more sustainable and environmentally friendly educational system.
- **Enhanced Learning Experience:** Technology can make learning more engaging and interactive, leading to improved understanding and retention of course material.

- **Flexibility and Accessibility:** Online and blended learning models enable flexible access to education, accommodating various learning styles and schedules.
- **Personalization:** Adaptive learning systems and data-driven insights can tailor instruction to individual student needs, promoting personalized learning experiences.
- **Efficiency:** Technology automates administrative tasks, such as grading and communication, saving time for educators and students.
- **Global Collaboration:** Technology facilitates collaboration with peers and experts from around the world, providing diverse perspectives and global connections.

#### CHALLENGES OF CLASSROOM TECHNOLOGIES:

- **Cheating and Plagiarism:** Technology can facilitate cheating and plagiarism, making it necessary to implement robust anti-cheating measures.
- **Cultural and Language Barriers:** Online and digital platforms may present challenges for non-native English speakers and those from different cultural backgrounds.
- **Digital Divide:** Not all students have equal access to technology, creating disparities in education. The "digital divide" may exclude some students from advanced technology-based learning.
- **Technical Issues:** Technical problems, such as software glitches or connectivity issues, can disrupt learning and cause frustration.
- **Privacy Concerns:** The collection and storage of student data raise privacy and security concerns, especially with cloud-based platforms.
- **Overreliance on Technology:** An overemphasis on technology can lead to neglect of important aspects of education, such as critical thinking and face-to-face interactions.
- **Costs:** Implementing and maintaining advanced technologies can be expensive, and not all institutions or students can afford them.
- **Digital Fatigue:** Prolonged use of technology can lead to screen fatigue and reduced attention spans, impacting the quality of learning.
- **Lack of Personal Interaction:** Online and virtual environments may lack the personal touch and social interaction that traditional classrooms provide.
- **Training and Support:** Faculty and students may require training and support to use technology effectively, and the lack of these resources can hinder its adoption.
- **Content Quality:** The quality of online content can vary widely, and not all digital resources are as effective as traditional teaching methods.
- **Distraction:** The same technology that can enhance learning can also be a source of distraction, as students may be tempted to engage in non-academic activities during class.

#### CONCLUSION:

In summary, advanced classroom technologies offer many benefits, but they also pose challenges and drawbacks. It is crucial for educators and institutions to carefully consider the integration of technology into the learning environment, with a focus on equitable access, privacy, and pedagogical goals. Effective implementation, ongoing assessment, and support are key to maximizing the advantages while mitigating the disadvantages.

These trends demonstrate the ongoing transformation of education, driven by technology, to meet the evolving needs of students and educators in a digital age. Institutions and educators are continuously exploring how to leverage these trends to enhance the quality and accessibility of education.

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## PHYSICAL EDUCATION AND SPORTS PROSPECTS

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### Abstract

*In the present world of Space age and automation era, nearly all human beings appear to be living a more and more inactive life. They like riding instead of walking, sitting instead of standing and watching instead of participating. So, there is great need for physical education as a part of balanced life and it is widely recognized that physical education and sports is relevant and important in developing an active and healthy life-style and the solution to rising obesity rates worldwide. The matter of concern is the deteriorating status of physical education and sports. It is a great challenge for the developing countries of the world to set up a connection with other developed nations to get guidance from their coaches and authorities. Some people are confused by this term and do not know what it teaches. It is mostly misunderstood as 'Physical training drills' (P.T. exercises). Others consider physical education as playing activity like football, hockey, races and other competitive activities whereas this is also not true. Some opine that it is for physical culture to make body-shape. Few others consider physical education is meant only for recreation, fun and enjoyment. In fact, these wrong opinions have led to many misconceptions about the subject. Structured physical education must be made an integral part of school curriculums in India. For such a young and socio-economically diverse population, physical education through schools can become a powerful holistic development tool for Indian Children. Physical Education ensures the social growth of children by providing them self-confidence, promoting leadership, teaching teamwork and encouraging inclusion and championship.*

*The importance of physical education has never been emphasized more than it is today. In the present world of Space age and automation era, nearly all human beings appear to be living a more and more inactive life. They like riding instead of walking, sitting instead of standing and watching instead of participating. Such a type of inactivity or sedentary life is extremely harmful for physical and mental health. On account of this lax and inactive lifestyle people are suffering from hypo kinetic diseases like diabetes, cervical and lumber spondylitis, back pain, joint pain, obesity and cardio vascular diseases. So, there is great need for physical education as a part of balanced life and it is widely recognized that physical education and sports is relevant and important in developing an active and healthy life-style and the solution to rising obesity rates worldwide. Although in most of the countries, physical education is part of the school curriculum, yet lessons are not given, thus leading to a reduced experience of physical activity for children and youth. The practice of a physically and mentally active lifestyle in combination with healthy and nutritious diet, however, needs to be started in early childhood.*

**Keywords:** Obesity, Sports, Physical education and Society

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### Research Methodology

Secondary data and pertinent literature have been consulted. Documented sources including internet sources have also been perused. Moreover, previous studies, surveys and literature were also consulted for insight stimulation on the topic of the paper.

### Purpose of study

The study aims at emphasizing the role of Physical education in today's hectic lifestyle as well as assessing its acceptance in the modern world and its future prospects. A large amount of people's saving can be utilized in development work, if they do not have to spend it for their medical care. Physical education can prove to be an effective tool for saving people's hard – earned money being unnecessarily spent in paying doctor's fees.

### Current trends of Physical Education in Society

The matter of concern is the deteriorating status of physical education and sports. It is a great challenge for the developing countries of the world to set up a connection with other developed nations to get guidance from their coaches and authorities. In this way, developing countries can gain knowledge of the world-class infrastructure and technological equipment related to sports. Physical education in the education institutes is the area to be targeted for the upliftment of sports. Cricket, which turns out to be a religion in India, is a media-friendly game and raises the monetary status of players.

### Misconceptions about physical education

Physical education is a vast subject but unfortunately people do not know the importance of this subject. Some people are confused by this term and do not know what it teaches. It is mostly misunderstood as 'Physical training drills' (P.T. exercises). Others consider physical education as playing activity like football, hockey, races and other competitive activities whereas this is also not true. Some opine that it is for physical culture to make body-shape. Few others consider physical education is meant only for recreation, fun and enjoyment. In fact, these wrong opinions have led to many misconceptions about the subject.

### **Importance of Physical Education in Indian children**

Structured physical education must be made an integral part of school curriculums in India. For such a young and socio-economically diverse population, physical education through schools can become a powerful holistic development tool for Indian Children. Most schools in India have remained unsuccessful in integrating structured physical education into the school's curriculum. Focus is on mainstream subjects, as schools fail to see how a structured physical education curriculum can add to the development of young children, by adding to their physical, mental, emotional and social growth. With 29.5% of India's population under 14 years old (Indian Census, 2011), physical education must be utilized as an effective tool for the holistic development of Indian children, from diverse socio-economic backgrounds. The obvious benefit of physical education of keeping children fit, active and healthy, is particularly important for living in urban India, from stronger economic backgrounds, where obesity has become a major issue. Physical Education also promotes mental health, providing motivation and fighting depression, while helping in the emotional development of children. India's education system, unfortunately, rotates around a dreadful competitive exam culture, putting immense pressure on students. Physical Education ensures the social growth of children by providing them self confidence, promoting leadership, teaching teamwork and encouraging inclusion and championship. These values are hard to learn through text books, but can be taught practically and enjoyably through physical education.

### **Future trends and Challenges**

The school / college health and physical education programmes are diminishing across the world. It's great challenge in today's world how to integrate the importance of the health with the marks cards and grades. The decline in physical education throughout the world has been the subject of much research and was addressed as the World Summit on Physical Education in 1999. Even though some government policies have planned to implement the physical education and the sports in the compulsory curriculum; still in reality it has lot of resistance to get materialized.

### **The challenges as on date may be discussed in the light of the following points :**

- i. Identifying issues and challenges engaging young people and PE teachers.
- ii. Identifying concepts and principles of effective teaching and learning, curriculum and programmes.
- iii. Talent identification and development in sports.
- iv. Appreciating the roles of a coach and how these can be effectively managed in school.
- v. Counselling and spreading the awareness of physical education and sports.
- vi. Developing state of the art and modern infrastructure for sports for this modern world.
- vii. Introducing and encouraging female sports by developing female sports environment and facilities.

### **Results:**

Physical education and sports has bright future prospect provided it is channelized in a perfect way. The primary concern now is realization of existing inadequacies and the subsequent provision of suitable programmes. A well – designed systematic health plan involving different PE and sports activities will definitely reduce the present global ill health scenario. The same will also result in an excellent performance level of global sports in competitive areas.

**Discussion**

It is a great challenge in today's world to integrate the importance of health with the marks – cards and grades. Even though some government policies have planned to implement physical education and sports in the compulsory curriculum, still in reality it has lots of obstacles to materialize.

**Conclusion**

Considering the above discussion, it is clear that physical education in India is often a neglected part of education and many schools across the country do not realize the importance of having physical education as a part of the system. Physical education has great advantages and there are some schools that have managed to strike the balance between academics and physical fitness. A well – designed systematic health plan involving different PE and sports activities will definitely reduce the present ill health scenario of the world. The present health care expenses at individual level can also be reduced by means of implementing a systematic PE programme and it may balance the individual economic wellbeing.

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## TECHNOLOGY INTEGRATION IN BIOLOGICAL SCIENCE

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### Abstract

*Teachers must be able to integrate technology into their lessons in order to create effective and efficient learning. The goal of this study was to determine the sort of technology that teachers utilized when teaching biology. The study's findings showed that there are a variety of technologies used in biological science. People are in a constant state of development and evolution, and in parallel, science and technology are advancing at an unprecedented pace. Many phenomena that were once unimaginable have become reality, unfolding swiftly. The rapid changes in technology give rise to both hopeful and concerning scenarios for individuals. This circumstance necessitates the effective management of technology through systematic approaches and its integration into various aspects of life processes.*

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### Introduction:

In today's modern era, it's widely acknowledged that we live in a knowledge-driven global society, where knowledge holds immense importance, both for individuals and nations. This rapid expansion of knowledge is only attainable through the utilization of cutting-edge technologies. These technologies are essential not only for accessing knowledge but also for facilitating the entire process of knowledge acquisition. This is where the field of Information and Communication Technology (ICT) comes into play. ICT encompasses various tools, equipment, and applications that enable the efficient collection, storage, retrieval, use, transmission, manipulation, and dissemination of information with utmost accuracy and effectiveness, ultimately enriching our knowledge pool. ICT's impact extends across multiple facets of life, including entertainment, business, marketing, social interactions, communication, and banking. Moreover, it has significantly transformed the realm of education, giving rise to the concept of technological integration in education. It wouldn't be an exaggeration to say that technological integration in education owes its existence to the advancements in information and communication technology. Technology integration in biological science often referred to as e-learning, online learning, or virtual learning, represents an educational approach that leverages technology and technology-assisted electronic devices to significantly enhance the individualization, productivity, and durability of the learning process. The fundamental concept underpinning digital education is not to entirely replace the traditional education system but rather to augment and enrich the overall learning experience. In essence, digital education seamlessly blends technology with learning, thereby empowering learners to tailor their educational journeys to their specific needs while also facilitating collaborative teamwork when required.

Several pedagogical approaches that integrate technology and learning include:

- Three-dimensional (3D) spatial learning
- Utilizing social media platforms
- Immersive experiences through virtual reality
- Accessing open educational resources
- Learning through video-based content
- Mobile-centric learning solutions
- Adoption of electronic textbooks (e-textbooks)
- Incorporating augmented reality techniques, among others.

Technology undeniably holds great promise, not only in delivering high-quality education but also in extending educational opportunities to learners residing in remote and underserved regions. It also offers educators the chance to broaden their knowledge horizons and tailor educational experiences to accommodate individual differences in learners' psychology. However, it's important to recognize that the effective implementation of technology is not without challenges, particularly in developing countries like India. These regions may still grapple with issues such as irregular access to electricity,

insufficient infrastructure for education (e.g., inadequate furniture, blackboards, health and sanitation facilities, computers, and dedicated personnel). Therefore, it becomes crucial to acknowledge and address common obstacles associated with digital learning.

Some of these challenges include:

**Continuous Technological Advancements:** In the 21st century, we are witnessing constant knowledge expansion and evolution, mirrored by the ever-changing landscape of digital technology. Technology is in a perpetual state of upgrade, and it's unrealistic to expect digital gadgets to remain static. Consequently, comprehensive planning and budgeting for technology upgrades must be integrated into digital education policies at all levels.

**Need for Robust IT Support:** As educational institutions increasingly rely on technology, the demand for IT departments escalates to meet these technological needs. Therefore, digital education policy planning should also emphasize the development of the IT industry.

**Increased Financial Commitment:** The introduction of technology-focused education undoubtedly places an additional financial burden on educational institutions. This financial constraint often hampers institutions' willingness to embrace the evolving concept of digital education. Given that India is a developing country, it cannot instantly allocate substantial financial resources or budgets. It necessitates a collaborative effort involving government, educational institutions, and community support to fund these significant costs.

**Optimizing Software for Mobile Devices:** Existing software is not optimized for mobile devices, which is essential because many students lack internet/WIFI access at home or do not own laptops/PCs. They primarily rely on mobile phones due to cost-effectiveness.

Adequate planning and work are required from the IT industry to address this issue. **Resistance to Change:** A significant hurdle in planning and implementing digital education is the reluctance stemming from a fixed mindset, especially within the teaching community. Teachers often find it challenging to depart from their traditional teaching methods. Addressing this problem requires providing ample information, statistics, and examples to educate individuals in the field of education about the benefits of digital education.

**Internet/Online Security Concerns:** The rise in internet and online activities necessitates enhanced security measures, which require substantial investments. Furthermore, both teachers and students need education on basic internet safety.

**Teacher Training Requirement:** Even with rigorous planning for the implementation of digital education policies in the near future, success hinges on providing adequate training to teachers, who play a pivotal role. To ensure the success of digital learning environments, teacher training in the use of various digital tools is imperative.

**Challenges in Content Creation:** The vast volume of digital content poses a challenge in curating high-quality digital learning materials. Successful digital education relies on collaboration between educators (subject matter experts) and software experts. The mere availability of digital tools is insufficient; it's the quality of content displayed through digital tools that drives effectiveness.

**Limited Accessibility:** Accessibility to digital tools and the required infrastructure, such as WIFI in educational institutions, is inadequate. To fully benefit from digital education, students need access to digital tools of their own, allowing them to utilize technology-oriented education seamlessly, regardless of location or time. In India, where students often rely on educational loans to finance their education, they cannot bear the additional financial burden. Addressing this challenge necessitates collaboration among educational institutions, the government, and community resources.

**Misconceptions about Digital Education:** It's crucial to clarify that digital tools are not a replacement for human interaction; instead, they complement and enhance classroom interaction. Effective results in learning stem from the content presented through digital tools, with appropriate planning and active teacher involvement. It's essential not to allow digital tools to completely supplant traditional teaching methods; instead, teachers should prepare for a new role working in tandem with technology.

**Technophobia:** Another obstacle to technology integration is technophobia – a fear or

aversion to advanced technology and complex devices. This technophobia often arises from the belief that new technologies conflict with established values like simplicity and modest lifestyles.

**Theory-Centric Curriculum:** Curricula are frequently criticized for their theoretical focus, with insufficient practical application of ICT. Practical integration of ICT into the curriculum remains a challenge, influenced by factors like inconsistent electricity supply, an inadequate ratio of students to gadgets, and overcrowded classrooms.

**Network Stability Issues:** Despite advances in satellite technology, network disruptions caused by minor weather disturbances can impede teaching and learning based on digital tools. Enhancements are required to ensure stable and fast network availability.

**Inadequate In-Service Teacher Training:** While efforts have been made to introduce digital education concepts in teacher training courses, there's a lack of knowledge among existing educators. Their willingness to incorporate digital tools into education will only develop when they become acquainted with the theory and practice of ICT. Workshops, refresher courses, seminars, and faculty development programs focused on ICT are necessary to address this gap.

**Conclusion:** The discussion above aims to highlight the challenges impeding the technology integration on education in India. Effective policy planning should address these issues comprehensively to ensure the success of digital education initiatives. These initiatives help to effective teaching of biological science. Before the commencement of lessons, technological integration was implemented within a group through essential activities. This approach motivates biology teachers to extend their focus, extend the duration of technology usage, and facilitates the continuation of their educational efforts beyond the confines of the school. Additionally, it has been identified that incorporating technology into the educational process, especially in activities such as project development, research assignments, and presentations, should be a gradual and well-prepared endeavor. When utilizing technology, priority should be given to practices that actively engage participants. This emphasis on active involvement enhances participants' cognitive, affective, and behavioral commitment, positively influencing their overall success levels.

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## AWARENESS OF LEARNING MANAGEMENT SYSTEM AS A TEACHING TOOL AMONG TEACHER EDUCATORS

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### Abstract

*This research paper presents the results of a survey study conducted to assess the Awareness of Learning Management Systems (LMS) as a teaching tool by teacher educators. As technology continues to transform the field of education, it is essential for teacher educators to be proficient in using digital tools to enhance teaching and learning. This study examines the level of awareness and the extent to which teacher educators employ LMS in their pedagogical practices. The findings reveal the importance of professional development in ensuring that teacher educators are adequately equipped to harness the potential of LMS as a teaching tool*

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### 1. Introduction

In this digital age, the role of technology in the classroom is no longer a matter of choice; it is a necessity. In the system of education, there is a paradigm shift towards blended learning and online learning environment. So it becomes increasingly critical for educators to adapt and embrace the tools that can empower them to deliver effective and engaging instruction. One such tool that holds immense potential for transforming teaching and learning is the Learning Management System (LMS). Learning Management Systems (LMS) have gained significant attention in the field of education due to their potential to enhance the teaching and learning experience. LMS platforms offer various tools and features that can facilitate content delivery, student engagement, and assessment. However, the successful integration of LMS into educational practices depends on the awareness, acceptance, and willingness of educators to use these systems effectively.

Teacher educators play a crucial role in shaping the future of education by preparing the next generation of teachers. Their awareness of LMS can significantly impact how future educators perceive and use technology in their classrooms. If they are aware of what LMS is about, they can develop a positive or favourable attitude towards its implementation in their instructional process.

#### Learning Management System

A Learning Management System (LMS) is a software application or platform designed to facilitate, manage, and enhance the delivery of educational content and training programs. LMS systems are commonly used in various educational settings, including schools, universities, corporate training programs, and online courses. LMS offers a centralized location where educational content, resources, assignments, communication tools, and assessments converge, making the learning experience more accessible, efficient, and engaging. Whether used in traditional classrooms, blended learning environments, or fully online courses, LMS platforms have become indispensable in managing the intricacies of education.

LMS platforms play a multifaceted role in education:

1. **Content Management:** Educators can create, upload, and organize course materials, including documents, videos, quizzes, and interactive resources, all within the LMS.
2. **Learning Facilitation:** LMS platforms offer tools for communication and collaboration, allowing educators to interact with students, provide feedback, and foster a sense of community in both physical and virtual classrooms.

3. **Assessment and Progress Tracking:** LMS systems enable the creation and administration of quizzes, tests, and assignments, as well as the tracking of student progress and performance, thereby facilitating data-driven instruction.
4. **Flexibility and Accessibility:** LMS platforms support various modes of learning, including self-paced, synchronous, and asynchronous, catering to the diverse needs of learners.
5. **Resource Efficiency:** LMS reduces administrative overhead by automating routine tasks, such as grading and attendance tracking, allowing educators to focus more on teaching.

#### Teacher Educators

Teacher educators are the professionals who specialize in the preparation and development of future educators and teachers. They play a crucial role in shaping the quality and effectiveness of the teaching workforce by providing the necessary knowledge, skills, and pedagogical training to aspiring teachers. The population of this study are teacher educators working in different teacher education colleges all over India.

#### Awareness of LMS

"Awareness of LMS" refers to the level of knowledge and understanding that individuals, typically educators, have about Learning Management Systems (LMS). In the context of education and technology, it relates to how familiar and informed the educators are about the existence, features, benefits, and usage of an LMS platform.

#### Objectives

The broad objective of the study is to measure the awareness LMS as a teaching tool by teacher educators. Considering the four dimensions: familiarity, personal engagement, integration and perceived challenges, specific objectives were framed as follows,

1. To determine the percentage of teacher educators who are familiar with the concept of Learning Management Systems (LMS) in the field of education.
2. To calculate the percentage of teacher educators who have engaged personally with LMS platforms, including creating and managing course content, administering assessments, and facilitating student interactions.
3. To assess the percentage of teacher educators who have integrated LMS tools into their pedagogy, including the incorporation of LMS tools into teaching practices and the encouragement of students' LMS experimentation.
4. To determine the percentage of teacher educators who perceive challenges and concerns related to LMS adoption, including technical issues, resistance from colleagues or students, privacy and security concerns, and potential impacts on course quality.

#### Hypotheses

Keeping in mind the objectives of the study, the following hypotheses were formulated.

1. The majority of teacher educators are familiar with the concept of LMS in the field of education.
2. A significant percentage of teacher educators have personally engaged with LMS platforms, majority reporting experience in creating and managing course content, administering assessments, and facilitating student interactions.
3. A substantial percentage of teacher educators have integrated LMS tools into their pedagogy, with many reporting the use of LMS tools in their teaching practices and encouraging students' LMS experimentation.
4. A notable percentage of teacher educators perceive challenges and concerns related to LMS adoption, including technical issues, resistance, privacy/security concerns, and potential impacts on course quality.

## 2. Literature Review

Learning Management Systems are web-based platforms designed to manage and deliver educational content. They offer features such as content creation, course management, assessment tools, communication, and collaboration capabilities. LMS platforms have become central to online and blended learning environments in various educational settings. LMS platforms have evolved from simple content repositories to comprehensive educational ecosystems. Initially designed for course management and content delivery, modern LMS now incorporate a wide range of features, including collaborative tools, multimedia integration, and analytics capabilities (Ally et al., 2020). This evolution has revolutionized teacher education by offering innovative approaches to instruction and professional development.

One of the key contributions of LMS to teacher education is the transformation of pedagogical practices. Educators can create interactive and learner-centered environments using LMS tools (Selwyn, 2011). Collaborative features enable student-teacher and peer interactions, fostering a sense of community (Rovai, 2002). In essence, LMS platforms have moved beyond content delivery to facilitate active learning and reflective teaching (Garrison & Vaughan, 2008).

LMS plays a vital role in teacher professional development (Darling-Hammond et al., 2017). Through online courses, webinars, and resource sharing, educators can continuously update their knowledge and skills (Vogel & Vogel, 2017). Moreover, LMS analytics help institutions personalize professional development opportunities based on individual needs (Koedinger et al., 2015).

LMS platforms offer robust assessment tools for evaluating teacher competencies. Rubrics, quizzes, and portfolios enable educators to demonstrate their proficiency in pedagogical practices, content knowledge, and technology integration (Koehler & Mishra, 2009). These assessments inform program improvements and support continuous quality enhancement (Ko & Rossen, 2017).

Despite its potential, LMS integration in teacher education is not without challenges. Technical issues, faculty resistance, and concerns about data security pose obstacles (Baran et al., 2011). Ensuring equitable access for all students, particularly in diverse contexts, remains a concern (Johnson et al., 2015). Additionally, the design and quality of online courses require careful consideration to maintain educational standards (Means et al., 2013).

The future of LMS in teacher education is promising. Emerging trends include the integration of artificial intelligence (AI) to personalize learning experiences (Ochoa et al., 2018), enhanced mobile compatibility to support anytime, anywhere learning (Chen et al., 2017), and the use of learning analytics to inform data-driven decision-making (Dawson et al., 2019).

Effective training and ongoing support are critical for educators to feel confident in using LMS (Teo, 2009). Insufficient training and inadequate support can lead to resistance and hinder adoption (Teo, 2010).

LMS can serve as platforms for educators to engage in continuous professional development. Educators who use LMS for their own learning needs are more likely to integrate them into their teaching (Sahin et al., 2009).

The successful integration of LMS into teaching practices depends on how well educators align these technologies with pedagogical goals (Bower, 2016). Effective pedagogical strategies and the creation of interactive and engaging content can enhance LMS acceptance (Alqurashi, 2016).

Technical issues, such as system reliability and usability, can be barriers to LMS acceptance (Chang & Fisher, 2003). Addressing technical challenges is essential to ensure educators have a positive experience. Resistance to change is a common challenge in LMS adoption. Educators may resist LMS due to concerns about workload, changes in teaching practices, or skepticism about the benefits (Teo, 2009).

Future research may explore how LMS can be customized to meet the individual needs of educators. Personalization and adaptive learning features can enhance LMS acceptance by tailoring experiences (Bali et al., 2020).

### **3. Methodology**

To investigate the Awareness of LMS as a teaching tool among teacher educators, data was collected through survey method.

#### **Tool**

A survey questionnaire was developed to collect data on teacher educators' awareness of LMS. The questionnaire included a total of 20 yes or no items under four dimensions. Each dimension with five items.

Dimension 1: Familiarity with LMS Concepts: This dimension aims to assess the teacher educators' foundational knowledge and understanding of Learning Management Systems (LMS) in the context of education. It explores whether they are aware of what LMS are, if they can differentiate between various LMS platforms, grasp the basic functionalities of these systems, and recognize the potential advantages of integrating LMS into educational settings. Essentially, it gauges their conceptual awareness of LMS.

Dimension 2: Personal Engagement with LMS: This dimension focuses on the teacher educators' direct experiences with Learning Management Systems. It seeks to determine whether they have actively engaged with LMS for educational purposes, including creating and managing content within these platforms, administering assessments, participating in online discussions or facilitating student interactions using LMS tools, and using LMS for monitoring and tracking student progress. Essentially, it assesses their practical involvement with LMS.

Dimension 3: Integration of LMS in Pedagogy: In this dimension, the questionnaire explores how teacher educators incorporate LMS tools into their teaching practices. It aims to understand whether they integrate LMS into their teacher education courses, encourage pre-service teachers to use LMS, believe in the pedagogical potential of LMS, have received training on LMS integration, and are open to further innovation in using LMS for teaching. Essentially, it assesses their approach to pedagogical integration of LMS.

Dimension 4: Challenges and Concerns: This dimension delves into the barriers and concerns that teacher educators may face in relation to LMS adoption. It investigates whether they have encountered practical challenges like technical issues or access problems, perceived resistance from colleagues or students, expressed concerns about privacy or security, felt that their technological skills are not sufficient, believe that LMS reduce the overall quality of the course. Essentially, it examines their concerns and challenges associated with LMS utilization.

These four dimensions collectively provide a comprehensive perspective on teacher educators' awareness, engagement, integration, and concerns regarding Learning Management Systems as a teaching tool. The responses to the questionnaire items within each dimension help in assessing their readiness and proficiency in utilizing LMS effectively in their teaching practices.

#### **Sample**

The questionnaire was distributed to teacher educators from different teacher education institutions all over India employing convenient sampling. A total of 75 teacher educators participated in the survey.

#### **Data Collection**

The questionnaire was administered online using the Google forms and participants were asked to respond to questions related to their awareness about LMS.

#### **Data Analysis**

Percentage analysis for each of the dimension (familiarity, personal engagement, integration, perceived challenges) and for each items in every dimensions were done separately.

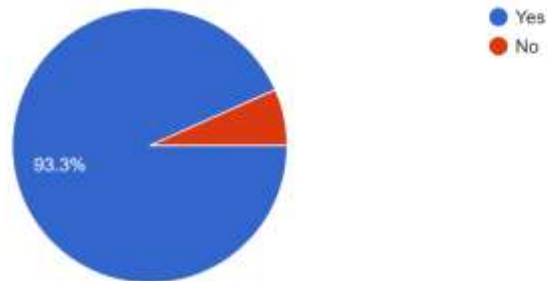
### **4. Results**

Responses were collected from 75 teacher educators from different teacher education colleges. The responses for each item under different dimensions are as follows,

## 1: Familiarity with LMS Concepts

Do you know how LMS can support blended or online learning environments?

75 responses



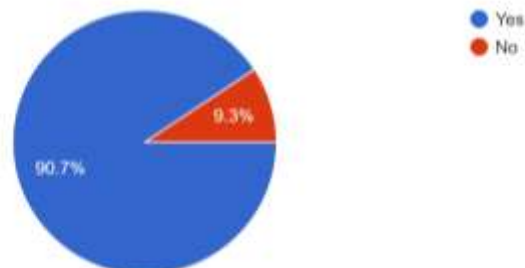
Have you heard of popular LMS platforms such as Moodle, Blackboard, Canvas, or Google Classroom?

75 responses



Do you know the fundamental functionalities of LMS, such as content delivery, assessment, and collaboration tools?

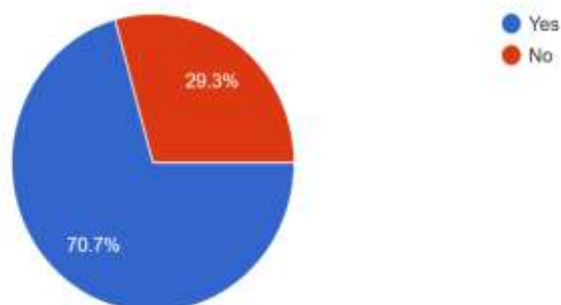
75 responses



## 2: Personal Engagement with LMS

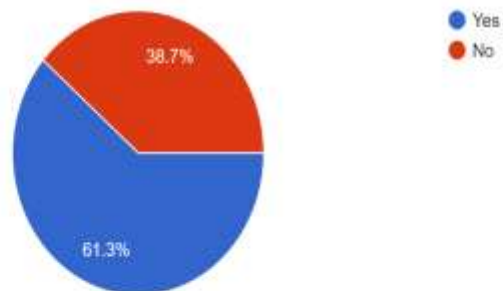
Have you attended any educational programmes using an LMS?

75 responses



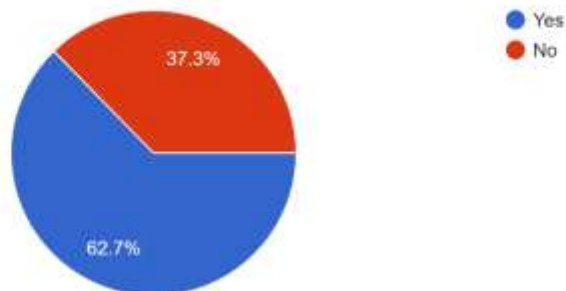
Have you ever created or managed course content within an LMS?

75 responses



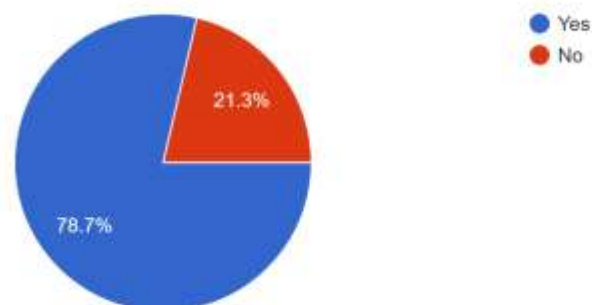
Are you experienced in setting up and administering assessments or quizzes through an LMS?

75 responses



Have you participated in online discussions or facilitated student interactions using LMS tools?

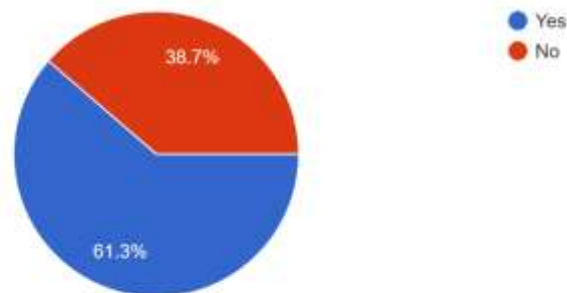
75 responses





Have you utilized LMS features to monitor and track student progress or performance?

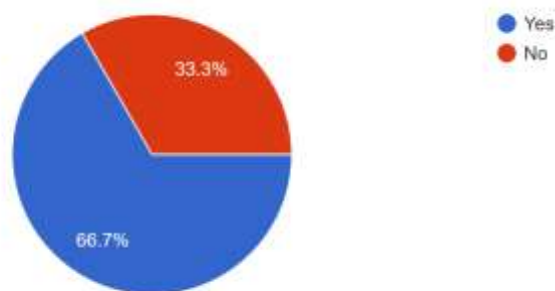
75 responses



### 3: Integration of LMS in Pedagogy

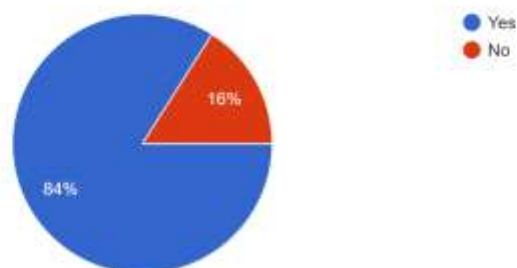
Do you incorporate LMS tools into your teacher education courses as part of your regular teaching practice?

75 responses



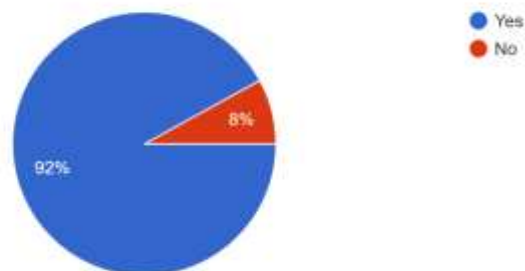
Have you encouraged your students to experiment with LMS for instructional activities?

75 responses



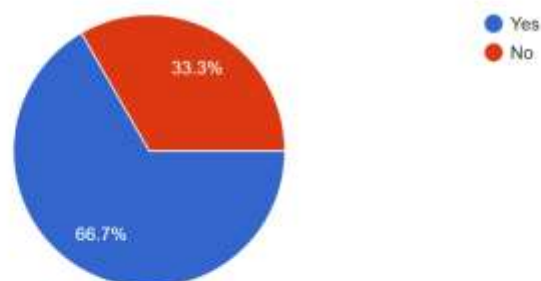
Do you believe that LMS can enhance pedagogical strategies and improve learning outcomes?

75 responses



Have you received professional development or training on effective LMS integration in teaching?

75 responses



Are you ready to explore innovative ways and utilize LMS in your courses?

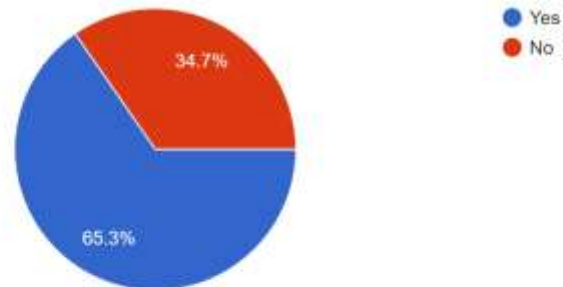
75 responses



#### 4: Challenges and Concerns

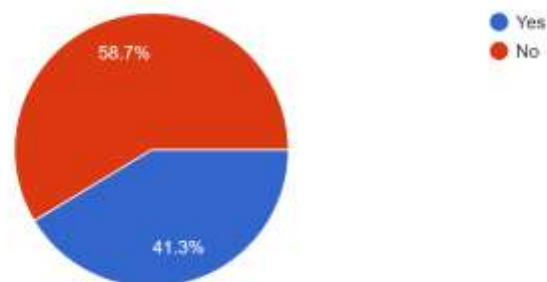
Are you worried about practical challenges, such as technical issues or access problems, when using LMS for teaching?

75 responses



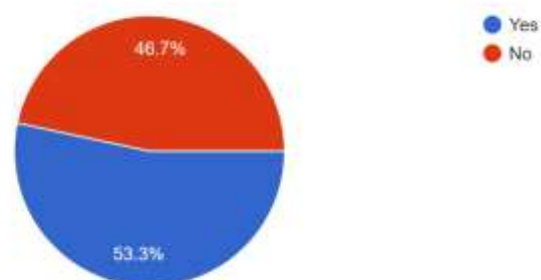
Do you perceive any resistance or reluctance from colleagues or students regarding the adoption of LMS?

75 responses



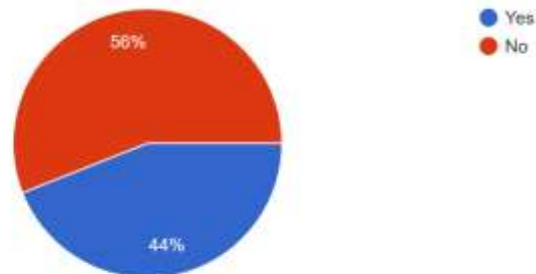
Are you concerned about potential privacy or security issues associated with LMS use?

75 responses



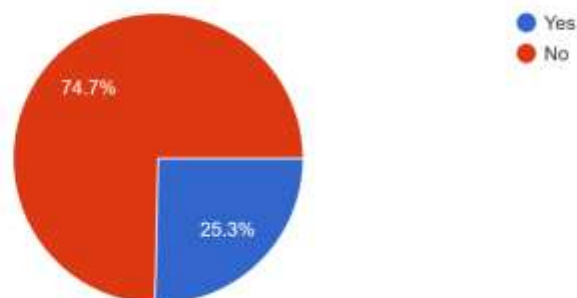
Do you feel that your technological skills are not efficient enough in incorporating LMS as a teaching tool into your teaching strategy?

75 responses



Do you believe that incorporating LMS will reduce the overall quality of the B.Ed. course?

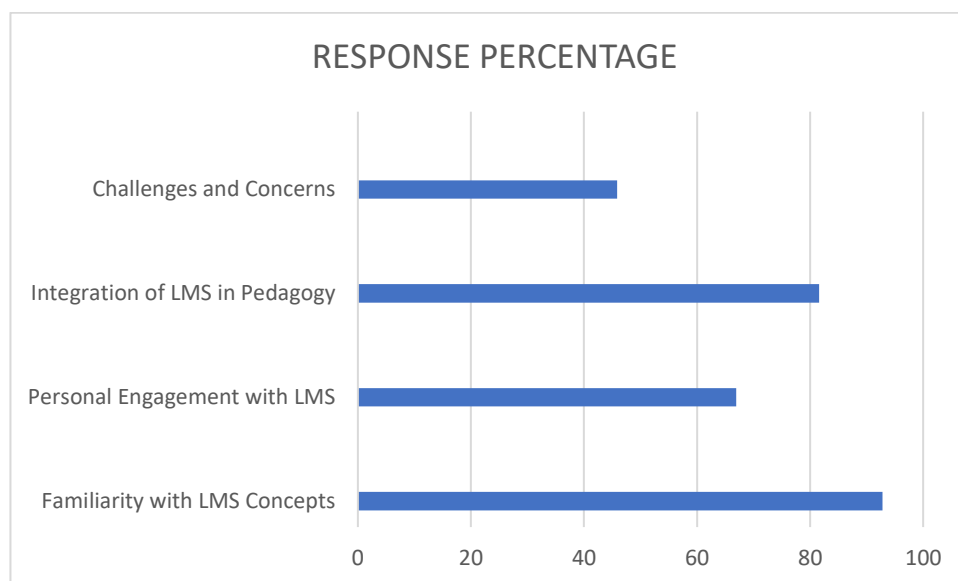
75 responses



## 5. Discussion and Conclusion

Based on the data collected, the following inferences were made,

1. **Familiarity with LMS Concepts:** 92.78 % of teacher educators indicated they were familiar with the concept of Learning Management Systems (LMS) in the field of education.
2. **Personal Engagement with LMS:** 66.94% of teacher educators reported personal engagement with LMS platforms. This engagement included creating and managing course content, administering assessments, participating in online discussions, and facilitating student interactions using LMS tools.
3. **Integration of LMS in Pedagogy:** 81.62% of teacher educators have integrated LMS tools into their teaching practices. They believe in the pedagogical potential of LMS, encourage pre-service teachers to use LMS, and have received training on LMS integration.
4. **Challenges and Concerns:** 45.84% of teacher educators expressed challenges and concerns related to LMS adoption. These challenges included technical issues, perceived resistance from colleagues or students, concerns about privacy or security, and worries about the potential impact on the quality of the course.



The findings of this study reveal that a significant percentage of teacher educators are familiar with LMS concepts and have engaged with LMS platforms. Furthermore, many teacher educators have integrated LMS tools into their pedagogy. However, a notable percentage still perceives challenges and concerns related to LMS adoption.

In conclusion, teacher educators play a pivotal role in shaping the future of education, and their awareness and integration of LMS can significantly impact the use of technology in the classroom. Efforts to provide training, support, and address concerns are essential to promote the effective use of LMS in teacher education, which can ultimately lead to more engaging and efficient teaching and learning experiences. Future research can delve deeper into strategies for overcoming challenges and maximizing the benefits of LMS integration in teacher education.

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## IMPACT OF DIGITAL CONTENT AND TOOLS ON DEVELOPING SCIENTIFIC CREATIVITY AMONG STUDENTS

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### Abstract

*This paper explores the evolving landscape of education through digital technology integration and its profound impact on fostering scientific creativity among students. In an era marked by rapid technological advancements, educators are increasingly leveraging digital tools and resources to enhance teaching and learning experiences. This paper delves into recent trends in technology integration, their implications for education, and how they contribute to the development of scientific creativity among students. It emphasizes the importance of cutting-edge technology such as digital tools and Content to empower students with the skills and mindset required for innovative scientific exploration.*

*Key words: Educational technology, Scientific Creativity, Digital tools, teaching –learning experience.*

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The digital transformation of education refers to the fundamental and widespread changes taking place in the field of education due to the integration of digital technologies. This transformation represents a shift from traditional, classroom-based teaching and learning methods to a more technology-driven and digitally enhanced educational landscape

**Shift from Analog to Digital:** Historically, education relied heavily on analog methods, such as textbooks, chalkboards, and face-to-face interactions in physical classrooms. However, the digital transformation of education involves the adoption and integration of digital tools, platforms, and resources to supplement or even replace traditional teaching and learning materials.

**Ubiquitous Access to Information:** With the advent of the internet and digital devices, students and educators now have easy access to a vast amount of information and educational content online. This access has revolutionized research, making information readily available to anyone with an internet connection.

**Enhanced Learning Experiences:** Digital technologies, including computers, tablets, and smartphones, have made it possible to create more engaging and interactive learning experiences. Virtual classrooms, online tutorials, multimedia presentations, and educational apps are just a few examples of how technology enhances learning.

**Personalized and Adaptive Learning:** Digital tools enable the customization of educational content to meet individual students' needs and learning styles. Adaptive learning systems use data and algorithms to tailor instruction to each student's progress, helping them learn at their own pace.

**Global Connectivity:** Technology has facilitated global connectivity and collaboration in education. Students can engage in online discussions, projects, and partnerships with peers from around the world, exposing them to diverse perspectives and cultures.

**Efficiency and Assessment:** Digital platforms allow for efficient management of administrative tasks in education, from grading assignments to tracking attendance. They also enable the use of data analytics for better understanding student performance and making data-driven decisions.

**Preparing Students for the Digital Age:** As technology becomes increasingly integral to various industries and professions, the digital transformation of education aims to equip students with the digital literacy, problem-solving skills, and adaptability needed to thrive in the 21st century job market.

Scientific creativity in the 21st century

**Innovation and Progress:** Scientific creativity is vital for driving innovation and progress in the 21st century. Creative scientists and researchers are more likely to come up with novel solutions to complex problems, leading to advancements in various fields, including medicine, engineering, and environmental science.

**Complex Challenges:** The 21st century presents humanity with numerous complex challenges, such as climate change, pandemics, and sustainable energy solutions. These challenges require innovative and

out-of-the-box thinking to find effective solutions. Scientific creativity plays a pivotal role in addressing these global issues.

**Interdisciplinary Nature:** Many of today's scientific problems are interdisciplinary in nature, meaning they require collaboration between experts from diverse fields. Creative scientists are more adept at bridging these disciplinary gaps and bringing together ideas and methods from different domains to solve complex problems.

**Data-Driven Insights:** With the advent of big data and advanced analytics, scientific creativity is essential for extracting meaningful insights from vast datasets. Creative data scientists can discover patterns and relationships that might be overlooked by traditional analytical methods.

**Adaptability:** The rapid pace of technological change in the 21st century means that scientific knowledge is constantly evolving. Creative scientists are better equipped to adapt to new information and ideas, allowing them to stay at the forefront of their fields.

**Entrepreneurship and Industry:** Scientific creativity is not limited to academia. It is also highly valuable in industry and entrepreneurship. Creative scientists and engineers can develop innovative products, technologies, and startups that contribute to economic growth and job creation.

**Problem-Solving in Daily Life:** Scientific creativity is not only relevant to professionals but also to everyday life. In an increasingly complex world, individuals who can think creatively are better prepared to solve personal and societal problems, make informed decisions, and adapt to changing circumstances.

**Global Competitiveness:** Nations and regions that prioritize scientific creativity are more likely to maintain a competitive edge in the global economy. Creative scientists and inventors can drive economic growth and contribute to a nation's prosperity.

**Ethical Considerations:** Scientific creativity is also essential for addressing ethical dilemmas posed by emerging technologies, such as artificial intelligence and genetic engineering. Creative thinkers are needed to navigate the ethical implications of these technologies and ensure responsible use.

The role of Digital technology in nurturing scientific creativity among students is multifaceted and plays a crucial part in modern education.

**Access to Information:** Technology provides students with instant access to a vast amount of information, research papers, articles, and educational resources. This access allows students to explore a wide range of topics, fostering curiosity and a thirst for knowledge, which are essential components of creativity.

**Interactive Learning:** Technology offers interactive learning experiences that engage students in hands-on activities and simulations. Virtual labs, for example, enable students to conduct experiments and explore scientific concepts in a risk-free virtual environment. This interactive approach encourages experimentation and exploration, key components of scientific creativity.

**Collaboration and Communication:** Technology facilitates collaboration among students, both locally and globally. Through video conferencing, online forums, and collaborative software, students can work together on research projects, share ideas, and learn from their peers. Collaborative learning promotes diverse perspectives and creative problem-solving.

**Data Analysis and Visualization:** Digital tools and software enable students to collect, analyze, and visualize data more efficiently than ever before. This capability allows students to draw meaningful insights from complex data sets, encouraging critical thinking and creativity in interpreting results.

**Simulations and Modeling:** Technology allows students to create and interact with simulations and models. Whether it's simulating the behaviour of molecules or modeling the effects of climate change, these tools provide students with opportunities to experiment with scientific concepts and develop creative solutions to real-world problems.

**AI and Machine Learning:** Students can use artificial intelligence and machine learning tools to analyse large datasets, discover patterns, and make predictions. These technologies not only enhance

analytical skills but also encourage students to think creatively about how AI can be applied to scientific research and problem-solving.

**Access to Experts and Mentors:** Through online platforms and networks, students can connect with experts and mentors in their fields of interest. These interactions provide valuable guidance and inspire students to pursue creative research projects and explore new avenues of scientific inquiry.

**Real-World Applications:** Technology allows students to engage with real-world scientific challenges and applications. Whether through citizen science projects, online challenges, or virtual internships, students can work on meaningful projects that have a direct impact on the world, encouraging a sense of purpose and creativity in their scientific endeavours.

**Customization and Personalization:** Technology enables personalized learning experiences tailored to each student's pace, interests, and learning style. Adaptive learning platforms can identify areas where students need more support and provide additional resources, fostering confidence and creativity in problem-solving.

**Feedback and Assessment:** Digital tools can provide instant feedback on assignments and assessments, allowing students to learn from their mistakes and iterate on their ideas. This iterative process is a key component of creativity, as it encourages students to refine and improve their work. Fostering scientific creativity among students is about nurturing their ability to think critically, innovate, and solve problems in the context of scientific inquiry. This can be achieved by

**Encouraging Exploration and Experimentation:** Students should be encouraged to explore scientific concepts beyond textbooks and engage in hands-on experiments. This encourages curiosity and allows them to discover and learn through trial and error.

**Promoting Critical Thinking and Problem-Solving:** Encouraging students to question, analyze, and evaluate scientific information and a phenomenon develops critical thinking skills. They should be challenged with complex problems that require creative solutions, pushing them to think beyond the surface.

**Facilitating Collaborative Projects and Interdisciplinary Learning:** Group projects and interdisciplinary learning opportunities encourage students to work together, bringing diverse perspectives to scientific challenges. Collaboration can inspire new ideas and approaches.

**Providing Access to Real-World Data and Research Opportunities:** Giving students' access to real-world data and research experiences, such as internships or participation in citizen science projects, allows them to apply scientific principles in practical settings and fosters a sense of scientific creativity.

**Supporting a Growth Mind-set:** Encouraging a growth mindset, where students believe their abilities can be developed through effort and learning, rather than fixed, can boost their confidence in exploring new scientific ideas and taking risks.

**Offering Freedom within a Structured Framework:** Students need a balance of freedom and structure in their learning. A structured curriculum provides the foundation, while opportunities for exploration and experimentation allow for creative thinking.

**Recognizing and Celebrating Creativity:** Acknowledging and celebrating students' creative achievements in science, such as innovative projects or solutions, can motivate them to continue exploring and developing their creative thinking skills.

**Providing Mentorship and Guidance:** Experienced educators and mentors can guide students in developing their scientific creativity by offering support, feedback, and encouragement. Fostering scientific creativity among students is essential not only for their academic success but also for preparing them to address complex challenges and contribute to advancements in science and technology in the future. It encourages a mindset of curiosity, adaptability, and innovation that is valuable both inside and outside the classroom.

**Conclusion:** Recent trends in technology, especially the digital Content in education have had a profound impact on the development of scientific creativity among students. The digital transformation of education, marked by the widespread adoption of online learning platforms, gamification, augmented reality, artificial intelligence, and access to big data, has revolutionized the way students engage with

science and technology. These trends have opened up a world of possibilities for students to explore, experiment, and think creatively in their scientific endeavors. Access to a vast array of information and interactive learning experiences has fostered curiosity and a thirst for knowledge. Virtual labs and simulations have provided safe environments for hands-on exploration, encouraging experimentation and innovation. Artificial intelligence-driven personalized learning has allowed students to learn at their own pace, boosting confidence and problem-solving skills. Collaborative tools and global connectivity have exposed students to diverse perspectives and interdisciplinary learning, enriching their scientific creativity. Moreover, these trends have brought real-world data and research opportunities into the classroom, allowing students to engage in meaningful scientific projects and make a tangible impact on the world. They have encouraged critical thinking, problem-solving, and adaptability, all essential components of scientific creativity. However, challenges such as ensuring digital equity and addressing privacy concerns remain, requiring ongoing attention. Nevertheless, the potential of recent digital technology to nurture scientific creativity among students is immense. As we look to the future, continued evaluation, adaptation, and the integration of emerging technologies will be key to unlocking the full potential of technology in fostering scientific creativity and preparing students to tackle the complex challenges of the 21st century. It is a journey of exploration, innovation, and limitless possibilities for the scientific leaders of tomorrow.

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## EDUCATIONAL SOFTWARE

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### Abstract

*In today's fast digital world, educational software has evolved as a powerful tool for transforming the way we acquire knowledge. It is also known as EdTech which has transform the way we learn. It offers a different type of tools that help the learner of all ages and background. This articles explores the significance of education software in modern education, it's benefits and impacts on students , educators and its role in shaping the future of learning*

**Key words:** Education ,Educational software and its role.

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Education software has become important role in teaching learning process. Initially it consists of simple programs of mathematics and language learning. Advancement of Technology have evolved into a sophisticated ecosystem, which contains adaptive learning platform, virtual classrooms and AI based tutors. This evolution has made learning more accessible in all over the world. Educational software has become an important tool in modern education. Its ability to personalize learning, increase accessibility, and engage students in many ways is reshaping the educational system. However, we have to embrace this digital revolution, in order to update knowledge in all fields today is the need of the hour to understand the need of advance technology. In order to bring positive change in ourself and in the world. The range of tools in the education industry is expanding, especially with the influx of artificial intelligence software and the recognition of the enormous potential associated with the development of education-specific software by the private sector.

### Benefits of Educationcational Software

1. **Personalized learning:**It helps the learner to learn on its own pace. through Data Analytics and AI can provide personal feedbacks for improvement.
2. **Interactive and engaging the content:** It includes gamification, simulations multimedia which make the learning interactive& joy able.
3. **The role in formal Education:** In all Educational system they have Incorporated the ES in their curriculum like digital textbooks, virtual class rooms for effective teaching learning process.
- 3 **Accessibility Inclusive:** one of the important benefit of ES is to break down the geographical barriers. It helps to gain high quality education from anywhere in the world. It also promotes inclusive education assisting learners with special disabilities .
4. **Increased Efficiency:** Educational software helps to increase efficiency in education by doing automatic task grading ,taking attendance ,evaluating etc.This can free up teachers time to focus on other important aspects of teaching such as engaging the students and lesson planning
5. **cost effective:** using educational software can be cost effective in the long run. At the initial stage it requires expenditure for purchasing and implementing software. We can save school and Universities money by reducing the need for textbooks.

### Types of Educational Software

1. **Learning Management Systems(LMS)**
  - a. Traditional LMS: This includes the traditional type of teaching learning process course management, grading and communication examples blackboard, charts and models.
  - b. Modern LMS: this involve with multimedia integration data Analytics like Canvas Google classroom are more famous in modern LMS.
2. **Interactive multimedia software:**



a. Educational games: making the learning process more fun joyful popular titles like Minecraft: education edition and kahoot.....

b. Simulations :Replicating the world real scenarios for experimental learning for example medical simulations, Planetarium simulations, driving simulations and flight simulators.

### **3. Content creation tools:**

a. video editing software: creating Educational videos time tutorials by using different type of applications like vivacut, in short and vitacut.

b. authoring tools: this tool allows educators to create customised e-Learning content for example Adobe Captivate and articulated storyline all oftenly used.

### **4. Adaptive Learning Software:**

a. Personalized learning: tailor contents and place to individual students needs for example dream box and knew ton are pioneers in this field.

b.AI powered tutoring: it has two point instant feedback and guidance for example Khan Academy utilise AI for tutoring.

### **5.Assessment and Evaluation Software**

a.Online Testing Platforms: we can conduct quizzes assessing digitally and providing solution on hands

b.Data Analytics: Helps to Analyse student performance improve the teaching strategies using power School extra.

#### ➤ Why we must use Educational software?

Education software is hugely beneficial for teachers, administrators, students, and parents alike. Solutions in these categories provide users with a host of benefits, from improved visibility and content distribution to analytics and better communication channels. Smart content, enhanced communication, consolidation of data and information, and improved efficacy.

- Smarter Content – Educational software has the potential to revolutionize the way content is created and presented to students. Digital content with artificial intelligence can offer material that adapts to the level of knowledge of students. This "smart" content is easily modified, distributed and reused by different generations of learners. Digital content has the added bonus of teacher oversight and often includes built-in assessments that teachers can use to test and monitor student achievement.
- Teacher, Parent and Student Communication — Clear communication between teachers, parents and students is essential to the learning process. There must be a strong level of respect and trust to properly educate students. Educational software and applications help develop strong ties between all parties through forums, portals and other interactive features. Parents and students have tools that promote easy communication between them, teachers and administrators.
- Clear and effective communication channels facilitate understanding between disparate parties that might otherwise be at a standstill. Students can ask teachers questions to clarify ambiguities about learning materials and assessment methods, and parents can have a clear view of their children's performance.
- Better learning environment – Education professionals are tasked with ensuring that students understand the learning materials. The number of educational apps available and the breadth of features they collectively cover provide educators with the tools necessary to create the best possible learning environment for their students. This can take the form of digital materials supplemented with AR/VR software in the classroom, the use of a learning management system, classroom management tools designed to keep students on task, or something else entirely. Teachers adapt their classrooms and change teaching styles to meet the needs of each group of students. Educational software helps teachers transform their learning environment by providing tools that can accommodate every learning style.



### Disadvantages of Educational Software

- ✓ **Technical issues:** There are the significant drawback of Education Software these issues may be due to various reason bugs, glitches or incompatibility with operating system .They can interrupt the learning process cause boredom for students and educators.
- ✓ **Over Reliance On Technology:** Education Software is that can make learning better but it could not be seen as a replacement for traditional ways of teaching. This might make people rely too much on technology.
- ✓ **Lack of Human Interaction:** Education Software lack human interaction opportunities they are critical to the learning process. These programs cannot substitute for the benefit of face to face interaction with the teachers and classmates. This short coming can be specially concerning for students.
- ✓ **Limited Subject Coverage:** Education Software can be helpful for teaching some subject, it may not cover all the areas of studies. This means that it may not be as effective as teachers.

**Conclusion:** Educational software has become an important tool in modern education. Its ability to personalize learning, increase accessibility, and engage students in many ways in reshaping the educational system. However, we have to embrace this digital revolution, in order to update knowledge in all fields. Today is the need of an hour to understand the need of advance technology. In order to bring positive change in ourself and in the world.

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## A STUDY ON ROLE OF ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION

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### Abstract

*Artificial intelligence (AI) is gaining significance in all the sectors of the economy and hence in higher education too. From last few years, this concept of “Artificial Intelligence in Education (AIED)” has experienced significant developments. This study attempted to find out how the concept of artificial intelligence can be applied in teaching and learning in higher education and impacts of using AI in higher education. It examines the learning implications of frequently evolving technologies on the methods and extent of learning as well as teaching. AI gives opportunities to higher education services to become easily accessible at an extraordinary speed, not only inside the class but also outside the classroom. This report attempts to figure out the how AI can become an integral part of universities and tried to access it's immediate and future implications on different areas of higher education. The challenges in implementing AI in these institutes were also explored. This study will successfully deliver the profound information for educators and in depth knowledge for educational model building that will provide opportunities for growth in future*

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### INTRODUCTION

The future of higher education is intrinsically linked with developments on new technologies and computing capacities of the new intelligent machines. In this field, advances in artificial intelligence open to new possibilities and challenges for teaching and learning in higher education, with the potential to fundamentally change governance and the internal architecture of institutions of higher education. With answers to the question of ‘what is artificial intelligence’ shaped by philosophical positions taken since Aristotle, there is little agreement on an ultimate definition. The future of higher education is intrinsically linked with developments on new technologies and computing capacities of the new intelligent machines. In this field, advances in artificial intelligence open to new possibilities and challenges for teaching and learning in higher education, with the potential to fundamentally change governance and the internal architecture of institutions of higher education. With answers to the question of ‘what is artificial intelligence’ shaped by philosophical positions taken since Aristotle, there is little agreement on an ultimate definition. Education undoubtedly plays a large and significant role for people residing in developing countries. Higher education institutes are playing an important role in a nation’s development. Economic and social development of individual depends upon two important factors viz. Knowledge and learning. People who are highly educated are more likely to get high skilled jobs and compensation, hence have more probability to enhance their living standards. Thus people of developing country have more deep implications of higher education as education equips a person to live the life chosen by them to lead a creative and more productive live. Good Education and skilled students also leads to higher growth and improvement for the country as a whole particularly in developing countries. Thus in developing nation like India role of higher education becomes more prominent and hence the learning process should be optimized.

A technological revolution has taken place in most of the parts of recent world, in last few decades. Society has dramatically shifted from traditionally living conditions driven society to the present knowledge society where creativity and inventiveness drives the society. Earlier educational system was characterized where teachers and students physically interacted in the classroom and majority of work is done manually in higher education institutes. But major technological developments in the last 20 years and mostly because of the Internet have changed people view of education and their working and a new concept that has evolved during the last few years is “artificial intelligence”.

It’s a well-known fact that higher education is heavily dependent on human and manual

work. This not only increases the operational cost for the higher education institutes but also accounts for increase in the errors and slow processing in the field. Higher education institutes due to its labour intensive framework will have to spend a big budget on hiring and retaining educators and also in the processing of data in their institutes. Apart from financial losses in the form of salaries of highly qualified personnel's these institutes are also bearing increased amount of effort that institutions put into the admission, learning and success of all their students. Lot of information and efforts are being wasted in higher education institutes on repetitive tasks that can be minimized. Hence being a labour sensitive field it is facing both financial and physical loss. Thus adoption of artificial intelligence will bring a cheaper and more responsive approach to higher education industry.

Since 1956, we find different hypothetical understandings of artificial intelligence that are affected by "chemistry, biology, linguistics, mathematics, and the advancements of AI solutions". Notwithstanding, the assortment of definitions and understandings remains broadly contested. Most methodologies centre around constrained points of view on cognizance or basically disregard the political, mental, and philosophical parts of the idea of knowledge. With the end goal of our examination of the impact of artificial intelligence in teaching and learning in higher education, we propose a fundamental definition provided by the literature survey of some past definitions on this field. Subsequently, we can characterize artificial intelligence (AI) as automated frameworks that can take part in human-like procedures, for example, "learning, adapting, synthesizing, self-correction and use of data for complex processing tasks".

#### WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence (AI) is the impersonation of human knowledge procedures, for example, discourse and visual acknowledgment, interpretation of the dialects and virtual decision making by machines and robots. The capacity of machine to think and act like people, has given AI an extraordinary place in all fields. Artificial intelligence is available wherever in different parts of our lives beginning from smart sensors to individual associates. Recent developments in AI have gotten numerous enormous changes in the higher education field. "Artificial intelligence helps students and teachers to make their educational experience wonderful".

Artificial intelligence (AI) is characterized as the capacity and improvement of a data innovation based PC frameworks or different machines to finish the jobs that typically require human knowledge and rational thinking. Despite the fact that AI can make the world a superior spot, AI accompanies its very own issues (Siau, 2018). Take the case of driverless vehicles. Driverless vehicles open another time of innovation progression in transportation. It carries colossal advantage to both the vehicle business and the clients from both financial and reasonable viewpoints. The use of driverless vehicles liberates the drivers from the ordinary assignment of driving and decreases mishap rates (e.g., weariness driving). By and by, driverless vehicles will supplant taxi, truck, and Uber drivers!

Artificial intelligence is presently advancing at a quickened pace, and this as of now impacts on the significant idea of administrations inside advanced education. For example, "universities already use an incipient form of artificial intelligence, IBM's supercomputer Watson. This solution provides student advice for Deakin University in Australia at any time of day throughout 365 days of the year (**Deakin University 2014**)". Regardless of whether it depends on calculations appropriate to satisfy dull and moderately unsurprising assignments, Watson's utilization is a case of future effect of AI on the managerial workforce profile in advanced education. This is changing the structure for the nature of administrations, the dynamic of time inside the college, and the structure of its workforce. A super-PC ready to give bespoke input at any hour is lessening the need to utilize a similar number of managerial staff already serving this capacity. In this regard, it is likewise

essential to take note of that machine learning is a promising field of artificial intelligence. While some AI arrangements stay subject to programming, some have an inbuilt ability to learn examples and make expectations. “An example is Alpha Go—a software developed by Deep Mind, the AI branch of Google’s—that was able to defeat the world’s best player at Go, a very complex board game (Gibney 2017)”. We characterize ‘machine learning’ as a subfield of artificial intelligence that incorporates programming ready to perceive designs, make forecasts, and apply the newfound examples to circumstances that were excluded or secured by their underlying plan.

#### ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

Many research works demonstrate that in higher education, artificial intelligence is important for teachers and students because application of such technologies encourages more flexible learning solutions for students without any limitation. With the help of artificial intelligence universities around the world are enrolling increased number of students due to increased flexibility and speed. However, its implementation in teaching has also proven relatively expensive but when compared with the other manual work related costs it comes out as economical. Though, use of artificial intelligence in the long run among college students is far more cost effective compared to education being conducted in a more traditional way and tasks done manually. Developed countries of the world have already implemented the process of artificial intelligence successfully. However developing countries are still at a preliminary stage compared to developed countries in artificial intelligence implementation. Weak infrastructure, poor information access, lack of support from institutes, insufficient necessary resources, poor technological skills, these are various obstacles for developing countries wanting to implement artificial intelligence as a tool in higher education.

AI is used in education system in grading, in this process teachers can mechanize grading of students for certain fixed set of questions. AI can also be applied in adaptive and individualized learning to fulfill student’s requirements. AI assists the teachers to access the understanding capacity of the students on their lectures and empower them to give the appropriate clues for students. It works as a teacher for the students and makes them learn concepts easily.

Artificial intelligence driven projects provide supportive input for the both students and educators. It causes the instructors to screen the performance of the students and empower them improve the guidance that they give for the students. AI frameworks in schools have changed the manner in which students find and cooperate with coordinated innovation. This has an impact to change educators as facilitators by giving students intuitive learning knowledge. Students can learn by the experimentation strategy without fear as AI bolsters in their learning and give help to their improvement. AI frameworks procured information will change the manner, in which the schools discover, instruct and bolster understudies. In fact at some places it may even supplant educators in certain situations. It has turned into a learning buddy the helps students in their learning procedure (Sharma c.).

Artificial Intelligence (AI) creates an encouraging environment, especially, can provide a favorable context for students learning characteristics and process. Artificial intelligence consists of all forms of electronically reinforced learning, processing and teaching. The easy and flexible structure of these AI influenced environments empowers learners to accommodate their personal needs in their own time learning. Thus we can say that AI is a well-designed tool that offers a flexible arrangement, collaboration opportunities, and options and control over learning process that can provide learners and teachers with the opportunity to pursue learning process effectively. Also, in AI in higher education institutes is the responsibility of tutors. Using AI teachers can create a learning environment that permits the students to develop a better understanding of content and build associations with instructors and students.

Entire globe has completely digitalized. Education has definitely been influenced by the digital world. The fast paced technology provides individuals in the area to training and learning with unlimited possibilities. With the global interest in computers, artificial intelligence has been focused in learning environment. This AI presents different functions for academic surroundings. Computers have potential advantages to both the instructors and the students. With the arrival of the computer, AI is playing an important role in the higher education institutes. Plenty of programs have been created for various fields or professional classes. The conventional teaching and learning methods usually lack efficient methods of explaining an intuitional and clear material, while AI can make up through the use of new software and hardware methods. From the viewpoint of AI program, there is more scope in teaching in the classroom compared to other mere learning methods. Thus, the emphasis is given on adopting AI in the classroom as well as outside classroom.

#### CHALLENGES FOR ARTIFICIAL INTELLIGENCE IN EDUCATION:-

“Major challenges for artificial intelligence in Education as proposed by **Woolf, et al., (2013)**” incorporates virtual coaches for each student in which inescapable help that coordinates user displaying, social reenactment and information portrayal, helps students with self-heading, self-evaluation, collaboration and then some, unite the tremendous measures of information about individual learning, social settings, learning settings and individual interests, increment the inter connectedness and openness of classrooms worldwide and taking learning outside of the study hall and into the student life outside of school. The job that Artificial intelligence plays in advanced digital world is wonderful and it is relied upon to propel learning knowledge increasingly more sooner in the near future. (Sharma C.) As already discussed there are numerous benefits of artificial intelligence for teachers, students and institutes, the possibilities of AI are also impressive. Yet there are few challenges also that higher education institutes are expected to face at the time of adopting artificial intelligence in their universities. Few of them are given below;

- Authorization and economic support should always be a constraint for the updated academic achievement and instructional support given by AI.
- Privacy regulations are also a big constraint as it always required to be updated with the intention of addressing the ability of AI frameworks to track information and makes use of it for analytical study.
- Interfacing with students is another constraint. In the event that AI assumes few current job duties, for example, evaluating and responding to students inquiries, directors and employees will most likely move their concentration to answering complex issues and interfacing with students on more profound dimensions.

To address the opportunities and difficulties introduced by AI adoption in the advanced education segment, we urge establishments to look at “(a) when to implement AI (short- or long-term), (b) in what fields of the institution AI would be of big helpful, (c) how to shield students’ privacy at the time of using data to help them, and (d) what the university’s definition of success is with respect to AI implementation”. Artificial intelligence can open up tremendous new conceivable outcomes for advanced higher education, and establishments that set aside the effort to incorporate it well will appreciate the advantages it brings to students, educators, and heads of the institutes.



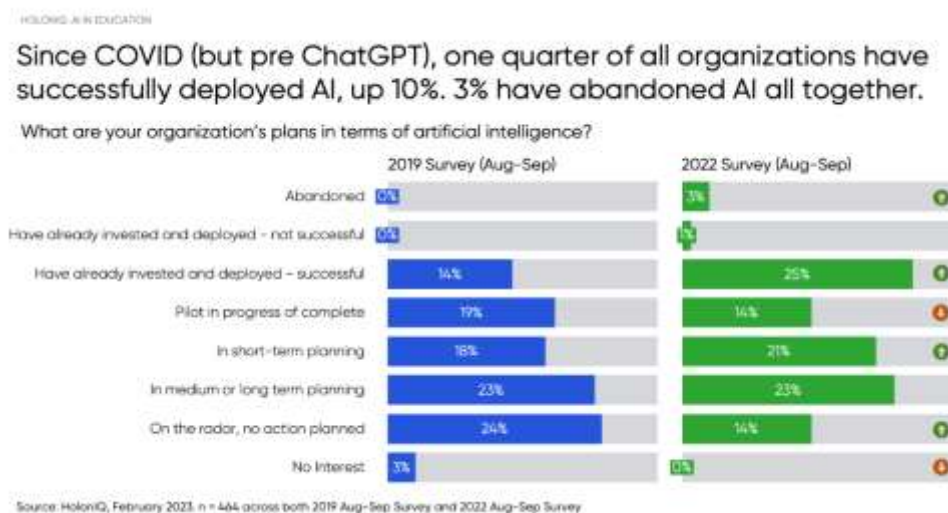
### AI EFFECTS ON HIGHER EDUCATION:

With the job substitutions and relocations created by AI, future job market and required ranges of skills would be fundamentally unique in relation to now (Siau, 2017, 2018; Rainie and Anderson, ). Various examinations revealed that jobs that include routine tasks and organized are simpler to computerize and will be supplanted by AI soon. Despite what might be expected, work assignments that are progressively unstructured and included overseeing individuals are harder to be supplanted by AI. Advanced education should be versatile and develop ceaselessly. Advanced education will be affected by AI from numerous points of view and the two noteworthy territories are educational programs and admissions. To begin with, AI will sweepingly affect educational plan in advanced education. The quality of AI is its speed, precision, and consistency. It is an act of futility to contend with AI on these measurements. Then again, AI is as yet feeble in delicate expertise, for example, "creativity, innovation, critical-thinking, problem-solving, socializing, leadership, empathy, collaboration, and communication". It is not necessarily the case that we ought to overlook the hard skills, for example, "science, math, and engineering". Advanced education should even now train the students in the basics of science and math, and in the meantime gives opportunities and training to students to upgrade their delicate abilities. A few colleges are as of now offering AI and Machine Learning courses to software engineering students, yet additionally business students as business managers and officials need to comprehend the abilities, constraints, and ramifications of AI in the business world. The other effect of AI in advanced education is admissions. Aesthetic sciences and humanities majors may turn out to be increasingly well known as these zones are less susceptible to "AI-invasion." Areas, for example, bookkeeping and budgetary investigation that might be hit hard by AI may see an intense drop in admissions. Likewise, with the wealth gap and conceivably millions (if not billions) out of occupations, advanced education may never again be reasonably priced to many.

### RESEARCH DATA OF AI EFFECTS ON HIGHER EDUCATION

A.  
on

AI impact



organization plan

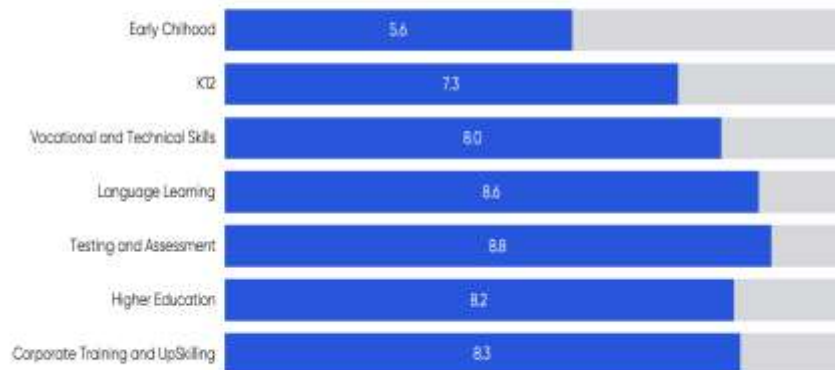


## B. Overall impact of AI in different phase of study structure

HOLONIQ AI IN EDUCATION

Language Learning and Testing and Assessment are the areas that AI is expected to have the greatest impact.

Assess the impact of AI technologies on different education markets.



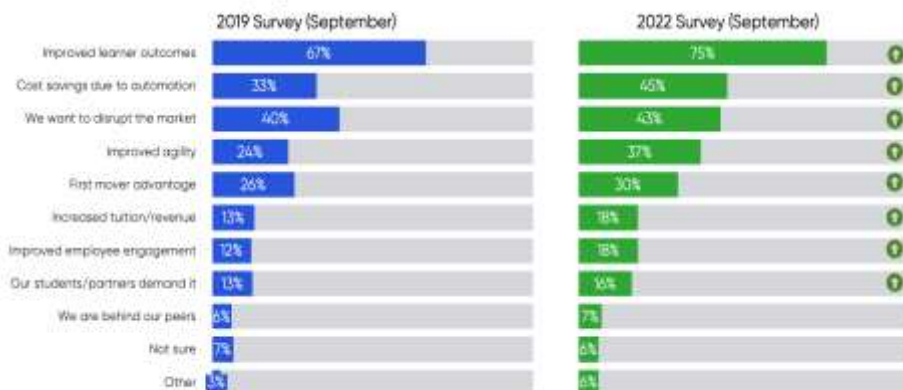
Source: HoloniQ, February 2023. n = 464 across both 2019 Aug-Sep Survey and 2022 Aug-Sep Survey

## C. Overall impact of AI in Learner outcomes

HOLONIQ AI IN EDUCATION

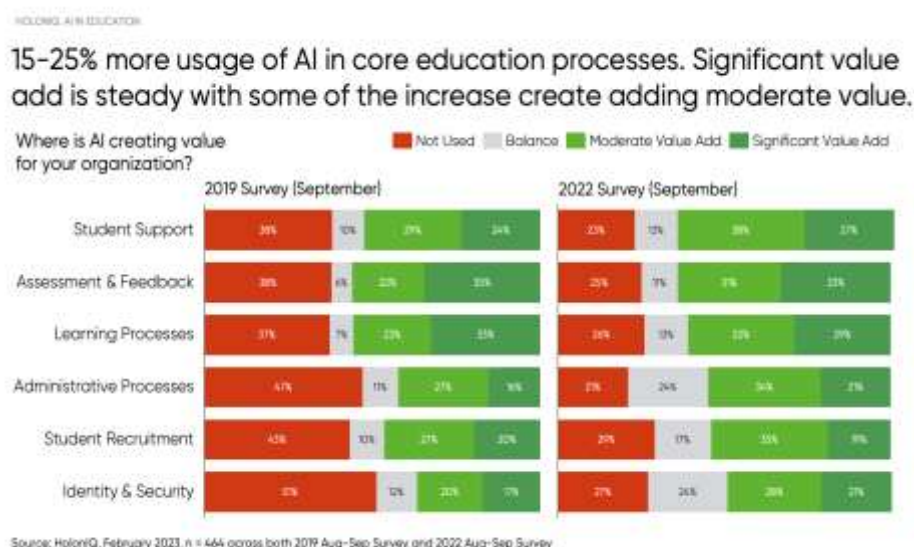
Improved learner outcomes remain the top reason for adopting AI, followed by cost savings, disruption, agility and first mover advantage.

What were the reasons for adopting AI?



Source: HoloniQ, February 2023. n = 464 across both 2019 Aug-Sep Survey and 2022 Aug-Sep Survey

## D. Overall impact of AI in Education process



## CONCLUSION

The contribution of computer science (AI) within the field of education has invariably been important. From robotic teaching to the event of an automatic system for answer sheet analysis, AI has invariably helped each the lecturers and also the students. During this research we witnessed impact of AI at various stages. Preparing students to figure aboard AI within the future will begin early. As most youngsters are snug with digital technology by the time they are of faculty age, teaching them the abilities. And the inclusion of AI in education, and also the force of the longer term are going to be higher ready to face the unknown challenges of the work of tomorrow.

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## EMERGING TECHNOLOGY AND EDUCATION: A PARADIGM SHIFT IN LEARNING

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### Abstract

*Education is undergoing a transformational shift with the integration of emerging technologies. This research article explores the impact of these technologies on various aspects of education, including teaching methods, learning experiences, and educational outcomes. We delve into the role of technologies such as artificial intelligence, virtual reality, and augmented reality in revolutionizing traditional educational paradigms. Additionally, we discuss the challenges and opportunities associated with the adoption of emerging technologies in education, emphasizing the importance of pedagogical strategies and ethical considerations. As we navigate this dynamic landscape, educators, policymakers, and researchers must collaboratively shape the future of education to ensure that learners are equipped with the skills and knowledge required for success in the 21st century.*

**Key Words-** E-learning-Online learning, Emerging technology, Artificial intelligence, Virtual Reality, Augmented reality, Block chain technology, Learning management system

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### Introduction

Education has always been a dynamic field, evolving in response to societal changes, technological advancements, and pedagogical innovations. From artificial intelligence (AI) to virtual reality (VR), these innovations have the potential to revolutionize how we teach and learn. This article explores the intersection of emerging technology and education, highlighting the potential benefits and challenges associated with their integration. This research article delves into evolving landscape of education and technology, highlighting key themes that shape the future of learning.

#### 1. E-learning Initiatives

E-learning initiatives have gained immense prominence in recent years, especially in the wake of the COVID-19 pandemic. The integration of digital platforms, online courses and multimedia resources has revolutionized the way students access education. This section explores the benefits and challenges of E-learning including accessibility, flexibility and personalized learning experiences.

- **Online Learning Platforms**

The proliferation of online learning platforms, coupled with advancements in distance education technologies, has democratized access to education. Learners can now access high-quality courses and resources from anywhere in the world. These platforms offer flexibility in terms of scheduling and pacing, making education more accessible to non-traditional students such as working adults and lifelong learners.

#### 2. Adaptation to New Technologies

Adapting to new technologies is crucial for educators and institutions to remain relevant. From virtual reality to artificial intelligence, this section examines how educational institutions are integrating these technologies into their teaching methods. Case studies and examples are provided to illustrate successful technology adaptation in education.

- **Artificial Intelligence (AI) in Education**

Artificial intelligence has made significant inroads into education, with applications ranging from personalized learning platforms to automated grading systems. AI-driven chatbots and virtual assistants provide students with immediate support and guidance, while machine learning algorithms help educators tailor instruction to individual student needs. The ability to analyze vast datasets also enables data-driven decision-making, helping institutions enhance curriculum design and resource allocation.

- **Virtual Reality (VR) and Augmented Reality (AR) in Education**

Virtual reality and augmented reality technologies offer immersive learning experiences that transcend traditional classroom boundaries. VR allows students to explore historical sites, travel to distant planets, or dissect virtual organisms, all from the comfort of their classrooms. AR, on the other hand, overlays digital information onto the physical world, enhancing hands-on learning activities. Both technologies engage students in interactive, experiential learning, making complex concepts more accessible and memorable.

### **3. E-Management of Schools**

Managing educational institutions has become more efficient and data-driven with the help of emerging technologies. This section discusses how E-management systems streamline administrative tasks, enhance communication among stakeholders and improve overall school governance. Key features and best practices are explored.

### **4. Advanced Classroom Technologies**

The traditional classroom is evolving into a dynamic and interactive space through the incorporation of advanced technologies. This section investigates the role of interactive whiteboards, digital textbooks and collaborative tools in creating engaging learning environments. Pedagogical approaches that leverage these technologies are also discussed.

### **5. Open Universities and Distance Education**

Open universities and distance education programs have democratized learning, allowing students from diverse backgrounds to access quality education. This section examines the evolution of open universities, their impact on higher education and the role of digital platforms in enabling distance learning.

### **6. Learning Management System (LMS)**

Learning Management Systems have become the backbone of online education. This section provides an in-depth analysis of LMS, their functionalities and their significance in managing online courses. The article also explores the challenges of LMS implementation and strategies to maximize their potential.

## **Benefits of Emerging Technologies in Education**

### **➤ Personalization and Differentiation**

Emerging technologies enable personalized learning pathways tailored to individual student needs and preferences. AI algorithms analyze student data to recommend appropriate resources, adapt content difficulty and provide targeted feedback. This personalization fosters student engagement and leads to improved learning outcomes.

### **➤ Active Learning and Engagement**

Virtual reality and augmented reality technologies promote active learning by immersing students in interactive simulations and scenarios. This hands-on approach encourages critical thinking, problem-solving and creativity. Students are more engaged and motivated to explore complex subjects, resulting in deeper comprehension.

### **➤ Accessible Education**

Online learning platforms break down geographical barriers, providing access to education for individuals who might otherwise be excluded. Learners with disabilities can also benefit from assistive technologies that make online content more accessible, ensuring from personalized learning platforms to automated grading systems. AI-driven chat bots and virtual assistants provide students with immediate support and guidance, while machine learning algorithms help educators tailor instruction to individual student needs. The ability to analyze vast datasets also enables data-driven decision-making, helping institutions enhance curriculum design and resource allocation.

### ➤ **Global Collaboration**

Collaborative tools and online platforms facilitate global collaboration among students and educators. Through virtual classrooms, students can connect with peers from around the world, promoting cultural understanding and diverse perspectives.

### **Challenges and Considerations**

#### ❖ **Digital Divide**

While emerging technologies hold great promise, the digital divide remains a significant challenge. Not all students have access to the necessary devices and high-speed internet connections, creating disparities in educational opportunities. Bridging this gap is crucial to ensuring that technology-enhanced education benefits all learners.

#### ❖ **Ethical Concerns**

The use of emerging technologies in education raises ethical questions related to data privacy, algorithmic bias and student surveillance. Institutions must establish clear guidelines and policies to protect students' rights and privacy while harnessing the power of technology.

#### ❖ **Teacher Training**

Effective integration of emerging technologies requires well trained educators. Building digital literacy and pedagogical skills is essential for ensuring that technology enhances rather than replaces the role the teacher. Many teachers may feel overwhelmed or ill-equipped to see these tools, emphasizing the need for professional development programs.

#### ❖ **Overreliance on Technology**

There is a risk of overreliance on technology, potentially diminishing the role of a teacher, striking the right balance between technology and the human interaction is essential for effective education.

### **Future Directions**

The integration of emerging technologies in education is an ongoing process, with several exciting developments on the horizon. These include:

#### ✓ **Artificial Intelligence and Adaptive Learning**

Advancements in AI will lead to even more sophisticated adaptive learning systems, capable of delivering highly personalized and responsive educational experiences.

#### ✓ **Extended Reality (XR)**

Extended Reality, which encompasses VR, AR and mixed reality, will continue to evolve, offering new possibilities for immersive and interactive learning.

#### ✓ **Block chain Credentials**

Block chain technology may revolutionize credentializing and verification, providing learners with secure, portable and verifiable digital credentials.

### **Addressing the Digital Divide and Fostering Inclusivity**

To bridge the digital divide, governments and educational institutions must invest in infrastructure and provide devices and internet access to underserved communities. Additionally, partnerships with tech companies can help supply affordable devices and connectivity solutions.

Fostering inclusivity requires a proactive approach. Educators should design digital content and platforms with accessibility in mind, ensuring they meet the needs of all learners, including those with disabilities. Moreover, training programs should equip teachers with skills to create inclusive learning environments.

### **Conclusion**

Emerging technologies are reshaping the education landscape, offering exciting possibilities for personalized learning, increased engagement and global collaboration. However, they also present challenges related to equity, privacy, teacher training and the risk of overreliance. To harness the full potential of emerging technologies in education, stakeholders must work together to address these

challenges. By prioritizing accessibility and inclusivity, we can ensure that these technologies benefit all learners regardless of their background or abilities.

In conclusion, the integration of emerging technologies in education represents a paradigm shift that holds immense promise. With careful planning and investment, we can unlock the transformative potential these technologies and provide students with a more engaging and inclusive learning experience.

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## EFFECT OF SELF-REFLECTIVE PRACTICES TO ENHANCE SELF-EFFICACY, CREATIVE TEACHING AND TEACHER IDENTITY AMONG B. ED STUDENTS

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### Abstract

*This study explores the critical role of self-reflective practice in enhancing teaching by focusing on self-efficacy, creative teaching, and teacher identity. Self-reflection fosters teacher self-efficacy by improving self-perception and adaptability. It enhances creative teaching by promoting innovation and customization. Furthermore, it clarifies and strengthens teacher identity, aligning teaching practices with personal values. A critical analysis of selected studies highlights the importance of diverse research methodologies, rigor, transparency, and theoretical contributions. Implications for education, teacher development, and reflective practice underscore the need for methodological diversity, research rigor, practical applications, and interdisciplinary insights.*

**Keywords:** *Self-reflective practice, Self-efficacy, Creative teaching, Teacher identity, Teaching quality*

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### INTRODUCTION

This study delves into the critical role of self-reflective practice in enhancing various facets of teaching, including self-efficacy, creative teaching, and teacher identity. Self-efficacy, defined as a teacher's belief in their ability to effectively educate and manage their classroom, is bolstered through self-reflection, leading to improved self-perception, increased confidence, and adaptability in the face of evolving educational landscapes. Creative teaching, characterized by innovative and tailored approaches to engage diverse learners, benefits from self-reflective practice by fostering innovation, customization, and a commitment to continuous improvement. Teacher identity, encompassing a teacher's self-concept and sense of purpose, is clarified and strengthened through self-reflection, aligning teaching practices with personal values, facilitating personal growth, and fostering resilience. Additionally, this discussion provides a critical analysis of selected studies related to reflective practice, self-efficacy, creative teaching, and teacher identity. It highlights the diversity in methodologies employed across these studies, emphasizing the need for flexibility in educational research methodologies. Rigorous research methods, such as surveys, interviews, and content analysis, enhance the credibility of findings. Theoretical contributions are valuable for conceptual understanding, while transparency in reporting, including methodological details and potential biases, is crucial for evaluating research quality.

The implications of these studies extend to the fields of education, teacher development, and reflective practice. They underscore the importance of methodological diversity, rigor in research, theoretical contributions, transparency and reporting, practical applications, interdisciplinary insights, and future research directions. Ultimately, this discussion emphasizes the pivotal role of self-reflective practice in elevating the quality of education, teacher development, and the teaching profession as a whole.

Self-reflective practice plays a pivotal role in enhancing various aspects of teaching, including self-efficacy, creative teaching, and teacher identity. In this discussion, we will explore the interplay between self-reflective practice and these key elements of effective teaching.

#### 1. Self-Efficacy:

•**Definition:** Self-efficacy refers to an individual's belief in their ability to accomplish specific tasks and goals. In the context of teaching, it involves a teacher's confidence in their ability to facilitate learning and effectively manage in the classroom

•**Effect of Self-Reflective Practice:** Improved Self-Perception: Self-reflection allows teachers to assess their strengths and weaknesses. By identifying areas of improvement, teachers can take targeted actions to enhance their teaching skills.

- Increased Confidence:** As teachers engage in self-reflective practice and witness their growth and development over time, they build confidence in their teaching abilities. Success stories and lessons learned from reflective practice reinforce their self-efficacy.

- Adaptability:** Reflective teachers are better equipped to adapt to changing educational landscapes and student needs. Their belief in their capacity to adapt and improve fosters a sense of self-efficacy.

## 2. Creative Teaching:

Definition: Creative teaching involves designing innovative and engaging learning experiences that cater to diverse student needs and stimulate critical thinking and problem-solving.

- Effect of Self-Reflective Practice:** Innovation and Experimentation: Self-reflective teachers are more likely to experiment with new teaching strategies and approaches. They use reflection to evaluate the effectiveness of these innovations and refine them, leading to creative teaching methods.

- Tailored Approaches:** Through self-reflection, teachers gain insights into their students' individual strengths and challenges. This understanding allows them to customize their teaching methods and materials, fostering creativity in addressing diverse learning needs.

- Continuous Improvement:** Creative teaching is an iterative process. Reflective practice encourages teachers to continuously seek ways to enhance their creative pedagogical approaches and adapt them to evolving educational contexts.

## 3. Teacher Identity:

Definition: Teacher identity refers to the self-concept and sense of purpose that teachers develop over their careers. It encompasses the beliefs, values, and attitudes that define one's role as an educator.

### Reflective Practice Studies:

- Chen, Wei, and Liu (2011):** Explored the impact of adapting teaching strategies to match learners' thinking styles in an online environment. The study found that reflective levels of the fit group outperformed the nonfit group.

- Methodology:** The study used an online reflection learning system and compared the performance of two groups (fit and nonfit) using different teaching strategies. It would have been helpful to provide more details about the sample size and demographics of the participants.

- Vaughan (2012):** Investigated strategies to help pre-service teachers develop reflective practices. The study found that strong reflective practices are evident in peer coaching and professional development activities.

- Methodology:** This study likely used qualitative methods, such as interviews or surveys, to gather data on pre-service teachers' reflections. More details on the specific methodologies used would enhance the understanding of the study's findings.

- Simon (2013):** Focused on the use of transcription and reflective practice in language development among L2 students. The study found that transcription and reflective practice support the development of noticing in language acquisition.

- Methodology:** The methodology likely involved collecting data through transcriptions and student reflections. Providing details on data collection and analysis methods would enhance the study's credibility.

## 2. Self-Efficacy Studies:

- Zimmerman (1995):** Defined self-efficacy and emphasized its importance for personal capabilities and task performance. It highlighted that general self-efficacy can be a better predictor of performance than specific self-efficacy.

- Methodology:** This is not a study with a specific methodology but a theoretical framework. It draws on existing research and theory to explain the concept of self-efficacy.

•**Salmirad and Srimathi (2016):** Examined the relationship between psychological well-being and occupational self-efficacy among teachers. Found a positive correlation between high self-efficacy and high psychological well-being.

•**Methodology:** The study used questionnaires to measure occupational self-efficacy and psychological well-being. The use of established scales adds to the study's credibility.

•**Hameed and Manjusha (2010):** Explored teacher efficacy of secondary school teachers in relation to teaching styles and organizational culture. Found significant effects of teaching styles on teacher efficacy.

•**Methodology:** The study likely used surveys or questionnaires to collect data on teacher efficacy and teaching styles. Details on the research design and analysis methods would be beneficial.

### 3. Creative Teaching Studies:

•**Horng et al. (2005):** Studied award-winning teachers to understand factors influencing creative teaching. Identified personality traits, family factors, experiences, beliefs, and administrative factors as influential.

•**Methodology:** The study used in-depth interviews, focus group interviews, classroom observation, and content analysis. This mixed-method approach adds depth to the findings.

•**Kampylis et al. (2009):** Examined Greek teachers' perceptions of creativity and found that some believed creativity could be enhanced in all students.

•**Methodology:** The study likely used surveys or questionnaires to collect teachers' perceptions. It's essential to explore why pre-service and in-service teachers had differing opinions on whether creativity can be taught.

### 4. Teacher Identity:

•**Teacher Identity (Not Associated with a Specific Study):** Defined teacher identity as how teachers identify themselves professionally.

•**Methodology:** This is not a study but a definition of the concept of teacher identity.

In summary, the mentioned studies vary in terms of methodology and rigor. While some studies employ rigorous research methods such as surveys, interviews, and content analysis, others are more theoretical in nature. To strengthen the findings and enhance the credibility of these studies, it would be beneficial for them to provide more comprehensive details on their methodologies, including sample sizes, data collection procedures, and data analysis techniques. Additionally, clear reporting of limitations and potential biases is essential for a more robust understanding of the research outcomes.

The implications of the research studies discussed in terms of methodology, rigor, and reporting have several important implications. Reflective Practice Studies:

#### •**Effect of Self-Reflective Practice:**

**Clarification of Values:** Reflective practice prompts teachers to examine their values and beliefs about education. It helps them align their teaching practices with their core values, resulting in a more authentic teacher identity.

•**Personal Growth:** Continuous self-reflection leads to personal growth and development. Teachers who engage in reflective practice often experience a deeper sense of purpose and commitment to their profession, strengthening their teacher identity.

•**Resilience:** Reflective teachers are better equipped to navigate the challenges and complexities of teaching. Their strong teacher identity acts as a source of motivation and resilience during difficult times.

In conclusion, self-reflective practice serves as a catalyst for enhancing self-efficacy, creative teaching, and teacher identity in the field of education. It empowers teachers to become more confident, innovative, and authentic educators, ultimately benefiting both themselves and their students.

**Reflective practice Implication :**

**1.Methodological Diversity:** The diversity in research methodologies used in these studies highlights the importance of flexibility in educational research. Different research questions may require different methods, and researchers should choose methodologies that align with their objectives.

**Implication:** Educators and researchers should be aware of the various research methods available and select the most appropriate ones based on their specific research goals.

**2.Rigor in Research:** Studies that employed rigorous research methods, such as surveys, interviews, and content analysis, were better positioned to provide robust and reliable findings. Rigorous research design enhances the credibility of the study.

**Implication:** Researchers and educators should prioritize the use of rigorous research methods when conducting studies to ensure the validity and generalizability of their findings.

**3. Theoretical Contributions:** Some studies, while not relying on empirical data, made important theoretical contributions by defining key concepts and frameworks. These theoretical contributions can guide future research and practice.

**Implication:** Theoretical work in education is valuable for developing a deeper understanding of concepts and providing a foundation for empirical research.

**4. Transparency and Reporting:**

The studies that reported their methodologies, sample sizes, data collection procedures, and data analysis techniques in detail provided readers with a clearer picture of their research processes. Transparency is crucial for assessing the validity of the study.

**Implication:** Researchers should prioritize transparent reporting of their methods and findings, including limitations and potential biases, to allow for critical evaluation and replication of their work.

**5. Practical Applications:** Studies exploring reflective practice, self-efficacy, creative teaching, and teacher identity have practical implications for teacher training, professional development, and classroom practices. Teachers and educational institutions can use the findings to inform their strategies.

**Implication:** Educational stakeholders should consider incorporating research findings into teacher training programs and professional development initiatives to enhance teaching practices and teacher well-being.

**6.Interdisciplinary Insights:** The studies touched upon various aspects of education, including psychology, pedagogy, and teacher development. This interdisciplinary approach can lead to a richer understanding of complex educational phenomena.

**Implication:** Encouraging collaboration among researchers from different disciplines can lead to holistic and innovative solutions to educational challenges.

**7.Future Research Directions:** The limitations and gaps identified in the studies open the door for future research. Researchers can build upon the existing work by addressing these limitations and exploring related areas.

**Implication:** Educational research is an ongoing process, and researchers should use the insights from previous studies to guide the direction of their future research

**CONCLUSION**

In conclusion, the implications of the discussed research studies underscore the importance of methodological rigor, theoretical contributions, transparency, and practical applications in educational research. By addressing these considerations, researchers, educators, and policymakers can contribute to the improvement of teaching practices, teacher development, and the overall quality of education.

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## AN OVERVIEW ON RECENT ADVANCES IN CLOUD COMPUTING

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### Abstract

Cloud computing is a new trend that involves using a network of remote servers rather than a local server or a personal computer for resources like data storage, management, and computation. In order to host internet-based application services, cloud computing places a strong emphasis on providing dependable, secure, fault-tolerant, sustainable, and scalable infrastructures. Business owners find cloud computing appealing because it removes the need for users to plan ahead for provisioning and enables enterprises to start small and add resources only when there is an increase in service demand. In today's digital world, cloud computing generally has a growing number of applications that enable businesses and individuals to outsource the management of all types of computer infrastructure and resources so they can concentrate their time and resources on more crucial tasks. Hence, in the narrative review we aimed to describe and delineate on the recent advances, current trends of cloud computing along with challenges and problems that contribute to increasing the number of customers willing to adopt and use the technology of cloud computing.

**Keywords:** Cloud computing, Storage data, SaaS, PaaS, Google, Microsoft, Security, Cost

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### Introduction

A new Internet-based computing technology called cloud computing offers various platforms, software, and infrastructure on a pay-as-you-go basis. The on-demand delivery and management of computing infrastructure, including storage, processing power, databases, networks, graphics processing units, and other components, is known as cloud computing. Typically, cloud services involve a company managing and controlling all the hardware, software, and overall infrastructure from their data center and making it instantly accessible to their clients over the internet as needed.

Prior to the industry-wide adoption of cloud computing, businesses had to buy and maintain their own computer resources, frequently necessitating the presence of an IT or infrastructure team. This is an expensive endeavour because it costs money to buy, maintain, and power various electronic resources. As electronics deteriorate with time and use and need to be replaced, the value of these assets also decreases. It can significantly outweigh the advantages if you factor in the price of hiring a team of engineers to maintain them.

Thus, with the advent of cloud technologies and fast internet speeds, cloud computing finds applications in many fields that were previously unable to make use of the advantages of such computer resources by outsourcing their management and bringing down costs drastically by leveraging economies of scale. It has allowed for a myriad of popular tools such as remote file storage (Dropbox, Google Drive, etc), collaborative editing of documents (Google Docs, Microsoft's Office 365 Online, etc), multimedia streaming (Netflix, Amazon Prime Video, Spotify, etc) and many more that are now tied to our daily work flows and are practically unavoidable.

### Cloud Delivery Models

Cloud services can be delivered in a variety of ways. The delivery model a company chooses to use varies based on its functionality requirements and the maturity of its IT and data governance needs. While public software-as-a-service (SaaS) solutions remain the largest market segment, vendors increasingly offer solutions that cater to a wide range of customers and requirements.

- **SaaS:** Software-as-a-service (SaaS) applications deliver software over the internet that users access via a browser. The vendor manages the hardware, database, security and infrastructure, while users



typically have some ability to configure the software to their needs. In the business context, these applications are often departmental. For example, customer relationship management for sales, service and marketing, HR software for HR.

- **PaaS:** Platform-as-a-service (PaaS) cloud solutions provide developers with the software and operating systems they need to build cloud-based applications, be it a mobile app for better inventory tracking or a consumer-facing social media platform. Companies are also beginning to use PaaS cloud systems for their network security, since they can easily be customized to suit specific security requirements. Spending on PaaS cloud services is forecast to reach \$71.5 million in 2022, up 54% from 2020, according to Gartner.
- **Multicloud:** Certain businesses want to distribute internal computer processing and storage requirements across multiple cloud platforms and applications, often from different vendors, based on their needs. It's common for them to choose different cloud providers for different functions, like ERP, security and marketing technology, for example. While an all-in-one business management platform that supports numerous functions is the best option for many companies, they may still require complementary solutions to help with other areas of the business. Businesses might also spread out their use of public clouds for compute resources to avoid lock in and gain leverage in negotiations. According to a survey of 750 tech decision-makers from IT consulting firm Flexera, organizations are using 2.6 public clouds and 2.7 private clouds, on average, and they're experimenting with more.
- **Private cloud:** A private cloud is a cloud computing model where services are provided over private infrastructure for the use of a single business, typically managed by that same business. Businesses choose private clouds to gain the benefits of cloud services through vendors without incurring the costs of building out and maintaining the cloud infrastructure themselves.
- **Hybrid cloud:** Many companies opt for a hybrid cloud model that combines public cloud services with the deployment of a private cloud, which is dedicated to a single business. This is especially true of organizations that collect sensitive data or operate in highly regulated industries like insurance, where data privacy is essential. A hybrid approach is attractive because it offers the necessary level of control without holding businesses back from innovation and scale as they roll out new services for their customers. The global hybrid cloud market is expected to be worth \$145 billion in 2026, up more than 180% from \$51 billion in 2020.
- **Serverless:** Serverless computing is a form of cloud computing that lets businesses access IT infrastructure on-demand, without the capital investment and need to manage the infrastructure themselves. The difference between generic cloud computing and serverless is based on how resources are allocated — serverless is a subset of PaaS used by companies who need a lot of processing power, but only in short bursts. Compiling software code is one example. Serverless models are gaining traction among companies big and small that want to build new applications quickly but lack the time, resources and/or budget to deal with the infrastructure. This lets growing businesses take advantage of greater computing power at a reasonable cost, while large organizations can roll out new digital services without adding to the burden of their already-stretched IT teams. Indeed, 25% of developers will use serverless computing by the end of 2021, global research firm Forrester predicts.

### Features of Cloud Computing

The pivotal features of cloud computing are as follows'

- On-demand self-service
- Broad network access
- Resource pooling
- Location independence;

- Rapid elasticity
- Measured service

### Applications of Cloud Computing

#### *No up-front investment*

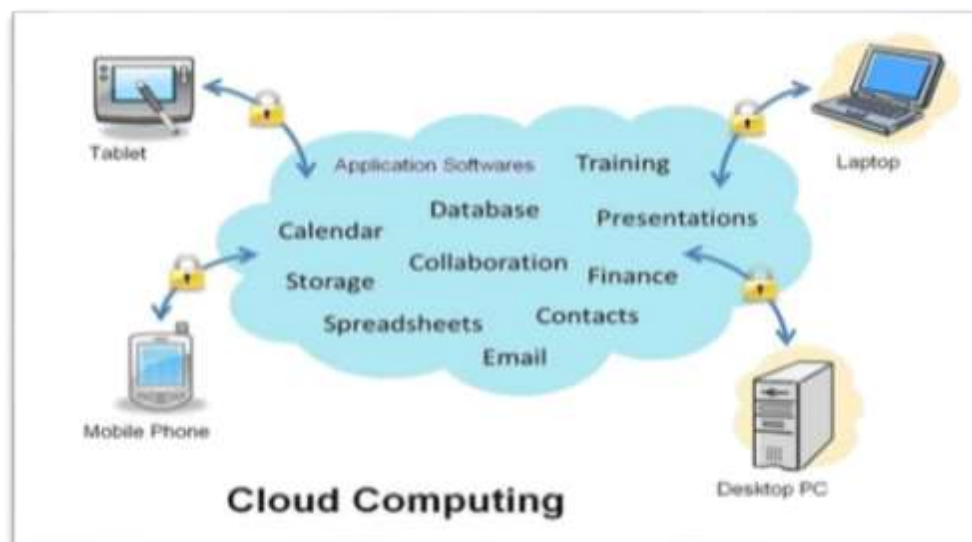
The pricing model for cloud computing is pay-as-you-go. To begin reaping the benefits of cloud computing, a service provider must make infrastructure investments. It merely rents cloud resources based on its own requirements and pays for usage.

#### *Lowering operating cost*

In a cloud environment, resources can be quickly allocated and released as needed. As a result, a service provider is no longer required to allocate capacities based on peak load. Since resources can be released to reduce operating costs when service demand is low, this results in significant cost savings.

#### *Highly scalable*

Infrastructure providers pool large number of resources from data centres and make them easily accessible. A service provider can easily expand its service to large scales in order to handle rapid increase in service demands. This model is sometimes called surge computing. The other applications of cloud computing are as illustrated in figure 1.



**Figure 1: Applications of cloud computing**

However, there are some disadvantages of cloud computing are noticed such as requirements for Internet access, speed, and direct access to resources. Therefore, companies may find it quite risky to depend entirely on cloud-computing service providers.

### Services of Cloud Computing

Following are the commercially available cloud computing services available in the market;

- Google
- Amazon
- Microsoft
- Salesforce.com
- VMware

### Trends in Cloud Computing

For businesses looking to better serve their customers and maintain their competitive edge, cloud computing has emerged as a key asset. The need for more storage space has been fueled by their mastery of efficient and effective data storage.

**Current trends**

- Cloud computing has become an essential part of sustaining superior performance to enhance competitive status.
- Cloud can be housed 547EB of data in as on year 2018. As more storage space becomes available, firms are impacted positively, allowing them to store greater amounts of data.
- Cloud computing also allows smaller firms to store and share data as fees for cloud computing descend.
- Cloud computing providers help firms to keep data safe and confidential.

**Future trends**

- Large multinational firms are beginning to generate proprietary cloud networks that meet their specific needs. These very large firms find it lucrative to provide private cloud networks rather than using those of general service providers.
- The overwhelming numbers of large companies have an IT department. As cloud service providers increasingly develop more complex offerings, they will be able to customize the cloud to answer the needs of each corporation, thereby allowing companies to outsource their IT departments.
- Companies will no longer need to invest funds in elaborate and expensive computers and IT departments. Further, IT employees will need to learn how to manage applications on the cloud. As cloud computing becomes common and user friendly, smaller firms and private individuals will join large companies in choosing to use the cloud.
- Many companies analyze data several times each year. To perform analytics, firms need powerful computers. However, over time, cloud computing will encompass that analysis so firms can access analytic information whenever they need it. Thus, organizations will not need their own expensive computers to answer that intermittent need.
- Following enlisted are some of the tools and future trends in cloud computing
  - Hybrid cloud solutions trend
  - Mobile cloud computing trend
  - Quantum computing trend
  - Automation trend

**Challenges in Cloud Computing**

□ Security is a key consideration. People's first thought is to steer clear of cloud storage for private data. Cloud computing has developed over the past few years from a promising business concept to one of the fastest growing industries in IT. Now, businesses struggling with the recession are realizing more and more that they can quickly access best-in-class business applications or significantly increase their infrastructure resources by simply connecting to the cloud, all for a very low cost. However, as more and more data about people and businesses is stored in the cloud, worries about how secure the environment is starting to spread. However, in addition to security issues in cloud computing, there are many other challenging being faced currently in cloud computing sector as follows;

- Security
- Privacy
- Reliability
- Legal issues
- Open standard
- Compliances
- Freedom
- Long-term viability

**Summary**

- It is clear that the ever-expanding paradigm of cloud computing is changing how businesses and organizations run globally. Outsourcing the management of hardware and software resources allows businesses to focus their time and resources on more crucial requirements

while also drastically reducing the cost and man hours associated with self-hosting and managing such resources. Major service providers like Microsoft, Amazon, and Google offer cloud computing services at steadily declining costs, making cloud computing today more user-friendly and cost-effective.

- There are three main models for cloud computing: SaaS, PaaS, and IaaS. By allowing access via any internet connection, it expands the range of applications for computing and improves usability. However, there are drawbacks associated with this increased ease. You have little to no knowledge of where your information is stored and less control over who has access to it. Additionally, you need to be aware of the security hazards associated with cloud storage.

### **Future Perspectives**

- As cloud computing technology is still in its early stages of development, there are a variety of technological perspectives for cloud analytics and a variety of cloud services that can be anticipated in the future.

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## ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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### Abstract

*Artificial Intelligence is the Science and Engineering domain concerned with the theory and practice of developing systems that exhibit the characteristics we associate with intelligence in human behaviour, such as perception, natural language processing, problem solving and planning, learning and adaptation, and acting on the environment. Teaching students about AI can help them develop the knowledge and skills needed to pursue careers in technology, data science and other in-demand industries. Adaptive learning platforms can adjust to each student's progress in real-time, identifying gaps in knowledge, providing immediate feedback, and suggesting targeted interventions to help students master the material. AI can also help teachers automate administrative tasks, enabling them to focus more on instruction and student interaction. This paper presents a general overview of artificial intelligence and also made an attempt to understand its role and significance in the field of education.*

**Keywords:** Artificial Intelligence (AI), Sustainable Developmental Goals (SDG), Role and significance, Education.

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### Introduction

Artificial Intelligence (AI) is a branch of Science which deals with helping machines find solutions to complex problems in a more human-like fashion. This generally involves borrowing characteristics from human intelligence, and applying them as algorithms in a computer friendly way. A more or less flexible or efficient approach can be taken depending on the requirements established, which influences how artificial the intelligent behaviour appears. The goals of artificial intelligence include computer-enhanced learning, reasoning, and perception. AI is being used today across different industries from finance to healthcare. Artificial Intelligence is a machine's ability to perform the cognitive functions we associate with human minds, such as perceiving, reasoning, learning, interacting with an environment, problem solving, and even exercising creativity.

AI is a technology that enables machines to perform tasks that would typically require human intelligence, such as perception, reasoning, and learning. In education, AI can be applied to create personalized learning experiences, automate administrative tasks, and support decision-making for educators.

### Role of Artificial Intelligence in the present context

Artificial Intelligence is very important nowadays because of its improved accuracy and decision-making: AI augments human intelligence with rich analytics and pattern prediction capabilities to improve the quality, effectiveness, and creativity of employee decisions. Artificial Intelligence is needed in the future because of the productivity of artificial intelligence may boost our work places, which will benefit people by enabling them to do more work.

AI is more advantageous to society with its ability to analyze vast amounts of data, identify patterns, and provide accurate predictions; AI can play a vital role in helping to achieve the Sustainable developmental goals (SDGs). AI can help improve access to education, healthcare, and clean water, and can also aid in the fight against climate change, poverty, and hunger. As the future of AI replaces tedious or dangerous tasks, the human work force is liberated to focus on tasks for which they are more equipped such as those requiring creativity and empathy.

### The Role of Artificial Intelligence in Education

Artificial Intelligence (AI) has the potential to address some of the biggest challenges in education today, innovative teaching and learning practices, and accelerates progress towards Sustainable development goals (SDGs) or Global goals. However, rapid technological developments inevitably bring multiple risks and challenges, which have so far outpaced policy debates and regulatory frameworks. UNESCO is committed to supporting Member States to harness the potential of AI technologies for achieving the Education 2030 Agenda, while ensuring that its application in educational contexts is guided by the core principles of inclusion and equity.

UNESCO's mandate calls inherently for a human-centered approach to AI. It aims to shift the conversation to include AI's role in addressing current inequalities regarding access to knowledge, research and the diversity of cultural expressions and to ensure AI does not widen the technological divides within and between countries. The promise of "AI for all" must be that everyone can take advantage of the technological revolution under way and access its fruits, notably in terms of innovation and knowledge.

AI can be used to create interactive games and other teaching tools that can teach young children academic or social skills. Artificial intelligence can also be used to power monitoring systems to help track children's behavior to glean insights into their development. AI can help educators identify areas of improvement in the classroom and enhance the overall learning environment. By analyzing student performance data and teacher feedback, AI can pinpoint areas where students are struggling and provide targeted interventions to help them succeed.

#### **Advantages of Artificial Intelligence in Education**

AI has the potential to revolutionize the education sector by enhancing learning experiences, supporting teachers and offering more personalized learning opportunities for students. We must equip teachers with the knowledge and strategies they will need to use this new technology to improve and streamline everyday processes as well as classroom implementation.

- One of the most significant advantages of AI in education is its ability to provide personalized learning experiences. AI-powered tools can analyse a student's learning style, preferences, and progress data to provide customized content, feedback, and learning recommendations. This can significantly enhance the effectiveness of teaching and learning, as it allows students to learn at their own pace and in a style that suits them.
- AI can also automate repetitive administrative tasks, such as grading, assessment, and reporting, enabling educators to focus on more critical tasks like teaching and mentoring. AI-powered tools can automatically grade assignments, generate reports, and provide analytics on student performance, allowing educators to track student progress in real-time and intervene when necessary.
- AI can improve student engagement by making learning more interactive and fun. AI-powered tools can gamify learning, making it more engaging for students. For example, AI-powered language learning apps can provide real-time feedback on pronunciation, making it easier for students to learn and practice speaking a new language.
- Some areas in which AI can transform the classroom include personalized learning, ideation, adaptive learning, special needs education, bilingual education, gamification and immersive learning.
- Personalized learning involves AI-powered systems that analyse students' learning styles, strengths and weaknesses to create tailored lesson plans and suggest resources to serve their individual needs.
- AI-powered virtual tutors can provide round-the-clock support to students, while customized learning solutions can empower students with special needs to reach their full potential.



Gamification and immersive learning experiences can make education more engaging, fun and memorable.

- AI-driven language translation tools can break down communication barriers, enabling students and educators from different countries or with different languages to collaborate on projects and learn from one another.
- Teaching students about AI is essential for developing digital literacy, critical thinking skills, and preparing students for future academic and career success. A basic understanding of AI systems enables students to engage and ideate with AI technologies safely, responsibly and ethically. Learning about AI also encourages students to analyse and evaluate question structure, complex information, question assumptions and consider the ethical implications of AI technology usage.
- AI is transforming the job market, with increasing demand for professionals skilled in AI and related fields.
- AI learning can inspire students to generate ideas and solutions, fostering creativity and innovation – essential skills in today's competitive and evolving job market.
- In fact, it is vital to integrate diversity, equity and inclusion within this domain to ensure that broad perspectives of values are embraced to combat digital bias and discrimination.
- The advantages range from streamlining, saving time, eliminating biases, and automating repetitive tasks.

#### **Disadvantages of excluding students from AI education**

Excluding any student group – either deliberately or by neglect – from learning how to leverage artificial intelligence can lead to several negative consequences, both for individuals and society at large. Following are some of the dangers associated with excluding students from AI education.

- **Digital divide** – Excluding students from learning about AI can contribute to the digital divide, as they may not have the knowledge and skills needed to navigate AI-driven technologies in their daily lives. This can hinder their ability to access information, participate in the digital economy and engage with online communities effectively.
- **Biased AI systems** – AI systems often are trained on data collected from human behaviour, which can contain biases. For example, facial recognition originally was designed exclusively with white faces because the developers were not diverse. Excluding diverse perspectives from the development and design of AI systems can perpetuate or amplify existing biases, leading to unfair or discriminatory outcomes for certain groups of people.
- **Wider skills gap** – As AI becomes increasingly important in various industries, the demand for professional skills in using AI will grow dramatically. Excluding students from AI education can exacerbate the skills gap, making it more difficult for businesses and organizations to find the diverse talent they need to thrive in the AI-driven economy.
- **Economic inequality** – Students who lack AI education may find it more challenging to secure well-paying jobs as many traditional roles may be automated or significantly transformed by AI. This can lead to increased economic inequality and limit social mobility for those who are not adequately prepared for the AI-driven job market.
- **Loss of creativity and innovation** – A diverse workforce in AI and related fields leads to more creative problem-solving and innovative solutions. By excluding certain students from AI education, we risk losing the valuable insights and ideas that they could bring to the development of AI technologies.
- **Ethical concerns** – As AI becomes more integrated into our lives, it is essential to have a diverse group of professionals involved in the development and regulation of AI systems to

ensure ethical considerations are taken into account. Excluding students from learning about AI may result in a lack of diverse perspectives, leading to potential ethical issues and unintended consequences. It also leaves students unprepared to navigate ethical dilemmas.

To mitigate these dangers, it is essential to promote equitable access to AI education for all students, regardless of their background or socioeconomic status. This will help to ensure that everyone has the opportunity to benefit from the advancements in AI and contribute to a more inclusive and just society. **Conclusion**

AI education can empower underrepresented communities to leverage technologies for social good and drive positive change in their local and global contexts. The greatest drawback of AI is things like costly implementation, potential human job loss, and lack of emotion and creativity. However, Ensuring underrepresented populations are well-versed in AI positions them to contribute to policymaking and decision-making processes, shaping the rules and regulations governing AI applications. AI leads to transformative applications within a series of industrial, intellectual, and social applications, far beyond those caused by previous industrial revolutions. Furthermore, AI has proven to be superior to human decision-making in certain areas. AI has the potential to revolutionize the education sector by providing personalized learning experiences, automating administrative tasks, and supporting educators in decision-making

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## EFFECTIVENESS OF AI TOOLS IN TEACHER TRAINING PROGRAMME

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### Introduction

Recent years have witnessed a profound revolution in the domain of education due to technological and artificial intelligence advancements. An instance of AI in education that exhibits considerable promise is its implementation in teacher training programs. Given the critical impact that educators have on influencing the trajectory of our society, it is imperative to prioritize their efficacy and ongoing professional growth. AI tools have surfaced as a valuable asset in this context, presenting inventive approaches to augment instructor preparation and, ultimately, elevate the academic achievements of students.

### The Function of AI in Educator Preparation

Throughout history, teacher preparation programs have predominantly utilized in-person meetings, seminars, and coursework as means to furnish educators with the essential knowledge and abilities. Although traditional methods continue to hold value, artificial intelligence (AI) presents numerous benefits that supplement and enhance conventional training approaches. **Personalized Learning:** By analyzing the specific strengths and weaknesses of each educator, AI tools enable the development of individualized training programs. By adjusting content, resources, and assessments to correspond with an educator's particular areas of growth, these tools have the capability to enhance the efficiency of training. AI has the capability to deliver prompt feedback regarding instructional practices, allowing educators to evaluate and modify their methods in an ongoing manner. This reciprocal process expedites the development of professionals and guarantees that instructors proficiently execute optimal methodologies. AI has the capability to analyze extensive quantities of data that are pertinent to both student performance and classroom dynamics. By utilizing this information, one can discern areas that require enhancement, formulate focused interventions, and track advancements. **AI-enhanced online teacher training courses** facilitate accessibility for a broader demographic, including educators situated in remote or underserved regions. This promotes equitable access to high-quality education, thereby diminishing geographical constraints. **Economical:** Training tools propelled by AI have the potential to substantially diminish the expenses linked to conventional teacher development programs. By doing so, institutions are able to optimize resource allocation and expand their outreach to a wider demographic. **Professional Development Beyond Initial Training:** As teaching methods and technologies evolve, AI tools can facilitate continuous professional development by providing ongoing support, resources, and updates.

### AI Implementation Tools

An array of AI-driven tools has exhibited their efficacy within the context of teacher training programs. The following are some examples: Platforms such as ClassVR and Nearpod utilize artificial intelligence to generate virtual classroom environments that cater to pre-service instructors. These platforms provide educators with a controlled environment in which to hone their skills in classroom administration, instructional techniques, and adjusting to various learning scenarios.

Intelligent tutoring systems, such as Carnegie Learning and DreamBox Learning, employ artificial intelligence to deliver individualized instruction and assistance to educators. These systems provide assistance to educators in enhancing their pedagogical abilities and subject expertise by adapting to their specific requirements. **Analytics of Data:** Tools powered by artificial intelligence that analyze student data can pinpoint areas in which instructors may require enhancement. **Panorama Education** and **BrightBytes** are two such programs that can offer educators crucial data regarding the efficacy of their students and their own teaching methodologies. Chatbots and virtual assistants, such as Google

Assistant and IBM Watson, are being implemented in educational settings to furnish responses to inquiries from instructors, recommend pedagogical strategies, and aid in the development of lesson plans. They facilitate the access of resources and save time for educators. AI tools have a substantial impact on the development of teaching abilities through the provision of resources, feedback, and assistance to educators. The following is an expansion of a list of AI tools that are frequently employed in imparting skills training:

**Engaging in Virtual Classrooms:** ClassVR and Nearpod are virtual classroom environments that are created through the use of artificial intelligence. Educators have the opportunity to refine their pedagogical skills, classroom administration, and teaching methodologies within these virtual environments. AI algorithms are capable of evaluating the efficacy of their instructional approaches and delivering feedback.

**Intelligent systems for tutoring:** Carnegie Learning: This AI-driven system provides educators with individualized instruction. It provides instructors with resources, feedback, and evaluation in order to assist them in developing their subject expertise and pedagogical abilities.

**The Analytics of Data:** BrightBytes and Panorama Education are analytics tools that utilize artificial intelligence to analyze student data in order to detect potential areas of improvement for instructors. They afford educators with valuable insights regarding student performance and teaching methodologies, enabling them to make decisions based on data.

**The utilization of chatbots and virtual assistants:** IBM Watson and Google Assistant are examples of virtual assistants that assist with administrative duties, respond inquiries from educators, and provide teaching advice and lesson planning assistance. They provide assistance around the clock, which helps educators conserve time and energy.

**Tools for Video Analysis:** Edthena: This platform analyzes instructional videos using AI. Educators have the ability to upload videos containing their lessons, and input on diverse facets of their instruction, including student engagement, classroom administration, and instructional methodologies, can be furnished by AI algorithms.

**Suggested Professional Development:** These AI tools, TeachBoost and EdSurge, suggest courses and resources for professional development in accordance with the particular requirements and objectives of the educator. In determining which training opportunities are pertinent, they take into account various factors including prior experience, student data, and teaching progress.

**Automated Grading and Evaluation:** These tools, Gradescope and Turnitin, automate the grading and evaluation of assignments and exams using artificial intelligence, thereby saving instructors time. This permits instructors to devote more time to offering feedback and honing their pedagogical abilities.

**Tools for Content Generation:** OpenAI's GPT-3: Educators can utilize AI language models such as GPT-3 to generate instructional content, lesson plans, and teaching materials. Furthermore, their assistance can extend to the development of personalized and captivating educational materials.

**Engagement Analytics for Students:** AI is utilized by Knewton and ScribeSense to analyze student engagement data, thereby assisting instructors in comprehending how pupils engage with academic material. Using this information to guide instructional decisions and enhance the efficacy of teaching strategies is possible.

**Toolkits for Feedback and Assessment:** Turnitin Revision Assistant: This application supports instructors in guiding students toward improved writing by providing feedback on student work via artificial intelligence. It provides support for both formative and summative assessments.

**Language-Learning Environments:** Duolingo and Rosetta Stone are language learning platforms that utilize artificial intelligence to offer instructional and pedagogical support to instructors. They provide language learners with adaptive lessons, assessments, and progress monitoring. The primary objective of these AI tools is to augment the pedagogical abilities of instructors through the provision of insightful

analysis, individualized evaluation, and assistance. Through the utilization of AI, educators have the ability to consistently enhance their pedagogical approaches, accommodate a wide range of learners' requirements, and ultimately cultivate more immersive and fruitful educational settings.

### **Challenges and Factors to Be Considered**

Although AI tools exhibit considerable potential in the realm of teacher training, there exist certain obstacles and factors that necessitate attention: Ensuring the confidentiality and security of sensitive student and teacher information is of the utmost importance. More stringent data security protocols and ethical deliberations are imperative in order to guarantee the responsible utilization of AI tools. Quality Control: It is critical to guarantee the precision and pertinence of content generated by AI. Experts should evaluate and update content on a regular basis to ensure its quality is maintained. Readiness of Teachers: Not all educators may possess the necessary access to or comfort with AI tools. Support and training must be made available to guarantee that every educator can utilize these technologies effectively.

**Conclusion:** Rapidly transforming teacher preparation programs, AI tools provide an array of advantages that boost professional development and, ultimately, student outcomes. Personalized learning experiences, real-time feedback, data-driven insights, and cost-effective solutions are critical components of these tools, as they furnish educators with the necessary competencies to thrive in the classroom of the twenty-first century. In light of the ongoing evolution of AI implementation in education, it is critical to maintain a harmonious equilibrium between the benefits of technology and the intangible expertise that instructors impart to students. AI ought to be regarded as a valuable adjunct to the teacher training toolset, rather than a substitute for the indispensable function that educators execute in molding the intellects of forthcoming cohorts. By effectively incorporating AI into teacher training programs, the preservation of education quality and the readiness of instructors to confront the complexities of the contemporary educational environment will be profoundly impacted.

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## E - MANAGEMENT OF SCHOOLS

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### *Abstract*

*Effective management of schools is crucial for ensuring the quality of education and the overall success of educational institutions. E-management, or electronic management, in schools involves the use of digital tools and technologies to streamline administrative processes, enhance communication, and improve the overall efficiency of school operations. This abstract explores the key aspects of E-management in schools, highlighting its impact on student performance, teacher satisfaction, and administrative effectiveness. It discusses the advantages and challenges of implementing E-management systems in the school environment and the importance of adapting to the digital age to meet the evolving needs of students and educators. The abstract concludes with a call for educators and school administrators to embrace E-management as a means to advance educational institutions in the 21st century.*

**Keywords:** E-management, School management, Education technology, Digital tools, Administrative efficiency, Digital age, Administrative processes, 21st century education, Technology integration, School administration, Educational leadership.

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### **Objectives of E-management in Schools:**

**Efficiency and Automation:** E-management aims to streamline administrative processes, reducing manual work and paperwork. This efficiency allows educators and administrators to focus more on teaching and strategic planning.

**Enhanced Communication:** Improved communication among students, teachers, parents, and administrators is a key objective. E-management tools provide instant communication channels, ensuring timely sharing of information and updates.

**Data-Driven Decision-Making:** E-management systems collect and analyze data related to student performance, administrative operations, and resource management. This data helps in making informed decisions to enhance the quality of education.

**Resource Optimization:** Effective resource management ensures that schools make the most of their resources, such as facilities, textbooks, and technology, ultimately reducing wastage and costs.

**Accessibility and Inclusivity:** E-management can make education more accessible to diverse student populations, including those with disabilities, by providing digital resources and accommodating various learning styles.

**Personalized Learning:** E-management can support personalized learning by tailoring educational content and experiences to individual student needs and preferences.

**Parental Involvement:** It encourages parental involvement in a student's education by providing parents with easy access to their child's academic progress, school events, and communication with teachers.

**Security and Safety:** Objectives also include ensuring the security of students and school property through access control, surveillance, and emergency response systems.

### **Importance of E-management in Schools:**

**Improved Efficiency:** E-management systems reduce administrative workload, leading to time and cost savings for educational institutions. This allows educators and administrators to focus on more value-added tasks.

**Enhanced Communication:** Effective communication tools foster better collaboration among stakeholders, leading to a more connected school community.

**Data-Driven Decision-Making:** The data collected through E-management systems enables schools to assess performance, identify areas for improvement, and make informed decisions.



**Adaptation to the Digital Age:** In an increasingly digital world, E-management is vital for schools to stay relevant and prepare students for the demands of the 21st century.

**Resource Optimization:** E-management helps in optimizing resource allocation, ensuring that schools make the best use of their facilities, materials, and technology.

**Inclusivity:** Digital tools can be tailored to accommodate different learning needs and styles, promoting inclusivity and accommodating students with diverse backgrounds and abilities.

**Personalized Learning:** E-management systems can offer personalized learning experiences, catering to individual student needs and helping students excel at their own pace.

**Parental Engagement:** E-management fosters parental involvement in a student's education, creating a supportive network for student success.

**Security and Safety:** Ensuring the safety of students and staff is paramount, and E-management tools can help monitor and secure school premises.

**Global Reach:** E-management can enable distance learning and international collaboration, expanding the reach and impact of educational institutions beyond local boundaries.

In summary, E-management in schools is essential for modernizing education, improving efficiency, and meeting the evolving needs of students, teachers, and administrators. It is a strategic investment in enhancing the overall quality of education and the school's effectiveness.

### **Types of E-management in schools**

E-management in schools encompasses various types and aspects of digital management. Here are some key types of E-management in the context of educational institutions:

**Learning Management Systems (LMS):** These systems provide a platform for managing and delivering educational content, including course materials, assignments, and assessments. LMS platforms like Moodle, Blackboard, and Canvas facilitate online learning and enhance the learning experience.

**School Information Systems (SIS):** SIS software is designed to manage administrative data such as student records, attendance, grading, and scheduling. It helps schools maintain accurate records and streamline administrative processes.

**Communication and Collaboration Tools:** E-management includes the use of digital tools for communication between teachers, students, parents, and administrators. This may involve email, messaging apps, and collaborative platforms like Google Workspace or Microsoft Teams.

**Data Analytics and Reporting:** Schools use data analytics to track student performance, assess the effectiveness of teaching methods, and make data-driven decisions. It aids in identifying areas that need improvement and supports strategic planning.

**Online Registration and Enrolment Systems:** These systems streamline the enrolment process, allowing students and parents to register for courses and programs online. It simplifies administrative tasks and reduces paperwork.

**Financial Management Systems:** E-management extends to managing the school's financial operations, including budgeting, accounting, and payroll. Specialized software helps in financial planning and resource allocation.

**Security and Access Control Systems:** Managing access to school facilities and information is essential for security. E-management includes access control systems and surveillance to ensure the safety of students and staff.

**Resource and Asset Management:** Schools use digital systems to track and manage resources such as textbooks, equipment, and facilities. This helps optimize resource allocation and reduce wastage.

**Human Resource Management:** HR systems for schools handle personnel records, recruitment, and performance evaluations of teachers and staff.

**Parent-Teacher Portals:** These portals provide parents with access to their child's academic performance, attendance records, and communication with teachers. They enhance parental involvement in a student's education.

**Online Assessment and Testing Platforms:** Digital tools for conducting assessments, quizzes, and exams online offer flexibility and automation in the assessment process.

**E-learning Platforms:** In addition to LMS, e-learning platforms focus on delivering entire courses online, making education accessible beyond traditional classroom settings.

These types of E-management systems and tools help schools improve efficiency, enhance communication, and adapt to the demands of the digital age in education. The choice and implementation of these systems depend on the specific needs and goals of each educational institution

### **Barriers to implementing E-management in schools**

Barriers to implementing E-management in schools can be challenging to overcome, but recognizing them is the first step in finding solutions. Some common barriers include:

**Cost:** The initial investment in E-management systems, including software, hardware, and staff training, can be a significant barrier for schools, particularly for those with limited budgets.

**Resistance to Change:** Educators and administrators may be resistant to adopting new technologies and changing established processes. This resistance can stem from a fear of the unknown or a preference for traditional methods.

**Lack of Training:** Insufficient training for teachers and staff in using E-management tools can hinder effective implementation. Without proper training, the full potential of these systems may not be realized.

**Digital Divide:** Students and families from lower-income backgrounds may lack access to the necessary devices and internet connectivity, creating a digital divide that hinders their participation in E-management systems.

**Privacy and Security Concerns:** Managing sensitive student data in digital systems raises concerns about data privacy and security. Schools must implement robust security measures to protect this information.

**Technical Issues:** Technical glitches, software bugs, and system downtime can disrupt the smooth operation of E-management systems, leading to frustration among users.

**Integration Challenges:** Integrating E-management systems with existing school infrastructure, such as legacy software and databases, can be complex and may require significant effort.

**Resistance from Parents:** Some parents may not be comfortable with E-management tools or may prefer traditional communication methods, which can create barriers to effective parental engagement.

**Limited Technical Support:** A lack of dedicated technical support staff can make it challenging to address technical issues promptly and provide assistance to users.

**Inadequate Internet Access:** Slow or unreliable internet connections can hinder the use of online tools, particularly for students and teachers in remote or underserved areas.

**Data Management and Compliance:** Meeting data protection and compliance requirements, such as GDPR or FERPA, can be complex and requires careful management of student and staff data.

**Cultural and Language Barriers:** Schools with culturally diverse student populations may face language and cultural barriers when implementing E-management systems, affecting effective communication and understanding.

**Overloading Teachers:** Implementing E-management systems may add to the workload of teachers, especially in terms of data entry, grading, and online communication.

**Limited Access for Special Needs Students:** E-management tools should be designed with accessibility in mind to ensure that students with disabilities have equal access to educational materials and resources.

To address these barriers, schools should have a clear strategy for implementing E-management systems, including adequate training, budget allocation, security measures, and a plan to ensure equitable access for all students. Overcoming resistance to change often involves effective communication and demonstrating the benefits of E-management in improving education and school operations.

### Conclusion

E-management in schools represents a transformative approach to education by leveraging digital tools and technologies to enhance administrative processes, communication, and overall educational quality. While there are notable barriers to implementing E-management, the benefits far outweigh the challenges.

E-management systems offer schools the opportunity to achieve greater efficiency, improved communication, data-driven decision-making, and enhanced inclusivity. They enable personalized learning experiences, promote parental engagement, and support the safety and security of students and staff. By adapting to the digital age, educational institutions can better prepare students for the 21st century and foster a more connected and effective learning environment.

To successfully implement E-management, schools must address cost concerns, provide adequate training for staff, and tackle resistance to change. Efforts should also be made to bridge the digital divide, ensure data privacy and security, and provide ongoing technical support. As schools continue to evolve and embrace E-management, they can unlock new opportunities for educational excellence and innovation.

E-management in schools is not just a matter of convenience; it is a crucial step toward achieving the educational goals of the future. Embracing E-management systems can help schools navigate the challenges of the modern world and provide students with a more dynamic and adaptable learning experience.

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## INTEGRATION OF ICT PEDAGOGY IN TEACHER EDUCATION

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### *Abstract*

*The recent developments in technology have changed the world outside the classroom; it is more eye-catching and interesting for a student than the classroom setting. As a result, students find classroom instructions as dull and devoid of life and do not interest them for learning. The information technology has made learner WWW-afflicted. This is because technological developments have brought developments in two ways: First, by enhancing human capabilities by helping people to participate actively in social, economic, and political life in a society at large. Second, by giving advantage to technological innovation as a means for human development due to economic progress and increased productivity. As ICT is becoming an integral element for educational reforms and innovations at secondary schools, this situation calls for an enhancement of pre-service education on ICT for prospective teachers. This paper makes an attempt to reflect upon development of techno skills among prospective teachers, approaches to ICT integration in Teacher Education, Capacity building for ICT integration in Education.*

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### INTRODUCTION

Information and Communication Technologies (ICT) that are becoming increasingly pervasive in societies around the world are also reaching schools. With numerous global advancements in ICT it is essential that educators have a thorough working knowledge of these media and their influence on the performance and engagement of their students. The curriculum framework 2005 as proposed by NCERT (National Council of Educational Research and Training), India focuses on the issues of;

- Connecting knowledge to life outside
- Shifting from rote learning to constructing knowledge
- Providing a wide range experiences for the overall development of a child
- Bringing flexibility in the examinations

The recent developments in technology have changed the world outside the classroom; it is more eye-catching and interesting for a student than the classroom setting. As a result, students find classroom instructions as dull and devoid of life and do not interest them for learning. The information technology has made learner WWW-afflicted. This is because technological developments have brought developments in two ways: First, by enhancing human capabilities by helping people to participate actively in social, economic, and political life in a society at large. Second, by giving advantage to technological innovation as a means for human development due to economic progress and increased productivity. The power of information is such that almost all decisions made in different sectors like science, technology, economics, and business development will be based on information that has been generated electronically. Information has become a key asset of the organization for its progress. Therefore, access to information is a key factor in the generation of wealth and there is a strong link between a nation's level of development and its level of technological development. Educators and policymakers believe that information and communication technologies are of supreme importance to the future of education and, in turn, for the country at large. As ICT is becoming an integral element for educational reforms and innovations at secondary schools, this situation calls for an enhancement of pre-service education on ICT for prospective teachers.

### REVIEW OF LITERATURE

Many studies have been conducted with regard to the attitude of teachers towards use and integrations of technology have revealed the importance of attitudes for learning to use technologies (Cox, Rhodes & Hall, 1988; Davidson & Ritchie, 1994; Hannaford, 1988; Kay, 1990). These findings were further supported by Bandalos & Benson, 1990; Dupagne & Krendl, 1992; Francis-Pelton & Pelton, 1996; Loyd & Gressard, 1984a; Mowrer-Popiel, Pollard, & Pollard, 1994; Office of Technology Assessment, 1995.)

Several studies have found that individuals' attitudes toward computers may improve as a result of well-planned instruction (Kluever, Lam, Hoffman, Green & Swearingen, 1994; Madsen & Sebastiani, 1987; Woodrow, 1992). Like other individual characteristics that are hypothesized to play a role in the continued growth of technology proficiency, attitudes and beliefs can't be easily taught and must be developed by an individual over a period of time.

#### **DEVELOPMENT OF TECHNO SKILLS AMONG PROSPECTIVE TEACHERS.**

- ✓ The aim of teacher education is to develop skills and appropriate knowledge among teacher trainees for using and integrating the correct technology in an appropriate manner.
- ✓ Every teacher should know how to use technology, pedagogy and subject area content effectively in their daily classroom teaching. It is clear that merely introducing technology to the educational process is not enough.
- ✓ One must ensure technological integration since technology by itself will not lead to change. Rather, it is the way in which teachers integrate technology that has the potential to bring change in the education process. Hence, attitude and self-efficacy towards technology play an important role.
- ✓ For teachers to become fluent in the usage of educational technology means going beyond mere competence with the latest tools to developing an understanding of the complex web of relationships among users, technologies, practices, and tools.
- ✓ Teachers must understand their role in technologically-oriented classrooms. Thus, knowledge about technology is important in itself, but not as a separate and unrelated body of knowledge divorced from the context of teaching--it is not only about what technology can do, but perhaps what technology can do for them as teachers.

#### **APPROACHES TO ICT INTEGRATION IN TEACHER EDUCATION**

Use of ICT within teacher training programs around the world is being approached in a number of different ways with varying degrees of success. These approaches were subsequently described, refined and merged into following approaches:

1. **ICT skills development approach:** Here importance is given to providing training in use of ICT in general. Student teachers are expected to be skilled users of ICT for their daily activities. Knowledge about various software, hardware and their use in educational process is provided.
2. **ICT pedagogy approach:** Emphasis is on integrating ICT skills in a respective subject. Drawing on the principles of constructivism, pre-service teachers design lessons and activities that center on the use of ICT tools that will foster the attainment of learning outcomes. This approach is useful to the extent that the skills enhance ICT literacy skills and the underlying pedagogy allows students to further develop and maintain these skills in the context of designing classroom- based resources.
3. **Subject-specific approach:** Here ICT is embedded into one's own subject area. By this method, teachers/subject experts are not only exposing students to new and innovative ways of learning but are providing them with a practical understanding of what learning and teaching with ICT looks and feels like. In this way, ICT is not an 'add on' but an integral tool that is accessed by teachers and students across a wide range of the curricula.
4. **Practice driven approach:** Here emphasis is on providing exposure to the use of ICT in practical aspects of teacher training. Focus is on developing lessons and assignments. Using ICT and implementing it in their work experience at various levels provides students an opportunity to assess the facilities available at their school and effectively use their own skills.

#### **CAPACITY BUILDING FOR ICT INTEGRATION IN EDUCATION-**

The following are the components of capacity building for ICT integration in education:



**i) Training**

Training teachers on ICT related skills within the context of classroom objectives and activities ensures the development of skills in the integrated use of ICT in teaching. This training includes basic computer skills, functional/product specific skills and pedagogical methods for ICT.

**ii) Hardware and software**

This refers to necessary infrastructure to enable use of ICT in education and includes computers, networks and relevant software.

**iii) Connectivity.**

This refers to internet connections where possible. In cases where the internet is not available, a minimum of a local area network is required to enable classroom teaching.

**iv) Maintenance and Support.**

This refers to the ability to sustain the installed infrastructure. The requirements for this include a helpdesk infrastructure, technical training for hardware and software support.

**b. Sound Pedagogy**

Pedagogy refers to the art or science of teaching. Pedagogical methods are an attempt to define structures or units of educational material. For example, this could be a lesson, an assignment, a multiple choice question, a quiz, a discussion group or a case study

Teachers learn how to use ICTs more effectively when they see the technologies not as generic and decontextualized tools but as tools for teaching, that is, for motivating, managing, facilitating, enhancing, and evaluating learning

When teachers perceive ICT as a tool to meet curricular goals they are more likely to integrate ICT in their lessons. Teachers also need 'to see a direct link between technology and the curriculum for which they are responsible. A school-based and classroom-focused approach to teacher training in ICT use takes into account the fact that teachers need to 'learn about technology ... in the context of their subject matter and pedagogy

**c. Digital Content**

This refers to the process of designing, developing and producing digital content for use in schools in line with our national curriculum

**d. Mode of Use of Content**

This refers to the delivery mechanism of the digital content and its application in a classroom environment.

**Conclusion**

Over the last two decades, the use of ICT has been an important topic in education. On the one hand, studies have shown that ICT can enhance teaching and learning outcomes. For example, in science and mathematics education, and in fostering communication, scholars have documented that the use of ICT can improve students' conceptual understanding, problem solving, and team working skills (Culp, Honey & Mandinach, 2005; Gerban, 1992; Tao & Gunstone, 1999; Toomey & Ketterer, 1995; Zhou, Brouwer, Nocente & Martin, 2005). As a result, most curriculum documents state the importance of ICT and encourage schoolteachers to use them. However, teachers need to be specifically trained in order to integrate ICT in their teaching (Batane, 2004; Jacobsen, Clifford & Friesen, 2002; Markauskaite, 2007; Mitchem, Wells & Wells, 2003; Yildirim, 2000). Hence there is dearth of training prospective teachers with techno skills.

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## ROLE OF MULTIMEDIA FOR EFFECTIVE TEACHING AND LEARNING

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**Introduction and Purpose:** As technology advances and hardware and software improve, it becomes much more feasible to integrate multimedia directly into classroom activities and the core curriculum. Understanding why, when, and where multimedia is appropriate and beneficial is the first step toward successful implementation. Implementing multimedia activities into the classroom requires careful planning. In this presentation, we discuss the uses of the DDD-E Model (Decide/Design/Deliver and Evaluate) as a guide for teachers and different component of multimedia tool and set up.

**1. Definition of multimedia:** Weidong Xhang(2003) defined “Multimedia is hot topic in education because it represents the latest technology and introduces into the classroom whole new ways of thinking about curriculum, interactions with students and even the nature of learning itself.” Multimedia can mean any kind of file or document, either a text or spreadsheet that has audio /video effects or “**an interactive information cafe**” whatever it is not, it certainly is the most promising technology in education.

### 2. Definition of Multimedia Laboratory

Multimedia laboratory is a showroom featuring the latest multimedia technology that is hardware with software, including tools and applications. Various conditions in the developing world prevent the ready availability of such technology. The oxford dictionary defines “a resource Centre as a place where a stock or supply of materials or assets is stacked.”

### 3. Meaning of Multimedia laboratory:

There are many definitions of multimedia laboratory some of us can remember when multimedia meant using a slide-tape program, where a beep signified the display of the next 35mm slide (others might remember flannel boards or 8-track tapes, but we won't go there), we will define multimedia laboratory/ classroom as **the integration of text, graphics, animation, sound, and/or video.**

Using this very broad definition of multimedia, multimedia in the classroom could include Power Point presentations that are created by the teacher, commercial software (such as multimedia encyclopedias) that is used for reference or instruction, or activities that directly engage the students in using multimedia to construct and convey knowledge. For the main purposes of multimedia has focus on **engaging students in the use of multimedia to construct and convey knowledge.**

#### *Examples of multimedia in classroom laboratory:*

- 7) Students using concept-mapping software (such as Inspiration) to brainstorm
- 8) Students using a spreadsheet or graphing calculator to record data and produce charts
- 9) A small group of students creating a digital movie to demonstrate a procedure
- 10) A class website that displays student artwork
- 11) Students scanning their hands and importing the images into PowerPoint for a presentation about fingerprints

#### **Multimedia laboratories in India:**

“Multimedia can stimulate more than one sense at a time, and in doing so, may be more attention-getting and attention-holding”. In India, many schools have to be overcrowding classroom so a single teacher for a class is not possible to stimulate and attention-holding of all student is difficult. It needs multimedia classroom and laboratory for effective teaching learning experience.

#### **4.1. Multimedia classroom first in India:**

Delhi is FIRST State to implement the following innovative interventions/projects under **Sarva Shiksha Abhiyan** that is,

- Khulja Sim Sim Project – Computer based learning station for as Alternative Innovative Education Centres for out of school children and adult learners.
- Setting up of multimedia classroom/lab in all government schools.
- In house development of multimedia animated classroom content.

#### **4.2. NGO's:**

The initiative began over two years back. Technology adoption in Indian schools has witnessed a clear pattern with schools moving on from merely acquiring PC Labs to moving technology for teaching purposes right inside the classrooms. It is envisaged that a large segment of Indian schools, predominately Tier I and II, are now ready to explore one on one computing environment inside the classrooms and would be open to adopt solutions that enable them to effectively improve students learning experiences. To this extent, Intel and NGO and private companies have been deeply engaged in developing a pedagogically sound solution for one on one computing in classrooms. Such as Intel has developed the Classmate PC that meets with the precise learning needs in schools.

#### **4.3. Multimedia laboratory classroom in India:**

The state of the art Multi-media classroom, better known as 'SMART ROOM' puts at the disposal of the teachers and students the latest technology available in teaching-learning process. The 24 hours internet facility helps teachers to bring the world itself into the classroom. The use of the Information Technology in the classroom makes learning more individualized, interactive, flexible, permanent and creative. It equips teachers with pedagogical skills; make them progressive, competent and resourceful. The teaching and learning process is also reinforced using audio-visual aids like maps, models, ordinary projectors, television and video. Educational videos are screened regularly to the students on various subjects.



Multimedia in education is a format for presenting information using a combination of images, sound, audio and text. According to the Florida Center for Instructional Technology, "Multimedia activities encourage students to work in groups, express their knowledge in multiple ways, solve problems, revise their own work, and construct knowledge." Multimedia-based projects have become common in school classrooms. School technology curricula include multimedia presentations as a required skill for students. The Tennessee technology standards state that students in grade seven need to "Use productivity tools to create effective documents, such as slide shows, posters, multimedia presentations, newsletters, brochures, or reports, for defined audiences."

#### **5. Need of Multimedia laboratory (in class room):**

Multimedia activities encourage students to work in groups, express their knowledge in multiple ways, solve problems, revise their own work, and construct knowledge. The advantages of integrating multimedia in the classroom are many. Through participation in multimedia activities, students can learn:

- 1) Real-world skills related to technology
- 2) The value of teamwork
- 3) Effective collaboration techniques
- 4) The impact and importance of different media
- 5) The challenges of communicating to different audiences
- 6) How to present information in compelling ways
- 7) Techniques for synthesizing and analyzing complex content
- 8) The importance of research, planning, and organization skills
- 9) The significance of presentation and speaking skills

10) How to accept and provide constructive feedback

11) How to express their ideas creatively

There are, however, some constraints to using multimedia in the classroom, including:

- Technological resources, both hardware and software
- Technological skills, for both the students and teacher
- Time required to plan, design, develop, and evaluate multimedia activities

### 5.1 Steps in Implementing Multimedia Activities:

Implementing multimedia activities in a classroom environment requires some planning.

Steven Covey offered this advice in his book, *Seven Habits of Highly Effective People*: “To begin with the end in mind means to start with a clear understanding of your destination. It means to know where you're going so that you better understand where you are now so that the steps you take are always in the right direction.”

Adopting that advice to the implementation of multimedia activities means that you should begin by determining the desired outcomes and defining how they will be measured, and, then, design the learning activity. This is often referred to as "Backward Design" since the process begins with outcomes and assessment measures (Wiggins and McTighe, 1998). This course will implement backward design through the model illustrated in the table below -- DDD-E or Decide, Design, Develop, and Evaluate.

Although it is helpful to use this model as a guide, in "real-life" the steps and phases may overlap or they may occur in a different sequence. Also note that the Evaluate phase encompasses all of the other phases -- in other words, it is on-going throughout the process.

PHASE	ACTIVITIES
DECIDE	Decide on relevant standards and benchmarks Decide if multimedia is appropriate Decide which learning outcomes are desired Decide on appropriate assessment measures
DESIGN	Inventory available hardware and software Determine the grouping strategy and roles Specify length/duration of activity Design a lesson/unit plan with a multimedia activity
DELIVER	Media development skills Classroom management and configuration Facilitating multimedia activities
EVALUATE	Student checklists Evaluation options Reflection and revision

### 6. Function of Multimedia laboratory:

- To provide means to integrate educational technology into the curriculum.
- To create classroom applications those are learner centered and that support high curriculum standard for all students.
- To provide students with a working knowledge of technological world.
- To develop an understanding of and capability to handle tools. Materials and processes integral to technological systems such as communication, production, power/ energy and transportation systems.
- To teach students to apply the knowledge, tools and skills in designing, constructing and evaluating solutions to real world technical problems.

- To facilitate design and fabricate teaching – learning material and application software need for classroom teaching.
- To select, acquire, purchase and store resources for the instructional resource Centre.
- To classify and index material for easy retrieval and condemning outdated and redundant material.

## 7. Benefits of Using Multimedia Laboratory

### a. Benefits of Using Multimedia laboratory in Education:

"Multimedia can stimulate more than one sense at a time, and in doing so, may be more attention-getting and attention-holding."

### b. Benefits for Students:

- Engaging and motivating.
- Provides opportunities to try new things.
- Incorporates additional useful skills into the curriculum.
- Heightens project-based learning opportunities.
- Provides classroom accessibility outside the classroom.
- Benefits audio/visual learners.
- Appealing and manageable to students with special needs and at-risk students.
- Allows for showcase of student work.

### c. Benefits for Teachers:

- Enables teachers to turn teacher-centered lessons into student-centered.
- Provides teachers with more opportunities to be facilitator.
- Easily adaptable to all learning levels.
- Decreases classroom management issues.
- Provides opportunities for students to have a 'real' audience.
- Places onus of responsibility back on the student.
- Allows teachers to deal with photocopying limitations.
- Provides a forum for teacher sharing and feedback.

### d. Benefits for Parents:

- Enables parents to monitor homework and upcoming assignments.
- Helps parents feel more connected.
- Offers parent a place to view student's work.

## 8. Resource in Multimedia Laboratory:

Library Resources	Textbooks, Refereces, Encyclopaedias, Newspapers, Educational Magazines, Periodicals and Journals.
Hardware facilities	Epidiashope, Overhead projector, LCD projector, Slide Projector, Microscopes, Television, videocassette player, Tape Recorder, Radio, Computers – monitors CPU's Printers, Scanners.
Software	Maps, Charts, Photos, Psters, Microfilms, Slides, Cassettes – Audio, video, Filmstrips, 16 mm Films, OHP Transparencies'
Teaching – Learning materials	Different types of boards – magnetic board, Peg board, Bulletin board etc. Specimens in biology museum teaching aids of all subjects improvised apparatus multi – media packages.

## 9. Multimedia Laboratory Tools Used in the Classroom:

### a. Computer Hardware

According to the Commonwealth Educational Media Center for Asia, "Multimedia requires high-end computer systems. Sound, images, animation, and especially video, constitute large amounts

of data, which slow down, or may not even fit in a low-end computer. Unlike simple text files created in word processing, multimedia packages require good quality computers." When rendering video, for instance, a computer with a slow CPU takes such a long time to complete its task that students become bored and lose interest in their project. Similarly, computers without a sufficient amount of hard drive space cannot store large video files. Generally, desktop computers work most efficiently with large multimedia files. However, high-end laptops can be configured to work well with multimedia applications.

#### **b. Computer Software**

Multimedia software is a key component of the multimedia toolkit in the classroom. Multimedia-capable computers should be loaded with audio, video and image-editing software. Multimedia presentations range from audio-based podcasts to flash animations to digital videos. A wide range of commercial multimedia software is available as well as many free open-source multimedia applications that are suitable for use in classrooms. Many free educational tutorials are available for use by both teachers and students.

#### **c. Other Hardware**

Multimedia classrooms require a host of electronic devices in addition to computers and software. Common classroom tools include digital cameras, scanners, video cameras, DVD players, audio recorders and LCD projectors. Also devices that can be used in the multimedia classroom include cell phones and iPods. These tools require the training of both teachers and students for effective use. Multimedia projects may require all or some of these devices depending on the nature of the project and the skill levels and ages of the students.

#### **d. Interactive Whiteboards**

Teachers use interactive whiteboards as teaching tools and presentation devices. Interactive whiteboards look like traditional whiteboards, but respond to the touch of a special pen or finger. The computer screen is projected onto the whiteboard and teachers manipulate the computer from the interactive whiteboard. Some whiteboards use wireless technology, which makes them ideal for use with wireless-capable computers.

#### **Setting up of multi-media laboratory in class rooms:**

The primary purpose of the multimedia laboratory is two-fold: 1) to provide technological support for all academic activities, 2) to facilitate the training of teachers in the effective integration to technology into teaching and learning. There are three components of a multimedia laboratory (Resource Centre)

- Model electronic classroom,
- A Multi-Media Presentation Room,
- Mobile Multimedia station.

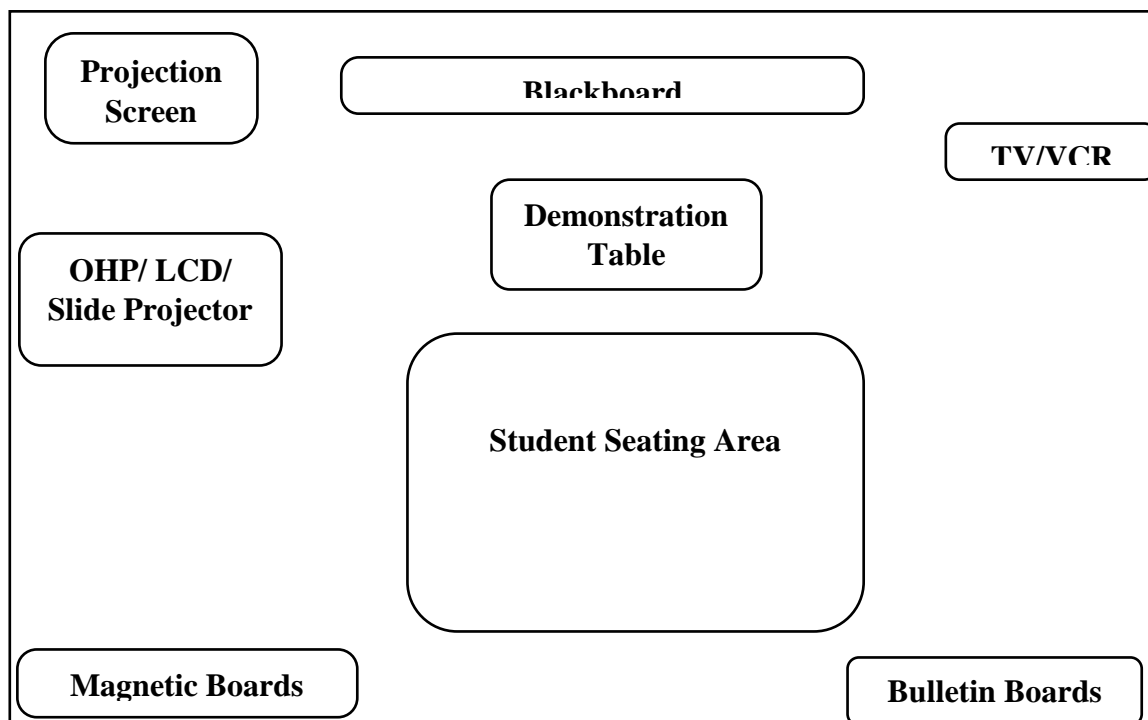
#### **A) Model Electronic Classroom:**

The future schools would all go 'Electronic'. In model electronic classroom predict that students will see and hear teachers on computers with 'remote learning' being the trend. Assert that students will access 'classrooms' on their computers and learn at times convenient to them.

In a poor country like India this is a dream which requires a herculean mission to fulfill. But for the present we could think of the following as a model classroom layout with provisions for electronic media.



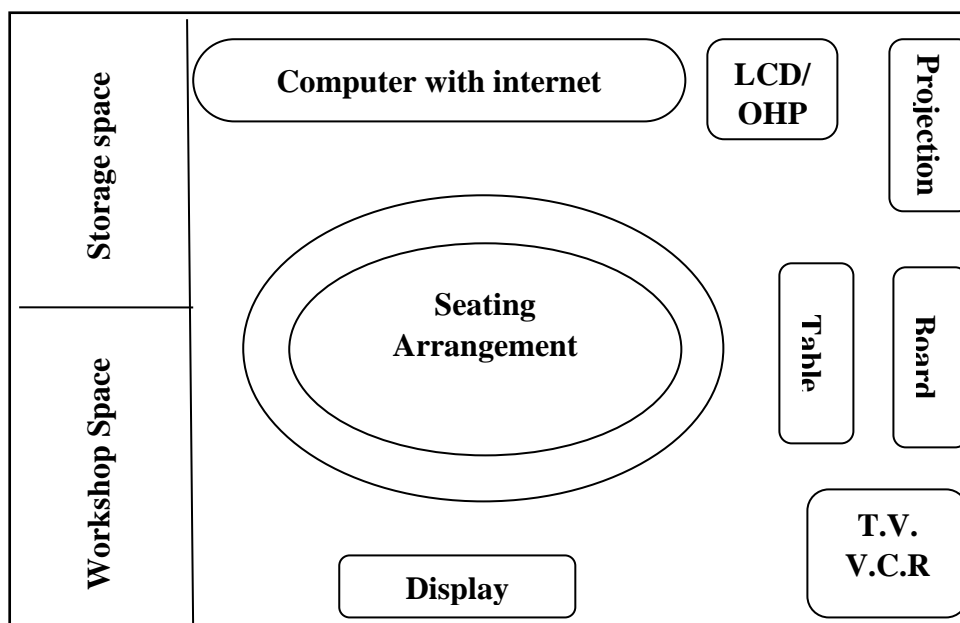
### Model of an Electronic Classroom



### B) Multimedia Presentation Room:

An ideal multimedia presentation room should have at least a computer with CD ROM, Internet connectivity, a VCP, a LCD, a video projection system OHP's, Film strips Projectors etc. The room should have a conference type arrangement where people can sit around the center table and outer perimeter if need be.

### Multimedia Presentation Room



**C) Mobile Multimedia Station:** The computer, VCP, LCD and Video Projection System are fixed on a mobile cart and can be moved from one classroom to another for multimedia presentation / demonstrations. Kreual (1998) says a “ great educational technology school lab would include:

- 1) Ergonomic “Kid sized” table and chairs,
- 2) Sufficient number of computers with maximum memory,

- 3) Head phones for each computer,
- 4) Printers/scanners for each computer,
- 5) Fastest possible Internet access,
- 6) A teacher station with board attached for LCD presentation,
- 7) Working spaces for a small group collaborative work,
- 8) Adequate lighting and air circulation
- 9) Sound proofing,
- 10) A bright, colorful and inviting atmosphere.

**Conclusion:** The ultimate goal of any plan for educational technology should reflect two intentions, equitable access to technology for all students and educators, and comparable levels of educational technology for all schools. In setting up an educational technology resource Centre, three aspects have to be addressed.

- ~ Determination of the equipment required – hardware and software.
- ~ Securing required funds so to cover initial costs such as maintenance and technical assistance.
- ~ Providing professional development for educators so that technology is utilized and implemented meaningfully.

Thus technology can become the force that equalizes educational opportunities of all children regardless of location and social and economic factors.

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## RESEARCH IN EDUCATIONAL TECHNOLOGY

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### *Abstract*

*Research in educational technology involves the investigation of the use of technology to enhance teaching and learning. This research can take many forms such as case studies, surveys, experiments and meta-analysis and can focus on a wide range of topics including the effectiveness of technology based interventions. The impact of technology on student engagement and motivation and the role of technology in promoting equity and access to education.*

*Educational Technology is the field of study that investigates the process of analyzing, desiring, developing, implementing and evaluating the instructional environment learning materials, learners and the learning process in order to improve teaching and learning. Educational is based on theoretical knowledge from various disciplines such as communication education, psychology, sociology, artificial intelligence, computer science it encompasses several domains including learning theory, computer-based training, online training and m-learning where mobile technology are used.*

**Key words:** *Blended learning, game based learning, online learning, mobile learning, virtual and augmented reality.*

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**Introduction:** Educational Technology also known as EdTech, refers to the use of technology to facilitate and enhance the teaching and learning process with the advancement of technology. Educational Technology has become integral part of modern education systems. The scope of educational technology is vast and encompasses various aspects of education including curriculum development, teaching methodologies assessment and evaluation.

Education Technology is vast and encompasses various aspects of education. Education Technology can enhance the quality of education by providing personalized learning experiences, facilitating collaboration and communication, providing access to learning resources enabling data analysis and improving assessment and evaluation process.

Meaning of Educational Technology

John(1973) -“ Educational Technology concerns the systematic use of modern methods and technology in teaching and learning. It involves teachers in a variety of roles. Some of which are traditional some still emerging.”

National Council for Educational Technology (NCET) says Educational Technology is a means for the development application and evaluation of three different things.

1. Techniques

2. Systems

3. Aids to improve the process of human learning.

W. Kenneth Richmond(1979)- “ Educational Technology is concerned with providing appropriately designed learning situations which holding in view the objectives of teaching or training bring to bear the best means of instruction.

B.P. Lulla: ” Educational Technology is the application of scientific methods and techniques to education.”

Research in Educational Technology:

Educational technology should magnify the teaching and learning process as well as facilitates better performance of educational systems as it emphasizes upon effectiveness and efficiency. Educational Technology includes the following curriculum constructions, teaching-learning strategies, audio-visual materials hardware and software etc. Research in Educational Technology investigates and

developments refers to the invention, design, improvement and construction and new types of educational products.

Some of the key areas of research in Educational Technology include:

1. Blended Learning: It combines traditional phase to phase instruction with online learning. Here pupils greater flexibility and control over their learning. Research area investigates the effectiveness of blended learning models also the factors that contribute to successful implementation.

Advantages:

- It improves students motivation and performance.
- promotes participation and self learning and team work.
- Opens new forms of inter relation between teachers and
- students. Allows greater flexibility.
- Boosts digital intelligence and the acquisition of digital skills.

2. Game based learning: It involves the use of digital games to support learning. Research in this area investigates the impact of games on students engagement, motivation and learning outcomes.

Advantages:

- It helps in retaining learning insights.
- Learning through familiar devices.
- Learning to last a lifetime.
- Helps in simplifying difficult concepts.
- Learning by doing.
- Collaborating with the team.
- Stimulates the imagination.

3. Mobile Learning:

It involves the use of mobile devices such as smart phones and tablets to support learning. Research in this area investigates the effectiveness of mobile learning interventions and the factors that contribute to successful implementation.

Advantages:

- Access anytime anywhere.
- Covers a huge distance.
- Variety of content.
- Encourages the students.
- Tests your knowledge.

4. Online learning: Online learning refers to the use of internet to deliver educational content and support learning. Research in this area investigates effectiveness of online learning interventions as well as the factors that contribute to successful implementation.

Advantages:

- Flexibility
- Reduces costs.
- More free time.
- Increased course variety.
- Career advancement opportunities.
- Increased collaboration.
- Personalized education.
- Enhanced time management skills.

5. Virtual and augmented reality: Virtual and augmented reality technologies offer new ways to engage students.

Advantages:

- Providing training in a safe and affordable manner.
- A better way of practicing skills.
- Developing soft skills and expertise.
- Enhanced the effectiveness of learning materials.

Why is research important in Educational technology?

- It's the most important tool for expanding our knowledge
- Make education more productive.
- Make education more individualistic.
- Give instruction a more scientific base.
- To make instruction more powerful.
- To make the access to education immediate.
- To make the access of educational equal.
- Research provides educators with valuable information about how students learn best. They can be more effective teachers.
- Also It helps us to develop new techniques and methods for teaching.
- Through this educators to explore different topics and ideas.
- It improves the quality of education.
- It leads to more effective educational approaches.
- It gives different practices and confidence.
- It built to explore profession competence.
- Through this we can easily achieve our goals; process, and objectives.
- It enhances the teaching-learning approaches.
- It improves our skills, knowledge and social values.
- It offering a factual/evidences based learning approach to academic challenges and concerns. Helps to improve the educational systems.
- Promotes critical thinking.
- It gives positive emphasizes to the development of the latest methods for effective education. It provides proper guidance to solve teaching problems.

### **Scope of Educational Technology**

Educational Technology as you know is used to raised the efficiency of education. But with the passage of time. The system of education is facing new problems to be tackled.

So, the hardware and software of educational technology are ever expanding. Therefore, the application of Educational Technology is much more than what it was a few decades back.

Mass education: there has been explosion of population and knowledge. There is, therefore, a need to educate the masses. Educational Technology has a tremendous application to educate a large section of people in a limited span of time. In this regard, the mass media viz. TV radio, newspaper and other modern technologies like computers and informational technology (e-mail, internet, mobile phone etc) has a lot of scope.

Historical information: Such information is of tremendous importance for the students to understand any branch of knowledge in it's totality. Such incidents when occur can be recorded as with help of Audio-Video cassette Or documented in the form of a return or printed material. Such documents become the source of information for learners to learn.

Costly and hazardous experiments: experiments, once conducted carefully in the laboratory or elsewhere can be recorded with the help of new electronic technology and be used by teachers and students for effective learning.

Gaming and simulation: this can provide a life like picture of phenomenon in 3 dimensions. It can also show the operation of different parts of a phenomenon and the consequences. Children can learn, through play, many concepts. The gaming and simulation has a great scope in the training of military personnel and in the field of aviation.

Distance Education: Educational Technology with its innovative practiced can educate the learners who cannot come to the classroom setup for their education. In this regard programmed learning materials, modules, contact program, and counseling are some innovations which can help distance learners.

Collection storing and retrieval of information: Information can be collected with the help of this new electronic technology both in audio and video form. Such information can be stored with magnetic and electronic devices easily and can be retrieved with in no time. Research information can also be collected and stored in the same way for the research. Not only quantitative data but also qualitative data can be analyzed and their lies the role of computer and the different methods of data analysis methods and techniques and developments of programmed learning materials, computer assisted instruction and computer assisted language learning packages. Facilitates of internet, website and INFLIBNET.

National policy on Education(1986), Recommends that, “ Educational Technology will be employed in the spread of useful information, the training and retraining of teachers, to improve quality, sharpen awareness of art and culture, inculcate abiding values etc., both in the formal and non formal sectors. Maximum use will be made of the available infrastructure.”

The scope of educational Technology can be accessed from the following points;

1.Determination of objectives ;

Educational Technology provides different methods and techniques for writing instructional objectives in behavioural terms such as Bloom taxonomy mager’s Approach And RCEM Approach.

2. Improvement in Teaching learning Process;

It helps in improving the teaching learning process and it makes it more purposive. It tries to discuss the concept of teaching process variables of teaching, phases and levels of teaching, principles of teaching, maxims of teaching ad relationship between teaching and learning.

3.Development of teaching Learning material ;

Teaching learning material are also as important as anything else in the teaching learning process. In this age of science and technology the materials of teaching cannot be unscientific.

Everything of the society including values of life need be reflected in materials. Only right type of material will be able to modify the behavior of the learner suitably making him a fit person for the society.

4. Improvement in teaching training ;

The change of environment with new curriculum and new materials need be handled by the teachers. Smart board, LCD, Radio programmes, Mobile phones, Blog, podcasting, E-learning, online learning, Web based learning, PPT, computer software, video lessons etc.

It includes micro teaching simulated teaching team teaching teacher effectiveness modification of teacher behaviour, class room interaction and interaction analysis etc.

5.Development of teaching learning strategies ;

A strategy plays an important role in the hands of the teacher in every learning situation. The strategy has to be right one which should be according to the materials and is able to bring about effective teaching-learning.



It tries to describe the ways and means of discovering selecting and developing suitable strategies and tactics of teaching in terms of optimum learning and available teaching –learning resources; the availability of the different types of teaching methods , devices and models of teaching –their appropriate selection and use for the optimum results.

6. Proper use of audio visual aids;

Audio visual aids have always played an important role in the teaching learning process. They need used according to the times The software aids the hardware aids the computer and other such appliances , equipment etc. have to be used in the present type of teaching –learning environment . Computer assisted instructions will help the learner as well as the teacher to achieve the goals of education more conveniently.

7. Utilization of the sub system of education ;

For the coverage of its systematic approach, it tries to include the topics dealing with the theory and principles of a system approach explaining education as a system, its different sub- systems in terms of input and output. It is helpful in solving scientifically educational administrative problems with the help of system analysis.

8. Development of curriculum;

Educational technology is concerned with the designing of a suitable curriculum for the achievement of the desired objectives.

It is helpful I describing the ways and means of the selection of suitable learning experiences organization of the contents in a suitable frame work in order to bring better results. It provides the scientific foundation to education as well as develops theories of teaching and learning.

9. Proper use of hardware and software ;

These days hardware and software are playing an effective role in the attainment of educational objectives. Educational technology helps in the proper use of these aids . it tries to describe these resources in terms of their specific functions their solutions ,proper handling and maintenance.

10. Provides Feedback;

For this purpose educational technology discuss the ways and means of suitable evaluation techniques ,their planning, development selection and appropriate use in relation to the objectives of teaching – learning system.

In this way educational technology is concerned with all those who are connected in any way , directly or indirectly to the processes and products of education.

It teaches the teachers thee art of teaching the learners the science of teach the educational planners the structure of planning and administrators or managers the skill of managing or administering the task of teaching and learning.

It works for individualization of instruction as well for improving the group dynamics of the classroom.

**Objectives of ET- Macro level**

- Identification of educational needs.
- Determination of the aims of education.
- Developing of suitable curriculum.
- Identification of man, material resources and strategies.
- Developing certain models to improve the tg-lg process.
- Identification of major constraints and the ways and means to overcome them.
- Assisting in vocational opportunities to masses especially neglected sectors of society.
- Managing the entire educational systems- covering planning, implementation and evaluation phases.

**Micro level**

Identifying and analyzing the needs of

1. Determining classroom objectives.
2. Analyzing content and organizing in proper sequence.
3. Identification of available teaching-learning materials.
4. Analyzing the sub systems like tests, resources, materials and methodologies.
5. Evaluating the effectiveness of classroom teaching.
6. Providing appropriate feedback.

**Conclusion**

Overall, the positive impact of technology on education is undesirable. From increased flexibility and personalized learning to the ability to collaborate and access a wide range of resources technology has transformed the way we learn and has opened up new possibilities for students and teachers alike. New technology always has heavy impact on education. Many learning institutional cutting back on textbook and investigating in technology enhanced learning.

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## **THEME - 3**



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## RELATIONSHIP BETWEEN IMPACTS OF SOCIAL SCIENCE TRAINING WITH ASSOCIATED FACTORS OF IN-SERVICE TEACHERS.

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### Abstract

*The DIET requires an overall academic focus area which would form its key purpose, based on which its larger role in the landscape of educational practice can take shape. This would also enable the DIET to converge its various activities or plans, design its own Annual Work Plan (AWP), and build collaborative linkages with other organizations. The overall institutional design, expectations and functions should follow from its focus, and become the basis of its relationship to other institutions. The core institutional focus of a DIET is continuous teacher professional development, which would directly/indirectly impact on school improvement programmes. Both are important and linked to each other, and converge as they bring back the focus on teachers as central to school quality.*

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### Introduction:

The DIET requires an overall academic focus area which would form its key purpose, based on which its larger role in the landscape of educational practice can take shape. This would also enable the DIET to converge its various activities or plans, design its own Annual Work Plan (AWP), and build collaborative linkages with other organizations. The overall institutional design, expectations and functions should follow from its focus, and become the basis of its relationship to other institutions. The core institutional focus of a DIET is continuous teacher professional development, which would directly/indirectly impact on school improvement programmes. Both are important and linked to each other, and converge as they bring back the focus on teachers as central to school quality.

Karnataka State government's new scheme, Guruchetana, at a function at the District Institute of Training and Education (DIET). The new scheme has been launched with a noble intention of empowering teachers by enhancing their ability and knowledge base to improve the quality of education. It was a specially designed programme and the officials of the Department of Public Instructions, should strive for the successful implementation of the scheme. The Department of Education has a great deal of confidence in the performance of the teachers who fulfil the expectations of society. Besides teachers, no one else can play a crucial role in building a solid society. Teachers are not just literary people, only they are the ones who reach the necessary human resources for the future of this nation. The department and the partner work as a knowledge bridge among parents in particular conditions. Our state dream is to receive such a competent teacher force. The Department of Education requires teachers to step into a holistic goal of developing the backbone of training as a person-power. But the expectations on teachers are even higher and different. The state finds that these cannot be fulfilled with annual programs, limited training for content. The new base is hoping to develop their resources and career skills, not just to train teachers. The ideas are projected. The "Guru Chetana" program is being implemented by the Government of Karnataka. The need for a long-term plan is to develop a specialized teacher professional development curriculum for the development of teachers Designed. The government is committed to involving a total 30-day teacher development workforce in the next three years. For this, 200 to 250 different learning tutorials (modules) will come out in three years. In this new project, teachers independently choose the modules for their professional development There is an urgent need. These include the philosophical system of education, the nature of the case, the various teaching, learning methods and subjects that help to develop the classroom process. Includes academic orientation that combines balance and learning exponentially. Early on the academic orientation of the Guru Chetna program in 2017-18, the

students of Kannada, English, Hindi, Science, Social Sciences, Mathematics, Nali Kali and 30 designs in 8 of the total and goals of this programme are Making Teachers a Reflective Practitioner, Teachers are self-motivated to provide opportunities to participate in professional development and Forming autonomous teachers to understand and enable children learning opportunities

### **Need and Importance of the study:**

With the Establishment of DIETs in Karnataka, the whole responsibility of pre-service as well as in-service training of teachers shifted to these institutions. Presently, DIETs are imparting pre-service training to the primary teachers and in-service training to all elementary and secondary teachers. It is worth mentioning here that two major Projects SSA and RMSA are also implemented through the DIETs of Karnataka. Varieties of training programmes for in-service elementary and secondary teachers, school heads, members of school management committees, community members and members of Panchayati Raj Institutions (PRIs), instructors of special education are organized by DIETs under the scheme of GURUCHETANA in Karnataka State.

The central and state governments are spending a huge amount for the organization of in-service training programmes. This investment demands a good return in the form of quality in the elementary education. In order to achieve this goal, timely assessment and reviewing is needed. A close scrutiny is needed in designing, planning and implementation of in-service training programmes for making them meaningful. Each and every course has to be evaluated with various measures for its effectiveness. The improvement reflected in the quality of elementary education as a result of various programmes designed by DIETs to support school system, has also to be reviewed. Keeping in view the role of DIET with special reference to in-service training programme following objectives was framed:

### **Objectives of the study:**

- To study the relationship between Impact of Social Science Training with Associated Factors of In-service Teachers

### **Hypotheses of the Study:**

1. There is no significant relationship between Impact of Social Science Training and usage of teaching methods and Strategies of In-service Teachers.
2. There is no significant relationship between Impact of Social Science Training and Teaching Interest of In-service Teachers.
3. There is no significant relationship between Impact of Social Science Training and Carrier Efficiency of In-service Teachers.

### **Methodology of the Study:**

The Correlation method was used under Descriptive research in the present investigation. It describes the current position of the research work. It involves interpretation, comparison, measurement, classification, analysis, evaluation and generalization. All these direct towards a proper understanding solution of significant educational problem.

### **Sampling Design:**

For the present study Simple random sampling technique was used and the study covers In-service Primary School teachers from 14 DIETs of four divisions of Karnataka State. Sample of One Hundred and ninety-eight(N=198) In-service teachers was drawn from 14 DIETs.

### **Tools used for the study:**

The investigator made a careful selection of the available standardized tools which could be validly applied to the sample of students selected for study. All the tools selected were those that were developed for the use with in-service teachers of Primary Level. Usage of Teaching Methods and Strategies, Teaching Interest and Carrier Efficiency tools are developed by the Researcher. Usage of Teaching Methods and Strategies Scale contains 59 items, Teaching Interest Scale consists of 28

items and Career Efficiency tool contains 36 items and all the items are Likert type and Care was taken to assure that the tools had accepted levels of validity and reliability.

### Statistical Techniques:

Karl Pearson's correlation coefficient technique was used for analysing the data. The Statistical Package of the Social Sciences (SPSS) version 23.0 was used to analyse the data. Descriptive Statistics were used to describe and summarize results.

### Analysis and Interpretation of the Data:

To achieve the above stated hypotheses, the Karl Pearson's correlation coefficient technique has been applied and results are presented in the following table.

**Table-1: Coefficient of correlation between Impact of Social Science Training and Usage Teaching Method and Strategies of In-service teachers.**

		Usage Teaching Method and Strategies
Social Science Training	Pearson Correlation	0.656**
	Sig. (2-tailed)	.000
	N	66
**. Correlation is significant at the 0.05 level (2-tailed).		

From the above table-1, we clearly noted that the obtained r-value is 0.656; which is statistically significant at 0.05 level of significance. So, reject the null hypothesis and formulates the alternative hypothesis, i.e. "there is a significant Relationship between Impact of Social Science Training and Usage of Teaching Method and Strategies of Inservice teachers". It means that Positive moderate level correlation exists between Impact of Social Science Training and Usage Teaching Method and Strategies of In-service teachers. It interpreted that Usage of Teaching Method and Strategies of In-service teachers has dependence on Impact of Social Science Training. Therefore, it concluded that Impact of Social Science Training has significant effect on Usage of Teaching Method and Strategies of In-service teachers.

**Table-2: Coefficient of correlation between Impact of Social Science Training and Career Efficiency of In-service teachers.**

		Career Efficiency
Social Science Training	Pearson Correlation	0.465**
	Sig. (2-tailed)	.000
	N	66
**. Correlation is significant at the 0.01 level (2-tailed).		

From the above table-2, we clearly noted that the obtained r-value is 0.465; which is statistically significant at 0.05 level of significance. So, reject the null hypothesis and formulates the alternative hypothesis, i.e. "there is a significant Relationship between Impact of Social Science Training and Career Efficiency of In-service teachers". It means that Positive good correlation exists between Impact of Social Science Training and Career Efficiency of In-service teachers. It interpreted that Career Efficiency of Inservice teachers has dependence on Impact of Social Science Training. Therefore, it concluded that Impact of Social Science Training has significant effect on Career Efficiency of In-service teachers.

**Table-3: Coefficient of correlation between Impact of Social Science Training and Teaching Interest of In-service teachers.**

		Teaching Interest
Social Science Training	Pearson Correlation	0.594**
	Sig. (2-tailed)	.000
	N	66
**. Correlation is significant at the 0.01 level (2-tailed).		

From the above table-3, we clearly noted that the obtained r-value is 0.594; which is statistically significant at 0.05 level of significance. So, reject the null hypothesis and formulates the alternative hypothesis, i.e. "there is a significant Relationship between Impact of Social Science Training and Teaching Interest of In-service teachers". It means that Positive good correlation exists between Impact of Social Science Training and Teaching Interest of Inservice teachers. It interpreted that teaching Interest of In-service teachers has dependence on Impact of Social Science Training. Therefore, it concluded that Impact of Social Science Training has significant effect on Teaching Interest of In-service teachers.

#### Major Findings of the Study:

- There is a significant Relationship between Impact of Social Science Training and Usage of Teaching Method and Strategies of In-service teachers. It means that Positive moderate level correlation exists between Impact of Social Science Training and Usage Teaching Method and Strategies of In-service teachers. Impact of Social Science Training has significant effect on Usage of Teaching Method and Strategies of In-service teachers.
- There is a significant Relationship between Impact of Social Science Training and Career Efficiency of In-service teachers. It means that Positive good correlation exists between Impact of Social Science Training and Career Efficiency of In-service teachers. Impact of Social Science Training has significant effect on Career Efficiency of In-service teachers.
- There is a significant Relationship between Impact of Social Science Training and Teaching Interest of In-service teachers. It means that Positive good correlation exists between Impact of Social Science Training and Teaching Interest of In-service teachers. Impact of Social Science Training has significant effect on Teaching Interest of In-service teachers.

#### Conclusion:

In ending, it could be stated that in-service training is a long-term investment to acquire the skills and professionalism of teachers at whatever degree. From this perspective, DIETs conducted Several Trainings under the Guruchetana Programme in Karnataka State, which seems to be very effectual for the growth of in-service teachers. However, along with the in-service teacher training programmes, new teaching-learning concepts should be acquainted to produce such programmes more effective. For instance, learning method and desirable teaching can form the teaching sounder. Thus, it is recommended that in-service teacher training providers should go forward to bring in a form of breeding activities with different teaching perspectives in their mind. It will assist the teachers, particularly Primary School teachers, to attain new techniques and accomplishments and therefore better the quality of Primary and Secondary School Teachers.

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## TEACHING MATHEMATICS THROUGH GAMIFICATION AND ITS INNOVATION

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### Abstract

*The traditional approach to teaching mathematics has often been met with challenges in engaging and motivating students. This abstract introduces the concept of gamification as an innovative and effective pedagogical strategy to enhance mathematics education. Gamification involves the integration of game elements and principles into educational contexts to promote active learning, problem-solving skills, and a deeper understanding of mathematical concepts. This research explores the theoretical foundations of gamification, examining how elements such as competition, rewards, and feedback can be applied to mathematics education. It also delves into the practical implementation of gamified activities and assessments within the mathematics curriculum.*

*This paper highlights the benefits of gamification in mathematics education, including increased student engagement, motivation, and retention of mathematical knowledge. It discusses the potential of technology, such as educational games and interactive platforms, to support gamified learning experiences. Furthermore, this paper addresses the challenges and considerations associated with the integration of gamification in mathematics education, such as designing effective game mechanics, ensuring alignment with educational objectives, and addressing individual learning needs.*

*In conclusion, this paper sets the stage for a comprehensive exploration of gamification in mathematics education, emphasizing its potential to transform the teaching and learning of mathematics through innovative and engaging pedagogical practices. The research aims to provide educators, researchers, and policymakers with insights into the development, implementation, and assessment of gamified mathematics instruction, ultimately contributing to the enhancement of mathematical proficiency among students.*

**Keywords:** Mathematics education, Gamification, Innovation, Pedagogy, Active learning, Problem-solving skills, Student engagement, Motivation.

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### Introduction:

Mathematics education is a critical component of the modern educational landscape, providing students with essential problem-solving skills, logical reasoning abilities, and a foundation for various STEM (Science, Technology, Engineering, and Mathematics) disciplines. However, the traditional approach to teaching mathematics often encounters challenges in terms of student engagement, motivation, and the ability to convey complex mathematical concepts effectively. To address these issues and promote a deeper understanding of mathematics, educators and researchers have increasingly turned to gamification as an innovative pedagogical strategy.

Gamification, the integration of game elements and principles into non-game contexts, has gained prominence as a means to transform the teaching and learning of mathematics. By leveraging the inherent appeal of games, gamification seeks to make mathematics education more engaging, enjoyable, and effective. This approach draws inspiration from various game elements, such as competition, rewards, feedback mechanisms, and interactive challenges, to create a dynamic and interactive learning environment.

### Rationale for Gamification in Mathematics Education:

The motivation for incorporating gamification into mathematics education arises from several pressing concerns. Traditional approaches to teaching mathematics often rely on lectures, textbooks, and rote memorization, which can lead to disinterest, frustration, and limited retention among students. Many learners view mathematics as a daunting subject, causing anxiety and discouragement.

### Objectives of the Research:

This research endeavors to explore and analyze the integration of gamification in mathematics education, aiming to achieve the following objectives:

Examine the Theoretical Foundations: This study will delve into the theoretical underpinnings of gamification, elucidating how game elements and principles can be applied effectively to the

teaching of mathematics. Concepts such as motivation, engagement, and cognitive load theory will be explored in the context of gamified mathematics instruction.

**Investigate Practical Implementation:** The research will investigate the practical aspects of implementing gamified activities, assessments, and educational technology within the mathematics curriculum. It will consider how gamification aligns with educational objectives and curriculum standards.

**Assess the Impact:** This research seeks to assess the impact of gamification on student engagement, motivation, and learning outcomes in mathematics. It will explore whether gamification leads to improved mathematical proficiency and problem-solving skills.

**Address Challenges and Considerations:** The study will identify challenges and considerations associated with gamification, including the design of effective game mechanics, the role of technology, and accommodating diverse learning needs.

### **Gamification with few examples.**

Gamification involves incorporating elements typically found in games into non-game contexts to engage and motivate individuals. In the context of education, including mathematics education, gamification can take many forms. Here are some examples of gamification in education:

**Leaderboards and Points Systems:** Teachers can create leaderboards where students earn points for completing assignments, participating in class discussions, or achieving specific milestones. This fosters competition and encourages students to strive for higher scores.

**Badges and Achievements:** Similar to video game achievements, students can earn digital badges for mastering specific math concepts, completing challenging assignments, or reaching certain levels of proficiency. These badges serve as visible recognition of their accomplishments.

**Interactive Quizzes and Games:** Online platforms offer interactive math quizzes and games that turn learning into an enjoyable challenge. Platforms like Kahoot! and Quizlet allow educators to create engaging quizzes that students can compete in individually or in teams.

**Storytelling and Narrative Elements:** Incorporating a narrative or storyline into math lessons can make them more engaging. For example, students might solve math problems to progress through a virtual adventure or solve real-world math challenges as part of a fictional scenario.

**Simulations and Virtual Labs:** Simulations allow students to experiment with math concepts in a risk-free environment. For instance, they can explore geometric shapes in a virtual world or experiment with mathematical equations to see how changing variables affects outcomes.

**Quests and Challenges:** Teachers can design quests or challenges that involve completing a series of math-related tasks. As students progress through these challenges, they gain experience points and unlock new content.

**Peer Collaboration:** Gamification can encourage collaboration among students. Group challenges or team-based competitions can motivate students to work together to solve math problems.

**Rewards and Prizes:** Offering tangible rewards like small prizes or extra credit for completing math tasks can motivate students. These rewards can be earned by accumulating points or reaching certain milestones.

**Progress Tracking:** Visualizing progress can be motivating. Students can track their progress on a digital scoreboard or see how close they are to earning a specific badge or reward.

**Role-Playing Games (RPGs):** In some math gamification scenarios, students take on roles within a mathematical context. For instance, they might become "math detectives" solving math-related mysteries or "math explorers" navigating through mathematical challenges.

**Real-World Applications:** Connecting math concepts to real-world applications and problem-solving can engage students by demonstrating the practical relevance of what they are learning.

**Adaptive Learning Platforms:** Some adaptive learning platforms use gamification to tailor lessons to individual student needs. As students progress, the platform adjusts the difficulty level of problems and provides immediate feedback.

### **Math Gamification Tool and Platform:**

There are several math gamification tools and platforms that can help educators create engaging and interactive math learning experiences. Here are some recommendations:

**Kahoot!:** Kahoot! is a popular platform for creating and playing interactive quizzes and games. Educators can design their own math quizzes or use pre-made ones from the Kahoot! library. It's a great tool for in-class competitions or remote learning.

**Quizlet:** Quizlet offers a variety of study tools, including flashcards, quizzes, and games, that can be used for math topics. Educators can create custom study sets and engage students with interactive quizzes.

**Prodigy:** Prodigy is an adaptive math platform for students in elementary and middle school. It combines math learning with an engaging RPG-style game, where students solve math problems to progress in the game world.

**Hooda Math:** Hooda Math offers a collection of free online math games covering a wide range of topics, from basic arithmetic to more advanced concepts. These games are suitable for elementary and middle school students.

**Coolmath Games:** Coolmath Games provides a variety of free math-related games that make learning math concepts fun. They cover topics like geometry, algebra, and more.

**Math Playground:** Math Playground offers a range of math games, puzzles, and logic challenges for elementary and middle school students. It includes interactive activities and problem-solving exercises.

**DreamBox:** DreamBox is an adaptive math program for students from kindergarten to eighth grade. It adjusts the difficulty of problems based on individual performance and offers a gamified learning experience.

**DragonBox:** DragonBox is a series of math apps designed to teach algebra and other mathematical concepts through gameplay. It's suitable for both children and adults.

**Math Jeopardy:** You can create your own Math Jeopardy games using templates available online. It's a fun way to review math concepts through a competitive and quiz-show-style format.

**Mathletics:** Mathletics offers a wide range of math activities and challenges for students of all ages. It includes animated tutorials, adaptive exercises, and competitive math challenges.

**Sumdog:** Sumdog provides math games that adapt to each student's ability level. It covers a variety of math topics and is suitable for elementary and middle school students.

**Zapzapmath:** Zapzapmath is a mobile app that offers a collection of interactive math games for students in kindergarten through sixth grade. It covers a wide range of math topics.

**XtraMath:** XtraMath focuses on improving basic math skills, particularly arithmetic. It provides practice exercises and progress tracking for students.

**Mathseeds:** Mathseeds is an online program designed for early learners. It includes interactive math games and activities to build foundational math skills.

### **Math education through gamification and Skills.**

**Problem-Solving Skills:** Gamification often involves presenting students with mathematical challenges and puzzles to solve. This encourages them to think critically, analyze problems, and devise creative solutions.

**Critical Thinking:** Gamified math tasks require students to evaluate information, make decisions, and weigh the consequences of their choices. This fosters critical thinking skills, which are valuable both in math and in real-life situations.

**Mathematical Proficiency:** Naturally, gamified math education helps students build a strong foundation in mathematical concepts, including arithmetic, geometry, algebra, and more. They can practice these skills in a fun and engaging way.

**Logical Reasoning:** Games often have rules and logical structures that students must understand and follow to succeed. This enhances their logical reasoning abilities and helps them make connections between different mathematical concepts.

**Adaptability and Flexibility:** Many math games offer different levels of difficulty or adapt to the player's skill level. This encourages students to adapt to changing situations and challenges, fostering adaptability and flexibility.

**Persistence and Grit:** In gamified math education, students may encounter setbacks and failures. Overcoming these challenges and persevering to reach their goals can teach them resilience, persistence, and grit.

**Mathematical Fluency:** Repeated practice of math concepts in a gamified setting can lead to increased fluency. Students become faster and more accurate in performing calculations and solving problems.

**Collaboration and Communication:** Some math games involve teamwork or discussion among students to solve problems collectively. This promotes collaboration and effective communication skills.

**Time Management:** Games often have time limits or encourage efficient use of time to complete tasks. This helps students improve their time management skills.

**Data Analysis:** In some math games, students may need to analyze data or statistics to make decisions. This introduces them to basic data analysis concepts and skills.

**Digital Literacy:** Many gamified math education tools are digital, which means students become more comfortable with technology and develop digital literacy skills.

**Motivation and Engagement:** Gamification is inherently motivating and can boost student engagement in mathematics. When students are engaged, they are more likely to apply themselves and develop various skills.

**Goal Setting and Achievement:** Gamified math education often includes goals, levels, or achievements that students can strive to reach. Setting and achieving goals helps students develop a sense of accomplishment and motivation.

**Mathematical Creativity:** Some math games encourage students to approach problems in creative ways, exploring multiple solutions. This fosters mathematical creativity and innovation.

**Decision-Making:** Gamified scenarios often require students to make decisions based on limited information or resources. This improves their decision-making abilities.

### **Mathematical concepts through Gamification and its applications.**

**Basic Arithmetic Operations:**

**Applications:** Gamified quizzes, challenges, and math games can reinforce addition, subtraction, multiplication, and division skills. For example, a game might involve solving math problems to progress through levels or collect points.

**Geometry:**

**Applications:** Gamification can help students understand geometric concepts like angles, shapes, and symmetry through interactive puzzles, construction challenges, and virtual manipulatives.

**Algebra:**

**Applications:** Algebraic concepts such as equations, variables, and inequalities can be taught through games that involve solving algebraic puzzles or equations. Students can earn rewards for correctly solving problems.

**Fractions, Decimals, and Percentages:**

**Applications:** Gamified scenarios can explore real-life applications of fractions, decimals, and percentages. For instance, students might manage a virtual store where they must calculate prices, discounts, and taxes.

**Data and Statistics:**

**Applications:** Gamification can introduce students to data collection, analysis, and interpretation through simulations and games that involve surveys, graphing, and making decisions based on data.

**Number Patterns and Sequences:**

**Applications:** Interactive math games can present students with number pattern challenges, where they have to identify and extend patterns to progress in the game.

**Measurement and Conversions:**

**Applications:** Gamified experiences can teach measurement units, conversions, and the application of measurement concepts in real-world scenarios, such as cooking or construction.

**Probability and Statistics:**

**Applications:** Probability concepts like likelihood and randomness can be explored through games that involve predicting outcomes and experimenting with probability scenarios.

**Calculus:**

**Applications:** While more advanced, calculus concepts can also be introduced through gamification. For example, students can explore the rate of change through simulations or solve calculus-related puzzles.

**Word Problems and Problem-Solving:**

**Applications:** Gamification can present word problems in the context of a story or adventure, requiring students to apply mathematical concepts to solve in-game challenges.

**Logic and Critical Thinking:**

**Applications:** Games that involve logical puzzles, riddles, and brain teasers can promote logical reasoning and critical thinking skills.

**Mathematical History and Discoveries:**

**Applications:** Gamified lessons can take students on a journey through the history of mathematics, introducing them to famous mathematicians and their contributions in an interactive way.

**Mathematical Challenges and Olympiads:**

**Applications:** Gamification can simulate mathematical competitions and challenges, motivating students to solve complex problems and push their mathematical limits.

**Financial Literacy:**

**Applications:** Gamification can teach financial concepts such as budgeting, saving, investing, and compound interest through financial simulation games.

**Coding and Computational Mathematics:**

**Applications:** Gamification can be used to teach coding and computational math concepts, helping students understand algorithms, logic, and problem-solving in computer science.

**Real-world applications of gamification in education.**

Gamification in education has a wide range of real-world applications that extend beyond traditional classroom settings. It can be employed in various educational contexts to enhance learning experiences and improve student outcomes. Here are some real-world applications of gamification in education:

**K-12 Education:**

In elementary and secondary schools, teachers use gamification to make lessons more engaging. Educational games, interactive quizzes, and digital platforms like Kahoot! are popular tools.

**Higher Education:**



In colleges and universities, professors can incorporate gamified elements into their lectures and assignments. This can include leaderboards for class participation, online simulations for complex subjects, or using educational video games to explore academic topics.

#### Online Learning Platforms:

Many online learning platforms incorporate gamification to motivate learners. For example, Duolingo uses gamified elements to teach languages, while Coursera offers badges and certificates to students who complete courses.

#### Corporate Training:

Companies use gamification in employee training programs. Gamified modules help employees acquire new skills, complete compliance training, or improve job performance.

#### Professional Development:

Gamification can be applied to professional development programs for teachers, healthcare professionals, and other industries. It keeps participants engaged and encourages ongoing learning.

#### Language Learning:

Gamified language learning apps like Memrise and Rosetta Stone make acquiring new languages enjoyable and effective. Students earn points and rewards for language proficiency.

#### Financial Literacy:

Gamification is employed to teach financial literacy, budgeting, and investment strategies. Apps like Stock Market Game and MoneyU offer real-world financial experiences in a gamified environment.

#### **STEM Education:**

In science, technology, engineering, and mathematics (STEM) education, gamification is used to teach complex concepts. For instance, Minecraft: Education Edition is used to teach science and engineering principles.

#### Special Education:

Gamification can be adapted to cater to the needs of students with disabilities or special learning requirements. Games can be customized to provide extra support or accommodations.

#### Healthcare Education:

Medical schools and healthcare training programs use gamification to simulate surgeries, diagnose medical conditions, and enhance clinical decision-making skills.

#### Museum and Cultural Education:

Museums and cultural institutions use gamified tours and exhibits to engage visitors. Interactive scavenger hunts and quizzes can make learning about art, history, and science more entertaining.

#### Library and Information Literacy:

Libraries incorporate gamification to encourage reading, research, and information literacy skills. Reading challenges, book clubs, and library quests are common examples.

#### Environmental Education:

Gamification is used to educate students and the public about environmental issues. Virtual reality simulations and mobile apps help users explore ecosystems and conservation efforts.

#### Social and Emotional Learning (SEL):

SEL programs in schools utilize gamification to teach students about empathy, self-awareness, and relationship-building. Games promote emotional intelligence and conflict resolution skills.

#### **Citizenship and Civic Education:**

Gamified simulations allow students to understand political processes, voting systems, and civic responsibilities. These tools help students become informed and engaged citizens.

#### Professional Skills Development:

Gamification is applied to develop professional skills such as leadership, negotiation, and project management in business and corporate settings.

Gamification is a versatile approach that can be tailored to suit various educational objectives and target audiences. Its real-world applications continue to expand as educators and organizations recognize its potential to make learning more engaging, effective, and enjoyable.

### **Challenges of gamification in education.**

While gamification in education offers numerous benefits, it also comes with its share of challenges and considerations. Addressing these challenges is crucial for ensuring that gamification enhances the learning experience effectively. Here are some of the key challenges of gamification in education:

**Overemphasis on Rewards:** Excessive use of rewards, badges, or points can lead to extrinsic motivation, where students focus more on earning rewards than on the actual learning. **Sustainability:** Maintaining a gamified system over time can be challenging. Teachers and educators need to continuously update and create new gamified content to keep students engaged.

**Alignment with Curriculum:** Ensuring that gamified activities align with educational objectives and curriculum standards can be complex. Gamification should support learning outcomes rather than distract from them.

**Balancing Competition:** While competition can be motivating, it may discourage some students or lead to negative emotions. Striking the right balance between competition and collaboration is essential.

**Accessibility and Inclusivity:** Some students may face barriers to accessing gamified content, such as students with disabilities or those without access to technology.

**Student Equity:** Gamification can inadvertently create disparities among students based on their initial skills or abilities. Some students may feel left behind if the difficulty level is not adjusted to their needs.

**Gaming Addiction:** Excessive use of gamified educational platforms can lead to gaming addiction or overuse, which can negatively impact students' academic performance and overall well-being.

**Teacher Training:** Educators need training to effectively integrate gamification into their teaching practices.

**Assessment Validity:** Assessing student performance within a gamified system can be challenging. Educators must ensure that assessments accurately reflect students' understanding and skills.

**Technology Reliability:** Gamified education heavily relies on technology, and technical issues can disrupt the learning process. Ensuring that the technology works smoothly is essential for a positive experience.

**Age Appropriateness:** Designing gamified content that is age-appropriate and suitable for the developmental stage of students can be tricky. What works for elementary students may not work for high school students.

**Lack of Data Privacy:** Collecting student data through gamification raises concerns about data privacy and security. Educational institutions must safeguard student information appropriately.

**Maintenance Costs:** Developing and maintaining gamified platforms can be costly. Educational institutions may need to allocate resources for ongoing maintenance and improvements.

**Over complexity:** Overly complex gamification systems can overwhelm students. Simplicity and clarity in design are important for effective gamification. **Intrinsic Motivation Development:** While gamification can initially boost motivation, it may not always promote the development of long-term intrinsic motivation and a genuine love for learning.

**Conclusion:** The integration of gamification into mathematics education has shown remarkable promise in revolutionizing the way we teach and learn mathematics. Through this innovative approach, we have explored the vast potential of gamification in transforming the mathematical learning experience, making it more engaging, enjoyable, and effective. This journey has led us to recognize the multifaceted benefits of teaching mathematics through gamification. We have witnessed how gamification increases student engagement, motivation, and retention of mathematical concepts. The incorporation of game elements such as competition, rewards, feedback, and interactivity has invigorated the learning process, promoting active participation and fostering a deeper understanding

of mathematical principles. Moreover, gamification has not only made mathematics more accessible but has also enriched its real-world applications. Students are now able to see the relevance of mathematics in various contexts, from solving complex problems in virtual environments to making informed financial decisions and exploring the intricacies of science and technology. However, we must remain mindful of the challenges associated with gamification, such as the risk of overemphasizing rewards or neglecting inclusivity. Successful implementation requires careful planning, alignment with curriculum objectives, and ongoing assessment of its impact on student learning. In closing, the future of mathematics education is intertwined with the gamification and innovation that we have explored. By harnessing the power of gamification, educators have the opportunity to ignite a passion for mathematics, nurture critical thinking skills, and equip students with the mathematical proficiency they need to excel in the modern world. The journey of teaching mathematics through gamification and its innovation is an exciting and transformative one, promising a brighter future for math education and its learners.

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## APPLICATION OF MODERN TECHNOLOGIES AND INNOVATIVE METHODS IN EDUCATION

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### Abstract

*Education is a power source for the growth and development of any society. The purpose of 21<sup>st</sup> century education is not just to make a student literate but to add rationale, knowledge, ability, and self-sufficiency. Teaching is one of the main components of educational planning, which is a key factor in conducting educational plans for the 21<sup>st</sup> century young generation. The rapid changes in the modern world have caused the education system to face a great variety of challenges. Students in our classroom today face an ever-changing world; it is essential to equip them with skills for dealing with rapid changes, challenges, and unexpected circumstances. As one such skill, creativity has been receiving increasing focus in the classroom with the growth in digital tools, technology and innovative methods. Educators have been paying attention to the need to use emerging, modern technologies and strategies to appropriately support creativity improvement. In the contemporary era, information technology, innovation, and creativity are paramount, serving as essential catalysts for the growth and development of the younger generation. That's why society must also view education as an engine of advancement in the modern era, propelled by its wheels of innovation, information, technology, and creativity leading to development. Therefore, this study systematically deals with understanding the use of modern technologies and innovative methods to promote creativity in educational settings.*

**Key words:** Technology, Innovative methods, Modern Technology

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### Introduction:

Educational attainment plays a very crucial role in the progress and advancement of any community. Education is a lighthouse that directs people towards the right path for development. The purpose of 21<sup>st</sup> century education is not just to make a student literate but to add rationale, knowledge, ability, and self-sufficiency. It aids in the growth of the human capital that drives and guides economic and technological innovation by imparting information, skills, and values. The rapid changes in the modern world have caused the education system to face a great variety of challenges. So teaching is one of the main components of educational planning, which is a key factor in conducting educational plans for the 21<sup>st</sup> century young generation. Students in our classroom today face an ever-changing world; it is essential to equip them with skills for dealing with rapid changes, challenges, and unexpected circumstances. With the growth in digital tools, technology and innovative methods, educators have been paying attention to the need to use emerging, modern technologies and strategies to appropriately support creativity improvement. Creativity can be developed, and innovation benefits both students and as well as teachers. This ultimately helps teachers to identify the gaps in the teaching-learning process and implement innovative, creative strategies and modern technologies in the process of teaching. In the contemporary age, information technology and creativity shine as indispensable and pivotal elements driving growth and development for the younger generation. Hence, it is imperative for society to regard education as the propulsive engine of progress in this modern era, with its gears powered by information, technology, innovation, and creativity, all steering towards development. Therefore, this study systematically deals with understanding the use of modern technologies and innovative strategies to promote creativity in educational settings. Education experts from all around the world support experimenting with new teaching philosophies as well as developing and enhancing the current learning methodologies. The use of innovative teaching methods by teachers helps to enhance the performance of students of diversity (Naz & Murad, 2017). Emerging technologies like Virtual reality (VR) and Augmented reality (AR) technologies provide immersive and interactive learning experiences. VR creates entirely virtual environments, while AR

overlays digital information onto the real world, enhancing learning opportunities (Dalgarno & Lee, 2010) (Akçayır & Akçayır, 2017).

### **Emerging and Innovative Methods of Teaching:**

Innovative Teaching incorporates technology in to teaching learning methods to create a rich learning experience for students and a rewarding teaching experience for faculty (Khairnar, 2015).

- **Project Based Learning:** Project Based Learning, an educational approach is aimed at giving students a chance to learn and develop knowledge and skills by taking part in projects that deal with issues and problems they may encounter in the real world. In short, students must be prepared for a project based world if we're going to help them succeed in life. Therefore, examples of actual application in the real world need to be included whenever we talk about Project Based Learning benefits for students. It will reinforce the belief that students are capable of breaking down future problems into its component parts, setting up and managing a diverse group of interested parties to address this problem and implement solutions.
- **Use of Multimedia Tools:** The most efficient way to communicate in this Digital Age is multimedia. A mix of various digital media types, such as text, pictures and sound, is efficiently used by many teachers and video, to teach students and it is found to be quite effective approach for transfer of knowledge. Multimedia technology helps the teacher to represent in a more meaningful way (Jayashree, 2017). Some of the multimedia tools are power point presentation, SWAYAM and MOOCS etc.
- **Flipped Classroom Method:** Flipping out learning has been one of the most interesting developments in modern education. According to Kari M. Arfstrom, cofounder of the Flipped Learning Network, flipped learning is all about creating opportunities for active engagement. Flipped learning is a methodology to make teachers prioritize active learning during class time by giving students resources and presentations that they can view at home or away from the classroom. The flipped classroom method aims to enhance student engagement, promote deeper understanding of course materials, and foster critical thinking and collaboration skills. It allows students to access content at their own pace and frees up class time for more interactive and participatory learning experiences.
- **Virtual Reality (VR)** is the important way to facilitate learning. Technologies utilising virtual reality have a very unique opportunity to provide authentic educational experiences. Students will be able to explore and interact directly with challenging ideas in virtual reality. For instance, using virtual reality can enable students to engage in a more realistic learning experience by experiencing historical events, scientific investigations, and sophisticated technologies in the actual world. Additionally, virtual reality has the ability to dissolve time and space barriers so that students can study from any location while travelling to locations they might not otherwise have access to.
- Another aspect of Artificial Intelligence is **Learning Management System**. The improvement of efficiency and time management is crucial for setting up a Learning Management Systems in training institutions. Calendars, student forums, and communication channels must all be integrated in order to establish a complete e-Learning LMS solution. LMS functionalities are available for both face-to-face instruction and online learning. LMS has developed into a crucial instructional tool that is no more a luxury but rather a must of the contemporary society. This approach aids in sustaining learning even in the face of challenging situations.

**Conclusion:** The arrival of multimedia technology will inevitably change the function of education, and we must have interactive, innovative and creative instruction. It is worth noting that information and communication technologies have introduced a number of innovative trends in the field of teaching, as well as drastic changes from the old school learning paradigm. Emerging technologies

and creative methods may enhance the educational process, but it is the teacher's attitude that underpins the foundation of a supportive and encouraging learning environment, facilitating students' overall academic and personal development. Modern teaching techniques and innovative strategies may help the learners to learn a lesson in joyful, interesting and attractive way.

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## EFFECTIVENESS OF ACTIVITY-BASED TEACHING METHOD IN SCIENCE ON ACADEMIC ACHIEVEMENT OF IX STANDARD STUDENTS.

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### **Abstract**

*The study was conducted to develop the activity based teaching method in science and experimenting it on the students studying in IX standard students and finding its impact on academic achievement in science “pretest-posttest parallel equivalent groups experimental design” was followed for this study. After comparing the pretest and post test scores of both the experimental and control groups and applying statistical techniques, it reflected that there exists significant difference between the two groups. The students learning through activity based teaching learning method prepared by researcher were found to be better in their academic achievement in science than the students learning through the traditional method of learning.*

**Key Words:** - Activity based teaching method, academic achievement in science, traditional method of learning.

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**Introduction:** - Achievement means one's learning attainments, accomplishments, proficiencies, etc. It is directly related to the pupil's growth and development in educational situations. An achievement test is a test of developed skill or knowledge. The most common type of achievement test is a standardized test developed to measure skills and knowledge learned in a given grade level, usually through planned instruction, such as training or classroom instruction. It is an important tool in school evaluation and has great significance in measuring instructional progress and progress of the students in the subject area. Tests should give an accurate picture of students' knowledge and skills in the subject area or domain being tested. Accurate achievement data are very important for planning curriculum and instruction and for program evaluation. Test scores that overestimate or underestimate students' actual knowledge and skills cannot serve these important purposes.

In the field of education, teaching and learning go side by side. Education is the only tool that aims to equip and empower its learners with the right knowledge. This knowledge also works towards acquiring various competences and skills that are required for any citizen to capture good employment opportunities and have a positive impact on the society. However, the most important element to gain these advantages is the teachers. In order to provide the youth and masses with the correct information, the teachers are the focal figure and have to set standards accordingly for their students. They are required to be competent enough and must possess the knowledge of the subject matter. This knowledge must be passed on to the students in the most neutral and creative way to enable the students to develop a clear insight along with stimulating critical thinking skills. Erickson (1978) believes that “Effective learning in the classroom depends on the teacher's ability to maintain the interest that brings students to the course in the first place.”

Activity-based learning is the baseline for creative and critical thinking skills enhancement. However, this method will not function properly if students are not motivated enough to achieve their actual potential. The most useful and effective method to teach concepts that are complex in nature is by involving students in interactive activities, which is also the backbone of ABTLM. By utilizing different activities in the classroom, critical thinking skills and creative skills of the students are also enhanced. Hake (1998) emphasizes on the importance of various activities and their relevance in everyday activity-based teaching methodologies. He brings light to the fact that ABTLM is a cognitive-based learning technique that works on constructive learning. Constructive learning comprises prior knowledge along with personal experiences. This theory emphasizes that learning is a process that comprises the psychological environment of an individual along with their interactions with various other structures of the society. It is vital for learners in ABTLM classrooms

to share personal experiences which enhance the whole constructive atmosphere. Using constructive method of teaching is believed to be far more effective than a traditional classroom setup as it enhances the learning process.

This research study was conducted to measure the effectiveness of activity based teaching learning method on student's academic achievement in science.

#### **Objectives of the study.\**

- To develop activity based teaching method in science for IX standard students.
- To find out the effectiveness of activity based teaching method on academic achievement in science of IX standard students.

#### **Hypothesis of the study:**

1. There is no significant difference between the pretest and posttest academic achievement scores in science of IX standard students in control group.
2. There is no significant difference between the pretest and posttest academic achievement scores in science of IX standard students in experimental group.
3. There is no significant difference between control group and experimental group in respect to pretest and posttest academic achievement scores in science of IX standard students.

**Research Method:** The researcher in the pretest study has employed the "pretest- posttest parallel equivalent groups experimental design". In this design pretest was administered before the application of the experimental (Activity based teaching method) and control (traditional method) treatments and posttest at the end of the treatment.

**Sample:** In this study, the techniques used for the selection of schools was random sampling technique. The groups were equated on the basis of previous year annual examination scores. The sample of the study consists of 80 students studying in IX standard in two high schools at Davanagere District, Karnataka. The sample includes both boys and girls.

#### **Tools Used:**

The following tools had been prepared for the study.

1. The investigator developed the activity based teaching method for the chapters like work and energy, structure of atom and improvement in food resources in science.
2. The investigator had prepared pretest and posttest containing 80 multiple choice questions pertaining to the chapters like work and energy, structure of atom and improvement in food resources in IX standard NCERT science test book.

#### **Variables:**

**Independent variable:** Activity based teaching learning method and traditional learning method.

**Dependent variable:** Academic achievement in science.

**Delimitations of the study:** the delimitations of the study are as follows: -

1. The study was delimited to private state secondary schools of Davanagere city.
2. It was delimited to IX standard students.
3. The academic achievement of the student in science only was included in the study.

**Data Collection:** During the experiment two groups of 40 students each were selected. One group was considered as experimental group and the other group as control group. Activity based teaching learning method prepared by the researcher on the chapters like 'work and energy', 'structure of atom' and 'improvement in food resources' was administered to the experimental group. The programme consists of concerned sessions of 45 minutes each. In each session a sub topic from the chapter was taught by applying the 5e steps of activity based teaching method i.e., engage, explore, explain, elaborate and evaluation. The control group was taught using traditional method. There were 40 students in each group. The pretest scores on academic achievement in science of two groups were used to equate the two groups. Soon after the treatment was over post test was administered to

measure the academic achievement in science of the students. Post test scores served as the data to measure academic achievement of the students in science as a result of the treatment.

### Testing of hypotheses:

**Null hypothesis:** There is no significant difference between the pretest and posttest academic achievement scores in science of IX standard students in control group

**Alternative hypothesis:** There is a significant difference between the pretest and posttest academic achievement scores in science of IX standard students in control group

To test the above null statement, the paired t-test was conducted and result of the test are presented in the table given below.

**Table: Summery of dependent t-test between the pretest and posttest academic achievement scores in science of IX standard students in control group**

Test	Mean	SD	Diff. mean	Diff. SD	% of change	t -value	P-value
Pretest	52.43	2.04	-0.33	1.70	-0.62	1.2088	0.2340, NS
Posttest	52.75	2.19					

From the outcome of the analysis presented in the table, it clearly shows that, the mean and SD of pretest academic achievement scores in science is  $52.43 \pm 2.04$  and mean and SD of posttest academic achievement scores in science is  $52.75 \pm 2.19$  in control group. The mean of difference of pretest to posttest academic achievement scores in science is  $0.33 \pm 1.70$  in control group. This difference is found to statistically not significant ( $t=1.2088$ ,  $p=0.2340$ ) at 5% significance level. Thus, null hypothesis is not rejected and alternative is rejected. It means that, the pretest and posttest academic achievement scores in science of IX standard students are similar in control group. In another words, no significant change was observed academic achievement scores in science of IX standard students after posttest in control group.

**Null hypothesis:** There is no significant difference between the pretest and posttest academic achievement scores in science of IX standard students in experiment group

**Alternative hypothesis:** There is a significant difference between the pretest and posttest academic achievement scores in science of IX standard students in experiment group

To test the above null statement, the paired t-test was conducted and result of the test are presented in the table given below.

**Table: Summery of dependent t-test between the pretest and posttest academic achievement scores in science of IX standard students in experiment group**

Test	Mean	SD	Diff. mean	Diff. SD	% of change	t -value	P-value
Pretest	52.60	3.07	24.85	3.08	47.24	51.0877	0.0001, S
Posttest	77.45	1.47					

From the outcome of the analysis presented in the table, it clearly shows that, the mean and SD of posttest academic achievement scores in science is  $52.60 \pm 3.07$  and mean and SD of posttest academic achievement scores in science is  $24.85 \pm 3.08$  in experiment group. The mean of difference of posttest to posttest academic achievement scores in science is  $24.85 \pm 3.08$  in experiment group. This difference is found to statistically significant ( $t=51.0877$ ,  $p=0.0001$ ) at 5% significance level. Thus, null hypothesis is rejected and alternative is accepted. It means that, the pretest and posttest academic achievement scores in science of IX standard students are different in experiment group. In another words, a significant change was observed in academic achievement scores in science of IX standard students after posttest in experiment group.

**Null hypothesis:** There is no significant difference between control group and experiment group with respect to pretest and posttest academic achievement scores in science of IX standard students

**Alternative hypothesis:** There is a significant difference between control group and experiment group with respect to pretest and posttest academic achievement scores in science of IX standard students. To test the above null statement, the independent t-test was carried out and outcome of the test are presented in the table given below.

**Table:** Summery of independent t-test between control group and experiment group with respect to pretest and posttest academic achievement scores in science of IX standard students.

Academic achievement	Control group			Experiment group			t -value	p-value
	n	Mean	SD	n	Mean	SD		
Pretest	40	52.43	2.04	40	52.60	3.07	0.3004	0.7647,NS
Posttest	40	52.75	2.19	40	77.45	1.47	59.2181	0.0001,S
Difference	40	0.33	1.70	40	24.85	3.08	44.1270	0.0001,S

From the results of the above table, it can be seen that the following:

- The mean and SD of pretest academic achievement scores in science of IX standard students in control group is  $52.43 \pm 2.04$  and in experiment group is  $52.60 \pm 3.07$ . The difference is found to be statistically not significant with t-value i.e. 0.3004 and p-value i.e. 0.7647 at 5% significance level. Hence, null hypothesis is not rejected and alternative hypothesis is rejected. It means that, the pretest academic achievement scores in science of IX standard students is similar in control group and experiment group.
- The mean and SD of posttest academic achievement scores in science of IX standard students in control group is  $52.75 \pm 2.19$  and in experiment group is  $77.45 \pm 1.47$ . The difference is found to be statistically significant with t-value i.e. 59.2181 and p-value i.e. 0.0001 at 5% significance level. Hence, null hypothesis is rejected and alternative hypothesis is accepted. It means that, the mean score of posttest academic achievement scores in science of IX standard students is different in control group and experiment group. In another words, the posttest scores of academic achievement scores in science of IX standard students are significantly higher in experiment group as compared to control group. In another word, the effect of experiment group on academic achievement scores in science of IX standard students is higher as compared to control group.
- The mean and SD of changes from pretest to posttest academic achievement scores in science of IX standard students in control group is  $0.33 \pm 1.70$  and in experiment group is  $24.85 \pm 3.08$ . The difference is found to be statistically significant with t-value i.e. 44.1270 and p-value i.e. 0.0001 at 5% significance level. hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the mean score of changes from pretest to posttest academic achievement scores in science of IX standard students is different in control group and experiment group. In another words, the mean score of changes from pretest to posttest academic achievement scores in science of IX standard students is significantly higher in experiment group as compared to control group. In another word, the change in academic achievement scores in science of IX standard students experiment group is higher as compared to control group.

#### Findings:

1. No significant change was observed academic achievement scores in science of IX standard students after posttest in control group.
2. A significant change was observed in academic achievement scores in science of IX standard students after posttest in experiment group.
3. \* The mean and SD of pretest academic achievement scores in science of IX standard students in control group is  $52.43 \pm 2.04$  and in experiment group is  $52.60 \pm 3.07$ . The difference is found to be statistically not significant.

- The mean and SD of posttest academic achievement scores in science of IX standard students in control group is  $52.75 \pm 2.19$  and in experiment group is  $77.45 \pm 1.47$ . The difference is found to be statistically significant.
- The mean and SD of changes from pretest to posttest academic achievement scores in science of IX standard students in control group is  $0.33 \pm 1.70$  and in experiment group is  $24.85 \pm 3.08$ . The difference is found to be statistically significant.

**Conclusion:**

Activity based teaching method has more as improving the academic achievement science when compared to traditional method. Activity based teaching methods encourage the students to participate in teaching learning process. It increases opportunity for the students to investigate the problem in hand and come to conclusion.

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## BLENDED LEARNING: AN INNOVATION IN TEACHING AND LEARNING

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### Abstract

*Blended learning is a new and innovative approach to enhance the teaching and learning process. This approach is widely used in schools as well as colleges and universities. This approach facilitates the teacher and the learner to interact in the dual mode system i.e., online and face-to-face mode. This paper highlighted the concept of blended learning, role of learner in the blended learning, models of blended learning, features of blended learning, effectiveness of blended learning for teacher and learner.*

**Key Notes:** Blended Learning

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### INTRODUCTION

The educational system at present is in a transition stage. To meet the challenges of expansion and for catering individuals need it is trying to adopt new technologies and exploring new paths to reach the goal of quality educational opportunities for all, at the same time due to various factors like deficient budgets, lack of facilities, advantages of face-to-face interaction, it is not completely ready to leave the conventional modes of knowledge transfer. Even the students are in a state of dual mind. When a group of teacher trainees were inquired about the mode of teaching, they will prefer from tradition classroom teaching and ICT supported teaching the students were nearly evenly divided between both the choices. The conventional mode of teaching despite its few shortcomings provides a much-needed human touch to the teaching learning process. Personality and behaviour of the teachers directly influences the blooming personality of the students. Only face to face interaction meets the affective objectives along with cognitive and psychomotor. Face to face conventional approach helps in developing a strong value system. Social skills like cooperation, sharing, expression and respecting other's views are more easily developed in conventional mode of teaching. Students learn not only from books, or from teachers teaching inside classroom but also from the co-students, through their peer group interaction, they learn many skills in playground and their small social interactions in canteens, lounge etc.

### BLENDED LEARNING

Blended learning is an innovative concept that embraces the advantages of both conventional teaching in the classroom and ICT supported learning including both offline learning and online learning. It has scope for collaborative learning; constructive learning and computer assisted learning.

Horn and Staker (2010) defined blended learning as “any time a student learns at least in part in a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path and/or pace”.

Volchenkova (2016) pointed out that blended learning is a form of learning that combines the best of direct classroom learning and learning through the internet by using its applications.

According to Kavitha and Jai Singh (2018) blended learning is one of the forms of e-learning in which e-learning is integrated into conventional classroom learning, using a computer, intranet, or smart classroom, where the teacher meets the student face-to-face and interaction between students and teachers is built into the course design. It arose as a natural development of programmed and electronic learning.

### Importance of the Blended Learning for the Students

#### ➤ Increase student interest:

When technology is integrated into school lessons, learners are more likely to be interested in, focused on, and excited about the subjects they are studying.



➤ **Keep students focused for longer:**

The use of computers to look up information & data is a tremendous lifesaver, combined with access to resources such as the internet to conduct research. This engagement and interaction with the resources keeps students focused for longer periods than they would be with books or paper resources, this engagement also helps develop learning through exploration and research.

➤ **Provides student autonomy:**

The use of eLearning materials increases a student's ability to set appropriate learning goals and take charge of his or her own learning, which develops an ability that will be translatable across all subjects. Instill a disposition of self-advocacy: Students become self-driven and responsible, tracking their individual achievements, which helps develop the ability to find the resources or get the help they need, self-advocating so they can reach their goals.

➤ **Promote student ownership:**

BL instills a sense of 'student ownership over learning' which can be a powerful force propelling the learning, it's this feeling of responsibility that helps the feeling of ownership.

➤ **Allow instant diagnostic information and student feedback:**

The ability to rapidly analyze, review and give feedback to student work, gives the teacher the ability to tailor his teaching methods and feedback for each student while improving time efficiency.

➤ **Enables students to learn at their own pace:**

Due to the flexibility of BL and the ability to access internet resources allows students to learn at their own pace, meaning a teacher can help speed up the learning process or give more advanced resources if necessary.

### **Features of Blended Learning**

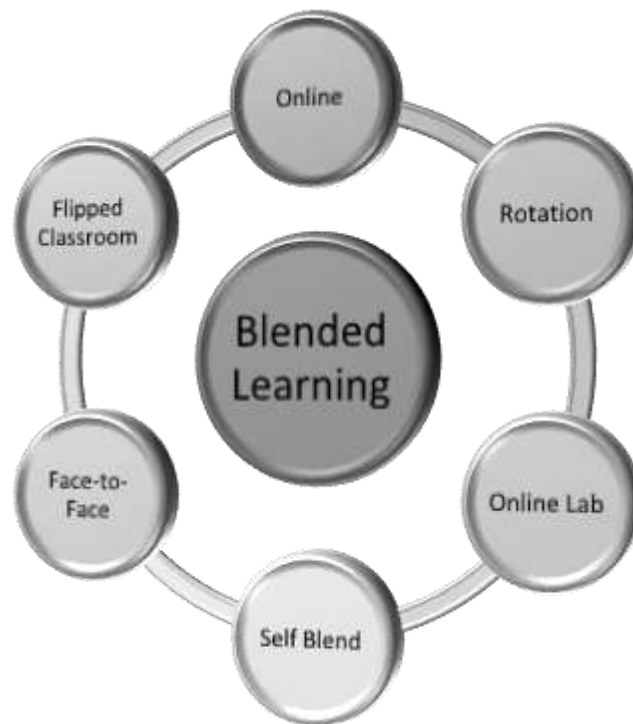
The important features of Blended Learning (hereafter referred to as BL) environment are:

- Increased student engagement in learning.
- Enhanced teacher and student interaction.
- Responsibility for learning.
- Time management and flexibility
- Improved student learning outcomes
- Enhanced institutional reputation.
- More flexible teaching and learning environment.
- More amenable for self and continuous learning
- Better opportunities for experiential learning

### **Models of the Blended Learning**

- ✚ **Online:** Instruction occurs via an online platform, with periodic face-to-face meetings.
- ✚ **Rotation:** Student rotates between self-paced online learning and face-to-face instruction. Schedules are fixed but flexible.
- ✚ **Flex:** Most instruction is delivered online, with teachers providing as needed support in small-group settings.
- ✚ **Personalized blend:** Teacher designs face-to-face and anywhere, anytime learning options that straddle the physical classroom and virtual spaces. Learning is the constant and time is the variable.
- ✚ **Online lab:** Instructions takes place in a brick-and-mortar lab. Delivered by an online teacher and supervised onsite by paraprofessionals.
- ✚ **Self-blend:** Students take online courses to supplement their tradition schools face to face course catalogue.

- ✚ **Face-to-face:** Teacher offers primarily face-to-face instruction, supplemented with technology in the classroom or computer lab.
- ✚ **Flipped Classroom Learning Model** – In flipped classroom learning model, the students read the study material based on the curriculum at home through online videos or courses. In the classroom, they discuss the read topics with their classmates and get in to group discussions or other learning activities under the guidance of an instructor.



**Figure: Models of Blended Approach**

#### **How Blended learning act as the facilitator of teaching and learning**

- ✚ **Opportunity for collaboration at a distance:** Individual students work together virtually in an intellectual endeavor as a learning practice.
- ✚ **Increased flexibility:** Technology-enabled learning allows for learning anytime and anywhere, letting students learn without the barriers of time and location but with the possible support of in-person engagement.
- ✚ **Increased interaction:** Blended learning offers a platform to facilitate greater interactivity between students, as well as between students and teachers.
- ✚ **Enhanced learning:** Additional types of learning activities improve engagement and can help students achieve higher and more meaningful levels of learning.
- ✚ **Learning to be virtual:** Learners practice the ability to project themselves socially and academically in an online community of inquiry. Digital learning skills are becoming essential to be a lifelong learner, and blended courses help learners master the skills for using a variety of technologies.

#### **Effectiveness of Blended Learning in the Classroom**

Creating an effective blended learning environment means making appropriate choices and overcoming the challenges that come with the use of technology.

1. **Technology access:** A critical first step is to know which resources are available to your students. Is there limited bandwidth, unreliable Internet connectivity, or lack of devices such as laptops or smartphones? Once you are clear about access, you can choose learning activities with the technology in ways that allow all to participate.
2. **Design:** Creating the appropriate in-person and online activities means designing courses with the pedagogic principles of both and integrating technology in a way that supports meaningful learning.
3. **Safety and security:** Create awareness of cyber-malice and ensure security interventions against unethical learning practices, academic dishonesty, identity theft and bullying are in place.
4. **Skill development, support, and training:** Both students and instructors must have technological literacy and competence with technology applications.
5. **Motivation:** Students need adequate motivation when engaging in a wide range of often shifting learning modalities, some of which may require significant skill development.

### Conclusions:

Thus, blended approach to learning is about the design of a course that enhances the teaching and learning experiences for students and teachers by combining face-to-face learning activities with online learning components. In many cases the act of “blending” achieves better student experiences and outcomes, and more efficient teaching and course management practices. It can involve a mix of delivery modes, teaching approaches and learning styles. Advances in technology provide new opportunities for students to learn in diverse environments and for courses to be designed and delivered in a way that enhances the teachers’ role.

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## THE USE OF INNOVATIVE TEACHING AND LEARNING STRATEGIES IN LANGUAGE CLASSROOMS

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### Abstract

*Keeping in view the present conditions and requirements of teaching learning process just recall the responsibility of a teacher. A teacher teaches to touch the lives of students. Apart from traditional approaches teachers use new technologies and strategies in education. In today's classrooms teachers try to teach according to the pace/speed of learners with innovation in teaching learning process. Importance of using innovative teaching methods and learning different languages by the teacher has become need of the hour. The process requires the ability to introduce the latest innovative technologies. Higher educational institutions stress those teaching methods which make classrooms lively throughout teaching learning process. Even though there is a felt need to use innovative teaching strategies at the school level /grass root level which aims at developing students' independence, flexibility, and critical thinking. Modern technologies are effective means of developing students' cognitive activities, their creativity, interests, skills and other mental qualities in order to become helpful in learning and teaching the language better.*

*The present paper throws light on innovative and effective teaching strategies for language learning and teaching which can be useful for language teachers to enhance student learning and better comprehension.*

**Key points:** *Innovative Teaching Strategies, Language classroom*

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### Introduction:

**Language:** Language is a powerful tool that enables effective communication and understanding among individuals from different cultures and backgrounds.

Language is an organized means of communicating ideas or feelings through the use of traditional signs, sounds, gestures or signs. Language, a system of traditional spoken, spoken or written symbols by which human beings, as members of a social group and participant in its culture, express their feelings, thoughts and emotions. Functions of language include communication, expression of identity, play, imaginative expression, and emotion.

Why do we need language? There are many different answers to this question. Language is important to us because it allows and facilitates us to come together as a group to share our ideas. It also enables us to express our thoughts and feelings. Using language to communicate also helps people build relationships and friendships together. Language is a social necessity. Language adapts and deteriorates within the society, plays an important role in the construction and formation of civilization and makes it possible to live in unity. If there was no language, the situation of human society and civilization would certainly be different.

### Innovation/Innovative:

According to Cambridge Dictionary: A new idea or method, or the use of new ideas and methods.

### Strategy/Strategies:

The concept of "strategy" comes from military science. Encyclopedia claims. The planning and direction of significant military maneuvers and operations is called strategy. It alludes to the series of actions that are used to achieve a particular goal. Instructional methods are those that we apply when teaching in a learning environment. It entails choosing a course of action before delivering the material in order to accomplish instructional goals. It takes some planning to accomplish goals. The skillful preparation of an effective system through which the goals may be readily attained is referred to as strategy.

The strategy is adjusted to the changing circumstances. The way of achieving learning goals is through teaching strategy. Teaching strategies, according to E. Stones and S. Morris, are generic plans for lessons that comprise organization, anticipated learner behavior in terms of instructional goals, and an explanation of planned actions required to achieve the strategy.

For instance, the following:

1. Using Blackboard is a tactic to provide lectures and discussions visual organization.
2. Free writing is a technique for inspiring pupils to write about and explore their ideas.
3. Using organized speeches for diverse points of view, students conduct discussions as a teaching strategy.

Innovative teaching strategies have enormous potential to improve student engagement and advance successful learning outcomes in the constantly changing educational environment. Traditional teaching strategies frequently fall short of meeting the different requirements and learning preferences of pupils, which leads to low competency and low enthusiasm. However, by incorporating teaching strategies, language classrooms may develop into dynamic centres of learning that encourage imagination, critical thinking, and successful communication. The significance of implementing teaching strategies in language classrooms and how they may transform language teaching and learning are both discussed in this article.

### **Significance of Teaching Strategies in Language Classrooms:**

The promotion of active student participation is one of the most significant benefits of using innovative teaching strategies in language classrooms. Traditional approaches, such as lectures and rote memorization, tend to be passive, leaving students as mere recipients of information. In contrast, innovative techniques, such as project-based learning, group activities, and technology integration, encourage students to actively engage with the language. Traditional language classes may be revolutionized by utilizing innovative teaching techniques that foster an active and engaging learning environment. Project-based learning is one such method, in which students engage in active learning by working on actual projects. With this method, students may use their linguistic abilities and academic knowledge to complete important tasks, which promotes understanding and learning motivation. Collaborative learning is yet another cutting-edge teaching technique. Student interaction and meaningful dialogue are fostered by collaborative activities like group projects and discussions. Students may hone their language abilities through these activities in a welcoming and helpful setting. As students cooperate to accomplish shared objectives, collaborative learning also fosters critical thinking and problem-solving abilities. Differentiated education is another innovative teaching strategy that may be used in language classes, along with project-based learning and collaborative learning. Differentiated education recognizes that each student has unique learning preferences, skills, and interests. Teachers may meet the requirements of each student and advance a student-centered learning philosophy by providing a variety of learning tasks, materials, and evaluations. This method encourages diversity and student participation in addition to improving language acquisition. Improved student motivation and passion are advantages of utilizing novel teaching methods in language schools. Students are more likely to feel invested in and interested in their language learning process when interactive and technologically based activities are incorporated. This may result in greater engagement, focus, and sincere interest in the language being taught. Innovative teaching strategies promote a welcoming and varied classroom atmosphere by accommodating students' various learning preferences and aptitudes. Students of many backgrounds, linguistic ability, and cultural experiences are present in language classes. Traditional teaching strategies frequently ignore these variances, which causes some students to be disengaged and make slow progress. Personalized learning and differentiated instruction, on the other hand, enable teachers to modify their lesson plans to meet the requirements of specific pupils. Teachers may provide meaningful learning experiences and make sure that all students feel valued and supported by customizing the curriculum to each student's learning preferences, learning styles, and capabilities.

Innovative teaching strategies foster problem-solving and critical thinking abilities, all of which are crucial for language learning. Learning a language takes more than just memorization of

vocabulary words and grammar rules; in order to communicate successfully, learners must be able to think critically and creatively. Innovative strategies encourage students to assess, evaluate, and use their language abilities in real-world contexts, such as inquiry-based learning and task-based education. Students gain language competence and the capacity to acclimate to new linguistic and cultural environments via problem-solving tasks. Additionally, one excellent example of an innovative teaching strategy is the incorporation of technology in language classroom. Language learners have access to a wide range of options thanks to technology, including multimedia resources, virtual language interactions, and online language tools. Students receive real language input through interactive platforms and digital tools, enabling meaningful dialogue within and outside of the classroom. By incorporating technology, instructors may close the gap between the classroom and the outside world, improving the relevance, interaction, and engagement of language learning. The inclusion of technology can also significantly improve language acquisition. To increase students' engagement and comprehension, teachers might make use of multimedia tools like films and interactive games. Additionally, with the use of online language learning tools, students may develop their language abilities at their own speed for more individualized learning experiences. Technology may improve accessibility and provide a variety of learning possibilities in language classes. Furthermore, innovative teaching strategies guarantee that language classroom stay current with the evolving needs of a globalized society. Language classes must change as technology continues to influence our interactions and communication, and it is essential to provide students the tools they need to succeed in this digital age.

**Conclusion:** In conclusion, implementing innovative teaching strategies has enormous potential to transform language classrooms. Language instructors may build dynamic and inclusive learning environments by encouraging active student engagement, addressing varied learning needs, strengthening critical thinking abilities, and using technology. Innovative teaching strategies not only increase student enthusiasm and engagement but also help language learners acquire the fluency and competence required for successful communication in the target language. To address the changing requirements of our kids, it is essential for educators to embrace innovation and continually investigate fresh ideas. To establish a motivating and effective learning environment, innovative teaching strategies must be used in language classrooms. Students' engagement, motivation, and language competence are improved by techniques including project-based learning, technological integration, collaborative learning, and customized instruction. Language teachers may equip students with the abilities and information necessary to thrive in a globalized environment through the use of innovative teaching strategies.

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## CLASSROOM MANAGEMENT

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### Abstract

*This article will discuss about classroom management and students learning behavior in the classroom. The three themes that will be explored throughout this paper are the effective ways to set up a classroom, the importance of rules and routines, and creating a safe and positive learning environment for students. By incorporating these three themes teachers will be able to manage their student's behavior in the classroom which will increase student productivity in the classroom.*

**Keywords:** classroom management, rules and routine, learning environment

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### Introduction

Classroom management is the process teachers use to ensure that classroom lessons run smoothly without disruptive behavior from students compromising the delivery of instruction. It includes the prevention of disruptive behavior pre-emptively, as well as effectively responding to it after it happens. Such disruptions may range from normal peer conflict to more severe disturbances of the social class dynamics, such as bullying among students, which make it impossible for the affected students to concentrate on their schoolwork and result in a significant deterioration of their school performance.

### Meaning of Classroom

The class room is an immediate management environment for formal knowledge acquisition. Its also a shelter for both teacher and learners so as to engage in educative activities.

Class room is made up of the teacher, the learner, learning equipment and the environment.

### Meaning of Management

Class room management is used by the teachers to describe the process of ensuring that the classroom lesson runs smoothly despite disruptive behavior by students. The term also implies the prevention of disruptive behavior.

However, classroom management that branch of school administration which deals with all the necessary arrangements needed for carrying out efficiently and effectively to academic work in the classroom.

### Definition of Classroom Management

“The action taken by the teachers to create and maintain a learning environment conducive for successful instructions” - **Evertson & Weinstein 2006**

### The Aims of Classroom Management

- 1) Encouraging the desired behaviour from the students
- 2) Create positive learning environment
- 3) Form an interpersonal relationships between the teacher and students
- 4) Use the time allocated for learning to optimal
- 5) Encourage the involvement of students in the teaching and learning process
- 6) Reduce the disciplinary problems
- 7) Manage and effective routine
- 8) Students will become more independent

### Features of Effective Classroom Management

1. Establishing Rapport and Building Relationships
2. Creating a Positive Learning Environment
3. Providing Engaging Instruction

4. Promoting Student Engagement
5. Having a Clear and Concise Behavior Policy
6. Establishing Classroom Routines and Procedures
7. Implementing Effective Discipline
8. Implementing Effective Communication
9. Continuing Professional Development
10. Constantly Reflecting on One's Teaching Methods

### **Types of Classroom Management**

4 different classroom management styles

1. Authoritarian Classroom Management Style
2. Authoritative Classroom Management Style
3. Permissive Classroom Management Style
4. Indulgent Classroom Management Style

#### **1. What is Authoritarian classroom management?**

Authoritarian. A teacher with complete control over the classroom is an authoritarian classroom management style. Students lack the freedom to participate actively and to respond. The instructor retains the centre of attention and overall authority in the classroom.

#### **2. What is Authoritative Classroom Management?**

A balance between teacher control and student interaction characterises the authoritative classroom management approach. Students are urged to participate and work together in this type of classroom while also adhering to the regulations. Although the structure is there, it does not supplant student liberty. The teacher values the opinions of the students, especially when it comes to suggestions for improving the learning environment.

#### **3. Permissive Classroom Management Style**

Low levels of control and student interaction are also characteristics of permissive classroom management. The pupils are essentially given free rein to do as they wish. This mostly results from the teachers and the administration's lack of organisation and planning.

#### **4. Indulgent Classroom Management Style**

Indulgent teachers are much more involved with their students than permissive ones are. They tend to be overly pleasant despite having a genuine concern for their students and what is happening in their life.

### **Effective Classroom Management Tools**

1. Classroom Rules
2. Classroom Cheers
3. Call & Responses
4. Brain Breaks
5. Action Word
6. Reward Coupons

**Some of the key benefits of effective classroom management include:**

- **Creating a positive learning environment** – A positive learning environment is one of the most important factors in promoting student learning. Classroom management can help create an environment that is conducive to learning, where students feel safe and respected.
- **Preventing disruptive behavior** – Disruptive behavior can interfere with the learning process and make it difficult for teachers to teach effectively. Classroom management techniques can help prevent disruptive behavior from occurring in the first place.
- **Setting clear expectations for student behavior** – When students know what is expected of them,

they are more likely to behave appropriately. Classroom management can help teachers set clear expectations for student behavior.

- **Making it easier to teach effectively** – When classrooms are managed effectively, it can make it easier for teachers to teach effectively. Classroom management can help reduce the amount of time spent dealing with disruptive behavior and make it easier to implement instructional strategies.

### **What are some common classroom management problems?**

There are a number of common classroom management problems that teachers face. Some of the most common problems include:

- **Disruptive behavior** – Disruptive behavior can interfere with the learning process and make it difficult for teachers to teach effectively.
- **Lack of engagement** – Lack of student engagement can lead to disruptive behavior and make it difficult for teachers to maintain control of the classroom.
- **Poor organization** – Poor organization can make it difficult for teachers to find the materials they need and can lead to disruptions in the classroom.
- **Classroom management problems** can also arise from a lack of teacher preparation or experience. Inexperienced teachers may not be familiar with effective classroom management techniques, or may not be prepared to deal with the challenges of managing a classroom.

### **Conclusion**

In conclusion, students' learning and behaviour can be affected by different classroom management aspects which can be in the classroom and also teaching strategies. As future teachers, we should acknowledge how important these classroom management aspects can promote learning and engagement for our students. These aspects can help teachers determine how to create the best learning environment for their students that will help them succeed academically in their classroom.

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## BLENDED LEARNING

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### *Abstract*

*Blended Learning is the future of Education. Blended Learning is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods. It requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace. Online Learning is part of Blended learning and is a learning technique in which use of both ordinary teaching and advanced modern online teaching, online learning materials are largely used. It has been around for more than two decades however not got the approval it sought to have. It is the dissemination of e-learning module courses using internet infrastructure and sources. This study, therefore, aims to review students, teachers, professionals' perceptions of blended online learning on various aspects of the learning process. Online education seems to stay for the time and in the future as per consensus through interviews and surveys conducted. Online blended learning has been seen to optimize the maximum benefits of old teaching methods and access to online learning materials. Also, will allow more students to access the learning and will develop professor skills in adjusting the assessment for digital.*

**Keywords:** *Blended Learning, Face-to-Face mode, Online mode, Flipped Learning, Hybrid Learning, Flexible Model, Hyflex courses etc,*

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### INTRODUCTION:

Blended Learning is one of the most modern methods of learning helping in solving the knowledge explosion problem, the growing demand for education and the problem of overcrowded lectures if used in distance learning, expanding the acceptance opportunities in education, being able to train, educate and rehabilitate workers without leaving their jobs and teaching housewives, which contributes to raising the literacy rate and eliminating illiteracy; blended learning increases the learning effectiveness to a large degree, decreases the time environment required for training, decreases the training costs, allows the learner to study at his favorite time and place, allows for live interviews and discussions on the network, provides updated information suiting learners' need, and provides simulations, animations, practical events and exercises and practical applications (Al-Shunnaq and Bani Domi, 2010).

Blended Learning is one of the contemporary trends of education and one of the new trends of the teacher in the twenty first century; it can be described as an educational method in which more than one means is used for transmitting knowledge and experience to learners to achieve the best of the learning outputs (Freihat, 2004); accordingly, this model combines the advantages of e-learning and the benefits of classroom education; this education is based on the integration between the traditional learning and e-learning (Al-Rimawi, 2016).

Indian Gurukula and Ancient Indian universities used a variety of teaching learning practices, like Listen-reflect-practice;(Shravana, Manana, Nidhidhyasana); Multichanal Learning, Lecture, Self-Study, Peer-Group-Learning, Learning with experience, apply, Teach, etc; Debatesand Orgumentation(Vaad-Vivad-Vitark); Question-Answer; Prashnottar vidhi; Imitation(Anukarana); Repetitionand Rote Learning (Punaravritti); Explanation and Illustration(Vyakhya-Drishthanta Vidhi); Demonstrationand Practice(Pradarshana-Abhyaasa); Tour or Field Visits(Bhramana Vidhi); Story telling(Katha-Kathan).

Vaughan (2008) ; Blended Learning as a thoughtful fusion of face-to-face and online learning experiences. "During the online and the "technology-mediated components of these learning experiences, students are not required to be physically together in one place but may be connected digitally through online communities" (Cleveland-Innes & Walton)

“Blended Learning thus, is a blending of carefully chosen learning tactics from face-to-face and technology-mediated learning domains to achieve expected learning outcomes” - **Mukhopadhyaya-2022**

It requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace.

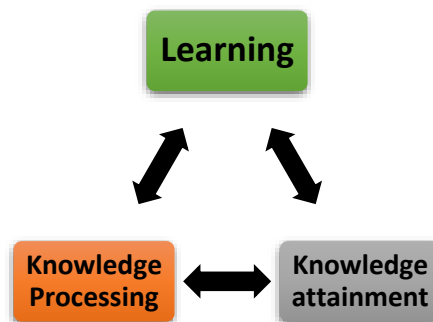
#### A Few associated terms

In **Flipped Learning**: Students learn in advance at home, followed by learning in the classroom. This sequencing has also been termed individual learning at home, followed by group learning in the classroom. - **Mukhopadhyaya-2022**

In the Flipped learning model a regular face-to-face classroom lecture is simultaneously streamed online. Hybrid learning as a mode of blended learning combines online educational materials with traditional in the mechanisms.

“Hyflex Learning combines the terms ‘hybrid’ and ‘flexible’ “In Hyflex courses, students can choose from one of three participation paths”

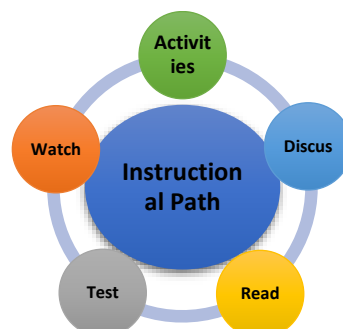
- Participate in face-to-face synchronous class sessions in person (in a classroom)
- Participate in face-to-face class sessions via video conference (e.g., Zoom)
- Participate fully asynchronously via course works”



- ❖ Direct Instruction - Basic Education
- ❖ Self-regulated Learning - Acquiring Knowledge
- ❖ Multi channel Learning - Depending Knowledge
- ❖ Research and Experimentation - Creating Knowledge

#### Blended Learning Models for Contextualization

- Face-to-face driver Model
- Rotation Model
- Flex Model
- Online Lab School Model
- Self-Blend Model
- Online driver Model



#### Benefits of Blended Learning:

1. Blended learning is more effective class either face-to-face or online learning

2. Blended learning course students perform better than f2f or online courses students
3. Students satisfaction more in BL courses than in f2f learning models.
4. Greater Independanceand opportunities across countries and cultures.
5. Opportunities for peer and expect collaboration across countries and cultures.
6. Hegher flexibility anytime, anywhere self pacing for mastery learning
7. Increased synchroneous and asynchrineous interaction among peer and with teachers.
8. Develop digital skills
9. In helps learner become virtual, globle citizens.

**Blended Lerning Plan:**

1. Curriculam
2. Learning Resources
3. Learning Assessment
4. Teacher Readiness
5. Student Readiness
6. Academic Leadership
7. Financial Provisison
8. National Infrostructure
9. International Infrastructure

**Blended Learning Policy Statement**

1. India will adapt an ODL and Online integrated Blended System of Education
2. All Indian Educational Institutions will adopt Blended Learning in all Courses at subjects at all levels
3. All students will learn to aquire,deepen and create knowledge.

**Enabling Policies National Infrastructure**

Fiber optic network will be laid down to connect people and all educational institutions in remote villages and dispersed locations.

**Enabling Policies Institutional Infrastructure**

1. Requistic ICT infrastructure will be developed in all educational institutions.
2. All Teachers and students will have personal access to digital devices with internet connectivity and atleast 1.5Mbps internet speed (need advice)

**Enabling Policies Curriculum**

1. Curriculum will be reconstructed to align with the attributes of blended learning
2. Every educational institutions will adopt blended programs, blended courses, and blended units designs

**Enabling Policies: Learning Resources**

1. High Quality Learning resources in textual. Video, games, animations, simulations, mobile apps, virtual labs, will be made available online free of cost.
2. The online learning resources will be periodically reviewed and refreshed.
3. A National OER of digital contents, blended programs, courses and unit designs will be created.

**Enabling Policies: Teacher Readiness**

1. All teachers will be trained in blended learning and aquiped with knowledge of the science of human learning and equipped with necessary ICT skill for imlimenting blended learning.
2. Every institution and teacher will choose a blended learning Model to suit the context.



**Enabling Policies: Academic Leadership**

1. All academic Learders will be oriented trained in blended learning and equipped with knowledge of science of human learning and the ICT skills necessary for implementing blended learning.
2. Every institution will developed institutional plan of implementation BLP, implement and create evidence with protection.
3. Instructors will develop and follow a Theory of change to implement the BLP.

**Enabling Policies: Financial Provision**

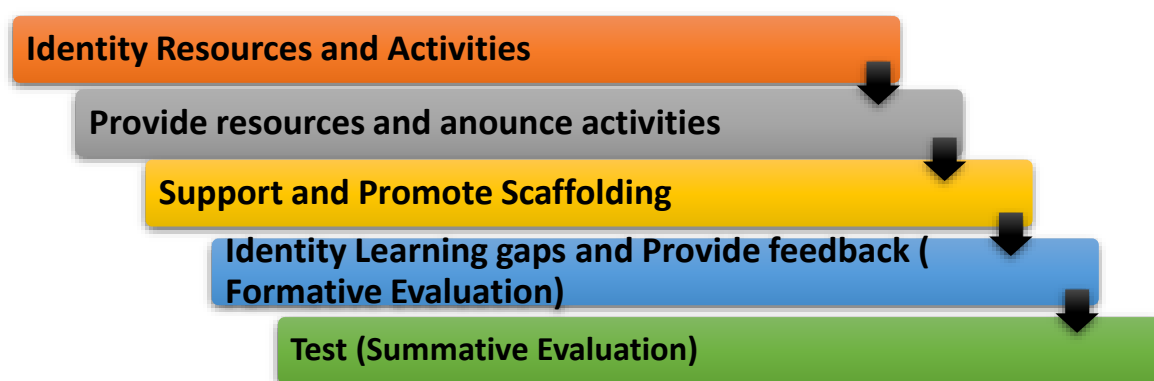
There would be adequate financial support for adopting Blended Learning.

**Challenges:**

- ❖ Magnitude if the System
- ❖ Wide Diversity and Disparity
- ❖ Digital Divides
- ❖ Attitudes
- ❖ ICT Skills Deficiency
- ❖ Poor Access to Digital Devices
- ❖ Poor Internet Connectivity.

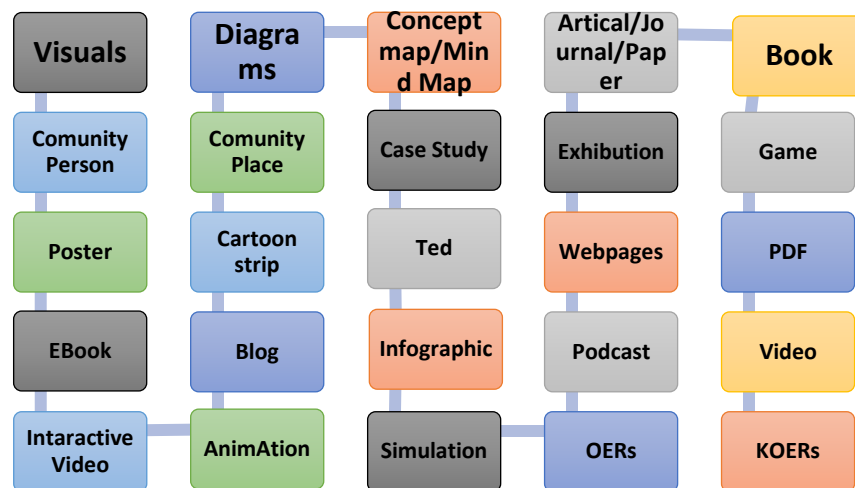
**Indian Framework for Blended Learning**

Review Learning Outcomes and decide mode of teaching-learning.....

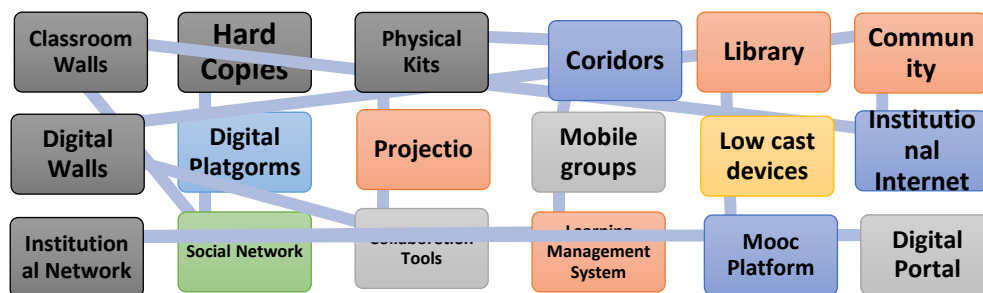
**Identity**

Blended Learning					
Online		Offline		Flexy (Online or Offline)	
Resources	Activities	Resources	Activities	Resources	Activities
Reading/Viewing Learning Resources		Interactive Material		Use-generated material (User=Learner)	
Resources				Activities	
Blended Learning					
Individualised Activities		Whole Group with Facilitator		Pair	
Resources		Activities			
Blended Learning					

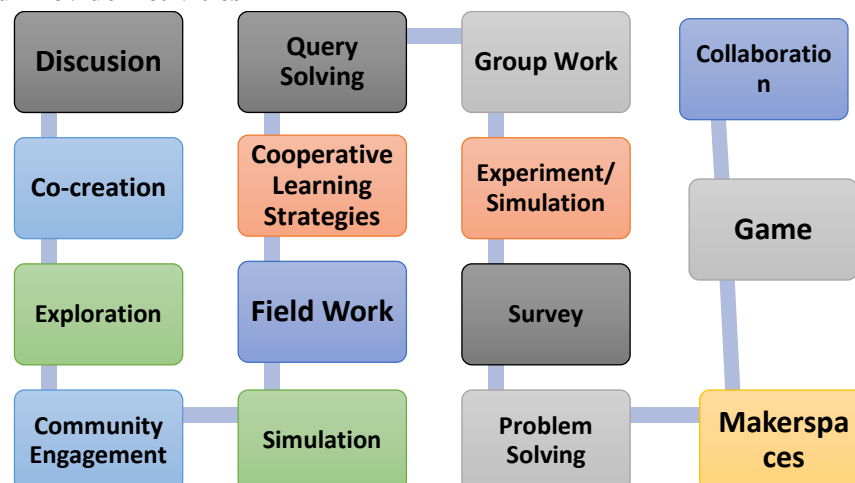
### Identity Resources

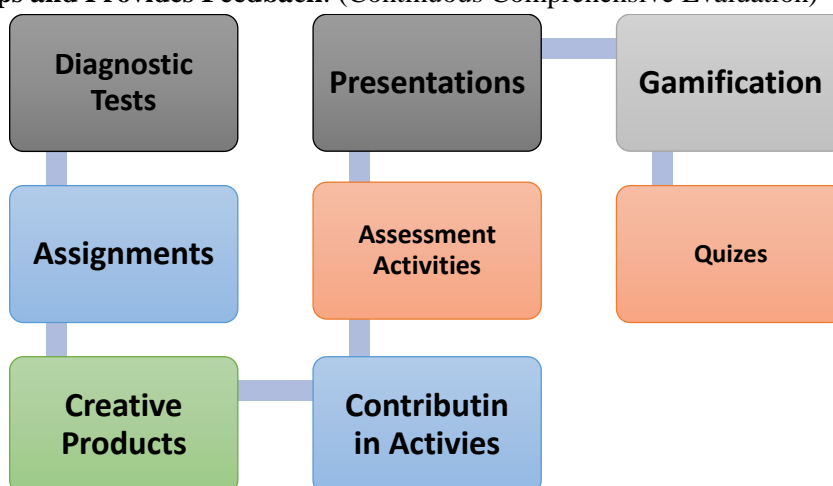
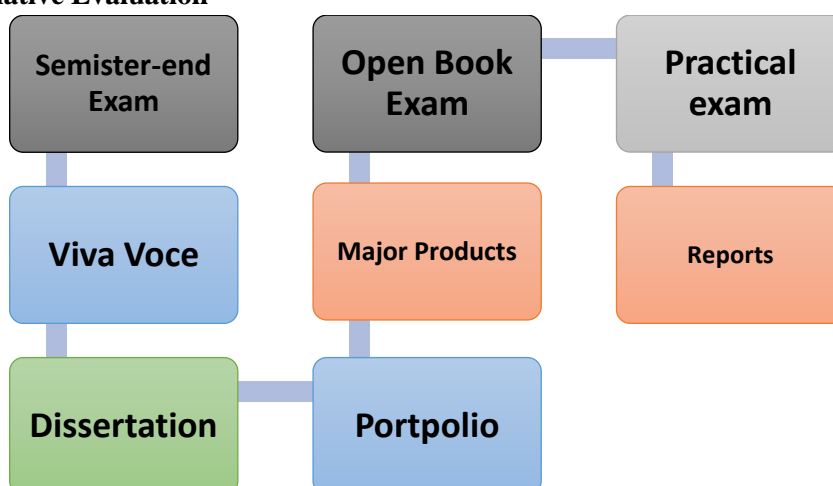


### Provide Resources



### Identity and Provide Activities

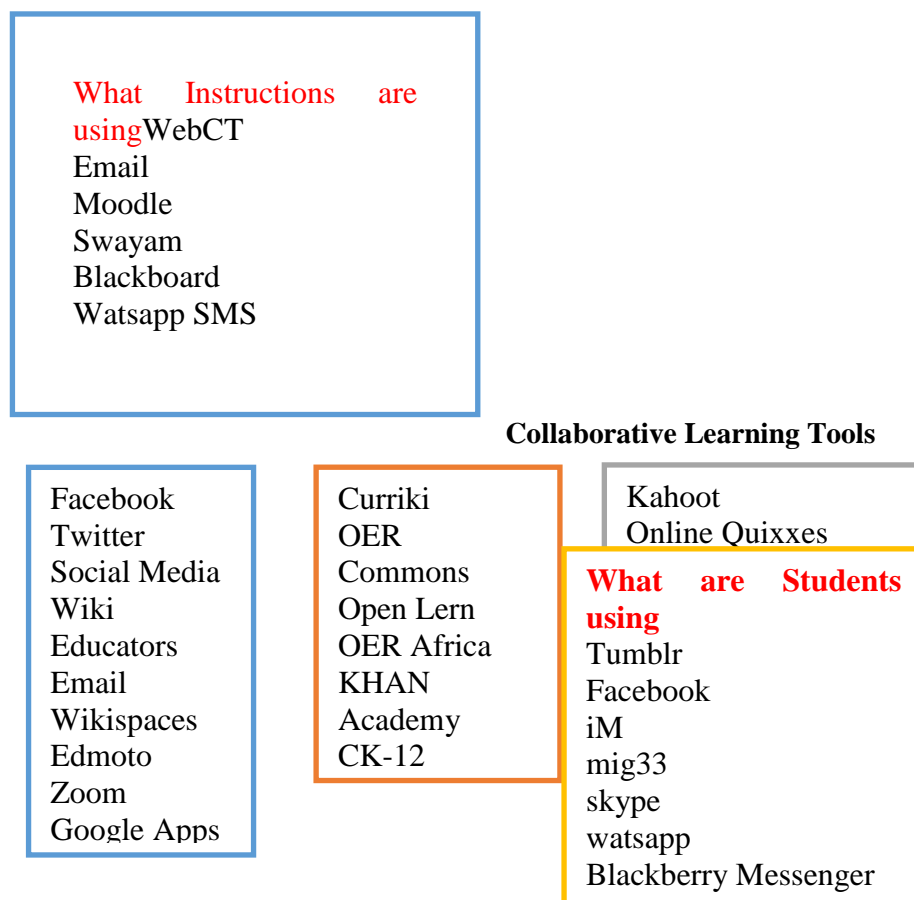


**Identity Gaps and Provides Feedback: (Continuous Comprehensive Evaluation)****Test: Summative Evaluation****What are the Issues?**

- Connectivity and Electricity
- Access to Learning Platform
- Learning Resources
- Teachers Capacity
- Learner Readiness

**What NEP-2020 Says:**

- **Inclusion and Access:** Enhance Educational access to Disadvantaged Group Including Divyang Students.
- **Digital Platform:** Digital Platforms and ongoing ICT based educational institutions to be optimized and expanded.
- **Blended Learning:** Emphasis on effective models of Blended Learning.
- **Content Creation:** Content creation, digital repository and dissemination, Technology Integration in Teaching, Learning and Assessment.
- **Expansion of Platforms :** Expansion of existing learning platforms – DIKSHA, SWAYAM, etc
- **Pilot Studies:** A series of Pilot studies to be conducted.



### Conclusion:

Finally Blended Learning in the appropriate response for achieving the policy vision and developing globally comparable education system. NEP-2020 has an implicit Blended Learning policy. The ingredients are stream all over the document. There is need to stitch them logically together to create a comprehensive and meaning full Blended Learning Policy.

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## PEDAGOGICAL METHODS AND INNOVATIONS - COLLABORATIVE AND PROBLEM BASED LEARNING

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### Abstract

*Pedagogy is a technique for carrying out a theme or carrying out an activity to create a stress-free learning environment for every student. Innovative Pedagogy is the process of proactively introducing new teaching strategies and methods into the classroom to improve academic outcomes and address real problems to promote equitable learning. It entails both the innovative methods of teaching and an examination of the effects on the teaching process. The significant difficulty of modernizing schools, which are frequently strict and outmoded, exists throughout the world. The pace of change in the globe is rapid. Too many pupils lack motivation and perform much below their capabilities. Aspirational goals are being set for educational systems around the globe in the same manner. For all of these reasons, educational institutions and systems need to be prepared to step outside their comfort zones and abandon the tried-and-true. Creativity is crucial. Significant changes in curriculum policy also support educational innovation. In many nations, curriculum policy measures encourage the emergence of competences, particularly those commonly known as "21st century skills." Competencies like teamwork, perseverance, creativity, and invention are more inherent to various Methods of instruction and learning through pedagogy than they are taught. If 21st century competencies are to be systematically developed rather than left to emerge by chance, pedagogies must intentionally foster them. Given that people are social creatures, collaboration is the most prevalent crucial abilities to teach students during the learning process (Barrows, 1985). Through this methodology, students are to possess problem-solving skills as well as to enhance their learning independence and creativity (Mühlfelder & Chandrasekaran, 2015). Collaborative problem-based teaching methodologies can be adopted at all educational levels, from elementary school to higher education, and are not just reliant on certain degrees of education.*

**Keywords:** Collaborative problem based learning, 21<sup>st</sup> century skills, Competencies, Problem solving, Modernization.

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### INTRODUCTION:

Innovation and knowledge transfer are at the heart of the growth process in all sectors, including business and education. Therefore, ongoing innovation is crucial for all educational institutions. For students to prosper in the twenty-first century, they need be able to think critically and creatively. Teachers and students must be proactive in their research, discovery, and use of a range of strategies in order to create novel notions or a method to discover something new. Innovation is the process of tackling problems in fresh ways and coming up with original solutions. It encourages creative problem-solving and encourages pupils to think beyond the box, it also serves to raise the standard of instruction generally. The environment in the classroom should be geared toward embracing and encouraging instructors' creative ideas. Innovation in education at schools is becoming more than simply a fad. It is quickly becoming into a method of instruction for both teachers and pupils. The World Intellectual Property Organization (WIPO) has classified India as the 48th most innovative country in the world out of 131 countries. Therefore it is noteworthy that India is making progress in this area.

One of the tools the teacher uses to carry out the manner in which students are taught in a classroom is the learning model. The educator can create lesson plans using the learning model in accordance with the learning concepts required based on the learning objectives and the characteristics of the learners. The process of education and the students' learning results will be significantly impacted by the teaching methodology used by the teachers. In this day and age, it is great to adopt learning models that direct us toward actual learning. A learning methodology known

as "authentic learning" bases the method of education on real-world challenges. Additionally, the learning approach employed must be modified to meet the needs of the 21st-century workforce. According to Kivunja (2014), students can offer the following four talents in order to generate high school graduates who can compete in the 21st-century job market: Critical thinking, communication, creativity, and teamwork are the first four.

Collaborative problem-based learning (CPBL) models are one learning strategy that has gained traction and is relevant to collaboration abilities. This model's foundation is problem-based learning that incorporates cooperation abilities. Collaborative problem-based learning models can be adopted at all educational levels, from elementary school to higher education, and are not just reliant on certain degrees of education. High school is among the relevant educational levels for this learning paradigm. Since high schools are an example of educational levels that are anticipated, they are being capable to develop a trained workforce in line with the demands of the 21st century, High School is best to implement this model.

### **COLLABORATIVE LEARNING:**

A collaborative (or cooperative) learning style involves students cooperating on projects or assignments in a class size small enough to guarantee everyone's participation. Students in the group may collaborate on a shared task or work independently on individual activities that contribute to a common final product. This is different from unorganized group projects. In order to promote more effective collaboration, several collaborative learning methodologies put pairings, groups, or teams of mixed ability to work in competition with one another. There are several different methods for organizing and carrying out activities that are used in collaborative and cooperative learning. Additionally, peer tutoring is a form of group instruction. Students get an additional month's worth of growth on average during an academic year thanks to collaborative learning strategies. The impact's magnitude varies, though, therefore accuracy in the details is crucial. The term "collaborative learning" can refer to a variety of instructional strategies, but the most effective collaborative learning goes much beyond simply grouping students inviting them to collaborate in groups or in partnerships; the best learning outcomes come from structured procedures and carefully crafted projects. Although it is not always essential, there is some evidence that competition within groups can improve collaboration. However, this can lead to students emphasizing the competition more than the learning it is designed to foster. The majority of effective strategies encourage student conversation and participation. According to the data, approaches to collaborative learning work best in groups (approximately three to five students); activities involving pairs of students or groups of more than five students have less favourable effects. The use of collaborative learning strategies in the science classroom appears to be particularly promising, according to some studies.

### **COLLABORATIVE SKILLS:**

The ability of pupils to complete tasks, solve issues, or develop goods in groups is known as a collaborative competence. Students' accountability for each activity and appreciation for the talents and contributions of all group members serve as examples of this emphasis on skills (Laal & Ghodsi, 2012). Austin and Baldwin provide another definition of collaboration abilities as the capacity to cooperate in groups to get results that are expected. Mutual trust, exact coordination, and comprehension of the need to carry out work with full accountability are requirements for implementation to attain goals and provide these effects (Austin & Baldwin, 1991).

There are five signs for collaboration skills that require consideration. These indicators were created by modifying student attributes to aid teachers in providing objective evaluations. The following five factors make up the assessment of collaboration skills:



**Participation:**

- ◆ Active participation in conversations and the capacity to offer valuable ideas
- ◆ Capable of clearly dividing responsibilities

**Time Management:**

- ◆ Set aside time as necessary.
- ◆ Each other's on-time assignment completion is appreciated.

**Task completion:**

- ◆ Able to finish duties that have been assigned and communicated
- ◆ Able to create workarounds based on suggestions from other users

**Team Work:**

- ◆ Receive feedback from other members, communicate effectively, and persuade other members to make an effort to group decisions.

**Evaluation:**

- ◆ Ability to process information discovered by oneself and by other group members
- ◆ Assist groups in drafting reports on the findings of investigations or lab work
- ◆ Present the findings of an investigation or practicum in front of the class.

**PROBLEM BASED LEARNING:**

A student-centered learning model is problem-based learning. According to this paradigm, students are anticipated to conduct investigations, combine theory and practice, and use their existing knowledge and skills to find solutions (Savery, 2006). PBL's main objective is to increase students' aptitude for problem-solving. According to Hung, Jonassen, and Liu (2008), this model has the following traits:

- (i) Learning has a certain issue, to start. With the problem as the center of the learning process, students can start tackling real-world, unstructured issues. The capacity among the pupils to relate their knowledge to their experience in addressing difficulties is highlighted by focused problems.
- (ii) Student-centered learning makes it difficult for the school to influence how students learn.
- (iii) Independent learning is the third. To enhance the diversity and experience of each student during the learning process, this learning model mandates that students create groups of 5-8 individuals (Justo, Delgado, VázquezBoza, & Branda, 2016; Scott, 2014). Learners are anticipated to be capable to develop their skills both independently and in groups, depending on the diversity and expertise that has been attained.
- (iv) Learning from self-reflection. It is necessary for students to be able to check or evaluate their understanding. Additionally, they must be capable to modify their learning tactics to fit their unique needs.
- (v) The teacher just serves as a facilitator or tutor. In this learning as they do, the instructor is emphasized as a facilitator of learning rather than as a disseminator of information.

**CONSIDERATIONS FOR USING PROBLEM BASED LEARNING:**

The problem is provided first rather than pertinent content being taught and then having students use the knowledge to solve difficulties. PBL assignments might be brief or longer, taking up an entire semester. Since PBL is frequently group-oriented, it is advantageous to set aside class time to help students get ready to work in groups and to participate in their PBL project.

In general, students must

1. Examine and identify the issue.
2. Find out what they already know about the underlying problems associated with it.
3. Find out what they need to know and where they can get the knowledge and resources they need to address the problem.

4. Examine several solutions to the issue.
5. Resolve the issue.
6. Inform us of your discoveries.

#### **GETTING STARTED WITH PROBLEM BASED LEARNING:**

1. Clearly state the project's learning objectives.
2. Make the issue happen. This should ideally represent a situation that students might experience in their future employment or personal life. Activities including PBL frequently start with cases.
3. Set ground rules at the start to get pupils ready for productive group work.
4. To give the students practice evaluating both their own work and that of their peers, introduce them to group processes and do some warm-up exercises.
5. To give the students practice evaluating both their own work and that of their peers, introduce them to group processes and do some warm-up exercises.
6. Think about assigning duties to the pupils or letting them split up the job. Alternately, the assignment can call for students to adopt different viewpoints, such as those of local business owners or leaders.
7. Decide how you'll review and grade the task. Think about including the self- and peer-assessments in the assignment grade.

#### **BENEFITS AND DRAWBACKS OF PROBLEM BASED LEARNING:**

A good model to use in a learning system is problem-based learning (PBL). When there is disagreement within the group, this learning style gives students the chance to respect one another while exchanging ideas and knowledge (Alrahlah, 2016). PBL offers benefits but also a drawback when it comes to implementation. The benefits and drawbacks of PBL are:

##### **BENEFITS:**

**Student-cantered learning:** It promotes active learning, strengthens comprehension, references, and the development of skills for lifelong learning.

**General competencies:** PBL enables students to acquire the necessary general abilities and dispositions for use in the workplace in the future.

**Integration:** PBL encourages and enhances integration in the fundamental subjects.

**Motivation:** PBL must be made into a model of learning that is enjoyable for both students and teachers, and it calls for active participation from all students.

**Deep learning:** PBL promotes deep learning by having students engage with the learning materials, make connections between concepts and real-world situations, and gain a better knowledge of the content.

**Constructivist method:** Students draw on prior knowledge and expand upon conceptual knowledge frameworks previously established.

##### **DRAWBACKS:**

**The teacher cannot "teach":** The teacher stresses that they cannot teach because pupils can develop their own knowledge and understanding, which often frustrates students.

**Human resources:** The teaching process calls for multiple teachers.

**Additional sources:** All students are expected to use the library, the internet, and other resources at the same time to get information.

**Role of the Model:** Less students get the chance to ask teachers questions.

**Excessive Information:** Independent study may cause students to lose confidence.

#### **PROBLEM BASED LEARNING AND TECHNOLOGY**

The growth of technology has had an impact on problem-based learning. Networked and immersive technologies, for example, have created a wealth of new opportunities for study and

experimentation in the design of PBL for digital and eLearning contexts. According to Moallem(2019), New models of learning that gradually shift away from focusing on content knowledge and toward supporting and modeling process skills, problem-solving skills, and thinking skills are required in response to the emerging global challenges and the need to transform pedagogy to better support the acquisition of twenty-first-century skills. Ulisses F. Arajo, President of the PAN-PBL Association of Problem-Based Learning and Active Learning Methodologies, states in a similar vein that "the use of digital tools and technologies that promote interaction and new forms of social relations in line with new knowledge production led to different forms of course organization where the roles of students and teachers change in the learning process." PBL methodologies can be paired with free or inexpensive tools like Zoom, WhatsApp, and Google Drive to promote collaborative work. According to Khalid, Rongbutisri, and Buus (2012) in "Facilitating Adoption of Web Tools for Problem and Project Based Learning Activities," the following technology tools are suitable for frequent tasks students complete during each PBL workgroup phase:

Sharing	Dropbox, Zotero, Diigo, YouTube, Facebook, Flickr, Twitter, Blogger, Delicious, Digg, Box.net, SlideShare, LogMeIn, TeamViewer
Discussing	Facebook, LinkedIn, Zoom, Skype, MSN, Twitter, Blogger, Doodle, SignAppNow, Canvas, Adobe Connect, Lectio.dk, Microsoft OneNote, FirstClass
Reading	Google
Writing	Google Docs, Typewith.me, MS Office with Dropbox
Communicating	Facebook, LinkedIn, YouTube, Flickr, Zoom, Skype, MSN, Yahoo messenger, Twitter, Blogger, Doodle, SignAppNow, Adobe Connect, Lectio.dk, Microsoft OneNote, FirstClass
Reflecting	Facebook, LinkedIn, YouTube, Flickr, Zoom, Skype, MSN, Yahoo messenger, Twitter, Blogger, FirstClass
Argumenting	Facebook, LinkedIn, YouTube, Flickr, Zoom, Skype, MSN, Yahoo messenger, Twitter, Blogger, FirstClass, Email, Microsoft OneNote
Diagramming	Gliffy, Diagramly, Dabbleboard

It is yet unknown how problem situations are developed for online PBL and to what extent digital environments can be learner-centered and learner-driven. Online PBL does appear to provide fresh learning environment where technology may promote new and novel types of educational interaction, despite the worries and anxieties about the ideas presented by both teachers as well as students and prove that it can function as a disembodied identity.

**CONCLUSION:** The urgent requirement is to foster an environment that encourages innovation rather than simply continuing with the traditional methods of instruction and assessment. Combining several subjects, going beyond the fundamentals, stepping beyond the classroom, and ultimately arriving at a fresh and different result will help pupils develop an innovative streak from the very beginning. Knowing the fundamentals is a good starting point, but students must use that knowledge to apply and investigate until they find the best solutions. The 21st century demands more innovation in teaching and learning, and this innovation must permeate the pedagogies used in classrooms and institutions. Understanding pedagogical innovation is a "black box" that must be opened in order for progress to be made, despite the great hurdles it poses. Collaboration in the classroom is becoming more and more popular nowadays. In this method of instruction, the students are once again responsible for their group, and the teachers serve as their guides, mentors, and supervisors. Additionally, it teaches pupils how to solve problems, collaborate in teams, and negotiate.

Thus, it can be said that in order to implement Collaborative Problem Based Learning (CPBL), teachers who wish to use PBL must complete 6 phases. Additionally, there are five areas that teachers should focus on in order to help students develop their collaboration skills: participation, time management, task completion, teamwork, and evaluation. The implementation of CPBL can help students improve their problem-solving abilities; and can help students improve their ability to work independently and collaboratively.

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## LEVEL UP LEARNING: THE POWER OF GAMIFICATION AND GAME-BASED EDUCATION

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### Abstract

*Level-up learning is generally used in the context of education and development. It refers to the process of enhancing one's knowledge, skills or abilities to a higher or more advanced stage. To enhance the learning ability of students it is quintessential to adopt innovative methods in teaching. If teaching is made interesting then learning process may also become more interesting. The rapid advancement in information technology has evolved the novel methods of teaching, among them the gamification and game-based learning are becoming more popular. Gamification and game-based learning are similar, in that both strategies promote engagement and sustained motivation in learning. Gamification is turning the learning process into a game, while Games-Based Learning is using a game as part of the learning process. It is established that incorporation of elements like points, badges, leader boards may promote sense of achievement, motivation and healthy competition among learners. The interactive nature of games encourages collaboration, scientific habits and critical thinking, enabling learners to apply theoretical knowledge to practical scenarios.*

*Gaming has a deep influence on the brain's reward system, activating the release of dopamine, a neurotransmitter associated with pleasure and motivation. The surge in dopamine creates a sense of accomplishment and reinforces the behaviour, encouraging the player to continue gaming. Further, the activation of the brain's reward system in gaming can enhance motivation, focus, and overall enjoyment, making it a compelling area of study in the field of neuroscience. This paper deals with the gamification and game-based learning processes exploring their impact on learning and drawbacks on the education system. It is concluded that these methods may improve overall student engagement and knowledge retention among the students.*

**Key words:** *Gamification, Game based learning, Dopamine and knowledge retention.*

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### 1.0 Introduction:

Level-up learning emphasizes continuous improvement, setting higher goals, and acquiring a deeper understanding of the subject matter. It can apply to various fields, including academics, sport, arts, programming and many others. In the dynamic landscape of education and training, traditional methods of instruction are being complemented and, in some cases, replaced by innovative approaches that leverage the principles of gamification and game-based learning. These pedagogical strategies harness the inherent engagement and motivational power of games to enhance learning experiences across various domains. Gamification involves integrating game elements, such as competition, rewards, and challenges, into non-game contexts (Deterding, 2011), while game-based learning (GBL) employs actual games as educational tools (Gee, 2003) to foster active participation, critical thinking, and skill development. The integration of game elements and mechanics into learning environments has gained substantial attention due to its potential to address issues related to learner engagement, motivation, and knowledge retention. Research suggests that incorporating elements like points, badges, leaderboards (Deterding et al., 2011) and immersive narratives into educational settings can promote a sense of achievement, motivation (Hamari, 2014) and healthy competition among learners, driving them to invest more effort and time into their studies. Moreover, the adaptability of gamification across diverse fields (Seaborn & Fels, 2015), from corporate training to classroom education (Hamari, 2014), further accentuates its significance in modern learning paradigms. Game-based learning, on the other hand, takes a more direct approach by employing games as educational tools. These games are specifically designed to impart knowledge, skills, and

problem-solving abilities (Kapur & Bielaczyc, 2012) while maintaining an enjoyable and interactive atmosphere. By offering learners the opportunity to experiment, fail, and learn from their mistakes within a virtual environment, game-based learning facilitates experiential learning and empowers learners to explore complex concepts in a risk-free space. The interactive nature of games encourages collaboration, scientific habits (Steinkuhler & Duncan, 2008) and critical thinking, enabling learners to apply theoretical knowledge to practical scenarios. This paper briefly delves into the multifaceted realm of gamification and game-based learning, exploring their theoretical foundations software applications (free and paid), pedagogical advantages, and real-world applications (Seaborn & Fel, 2015). By examining the existing body of literature and drawing insights from some studies, this study seeks to elucidate the impact of these strategies on learner engagement, knowledge acquisition, and skills development. Through a comprehensive analysis of the latest research, this paper aims to provide educators, trainers, and instructional designers with a holistic understanding of how gamification and game-based learning can be effectively harnessed to create engaging and impactful learning experiences.

**1.1 Gamification:** The impact of gamification on learners has been a subject of extensive research in recent years. Gamification involves incorporating game elements and principles into non-game contexts, such as education, to enhance engagement, motivation, and learning outcomes. Game mechanics or game elements are the rules that guide a player's actions, as well as a game's response to them. The point system, for example, determines which actions earn players points. Levels, badges, leaderboards, and other elements serve as additional examples. In a non-game context, gamification refers to anything other than a game. Such as, in education, gamification is evident when a teacher awards students badges such as "Perfect attendance" or "Early bird." Here motivation is extrinsic comes from the teacher.

**1.1.1 Types of Gamifications:** Gamification involves integrating game design elements into non-game contexts to enhance engagement, motivation, and learning. Here are various types of gamification techniques.

- a) **Points, Badges, and Leaderboards (PBL):** Users earn points, badges, or are ranked on leaderboards based on their activities or achievements.
- b) **Narrative or Storytelling Gamification:** Incorporates a storyline into tasks or activities to create a compelling and immersive experience.
- c) **Challenges and Quests:** Users complete specific challenges or quests to achieve rewards or progress in a gamified system (Werbach & Hunter, 2012).
- d) **Progression and Levels:** Users advance through levels or stages as they accomplish tasks or goals, providing a sense of achievement and advancement.
- e) **Competition and Leaderboards:** Users compete against each other, and their scores are displayed on leaderboards, fostering competition and motivation. These techniques are often used in various combinations to create engaging gamified experiences across different fields, including education, marketing, and employee engagement. The references provided offer comprehensive insights into the respective gamification techniques and their applications.

**1.2 Game-based learning:** It involves using games or game elements in educational settings, has gained significant attention in recent years for its potential to enhance the learning experience. Here motivation comes from within i.e. intrinsic motivation

**1.2.1 Types of GBL:** Game-based learning encompasses a variety of approaches and techniques, each designed to leverage the engaging nature of games for educational purposes. Here are several types of game-based learning.



- a) **Serious Games:** Serious games are designed with a primary purpose other than entertainment, often for educational, training, or health-related objectives (Djaouti et al., 2011)
- b) **Simulations:** Simulations replicate real-world scenarios or processes, allowing learners to interact with and learn from simulated environments (Gredler, 2004).
- c) **Educational Video Games:** Educational video games are specifically designed to teach particular concepts or skills, often incorporating game mechanics to engage learners.
- d) **Game-Based Assessments:** Game-based assessments use game elements to evaluate learners' knowledge and skills in an interactive and engaging manner (Ifenthaler, 2015).
- e) **Immersive Virtual Reality (VR) Learning:** Immersive VR learning involves creating realistic, three-dimensional environments that learners can explore and interact with, enhancing experiential learning (Merchant et al., 2014)

These diverse approaches to game-based learning offer innovative ways to engage learners and enhance educational outcomes, drawing from principles of game design and cognitive psychology.

**1.2.2 Apps for GBL:** Kahoot, Baamboozle, Quizzez, Quizlet, Edpuzzle, Nearpod, Blooket, Socrative, Educand, Classcart these are readily available Apps can be used to enhance learning among learners

**1.3 Example for Gamification and Game based learning:** Here's an example to illustrate the differences between GBL and gamified learning in the context of teaching mathematics to 3rd-grade students:

- a) **Game-Based Learning:** In this scenario, an application like Prodigy Math is employed. Within this game, students board on adventures in a magical world, undertake missions, engage in captivating battles, and even collect in-game "Pets." To advance, students are required to respond to questions that line up with educational standards, which are set by their teacher.
- b) **Gamified Learning:** Conversely, in gamified learning, students accrue points or earn badges by successfully completing math problems or worksheets designed for third graders. Additionally, a leaderboard may be incorporated to monitor progress and stimulate a sense of competition among the students.

#### **1.4 Key impacts of gamification and game-based learning on learners:**

- a) **Increased Motivation:** Gamification often leads to increased motivation among learners. Elements of games create a sense of achievement and competition, which can motivate individuals to complete tasks and achieve their learning goals.
- b) **Improved Engagement:** Games are inherently engaging, and when educational content is gamified, it can capture learners' attention and maintain their interest over time. This increased engagement can lead to better retention of information (Gee, 2003).
- c) **Fostering problem-solving skills:** Games often require players to solve problems and make decisions. When applied to education, gamification can help learners develop critical thinking and problem-solving skills by presenting them with challenges and rewarding them for finding solutions (Steinkuehler & Duncan, 2008).
- d) **Fostering reasoning skills:** Thorough games students learn to think logically, inspect observations, analyse information which help to solve the problems (Hakulinen et al., 2015).
- e) **Immediate feedback and assessments:** Games often provide immediate feedback, allowing students to assess their performance and make adjustments. This can lead to more effective learning and skill development (Barab et al., 2009).
- f) **Increased persistence:** The prospect of earning rewards or reaching higher levels can motivate them to continue learning, even when faced with difficult material (Stein & Li, 2017).
- g) **Social interaction:** Multiplayer and collaborative elements in gamified learning environments can promote social interaction (Deterding et al., 2011) and teamwork among learners (Hanus & Fox, 2015).

**h) Positive emotional experience:** Games are designed to evoke emotions such as excitement, curiosity, and satisfaction (Hanus & Fox, 2015). When applied to education, gamification can create a positive emotional experience that contributes to a more enjoyable and memorable learning process (Plass et al., 2015).

**i) Enhanced retention and recall:** Helps to retain the concept for long time (Hays & Singer, 1989).

**j) Personalized Learning Paths:** Game-based learning platforms can adapt to individual students' progress, providing customized learning experiences based on their performance and needs (Barab et al., 2009).

**k) Real-World Application:** Game-based learning can bridge the gap between theoretical knowledge and practical application by immersing students in realistic scenarios and decision-making processes (Aldrich, 2004).

**l) Long-Term Engagement:** Educational games can sustain learners' interest over extended periods, promoting continuous learning and skill development (Gee, 2003)

**m) Motivation for Mastery Learning:** Mastery-based progression in games encourages learners to persist and achieve proficiency in a subject area (Steinkuehler & Duncan, 2008).

### **1.5 Drawbacks of both Game-Based Learning and Gamification in Education:**

**a) Limited Content Coverage:** Game-based learning and gamification may not cover all educational content, potentially leaving gaps in students' knowledge (Hamari et al., 2014)

**b) Resource and Development Costs:** Developing educational games and gamified systems can be resource-intensive, requiring time and financial investment (Gee, 2003).

**c) Difficulty in Assessment:** Assessing learning outcomes in game-based environments can be challenging, as traditional assessment methods may not align well with gaming experiences (Anderson & Dill, 2000).

**d) Technical Barriers and Access Issues:** Limited access to technology and devices can be a barrier to implementing game-based learning or gamification, creating inequalities in educational opportunities. (Steinkuehler & Duncan, 2008).

**e) Overemphasis on Competition and Rewards:** Both game-based learning and gamification may overemphasize competition and rewards, potentially leading students to focus on extrinsic motivation rather than deep learning (Deterding, 2011).

These drawbacks highlight some of the challenges and considerations associated with the use of game-based learning and gamification in educational settings. While these approaches offer benefits, educators must carefully weigh their advantages against potential limitations.

**1.6 Science behind Gaming:** Gaming has a profound impact on the brain's reward system, triggering the release of dopamine, a neurotransmitter associated with pleasure and motivation. When a player achieves in-game goals, completes challenging tasks, or earns rewards, the brain's reward pathways are activated, leading to the release of dopamine. This surge in dopamine creates a sense of accomplishment and reinforces the behaviour, encouraging the player to continue gaming. Studies have shown that the anticipation and experience of rewards in video games closely resemble the neural processes observed in other reward-driven activities, such as drug addiction and gambling (Koeppe et al., 1998). The interaction between gaming and dopamine release is a key factor in the addictive nature of video games, as players seek the pleasurable sensations associated with dopamine release, compelling them to play more frequently and for longer durations (Lemmens et al., 2009). Additionally, the activation of the brain's reward system in gaming can enhance motivation, focus, and overall enjoyment, making it a compelling area of study in the field of neuroscience.

**1.7 Relation between Dopamine and Learning:** Dopamine, a neurotransmitter, plays a fundamental role in learning and reinforcement processes in the brain. It acts as a reinforcement signal, strengthening neural pathways associated with rewarding or positive experiences, thereby facilitating

learning and memory (Schultz, 2013). Dopamine is particularly crucial in reinforcement learning, where it helps the brain to assess the value of different actions and outcomes, enabling the selection of optimal choices in various situations (Glimcher, 2011). Studies have demonstrated that disruptions in the dopamine system can impair learning and decision-making abilities, highlighting its significance in cognitive functions (Cools, 2016). Furthermore, dopamine is involved in long-term potentiation, a process underlying synaptic plasticity, which is essential for learning and memory formation (Li et al., 2003). The intricate interplay between dopamine and learning mechanisms underscores its importance in shaping our ability to acquire and retain new information.

**1.8 Conclusion:** In conclusion, game-based learning and gamification represent innovative and effective educational approaches that harness the power of games to enhance learning experiences. By integrating engaging gameplay elements into educational activities, students are motivated to actively participate and explore complex concepts in a fun and interactive manner. Game-based learning not only fosters a deeper understanding of subjects but also cultivates crucial skills such as critical thinking, problem-solving, and collaboration. Furthermore, gamification techniques, such as rewards, challenges, and competition, inspire students to achieve their goals and excel academically. These platforms should seamlessly track progress as students work through subject matter and help identify where students are excelling, as well as where they need support. These methods create a dynamic learning environment, catering to diverse learning styles and preferences, ultimately improving overall student engagement and knowledge retention. Moreover, game-based strategies can be adapted to various subjects and educational levels, making them versatile tools for educators. As technology continues to evolve, the potential of game-based learning and gamification in revolutionizing education is immense, paving the way for a more interactive, enjoyable, and effective learning experience for students worldwide. The purpose was never to replace teachers and traditional learning, but to help positively augment it.

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## EFFECTIVE CLASSROOM MANAGEMENT

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### Abstract

*Teachers play a key role in shaping effective education. Effective classroom management sets the stage for the effective learning. It is important to the whole education process because it offers students an ideal learning environment. One of the teacher's most important jobs is managing the classroom effectively. This task determines teaching success and with poorly managed classroom very little academic learning can happen and lead to indiscipline. Classroom management doesn't mean just discipline and rules, expects more than this. This refers to eliciting and maintaining the pupil's attentiveness, sustaining the pupil receptiveness and of achieving appropriateness. This requires teaching competence; rich learning experiences; maintaining sound relationships with pupils' etc. In this study some of techniques; strategies are discussed for student teachers. However, managing classroom techniques differ from teacher to teacher. Reflective teaching provides better platform for practicing this skill for student teacher's by anticipating the problems and accordingly design strategies to promote positive learning. Effective classroom instructional and behavior management is essential to ensure student academic and social success. Foundational strategies such as clear expectations and routines, specific feedback, and high rates of opportunities to respond have strong empirical support, yet are often missing from educator repertoires. In this article, the authors provide a brief rationale for the inclusion of evidence-based practices accompanied with recommended resources to identify current and future practices. In addition, they also provide an overview of effective in-service educator professional development, to ensure evidence-based practices are implemented with fidelity, and recommended systemic strategies that schools and school districts can adopt to support teacher learning. Implications for teacher preparation programs also are discussed.*

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### Introduction

Establishing a climate for learning is one of the most challenging aspects of teaching and one of the most difficult skills to master, even at the post-secondary level. For those new to the profession, failure to set the right tone will greatly hinder your effectiveness as a teacher. Indeed, even experienced faculty may sometimes feel frustrated by class room management issues. Strategies that worked for years suddenly become ineffective in the face of some of the challenges today's students bring with them to the classroom. This paper is an attempt to make Teaching-Learning more purposeful wherever and whenever there is a Teaching session.

The term "classroom management" is often used to refer to behaviour modification or discipline only-and for good reason. Classroom management, on its surface, is primarily about establishing guidelines for behaviour and making sure that those guidelines are followed. Good behaviour is important for creating an environment where student learning will take place. Good behaviour is a necessary condition for learning, but by itself, it is not sufficient. When an educator begins to go beyond performing behaviour modification to include strategies that promote learning, that educator begins to practice true "class room management." This broader concept of classroom management includes other things such as:

- How we arrange classroom space.
  - How we present our "teaching self" in that space.
  - How we expect students to demonstrate that they have learned what we wanted them to learn.
- Combined with behaviour modification practices, these concepts suggest a definition for the broader view of classroom management:

"A system for structuring physical space and delivering instruction that manages behaviour with the overall goal of promoting student learning in the classroom."



## **Good Teaching**

Good teaching cannot be equated with technique. It comes from the integrity of the teacher, from his or her relation to subject and students, from the capricious chemistry of it all. A method that lights one class afire extinguishes another. An approach that bores one student changes another's life. Faculty and administrators who encourage talk about teaching despite its vagaries are treasures among us. Too many educators respond to the mystery either by privatizing teaching or promoting a technical "fix." The first group uses the variability of good teaching as an excuse to avoid discussing it in public-thus evading criticism of challenge. The second group tries to flatten the variations by insisting on the superiority of this or that method of subtlety. In both quarters, the far-ranging conversation that could illumine the mystery when we think of it as a "black box," something opaque and impenetrable that we must either avoid or manipulate by main force. Mystery is a primal and powerful human experience that can either be ignored nor reduced to formula. To learn from mystery, we must enter with all our faculties alert, ready to laugh as well as grown, able to "live the question" rather demand a final answer. When we enter into mystery this way, we will find the mystery entering us, an odour lives are challenged and changed. Good teachers dwell in the mystery of good teaching until it dwells in them. As they explore it alone and with others, the insight and energy of mystery begins to inform and animate their work. They discover and develop methods of teaching that emerge from their own integrity but they never reduce their teaching to technique.

Teachers handle many issues in a day, from disciplinary and behavior issues to a lack of adherence to the daily schedule cases. Consistently experiencing such challenges can sometimes make the teaching profession feel unrewarding. Luckily, teachers can use various classroom management strategies to inspire compliance among students. It starts with having a solid classroom management plan that outlines the methods and techniques for running a classroom and each lesson. From there, teachers can also upgrade their classroom management skills through a degree in education and apply these additional 20 strategies to manage their classrooms better.

## **The Best Classroom Management Strategies Today**

The five components of effective classroom management include developing behavioural standards, establishing working relationships with students, valuing your time as a teacher, familiarizing students with teaching methods, and anticipating student behaviour.

Teachers should implement the following universal classroom management strategies for the best chance of succeeding at managing their classrooms:

### **Lead by Example**

The most effective way for teachers to instill good student behaviour is by leading through actions, not words. That's because students' minds are still developing, so they learn more from experiences. Therefore, doing simple things like avoiding electronic use, talking politely, and respecting everyone in the class can have a significant impact on molding better student behaviour. Teachers can manage classrooms better by involving students in rule-making, documenting the rules, and setting consequences for breaking them. Teachers should also reward good behaviour and talk more positively about students.

### **Allow Students to Participate in Rule-Making**

Most humans, from employees to students, comply better to set rules when involved in decision-making. Teachers can use this classroom management technique to ensure willful rather than forced compliance with classroom rules throughout the calendar year.

### **Write Down the Rules Down**

For the rules to work, students should be able to see them every time they enter the classroom. Teachers should create professional charts with all rules typed and stick them in a visible place to ensure they remain on top of each student's mind.



**Hold Students Accountable for Breaking Rules**

Once students have taken part in setting classroom rules and they're drafted, teachers should start holding students accountable for breaking the set regulations. For each broken regulation, students should face a certain amount of consequence, even if it's just acknowledging their indiscipline in front of the entire class.

**Never Generalize the Entire Class**

Teachers should avoid punishing the entire class for a mistake made by several students. Instead, they should identify and call out the bad-behaving students after the class and try to discover the cause of their bad behavior to see if they can come up with a solution.

**Have a Friendly Aura**

Teachers should generally be social and approachable human beings. Even on bad days, teachers should try to be the most optimistic in the classroom environment and not let their bad moods radiate to the rest of the class.

**Let Students Thrive at What They Excel In**

In every classroom, some students are gifted in academics while others have strengths in other areas, such as art. Teachers should support learners of all students in areas they show interest and passion.

**Commend Students for Job Well Done**

Students love to feel appreciated when they have put some effort toward doing the right things, and it keeps them motivated toward a good path. Therefore, teachers should regularly acknowledge class or student efforts to encourage positive participation and behavior in the classroom.

**Reward Excellent Behaviour**

Teachers should reward good behavior from the entire class or students from time to time to encourage more of it. Rewards can include special parties, outdoor activities during free time, or treats.

**Talk of Students in a Positive Light**

Parents often hear from teachers only when their child has done wrong in school. Teachers should also contact parents with positive information or a good word about the children for better student-teacher and parent-teacher relationships.

**Make Learning Exciting**

Learning can become mundane and boring when it's the same old regurgitated content. As such, teachers should spice up each day's learning experience by setting the tone for an exciting day from the minute lessons start. This way, students will remain excited and expectant throughout the day.

**Engage with Students on a One-to-One Basis**

Teachers should get to know their students more personally to be in a better position to help them thrive. Privately, they should learn their students' strengths and weaknesses in academics and life to help them grow.

**Set Routines and Schedules**

Students are creatures of habit. As such, teachers should set short- and long-term classroom routines and schedules that allow students to know what is expected of them at each point during the day for more productivity.

**Establish Ways to Handle Bad Behaviour**

Bad behaviour should never go unchecked in a classroom or students will become hard-headed. Instead, teachers should have creative ways to deal with bad behaviour, such as unwarranted class disruptions, to show others that such behaviour isn't acceptable.

## **Classroom Management Techniques for Colleges and Institutions of Higher Learning**

The top strategies include building a community and a safe classroom, involving students in rule-making, having clear communication channels, being fair, knowing students personally, addressing conflict amicably, having positive classroom routines, being authentic, and partnering with guardians. Teachers can go the extra mile to get college and university students to comply with classroom regulations by implementing the following best classroom management strategies:

### **Build Student Relationships**

Students in colleges and universities admire teachers who have positive personal relationships with them. They're also more compliant in the classroom for teachers with whom they have a good rapport.

### **Have Diverse Teaching Methods**

Students capture information better when it's conveyed in various formats instead of one. These can include visual presentations such as graphs and PowerPoint presentations, group work, and takeaway assignments.

### **Always Show Excitement and Passion**

The passion and enthusiasm shown by teachers rubs off on students too. Therefore, teachers should always try to be their most excited selves in classrooms to encourage active student participation and response.

### **Prepare for Every Class Adequately**

Teachers should prepare thoroughly for every class they plan to attend during the day. They should review and improve their notes regularly to make them as easy to understand and enjoyable as possible for students.

### **Dedicate Some Social Time**

Teachers should get to know their students better in social environments rather than only within campus corridors. For example, they can organize trips and outdoor team-building skills where they can interact with students personally.

### **Declare an "Electronics Off" Policy in Class**

Teachers should implement a technology-off policy to prevent students from being distracted while in class. The only exception would be laptops for note-taking, but smart phones and other gadgets should be turned off until the end of the lesson.

### **4 ways good classroom management helps your entire class**

Classroom management is essential because it helps you to keep classroom behaviour in check and your students on task.

**1. It sets clear expectations for student behaviour.** One of the elements of a well-managed classroom is clear expectations about how students should behave. Creating a set of classroom rules at the start of the school year can set these expectations for positive behaviour. Even kindergarten classrooms can have a simple set of rules!

**2. It sets out how to deal with misbehaviour.** Once you have created your rules, you can also make it clear how inappropriate behaviour will be dealt with. Although working through behaviour problems by modeling and focusing on good behaviour and using positive reinforcement is always preferable, sometimes you need to intervene. Your classroom management strategy should include ideas to deal with individuals being disruptive and whole class misbehaviour.

**3. It creates a more positive learning environment.** Although you might still get some disruptions, effective classroom management helps to reduce these incidents and encourage more positive behaviour. This creates more student engagement and a better learning experience. For example, research shows that greeting students at the door can increase engagement and decrease negative behavior.

#### 4. It improves student learning and academic success.

Research by Robert and Jana Marzano shows that “teachers’ actions in their classrooms have twice the impact on student achievement as do school policies regarding curriculum, assessment, staff collegiality, and community involvement.” That makes effective teaching and creating a positive classroom environment all the more important.

#### 5. It makes it easier for you as a teacher.

Teaching can be stressful and research has shown that teachers report classroom management as one of the most concerning aspects of teaching. If you have a clear classroom management plan and a range of effective instructional strategies in your pocket, then you can be a more effective teacher. Knowing exactly how you will tackle each day in class can also help reduce your stress levels because you already have plans in place not only for learning activities but also for dealing with issues.

#### 7 quick classroom management tips

- Involving students in setting the classroom rules makes them more likely to follow them. Once the rules are set, make sure they are clearly displayed on the bulletin board or somewhere in class.
- Work to develop positive relationships with students that includes an awareness of their home life and anything that might impact their learning ability.
- Set the tone at the beginning of each day — greet your students at the door with a positive greeting or physical connection.
- Create the right learning environment by setting up your class in a way that encourages students to be engaged. For example, make sure they can easily access the equipment they need.
- Aim to reinforce positive behavior first but also have a strategy for dealing with disruptive behavior. Consider individual behavior management plans like the Positive Behavioral Interventions and Supports (PBIS) framework if needed.
- Think about how you are moving around the classroom space and its impact on behavior. For example, standing behind or near a student acting up can draw their attention to the behavior without making a big deal of it.
- Consider your current classroom management style and think about how successful it is or whether you could adapt your teaching style to be more effective. If you are struggling with developing the right classroom management techniques, speak to your school to see if they have any professional development in this space.

**Conclusion:** It is known fact that in poorly managed classrooms very little academic work can happen. For the beginners of teaching classroom management is highly challenging task and teacher has to play a critical role as manager. Reflective teaching will be helpful for better management. However, Classroom management techniques & plans are different for different subjects and for different teachers. One should be aware of different strategies & models. Each day teacher should start with a new beginning till they get hold on managing class. To feel sense of achievement and satisfaction in teaching they have to implement different strategies. Teacher instead of concentrating on minimizing inappropriate classroom behavior; they can use their unique skills to promote positive student behavior in the classroom which will facilitate positive learning.

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## GEOGRAPHICAL INFORMATION SYSTEM (GIS) TECHNOLOGY AS AN INSTRUCTIONAL TOOL IN FOSTERING ACADEMIC ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS

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### Abstract

*GIS is an advanced technology that offers a new and effective tool for geography education in schools. It provides a cutting-edge teaching and learning tool that teachers can use in the classroom for exercises that include problem-solving as well as for activities that encourage students to investigate geographic challenges and improve their spatial cognition and geographic learning. Since 2005, the Geographic Information System has been included in the Social Science-II textbooks. There is a particular chapter in the X standard Social Science-II text book dealing with new techniques in geography like as remote sensing, geographic information systems, and global positioning systems. Despite substantial coverage of GIS concepts and applications in textbooks, students in schools lack hands-on experience with GIS. Furthermore, the potential of GIS as a teaching tool is underutilized.*

**Keywords:** *Geographical Information System (GIS), Instructional Tool, Academic Achievement, Secondary School Student, Geography*

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### Introduction

Generally speaking, GIS is a technology with hardware and software tools and is an information handling strategy. Geographical Information System is a set of tools for collecting, storing, manipulating, retrieving, transforming and display of spatial data from the real world. The term 'Geographic' implies that locations of the data items are known or can be calculated in terms of geographic coordinates (i.e., longitude and latitude). Further, the term 'Information' implies that the data in a GIS are organized to yield useful knowledge, often as colored maps and images, but also as statistical graphics, tables and various on-screen responses to interactive queries. The term 'System' implies that a GIS is made up from several inter-related and linked components with different functions.

### Conceptual Background

The concept of Geographic Information System (GIS) can be defined as, a system of hardware and software used for the input, storage, retrieval, mapping, analysis and display of geographic data (Malpica et.al, 2007). Hardware system consists of computer equipment and network with some external device structure in which the computer is the host of GIS and software system generally consists of five sub-systems i.e., data input, data pre-processing, data storage and management, spatial analysis and data output (Wei, 2011). The ability of GIS to analyze spatial data is frequently seen as a key element in its definition and has often been used in literature as a characteristic which distinguishes GIS from other systems, according to Tomlinson (2003).

### Need and Importance

The discussion over the impact and importance of employing technology in the classroom has mostly died down in recent years. Many studies have demonstrated that technology and computer use can help kids improve their academic performance. In classrooms, technology is alive and well, and computers are now popular educational tools. The acquisition of computer technology is not enough to ensure the successful deployment of educational technology in schools. Having technology does not ensure improved learning. Geographic Information System (GIS) technology, a relatively new educational tool, holds immense promise for merging issue-based and inquiry-based learning.

## Statement of the Problem

Geography is the subject that introduces pupils to the world's changing landscape and prepares them for the role of global citizen in the twenty-first century. It is vital to begin transferring topic knowledge at an early age in order to lay the groundwork for geography. The expanding significance of geographic knowledge has far-reaching implications for geography education, necessitating compelling teaching and learning experiences for students. Furthermore, the shift in emphasis from content to the processes of knowledge acquisition has far-reaching implications for many aspects of educational practice, including geography instruction. This posed the question, "How can Geography instruction be improved to provide effective learning experiences for learners."

The present endeavor emerged as a result of these observations, and it focuses on developing and evaluating a specially built teacher-assisted learning package based on GIS for Geography instruction. As a result, the problem under examination is known as: **GEOGRAPHICAL INFORMATION SYSTEM (GIS) TECHNOLOGY AS AN INSTRUCTIONAL TOOL IN FOSTERING ACADEMIC ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS.**

## Scope of the Study

1. The investigation is confined only to pupils studying in IX standard.
2. The present study is limited only to selected topics in Geography of IX standard.
3. The current study contrasts traditional teaching and GIS-based geography instruction.

## Review of Related Literature

**Baker and Roy (2002)** discovered that integrating GIS into classrooms helps students participate in more demanding tasks, enhancing their Geographic subject knowledge mapping abilities and accomplishment. GIS has been recognised as a useful teaching tool because it improves students' geographic knowledge and fosters more engaging geography instruction, which raises student achievement.

**Sarah Witham Bednarz (2004)** in her case study divided the participants into two groups: a treatment group (256 students) who received GIS training, and a control group (256 students) who did not. (1,169). According to quantitative analyses of the outcomes of standardized tests, the introduction of GIS into the middle school curriculum significantly improved students' performance on the high stakes Florida Comprehensive Achievement Test (FCAT) reading scores as well as their final course grades in science and social studies.

**Bikar et.al (2022)** used a mixed-method model to investigate the problem of geography underachievement among Malaysian secondary school students. A quasi-experimental approach was used to collect quantitative data, while interviews with students were used to collect qualitative data. The students in the treatment group were given a lesson on the varieties and geographic distribution of flora, complete with GIS-integrated teaching materials. The identical material was imparted to the control group utilizing traditional teaching techniques. The quantitative data analysis demonstrated that the post-test mean intrinsic motivation score for the experimental group was significantly higher than that for the control group. The study's results by **Zhang et al. (2023)** provide some ideas for the development of geography education, implying that geography educators should pay more attention to the impact of students' geography learning in curriculum design and teaching processes. Furthermore, the mediating function of geo-spatial thinking elucidates the mechanisms underlying academic success in geography. As a result, more geo-spatial thinking training is required to enhance academic achievement in geography.

## Methodology of the Study:

The study was carried out primarily through the use of quasi-experimental methods. The samples were classified into two groups and the same are arrayed as Control and Experimental groups on the basis of their intelligence. The effect of treatment on experimental group was ascertained.



**Variables of the Study:****Independent Variables**

1. Teaching using GIS as an instructional tool and
2. Conventional/Traditional Method of teaching

**Dependant Variable**

1. Students Achievement in Geography

**Moderate Variable**

1. Gender (Boys/Girls)

**Definitions of the Operational Terms**

In the present study wherever the said terms appear are understood to mean as follows:-

**Geographical Information System (GIS) Technology**

Geographic Information System (GIS) is a technological tool used to understand geography and make informed choices. GIS organizes geographic data so that someone reading a map can select the information needed for a particular task. A table of contents on a thematic map enables the reader to add layers of information to a base map of real-world places.

An instructional tool is a comprehensive courseware package that can be used in the service of teaching, and it contains a lot of related material.

In the present study, the term Instructional Tools means the online resources of GIS that are being used as an online teaching-learning resource to explain the concepts of Geography.

**Academic Achievement**

Academic achievement refers to the results of learning. In the present study, academic achievement means performance outputs of students in selected units of Geography subject.

**Objectives**

The current research is intended to achieve the following goals. They are as follows:-

- 1) To use GIS to teach a few chosen IX-standard geography lessons.
- 2) To determine the impact of GIS technology on students' academic performance.
- 3) To evaluate the differences in academic achievement in geography between the control and experimental groups.
- 4) To figure out the variation in academic performance in relation to a moderate variable (Gender).

**Hypotheses**

1. Students in the Control Group's geography pre- and post-test results did not significantly differ.
2. Students in the experimental group's geography test scores did not substantially alter between the pre- test and post-tests.
3. The Control and Experimental Groups' pre-test geography scores did not significantly differ from one another.
4. In terms of post-test results in geography, there are no discernible differences between the Control and Experimental Groups.
5. Regarding their pre-test results in geography, boys and girls in the control group do not significantly differ from one another.
6. In terms of post-test results in geography, boys and girls in the control group do not significantly differ from one another.
7. In terms of pre-test results in geography, boys and girls in the experimental group do not significantly differ from one another.
8. In terms of post-test results in geography, boys and girls in the experimental group do not significantly differ from one another.

### Research Tools Used

1. For the purpose of paired matching, Raven's Standard Progressive Matrices (R-SPM, 1983 Edition) are used to gauge pupils' level of intelligence.
2. GIS technology to teach selected concepts of Geography.
3. Achievement Test in Geography prepared by the researcher to assess the achievement in Geography of students of IX standard.
4. Attitude Towards GIS Scale

### Procedure of Data Collection

Using a GIS tool, the researcher taught chosen Geography lessons. The experiment lasted three months and included one orientation period, 15 instruction periods, and three testing periods (Raven's Standard Progressive Matrices, Pre-test, and Post-test). A total of 30 periods were collected for the Control and Experimental groups utilising traditional instruction and teaching using a GIS program, respectively.

Both groups were given an IQ exam and a pre-test to begin with. Later, orientation was provided to raise understanding regarding the exam.

The orientation dispelled all doubts about classroom procedures. Each day, concepts from the Geography curriculum were taught to the experimental group using a GIS tool.

Following treatment, the researcher conducted a Post-test to both the Control and Experimental Groups of students.

### Sample

The sample was drawn using the purposive sampling technique by the researcher. The sample consisted of 100 students, 50 of whom were assigned to the control group and 50 to the experimental group based on their intellect as measured by Raven's Standard Progressive Matrices.

### Statistical Techniques Used

The data acquired were analyzed using descriptive and differential statistics, the 't' test, and two way ANOVA by the SPSS software in light of the objectives and hypotheses.

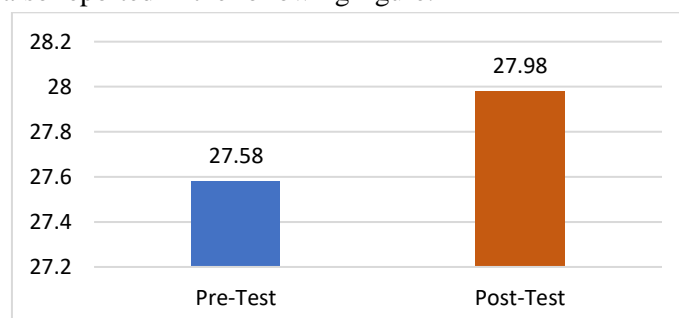
### Analysis of Data Using Descriptive Statistic Analysis

**Table No.1.1: Comparison of the Control Group students' Achievement in Geography Pre- and Post-test results.**

Achievement Test	N	Mean	SD	Mean Gain Score
Pre-Test	50	27.5800	1.34149	0.4
Post-Test	50	27.9800	0.97917	

The achievement pre-test scores of students in the Control Group had a mean of 27.5800 and an SD of 1.34149, while their achievement post-test scores had a mean of 27.9800 and an SD of 0.97917. The mean gain scores are in support of post-test success. As a result, it was found that after intervention, students in the Control Group had somewhat higher achievement in geography scores on the post-test than they had on the pre-test.

The findings also reported in the following figure.



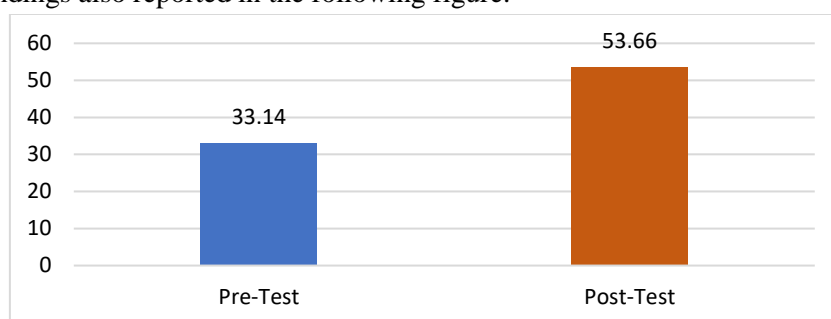
**Figure No.1.1: Comparison of the control group students' pre-test and post-test geography achievement results.**

**Table No.1.2: Scores on the pre-test and post-tests for students in the experimental group in geography.**

Achievement Test	N	Mean	SD	Mean Gain Score
Pre-Test	50	33.1400	1.17820	20.52
Post-Test	50	53.6600	1.27151	

Table No.1.2 shows that for achievement pre-test scores, the mean was 33.1400, the standard deviation was 1.17820, and for achievement post-test scores, the mean was 53.6600, the standard deviation was 1.27151 for the experimental group's pupils. Post-test Achievement is favoured by the mean gain scores. Thus, it may be inferred that students in the Experimental Group had greater achievement scores in geography on the Post-test following intervention with Geographic Information System (GIS) Technology than they had on the Pre-test.

The findings also reported in the following figure.



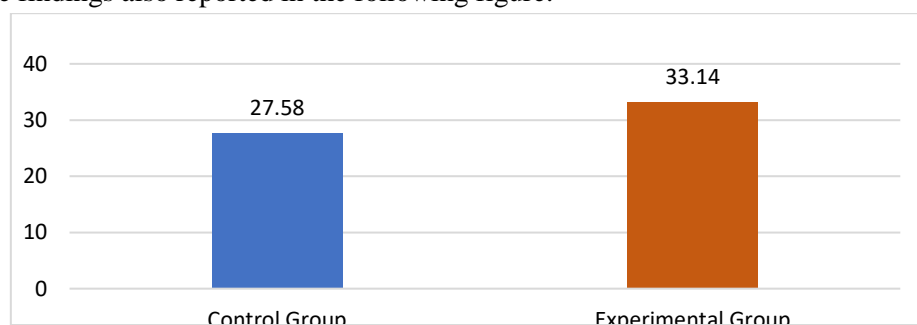
**Figure No.1.2: Scores on the pre- and post-tests for the students in the experimental group in geography.**

**Table No.1.3: Comparison of geography achievement pre-test scores between students in the Control and Experimental Groups.**

Group	N	Mean	SD	Mean Gain Score
Control Group	50	27.5800	1.34149	5.56
Experimental Group	50	33.1400	1.17820	

Table No.1.3 shows that for the achievement pre-test scores of the Control Group, the mean is 27.5800 and the SD is 1.34149, while for the achievement pre-test scores of the Experimental Group, the mean is 33.1400 and the SD is 1.17820. The pre-test achievement scores of the experimental group are favored by the mean gain scores. This leads to the conclusion that the Experimental Group students had higher Pre-test Achievement scores in Geography than the Control Group students.

The findings also reported in the following figure.



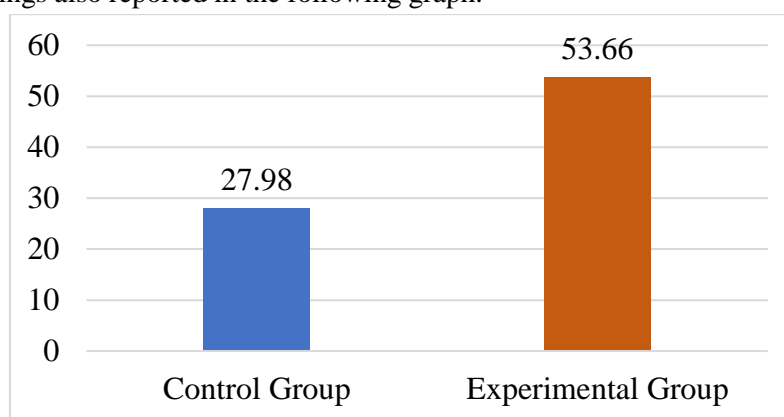
**Figure No.1.3: Comparison of geography achievement pre-test scores between students in the Control and Experimental Groups.**

**Table No.1.4: Students from the Control and Experimental Groups were compared in terms of their post-test results for geographic achievement.**

Group	N	Mean	SD	Mean Gain Score
Control Group	50	27.9800	0.97917	25.68
Experimental Group	50	53.6600	1.27151	

From Table No.4.4, it can be seen that the achievement post-test scores for the Control Group have a mean of 27.9800 and an SD of 0.97917, whereas the achievement post-test scores for the Experimental Group have a mean of 53.6600 and an SD of 1.27151. The Experimental Group's Pre-test Achievement is promoted by the Mean Gain Scores. Therefore, it can be said that after intervention using Geographic Information System (GIS) Technology, the Experimental Group's students performed better on the Post-Test in Achievement than the Control Group's students, who received conventional instruction in geography.

The findings also reported in the following graph.



**Figure No.1.4: Students from the Control and Experimental Groups were compared in terms of their post-test results for geographic achievement.**

#### Findings of the Study

1. The students of Control Group showed marginal higher score in Post-test compared to Pre-test Achievement in Geography after intervention.
2. After intervention with Geographic Information System (GIS) Technology students of Experimental Group showed higher Achievement scores in Post-test as compared to Pre-test Achievement scores in Geography.
3. Pre-test in terms of geography achievement scores, students in the experimental group scored better than those in the control group.
4. On the Post-test in Achievement following intervention with Geographic Information System (GIS) Technology, students in the Experimental Group did better than those in the Control Group who received conventional geography instruction.
5. In Geography, girl students in the Control Group outperformed boy students in terms of Achievement in the Pre-test.
6. In Geography, girl students in the Control Group performed better on the Post-test than boy students in the Control Group.
7. In Geography, the Experimental Group's Boy students outperformed the Experimental Group's Girl pupils in Pre-test Achievement.
8. Boy students of Experimental Group showed marginally higher Post-test Achievement scores than the Girl students of Experimental Group in Geography.

#### Findings of Inferential Statistics

1. In comparison to the Pre-test, the students performed better on the Achievement Post-test.

2. Following intervention, the students fared better in Post-test Achievement than in Pre-test Achievement in Geography.
3. In terms of pre-test achievement, Experimental Group students perform better than Control Group students.
4. Students in the Experimental Group outperformed those in the Control Group on the Post-test Achievement Test.
5. The Pre-test Achievement results in geography for the boys and girls in the Control Group were comparable. This shows that the Pre-Achievement scores of students in the Control Group for Geography are unaffected by gender.
6. Female students outperformed male pupils in the post-test. This suggests that gender affects students' achievement in geography post-test scores.
7. The Experimental Group's boy and girl students had similar pre-test Achievement scores in Geography. This means that gender has no effect on the Pre-test Achievement in Geography scores of students in the Experimental Group.
8. The Experimental Group's boy and girl students had similar Post-test Achievement scores in Geography. Thus, students in the Experimental Group's Post-test Achievement in Geography results are unaffected by gender.

#### **Limitations of the Study**

1. The investigation is confined only to pupils studying in IX standard.
2. The present study is limited only to selected topics in Geography of IX standard.
3. The present study compares teaching of Geography using GIS technology with traditional teaching.

#### **Educational Implications**

1. Research results have repeatedly demonstrated a beneficial association between the use of GIS tools and students' academic progress in Geography. As a result, schools must play a vital role in incorporating this new technology into classroom learning.
2. GIS tools encourage interaction between instructors and learners, assisting pupils in understanding and remembering. Visualizations that are creative have a greater influence on learning. As a result, GIS technologies will be employed as an innovative teaching method in secondary schools.

#### **Summary and Conclusions**

Recent advancements in information and communication technology have revolutionized the world outside and within the classroom, making it more appealing and exciting for students to know and understand. Developments in the application and dissemination of knowledge and information technology have changing demands of education. The infusion of GIS technology and its tools into actual and virtual classroom has generated much interest in educational research in recent years. Tools of GIS have the potential of proving an alternative and more effective teaching and learning tool in education.

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## CONSTRUCTIVE PEDAGOGY AS AN INNOVATIVE TOOL IN TEACHING PHYSICS- AN ANALYSIS

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### Abstract

Class room teaching in the 21<sup>st</sup> century has transformed into a creative pursuit for the teachers in order to deliver the desired impact. The all-pervasive concept of the "ATAL TINKERING LABORATORY" creative has given wings to the Imagination for both, the trainers and receivers: "Importing education is not a child's play", says Sigmund Freud, the well-known psychologist. Disrupting the traditional methods of class-room teaching has become the order of the day, to motivate the learners and unleash their creativity. The theoretical framework of this research article strengthens the main argument that, teaching or discussing physics as an academic discipline indeed is like never before. In the wake of the grand success of the chandrayan-2 mission to the moon, the budding young minds of the student community have started taking newer interest in the subject of physics which is commendable, and at this juncture, applying the constructivist pedagogical principles to the exercise of teaching and learning physics in the era of Artificial Intelligence (AI). The main aim of this article is to prove that topping the young minds to unearth, their potentialities is extremely essential and to motivate them to emulate the virtues of the iconic physicists like Dr.A.P. J Kalam, Dr. Vikram Sarabhai, Bohr Edison, Sir C.V. Raman and some other physics scientists etc. There is an inherent relationship between the constructivist pedagogy and the constructivist learning theory. This paper also deals with the aspect of theory and practice of incorporating the constructivist methodology as a part of teaching-learning framework.

### Introduction:

The role of the perceived value by more observation has transcended its boundaries. The Social Cognitive Theory (SCT) of Bandura, emphasizes the importance of observational learning [Bandura, 2001] Having a role model in order to engage in observations and compare the characteristics of the model behaviour and compare them with their own existing abilities Any class room environment is termed as an element of shared atmosphere. A trainer creative arc is expected to intersect the perceived experiences of the learners. Constant classroom interaction leads to the co-constructive knowledge production and consumption.

### Materials and Methods:

Deductive methodology of research has been adopted in the analytical study. A scale was constructed and a questionnaire survey was then used to collect data and arrive at the analytical intervention Identifying and establishing the connection between the cognitive and the intentional factors during the classroom observations are intrinsic to this research paper.



The above hypothesis is the clear indicator that a social culture of a classroom makes either a

positive or negative on teaching and learning methods. By its central position at the level of constructivist pedagogy, viability valorises the cognitive and methodological resources of all the operational promoted by constructivist pedagogy and of other concepts adopted from other sciences. Viability is the central concept of constructivism as a model of knowledge founded neural-biologically, psychologically, sociologically and systematically.

### **Review of Literature:**

Constructivist Pedagogy is described as the "Postmodern Science of Education". It was only during 1960, that formal theories on the concept of constructivism, were Formulated. Jean Piaget identified "Play" as an important aspect of learning essential for the cognitive development. In a constructivist classroom, learning is constructed, active, reflective, collaborative, inquiry-based and evolving. Constructivism states that learning is an active, contextualised process of constructing knowledge rather than acquiring it. In this process, learner becomes the information constructor and actively constructs or creates his/her subjective representations of objective reality and that new is linked to prior knowledge.

John Dewey is often cited as the philosophical founder of the constructivist theory. Bruner and Piaget are the chief theorists and Lev Vygotsky is the major theorist of social constructivism. The social constructivist view posts that learning is constructed through social interaction and discourse and is considered to be a process in which meaning is made dialogical. The cultural and social contexts make a deeper impact on the process of learning.

John Dewey presented "direct living" method to be implemented in a classroom engaging the students in real-world, practical workshop in which they would showcase their knowledge through creativity and collaboration. self-thinking is an important aspect of learning curve and stirring the interest of young minds is the task of the trainer and the constructivist methodology makes the task easier by creating a congenial platform for both learners and well as the instructor. Education has to be grounded in real experience learning never helps to Sustain the goal of education and it is a short-lived method of learning.

Jean Piaget proposed that learning dynamic process that comprises successive stages of real-time education. "Discovery Learning is an important stage of the constructive pedagogy. The learners must be encouraged to construct their own knowledge based on social and cultural contexts. Learn to discover; discover to learn, should be the motto of a modern class room. The formalization of constructive from a within-the-human perspective is generally attributed to Jean Piaget, who articulated mechanisms by which information from the environment and ideas from individual interest and as a result, a from the internalized structure of knowledge is developed. Jerome Bruner builds on the Socratic tradition of learning through dialogue. Bruner initiated curriculum change based on the notion that learning is an active, social. process in which students construct new ideas or concepts based their knowledge background. Structuring the information is important so that it becomes easier to grasp by the learners. formally, it is identified as, "Spiral Organisation".

Theorists who influenced the theory of Constructivist pedagogy include, John Dewey, Maria Montessori, Jean Piaget, George Kelly, Jerome Bruner, Herbert Simon, Edgar Morin, Humbertomaturana, Heinz von and Lev Vygotsky.

According to Brooks, the concept of constructivism has roots in classical antiquity, going back to Socrates' dialogues with his followers, in which he asked directed questions that led his students to realize for themselves the weakness in their thinking. Piaget perceived that humans learn through the construction of one logical structure after another. The mindset of the young learners would be different when compared to adults and hence the theory of constructivism becomes more relevant in this context.

Seymour Papert's ground breaking work in using computers to teach children has led to the widespread of computer and information technology in constructivist environments.

**Discussion:** This research paper is constructed on the maxim, Science is "Every day in and day out, several lives". Day in interesting events occur in everybody's life. Physics plays an essential role in all of this. For instance, steam iron, ball-point pen, electric kettle, neat belt, head phones, mobile phone technology etc encompasses the theories of physics virtually. with advanced in technology, physics is used every important application. In fact, the world is surrounded by physics. Even a layman could understand the significant of the chandrayan-3 mission. In such an interesting situation, teaching physics adopting the constructive pedagogical method is apt and illustrative.

**Pedagogy through Storylines:** Narrating stories about a complex topic and break them into simple understanding. For instance, to explain the Raman's Effect," a trainer may choose to narrate trivial related to Sir C V Raman and his observations of the sea while he was recording the scientific data. Second, the scientific phenomenon of the diffusion of light could be demonstrated in a classroom and allow the learners to put thinking cap and imagine things. Physics is on the about interesting and intriguing world and the inquisitive young minds becomes more active in the presence of a creative trainer. To teach the collisions of elastic and inelastic forces, simulation method may be used where the learners are taught the elastic and inelastic forces by playing pool alongside Isaac Newton. In this condition of learning, still the learners are in control of the trainer.

**Effective ways of learning formulas:** The trainer formula may choose to demonstrate a on a white board and instead of asking the learners to memorise, the trainer may describe the contents of the chosen formula in the language of the learners, and allow them to imagine things for themselves. For instance, the average speed formula  $S=d/t$ . This formula is used to calculate the average speed of a moving object for the distance covered and time duration. At this point, basic information about the formula may be discussed. The Speed (s) and distance (d) are the scalar quantities that give magnitude but do not tell the direction. Further, the terms scalar quantities and magnitude, may be discussed to give complete clarity. to the learners and make them thorough with the conceptual formula.

**Constructive Pedagogy and Experiments:** A trainer may utilise the easily available things in a learning atmosphere, yet make an impact teaching while a random principle in physics. As the maxim goes, the world is surrounded by physics and its principles, a trainer may tap. on this factor and transform the classroom into a laboratory. A flashlight, the infrastructure of a classroom light and shade, gravitational factors, the state of inertia, all may be included in the discussion and observation.

**Relating Physics to everyday life:** Physics play an important and essential role in the occurrence of several interesting. events happening day in and day out. The terms become more relevant if they are explained in a lucid manner, connecting them to identifiable event or an occurrence. Discussing ohm's Law through simulation helps the learners to understand resistance, resistivity, combining resistance in parallel and series. Encouraging the learners to create a Law would simply circuit by applying ohm's law would give the desired result of a successful teaching and learning activity.

**Learning Physics through asking questions:** To dispel the myths and misconceptions among the learners is an important factor of teaching. Encourage the learners to raise questions about a concept is a great way of ensuring that the process of transmission of knowledge is uninterrupted.

It is only through the process of asking questions that a learner may gain 360° view of a concept in physics and clear the doubts and proceed further. Perhaps, Socrates had realised the importance of asking questions and seeking answers to them is a divine activity of gaining knowledge and this thought suits a physics classroom very well.

**Blending Technology with Constructivist Pedagogy:** Interactive visuals may bring otherwise complex concepts to life and a trainer tap may on this for effective teaching of concepts. Learner may have an easier time digesting. and engaging with information through clicking, sliding or zooming in may provide a more direct and personally meaningful experience of abstract phenomena and thus facilitate comprehension and learning. In this condition, a trainer steers through the classroom, facilitating the learners while having an interface with the technological aids to learn the various

concepts. It is the trainer's discretion to decide the introduction of the implementation of programmes to teach the related concept in Physics.

**Hosting a virtual field trip:** virtual field trip is innovative and effective in enhancing learning and may keep the learners more engaged. For instance, to reach the concept of application of Buoyancy: Floatation, learners may be taught about certain objects sink or float in the water. Again, a trainer decides the schedule of the virtual field trips suiting to the needs of a class-room intending to learn physics, Learning becomes a joyful activity, when an amicable and conducive atmosphere is Created break the by the trainer who may make or young minds of the learners. The unilateral delivery of the instructions from a trainer may make the learners totally passive. The process of learning simply fails, if there is no stirring of curiosity among the learners. Physics is a subject full of life zest and they have to be taken into a classroom through constructive pedagogy. Engaged pedagogy helps to develop critical and quantitative thinking skills.

**Interactive Lecture Demonstrations.** Developed by Thornton and Sokoloff, Interactive lecture demonstration is an attempt to transfer the traditional lecture into an active learning environment using computer-based laboratory demonstrations. Initially developed for teaching kinematics and dynamics, the demonstrations use a motion detector to generate real-time graphs of position, velocity, and acceleration with respect to time, and a force probe to record the force in a variety of situations. with easy access to powerful computer-based technologies, the lecture paradigm is no longer the only possibility, credible alternative paths have replaced the lecture format focussing constructivist pedagogy method. Effective transfer of pedagogic innovation from the local and well-defined environs of the developers' laboratory to the widely differentiated ambience of the classroom is the most difficult stage to negotiate. Assimilation of educational innovation depends critically on teacher's understanding of how the specific instrument is to be employed. Then, rather than concentrate on propagating merits of use of specific instruments, it is necessary to address the root cause of the impediment; the trainer's epistemological beliefs about the process of teaching and learning.

**Conclusion:** Learning is a participatory in nature, Interactive learning may lead to innovative thinking and Physics, being a branch of pure sciences, requires engaging method of teaching. Constructivist Pedagogy aptly anchors the need of creative teaching methodology while dealing with diverse student community. Knowledge transmission is about inspiration and motivating the learners by instilling a deep sense of curiosity and inquisitiveness in them. Greatest physicist's display the traits of passion and curiosity being fashioned from young days. Constructivist pedagogy innovatively engages the young minds in the process of learning and teaching. The aim of teaching physics is not restricted to the need of academics, rather giving wings to the creative pursuit of the young learners, and makes them world citizens

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## PROMOTING ACHIEVEMENT THROUGH KOLB'S EXPERIENTIAL LEARNING MODEL AMONG 9<sup>th</sup> GRADE (CBSE) SECONDARY SCHOOL STUDENTS

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### Abstract

The research paper is on promoting achievement through Kolb's experiential learning model among the students of grade ninth. Kolb's experiential learning model in language could be learner-friendly and foster achievement by the implementation of Kolb's experiential learning model. In Kolb's experiential learning model students are playing an active role and learn to reflect on their learning experiences. Thus, helps in developing skills, attitudes, and new ways of thinking among the learners. In the present study, the researcher has reviewed prior studies and in-depth analysis of literature was done to formulate hypothesis. The quasi-experimental method was designed for students from the CBSE board and English as the medium of instruction. The 25 students were taught using the conventional method of teaching and 25 students were taught using Kolb's experiential learning model. The instructional module prepared for the topic of **My Childhood (English Prose)**. The Kolb's experiential learning model includes **Stage 1: Experiencing (concrete experience)**, **Stage 2: Examining (Reflective observation)**, **Stage 3: Explaining (abstract conceptualization)**, **4. Concrete Experience**, **Stage 5: (Active Experimentation)** The Pre-test was conducted before the implementation of the program and the post-test was administered after the program. Data were analyzed by applying the t-test and the hypotheses were tested. The study revealed that the experimental group has performed better in the achievement test in language as compared to the control group. The researcher found that Kolb's experiential learning model in language increases the autonomy among the learners, and it is best achieved when teacher acts as a facilitator of learning. Thus, it can be said that instructional program based on Kolb's experiential learning model activities enhances achievement. The study recommends that, such learning can be imparted in different curriculum and also for different age groups of students.

**Key Words:** Experiential Learning, Achievement.

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**1. INTRODUCTION:** Present Education scenario is incorporated with technology. Modular teaching is one of the widespread and recognizes teaching-learning technique. Considering individual difference among the learners, it is necessary to plan appropriate teaching strategies for them. Such learning can impart through Kolb's experiential learning model with instructional module. The learning which enhances hands-on experiences leads to meaningful learning among the students. Kolb's experiential learning model is one of the approaches of constructivist learning (Amin 2011). As stated by Lewis and Williams "In its simplest form, Kolb's experiential learning model means learning from experience or learning by doing". Experiential education first immerses learners in an experience and then encourages reflection about the experience to develop new skills, new attitudes or new ways of thinking." (Lewis & William 1994)

**2. LITERATURE REVIEW:** Review of related literatures is an important part of every research.

**Laney (1993)** compared experience-based learning with experiential approaches in teaching of Economics. The findings supported the advantage of experience-based instruction over experiential approaches.

**Siegel, Omer and Agrawal (1997)** conducted research on theory of Kolb's experiential learning model in relation to video simulation of an audit. The results showed significantly better performance of students in the experimental group as compared to control group.

**Gibbons and Gray (2002)** conducted a comparative study on social work education by integrated approach based on experience. The model propagated that learning is effective by doing, working experiences, collaborative approach with integrating theory and practice.

**Hawtrey (2007)** found the impact of various Kolb's experiential learning model techniques in Economics. The investigator evaluated a range of learning methods (passive and active) and it was revealed that under-graduate students who were exposed to various class activities preferred Kolb's



experiential learning model activities in Economics. Analysis of study also depicted that on the basis of gender, students preferred Kolb's experiential learning model methodology for learning.

**Smart and Csapo (2007)** studied the impact of learning by doing and engaging students through learner-centered activities. The study revealed that active learning resulted in positive learning outcomes.

**3. THE RATIONALE OF THE STUDY:** The present education system is changing, so there is a need to promote learning based on a learner-centered approach. The idea of the Kolb's experiential learning model in language provides a meaningful learning experience among the students of grade ninth. And the instruction focuses on building the learners to reflect on the learning process at their own pace. The instructional module program could be used for enhancing achievement in language and influence achievement through experiential learning. The stages experiential approach is; Experiencing (concrete experience), Examining (Reflective observation), Explaining (abstract conceptualization), Concrete Experience, (Active Experimentation). The study was intended for ninth grade students of CBSE board curriculum.

**4. SIGNIFICANCE OF THE STUDY:** Learning is the process of acquiring new skills, knowledge, behavior, attitudes, and achievement of values. It involves an ongoing, active process of inquiry, engagement, and participation in the learning process. Engaging the learners in the different learning process in language increases their attention and motivates them to practice critical thinking skills which intern promote autonomy for insightful learning experiences. The researcher thinks that the instructional strategies in the language classroom with Kolb's experiential learning model to promote achievement in classroom which leads to a fun learning environment. The study has implications for curriculum designers to include instructional module for different grade levels. The study also expected to be beneficial to students in language subjects, as well as other subjects can be incorporated through it. As a consequence of teaching learner through the Kolb's experiential learning model with instructional program would enhance their achievement scores to higher level.

**5. OBJECTIVE OF THE STUDY:**

- To study the effectiveness of developed instructional module with traditional method of teaching in relation to achievement scores of experimental groups of grades ninth.

**6. HYPOTHESIS OF THE STUDY:**

To facilitate present study the following hypotheses were formulated and tested at 0.05 level of significance.

- There is no significant difference between the pre-test achievement scores from experimental and control groups of ninth grade students.
- There is no significant difference between the post-test achievement scores from experimental and control group of ninth grade students.
- There is no significant difference between the mean scores of pre-tests and post-test achievement in language from experimental group of ninth grade students.

**7. METHODOLOGY OF THE STUDY:** The study was based on the quasi-experimental method along with pre-test post-test parallel group design. The aim was to enhance achievement through experiential learning for experimental group and conventional method for control group students. The population of the study consists of students of grade ninth from CBSE board curriculum and English as a medium of instruction. The experimental and the control group included 25 and 25 students respectively. The experimental group was taught by Kolb's experiential learning model with instructional module, and control group was taught the same topic by conventional method of teaching.

**7.1 Intervention Program :** Considering the previous test scores in English two equal groups were formed. The intervention program was conducted for the experimental group and conventional



method was used for the control group of the study. The appropriate learning experiences were developed by the researcher. The program includes varied task, group and individual activities, think and share with partner, videos & group discussion, students' reflection on learning for the topic in language. The pre-test was conducted for both experimental and control group of students. After execution of the program, post-test was conducted for both the groups. The effectiveness was measured by comparing pre-test and post-test scores of controlled and experimental groups using statistical techniques. The significant difference was measured by comparing pretest and posttest achievement scores of experimental groups.

## 8. RESULTS AND ANALYSIS:

**Null hypothesis 1:** There is no significant difference between the pre-test achievement scores from experimental and control groups of ninth grade students.

Group	N	Mean	SD	't' ratio	Level of significance
Control	25	32.5	4.53	0.33	Not Significant at 0.05 and 0.01Level
Experimental	25	32.09	4.19		

df=25+25-2=48, Table value at 0.05 level =2.01 At 0.01 level = 2.68

**Table 1**

If we look at Table-1, it shows that the obtained t-value 0.33 which is less than the table value both at 0.05 and 0.01 level of significance. Hence, the null hypothesis was accepted. Therefore, the null hypothesis stating that, there is no significant difference in mean scores of pre-test achievement in language between experimental and control group before implementation of the program.

**Null hypothesis 2:** There is no significant difference between the post-test achievement scores from experimental and control group of ninth grade students.

Group	N	Mean	SD	't' ratio	Level of significance
Control	25	34.78	4.97	7.53	Significant at 0.05 and 0.01Level
Experimental	25	45.63	5.23		

df=25+25-2=48, Table value at 0.05 level =2.01 and at 0.01 level = 2.68

**Table 2**

If we look at Table-2, it shows that the obtained t-value 7.53 which is higher than the table value both at 0.05 and 0.01 level of significance. Hence, the null hypothesis was rejected. Therefore, the null hypothesis stating that, there is a significant difference in mean scores of pre-test achievement in language between experimental and control group.

**Table 3. t-test between mean scores of pre-tests and post-test Experimental Group**

Experimental Group	N	Mean	SD	't' ratio	Level of significance
Pre-test	25	32.09	4.19	10.18	Significant at 0.05 and 0.01Level
Post-test	25	45.63	5.23		

df=25+25-2=48, Table value at 0.05 level =2.01 and at 0.01 level = 2.68

**Table 3**

If we look at Table-3, it shows that the obtained t-value 10.18 which is higher than the table value both at 0.05 and 0.01 level of significance. Hence, the null hypothesis was rejected. It means that there exists significant difference between the mean pre-test and post-test scores of IX grade students of experimental group. It means there is a significant difference in post test scores after implementation of the program. The finding shows that the experimental group was benefited with the program.

**9. FINDINGS AND DISCUSSION:** In the present study, it's found that there is no significant difference in pre- test mean scores in language between experimental and control group before

implementation of Kolb's experiential learning model among the students of ninth. The study revealed that there is a significant difference in post-test achievement scores in language between experimental and control group after the treatment. Instructional module was found to be effective than traditional method of teaching. After implementation of the experiential learning, there was a change in students' perception and contributed to promote the achievement. Sanya Sachdeva (2017) has given importance to role of Kolb's experiential learning model and encouraged dialogue, involvement of students in learning process. Therefore, this study has provided evidence which support the result of present study. Engaging learners in learning process increased their autonomy, and motivated to be creative in sharing their learning experience. The researcher found that Kolb's experiential learning model instructional program strengthens students' potential to develop their deeper understanding of concepts.

**10. IMPLICATIONS:** Experiential learning is designed to engage students' emotions as well as enhancing their knowledge and skills.

- The results of Kolb's experiential learning model will provide foundation for the development of academic achievement
- Helps to develop Kolb's experiential learning Model in the Teaching of English at Secondary School Level
- Helps to develop Kolb's experiential learning Model approach-based teaching-learning strategy of general English for the grade IX students.
- Helps to implement the Kolb's experiential learning model-based teaching-learning strategy of English for the class IX students.
- Helps to compare the achievement of students exposed to Kolb's experiential learning model-based teaching-learning with that of students exposed to traditional mode of teaching.
- Helps to find the effectiveness of Kolb's experiential learning Model based teaching-learning strategy of teaching English with regard to achievement in different dimensions of learning.

**11. CONCLUSION:** The study concluded that Kolb's experiential learning model in language promotes achievement among the students of grade ninth. Moreover, the experiential instructional module is effective in enhancing achievement in language as compared to the conventional method of teaching. The innovative approaches in teaching-learning will be beneficial for learners to boost their deeper understanding as well as interest in language among the students. The study concluded that Kolb's experiential learning model in language enhances achievement, and it is best achieved when teacher acts as a facilitator of learning. In sum up, the results of the study would provide a framework for educators to implement best practices that will lead to raise the achievement level of students in language.

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## CONCEPT CARTOONS WITH CO-OPERATIVE LEARNING TO ENHANCE CRITICAL THINKING IN SCIENCE

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### Abstract

Science has the status as a rigid and difficult to learn for secondary school students. There are many reasons for student's difficulty in learning. The reason's may be classified into student factors and instructional factors. The instructional factors include usage of non-interactive methods, approaches and strategies. Science teaching should be advanced using a range of techniques to get closer to more students and achieve deeper learning to inculcate higher order cognitive skills. Concept Cartoons as a strategy are sparsely used in Spanish schools play an important role in improving the students' perception, reasoning ability, problem solving ability, critical thinking and performance in learning science concepts. Concept cartoon as a strategy was first coined by **Keogh and Naylor** in 1999. Primarily, Concept cartoons were developed in a search for a teaching strategy which could help students develop their own ideas and eliminate misconceptions by and reasoning (Naylor and Keogh 2013). Concept cartoons are the visual tools comprising of two or more characters 'with ideas, thinking on a subject, a situation of our daily life. These engage students in focussed discussions, by making students talk about the concepts represented in the cartoon characters. This paper focuses on Concept cartoons, in which learning is determined by association of past and present knowledge of the students. Through this strategy, co-operative learning takes place among the students to get an exact conceptual understanding of Science and also facilitates the students to think critically and to improve their performance. It can be used not only as an instructional strategy but also as an assessment tool.

**Keywords:** Concept Cartoons, Science education, higher order skills, co-operative learning, and critical thinking.

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### Introduction:

"Science is one of mankind's attempts to gain a better understanding and clearer interpretation of ourselves and the universe in which we exist". (Edward victor, 1967)

Now a day's most of the countries focuses on developing students' higher-order thinking skills through their education systems. (Stupple et al., 2017). By many psychological theories, it is acknowledged that every student can think naturally. However, with inappropriate learning experiences, students frequently struggle to cultivate higher order skills in complex domains such as scientific thinking. While Science is habitually regarded as a challenging subject, it is reasonable to expect that students' can apply scientific principles to their daily lives. However, what does it mean to think like a scientist? To think like a scientist is the capacity to investigate for understanding the world around us by evaluating evidence through reason and the capacity to solve problems in daily life. In brief, it is the specific application of critical thinking to a problem region.

Science is a universal subject in which abstract concepts makes student feel difficult to understand. This undesirable perception is one of the hindrances that further make it difficult for students to perform well in the subject. Consequently, there are detritions among the students to take science because, they found that this subject is difficult to score.

On the other hand, one of the major challenges of teaching science is, students need to have the practical knowledge and skills to adapt to the changing science environment as majority of secondary school students will be the future engineers, architects and scientists. If most of the secondary students fail to think like scientists, are they able to train future generations to reflect? Are they able to develop their critical thinking in the process of learning their lessons?

Therefore, critical thinking is an important element to be stressed in modern education, especially in higher education (Shazaitul Azreen Rodzalan and Maisarah Mohamed Saat, 2015, O'Hare & McGuinness, Dunne, 2015; Kwan & Wong, 2015; Maria Saleh, 2010; Davies, and Lundholm, 2013; Rajendran, 2004). Proper and organised research needs to be carried out to recognize the best ways for students to develop their understanding and knowledge outside the surface level (Bommel, Boshuizen and Kwakman, 2015; Williams, Venville and Gordon, 2013; Khoo, 2008). In order to realise this goal, researchers trust that, the social interactions involved in group problem solving would enable students to extend their Zone of Proximal Development-ZPD (Thurston et al. 2007; Sopiah, 2005; Vygotsky, 1997).

Co-operative learning may endorse learning to achieve ZPD compared to individual learning. Concept cartoons are one of the favourable strategy that has generated positive results in terms of critical thinking and higher order thinking skills (Sengull, 2011). Additionally, Concept cartoons can upkeep moral and democratic values which is in line with the existing Science curriculum.

The main aim of education according to NEP-2020 is to ensure that, no child loses any opportunity to learn and excel because of the circumstances of birth and background. Based on the moral value, a novel instructional strategy, Concept cartoons can justify the existence of co-operative learning in students and enhances critical thinking is stressed in the present paper.

NEP-2020 encourages students to adopt a self-directed learning strategy that will ultimately help them develop an inquisitive mind set towards science as well as life. It suggested to empower teachers to implement a learner centric strategy in the classrooms. This recommendation implies that, extreme and effective actions need to be taken at secondary schools to prepare students to be effective personnel who are able to think critically.

### **Concept cartoons in Science education**

Concept cartoons are colourful, animated cartoon-style drawings showing different characters highlighting everyday situations, are designed to incite discussion and stimulate thinking (Webb, Williams and Meiring, 2008). Researchers found that concept cartoons help create a discussion environment in the classroom that can reveal student misconceptions (Kabapinar, 2005). Concept cartoons help students to see their misconceptions on the subject and help them cultivate new knowledge (Birisci, Metin& Karakas, 2010). For example, the 9<sup>th</sup> grade students always have confusion between the Volts and Watts, a Concept cartoon with different examples of these will bring to a clearer picture. Concept cartoons help students' know-how different instructional strategies other than the traditional teaching to look at topics from different angles that help students see their misconceptions about topics and involve students more enthusiastically in learning (Birisci, Metin& Karakas, 2010). The students may involve interpreting the meaning of the Concept cartoons during their learning as a group co-operatively.

With Concept cartoons, students experience cognitive conflicts, apply principles and question their understanding so as to resolve it. Therefore, in this process, students energetically use their inquiry learning skills while trying to validate their mental constructs and newly-acquired information (Evrekli, Inel&Balim, 2011). The Concept cartoons can be used to support group discussion which can enhance students' formation of ideas and critical thinking (Warren, 2001). Group discussion with the brainstorming activities are an essential part of critical thinking, it helps students to generate the idea or solution to problem solving. Concept cartoons are the comical expressions from which helps the students get motivated to learn the concepts in easy manner with their peer group. The following situation is one of the example for Concept cartoons strategy in Science.

The particles of matter are everywhere and continuously moving, so, we get the smell of incense sticks



If it has a strong flavour, it smells to a certain distance



**When you light an incense stick in a corner of the room, do you get the smell though you are seated at a distance? Why?**

Yes. It smells, but slightly because we are seated far away from the incense sticks.



Yes. I get the smell of incense sticks only when it is lighted



### CONCEPTUAL FRAMEWORK

The conceptual framework of Concept cartoons is based on Lev Vygotsky's (1997) Zone of Proximal Development (ZPD) theory. The ZPD is the difference between what students can achieve without assistance from others and what students can achieve with the guidance of facilitators or peers or parents. He thought that the ZPD is a powerful pedagogical space that can both quicken and maximize learning. Co-operative learning and group work can subsidize to the establishment of the ZPD. When teachers conduct the lessons based on the Concept cartoons strategy, they had to introduce the main animated cartoon characters to the class during the instruction. This was followed by introducing the new science concepts to the students before they had to chat in peer groups using the given concept cartoons.

With the given Concept cartoons, the students were allowed some time to discuss, to develop the meaning of the Concept cartoons and also to create/generate new ideas. During the discussion, the



students could share their opinions with teachers and peers. Social interface among students is central to the students' acquisition of new knowledge and critical thinking skills (Lev Vygotsky, 1997). The students also can boost their interest in science with the assistance of the Concept cartoons. These may help the students to understand the science concept systematically and in a dynamic manner.

### **Criteria for Concept cartoons**

- Daily life situations or problems with a scientific dimension.
- Minimal amount of text in student's language.
- Common alternative viewpoints based on research set forth.
- Alternatives appear of equal status.

### **Implications of Concept cartoons in Secondary schools**

- Effective with students of all ages and circumstances.
- Highly motivating
- Stimulating new sides on familiar events.
- Important for both teacher and student to construct personal meaning.
- Useful in a variety of situations.
- Formal education to informal everyday settings.
- Useful for a diversity of students
- Used for different concepts in science.
- Many educators believe that students should construct knowledge through inquiry rather than receiving it passively through textbooks or lecturers.
- Gain attention.
- Stimulate recall of prior knowledge
- Engage attention
- Serve as entertainment
- Present information in a non-threatening manner

### **Advantages of Co-operative learning**

Co-operative learning chiefly refers to students' learning with and from each other as fellow learners without any oblique authority from an individual (Boud, 2001). In this paper, co-operative learning refers to a learning method where students learn through conversations with peers. A group of researchers found that co-operative learning can develop deep knowledge (Sciclun, O'Sullivan, Boyle, Tsaushu et al., 2015; Jones and McNeil, 2015). They also found deep knowledge of any concepts can enhance critical thinking. Stenbag and Carlson (2015) found that student's feel safe when joined with their peers and this develops their learning abilities.

The Concept cartoons also have provided students with the fun of learning. It also created an encouraging learning setting rich in both humour and fun (Van Wyk, 2011). Concept cartoons have proven to be effective in increasing students' motivation (Bahrani and Soltani, 2011). Shurkin (2015) also believed that Concept cartoons can enhance students' communication skills largely because of its uniqueness value in the classroom. The students can boost their communication skills especially when they are working with their peers. Previous studies showed that peer learning is active in the enhancement of students' confidence and learning (Dehghani, Amini, Kohuri&Nabeiei, 2014). Coetzee, Lim, Fox, Hartmann & Hearst, 2015 also investigated how to introduce synchronous co-operative peer learning online and reported positive findings.

### **Concept cartoons enhance Critical thinking in science education**

According to Co Michael Scriven and Richard Paul, 2003, "Critical thinking is the knowledgeably disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesizing, and evaluating information gathered from or generated by, observation, experience, reflection, reasoning,



communication, as a guide to belief and action". Ennis (1985, p. 45) defined critical thinking as "rational and reflective thinking which emphasizes on what one believes in or what to do".

According to Ennis (1991), critical thinking comprises the following features:

- Precision: fact of being exact and accurate.
- Attention: notice taken of some information
- Total situation: nature to consider the situation in all its aspects
- Causes: outlook for and present reasons to rationalize
- Trying to be well up-to-date: character to present proof about a subject
- Substitutes: outlook for different ways to understand a situation
- Accuracy: try to obtain definite data to the extent acceptable by the subject
- Self-awareness: To be self-aware about each of one's major needs
- Open-mindedness: To be open-minded by thinking of different viewpoints other than one's own
- Attentiveness: nature to withdraw from making a primary judgement when evidence and reason are not sufficient
- Non-scepticism: To have a position or change it when evidence and reasons are sufficient
- Using one's abilities: To foster and use critical thinking skills

According to educational philosophy, Critical thinking is an important part of education, rather than simply being another possibility (Norris, 1985). Today, around the world, it is extensively accepted that a society that is not captured by critical thinking cannot be a developed society (Aybek, 2007). As the future leaders or decision makers in our society, today's students should be able to think openly, with uncertain and questioning attitude when determining on social problems, while being able to evaluate the arguments of an issue critically and reach healthy decisions (Tumay and Koseoglu, 2011). Critical thinking assists students to synthesize, analyse and assess students' thoughts, beliefs and actions in order to guide them well. Critical thinking has become both a result and a need for human beings who are experiencing fast modifications and who need and desire to predict the future and prepare for it ideationally (Aybek, 2007). Besides, critical thinking and critical thinking skills can be earned and can be established through schooling (Schafersman, 1991). Today, Critical thinking which is at the forefront of instructional thinking skills, is an important factor of increasing students' performance, encouraging them to produce information, enabling them to learn by being less dependent on textbooks and teachers, helping them to assess social structures and encouraging them to change these structures (Anonymous, 2016). Thus, learning and teaching critical thinking must have a significant place.

Tsai, Chen, Chang and Chang (2013) concluded that developing students' critical thinking skills helped them to understand information conveyed in science lessons. A great number of previous studies on this matter shows that students' critical thinking skills and their achievement are closely related. In other words, students with higher critical thinking skills are more prevalent in lessons (Ip, Lee, Lee, Chau, Wootton & Chang, 2000; Giancarlo & Facione, 2001). Browne & Freeman (2000) stated that critical thinking can be taught to students with their vigorous participation. One of the teaching techniques that inspires students participate actively in class is the use of concept cartoons, which gives them a discussion environment. Concept cartoons can be used as a teaching tool to encourage students to think critically and join in discussions (Cho & Reich, 2008). Along with learning scientific knowledge, relishing the lesson is also a goal of science education. Within this context, amusing teaching materials can make science lessons more fun and thus help students to enjoy science (Özdemir, 2017). For example, the students can know the concept of pressure and thrust through activities. In addition, Concept cartoons are a dais for students to discuss about their opposing

viewpoints in a non-threatening environment, thereby nurturing productive argumentation and conversation (Naylor, Keogh & Downing, 2007).

**Conclusion:** Concept cartoons with more than two verbal thoughts of a particular situation or context enhances the students' different abilities by co-operative learning. If curiosity of students is supported by Concept cartoons appropriate to their age, it can make them an effective rational person in future. Concept cartoons contribute to different aims such that improvement in their critical thinking, perception level, creative thinking, problem solving, conceptual understanding, decision making skills, scientific temper, reasoning and performance. With Concept cartoons, students ensure active participation in the classroom with cognitive conflicts. Later on, these conflicts will be ruled out with investigations followed by experiments. They are used to introduce, explain the concepts and also to evaluate the students understanding. Thus, students develop the ability to draw conclusions and make generalizations in science with fun. Therefore, the teachers' community should use this strategy to validate the students' mental constructs and newly acquired information. We all should be a part of change in bringing quality of education in schools to build our nation.

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## CONCEPT MAPPING AS A TOOL FOR ENHANCING ACHIEVEMENT IN SCIENCE

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### Abstract

*Learning and how to learn is the major issue in any educational institutions. Most teachers are searching teaching and learning strategies to overcome from this issue and help students to gain meaningful learning. Concept mapping is one of the best tools to enhance the achievement among the secondary school science students. It is a visual representation of concepts or topics. Though it is difficult to prepare first but after the effort of preparation it make easy to understand and revise the concept quickly later. Papert (1993) believes that "better learning will not come from finding better ways for the teacher to instruct but from giving the learner better opportunities to construct". Among the many techniques available, concept mapping as an effective tool for organizing new information and integrating it with the existing knowledge can provide learners opportunities to learn and construct knowledge (Gao,et al. '2007;Noval & Canas,2006).*

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**Introduction:** Concept maps are an optimal learning tool for students and educators, whether the contributors are enrolled in school, teaching or tutoring a subject, or developing new skills on their own. The process of connecting ideas in a tangible space can solidify your topical knowledge, as well as clarify which areas need a little work. Concept map was developed by Novak in 1972 as a tool to represent students understanding of science concepts. Concept mapping as a way to facilitate the understanding of theories and the internalization of concepts, challenging the traditional methods of rote memorization and passive learning (Kostovich et al., 2007). As nowadays we are hearing that Artificial intelligence will replace the teachers, but hereby we can say that artificial intelligence are help us to gain information of any topic but systematic arrangement, organization of content is done with the help of concept mapping strategy. It enhances learner's cognitive as well as psychomotor ability.

**Meaning of concept mapping:** Concept maps are visual representations of information. They can take the form of charts, graphic organizers, tables, flowcharts, Venn Diagrams, timelines, or T-charts. Concept maps are especially useful for students who learn better visually, although they can benefit any type of learner. They are a powerful study strategy because they help you see the big picture: by starting with higher-level concepts, concept maps help you chunk information based on meaningful connections. In other words, knowing the big picture makes details more significant and easier to remember. Concept maps works very well for classes or content that have visual elements or in times when it is important to see and understand relationships between different things. They can also be used to analyze information and compare and contrast.

### What is a concept map?

A concept map is a diagram or graphical tool that visually represents relationships between concepts and ideas. Most concept maps depict ideas as boxes or circles (also called nodes), which are structured hierarchically and connected with lines or arrows (also called arcs). These lines are labeled with linking words and phrases to help explain the connections between concepts.

### Key features of concept maps:

Concept maps are also referred to as conceptual diagrams. While other types of diagrams may look similar, concept maps have specific characteristics differentiating them from other visual tools.

1. **Concepts:** Concepts are defined as "perceived regularities or patterns in events or objects, or records of events or objects, designated by a label" and are depicted as shapes in the diagram.
2. **Linking words/phrases:** Linking words or phrases are located on the lines connecting objects in a concept map, and these words describe the relationship between two concepts.

They are as concise as possible and typically contain a verb. Examples include "causes," "includes" and "requires."

3. **Propositional structure:** Propositions are meaningful statements made up of two or more concepts connected with linking words. These statements are also known as semantic units or units of meaning. Concepts and propositions are the foundation for the creation of new knowledge in a domain. Essentially, a concept map visually conveys a set of propositions about a certain topic.
4. **Hierarchical structure:** A key element of the concept map is its hierarchical structure. The most general and inclusive concepts are positioned at the top of a concept map with the more specific and exclusive concepts arranged hierarchically below. As such, a concept map is designed to read from top to bottom.
5. **Focus question:** A focus question defines the issue or problem the concept map needs to solve. Developing a focus question allows you to design with a context in mind and thus helps guide and maintain the direction of your concept map. Within the hierarchical structure, the focus question should be at the very top of the concept map and serve as a reference point.
6. **Parking lot:** Before beginning your concept map, it can be helpful to come up with a list identifying the key concepts that need to be included. Establish a rank ordered list from the most general concept to the most specific. This list is referred to as a parking lot, as you will move the items into the map as you figure out where they fit in.
7. **Cross-links:** Cross-links are relationships between concepts in different domains of the concept map, allowing you to visualize how ideas within these different domains are connected. Both the cross-links and the hierarchical structure facilitate creative thinking, and these cross-links often indicate moments of creativity.

### **Process of Concept Mapping:**

Following is the process or Steps of Concept Mapping

1. Identify the main topic or core concept.
2. Brainstorm everything you already know about the topic.
3. Organize the information by major ideas or points.
4. Place the information on a diagram or map. Start with core concept, then major points, then significant details.
5. Review course materials and vocabulary to insure everything is included.
6. Label connecting strands with words or phrases, then use branches, arrows and other symbols (for example stop signs) to indicate the relationship.
7. Use colors, fonts or lines to group or distinguish concepts.
8. Include detailed explanations, definitions, rules, formulae, or equations.
  - Analyze the map using the following questions
  - Is the core concept accurately defined and positioned?
  - How do the ideas fit together?
  - Have I considered all the related information from lectures, texts, and labs?
  - Have I noted all relevant relationships, exceptions, and conditions?
  - Does the map have adequate validity, logic, complexity, and detail?
  - What is the muddiest point and what can be done to clarify it?
9. Revise the map as understanding of the material improves.

### **Concept Mapping as a Tool for enhancing Achievement in Science**

- It is an active and meaningful learning tool and it avoid rote learning
- It develops critical thinking ability among learner

- It also develops the cognitive ability as learner involve in gathering information and arrange in systematic manner to exhibit relationship among the key concepts.
- Complex topics are made very easy to understand
- Revision becomes very quick at the time of examination.
- Through artificial intelligence, information are collected and these information are systematically organized with the help of concept mapping strategy. It creates interest while construction.
- Both mind and hands are active while preparing concept map.
- It explores the learner to share their ideas through brainstorming.
- Broader or bigger concepts are aggregated in one page itself, which helps to quick recall
- Not only benefit for secondary school student instead used in higher education as well as for preparing competitive exams
- Promote richer understanding of knowledge retain for longer duration

### **Why use a concept map?**

The brain processes visuals 60,000 times faster than it processes text. Designed as a tool to organize and represent knowledge, concept mapping can help you visualize relationships between various concepts and test your understanding of complex subjects. Thinking through and visually representing relationships between ideas forms mental connections that allow for better retention of knowledge. This diagram is a popular way to capture understanding of a topic for work, school, or personal study. It's used most frequently in academia, but the process can be easily applied to other fields.

### **Concept mapping offers benefits for any learning process:**

Following are the some of the benefits of concept mapping in Science

- Facilitates comprehension with its visual format
- Synthesizes information by integrating new and old concepts to better grasp the big picture
- Encourages brainstorming and high-level thinking
- Fosters discovery of new concepts and their connections
- Provides clear communication of complex ideas
- Promotes collaborative learning
- Sparks creativity
- Snapshots your current knowledge to assess understanding
- Identifies areas that need further knowledge or review

### **When to make a concept map?**

Concept maps are an optimal learning tool for students and educators, whether the contributors are enrolled in school, teaching or tutoring a subject, or developing new skills on their own. The process of connecting ideas in a tangible space can solidify your topical knowledge, as well as clarify which areas need a little work.

Making a concept map can be helpful when:

- Absorbing information while studying for an exam
- Assessing a student's grasp of a particular topic
- Consolidating knowledge during the learning process
- Demonstrating an acceptable level of understanding on a subject
- Defining knowledge that exists in your head but hasn't been formally documented

Concept maps are similar to other node-linking mapping methods such as topic maps or UML diagrams. However, concept maps differ due to their philosophical basis, which holds that concepts



and propositions are the foundation of new knowledge and meaning. Keep in mind that concept maps are not the same as mind maps, though they're frequently confused

**Concept maps vs. mind maps:** Many people have trouble telling concept maps and mind maps apart. Here's how to determine if you're dealing with a concept map or a mind map:

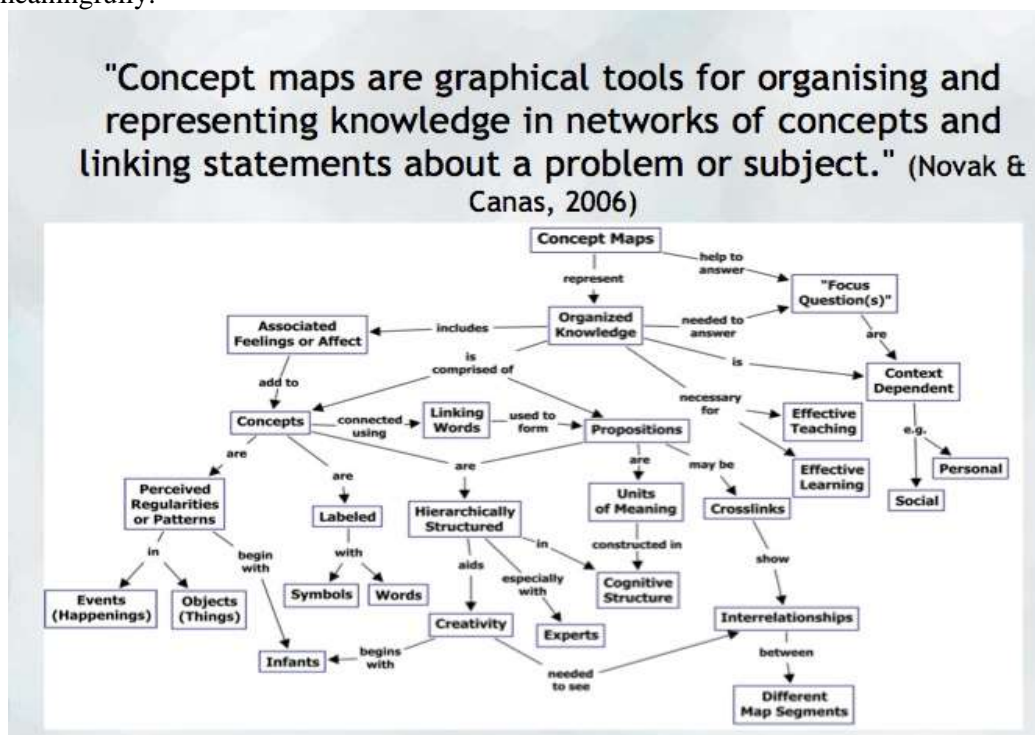
#### Concept maps:

- Are used to represent tacit knowledge, like an existing theory or concept. The ideas are usually generated externally.
- Tend to represent academic knowledge, so their application is more formal.
- Contain general knowledge near the top of the map, with related concepts arranged hierarchically below.
- Show topics with cross-linking and multiple relationships.

#### Mind maps:

- Are used to flesh out a set of ideas, which are often generated internally.
- Tend to represent a greater variety of tasks and concepts, so their application is more flexible.
- Contain a single word, phrase, or image in the center of the map, with related ideas radiating outward in all directions.
- Show topics with a single parent and several children.

**Concept mapping as a teaching strategy:** Ausubel (1963) suggested that most new learning occurs through derivative subsumption i.e., deductive way to deriving subordinated concepts from superordinated concept; and correlative subsumption i.e., learning of new concepts. He also stated that cognitive structure is organized hierarchically by subsuming more inclusive concepts (Asan, 2007). For meaningful learning three conditions is necessary. I) The material to be learned must be conceptually clear and presented with language and examples relatable to the learner's prior knowledge. II) The learner must possess relevant prior knowledge. III) The learner must choose to learn meaningfully.



#### How to get started?

As mentioned, concept maps can be analogue or digital. Teachers might consider providing students with a choice in developing their map using high tech or low/no-tech approaches depending on the objectives. If the objective is to widely share the map, then digital may be preferable (of course, students might also take a photo of a map 'in process' and one that is 'completed' in order to share as part of a portfolio or published work/project).



**For higher-tech options, try:**

- **Mindmaps:** it is a tool that allows you to create concept maps without the need for an account. It also allows you to save your map in the cloud or download it to your computer.
- **Draw.io** (Free Range Ed Tech – An Open Access option available on the Sandstorm Server) : The teacher will need to create an account (data is Canadian housed) and will then have access to the Sandstorm server. Once there, go to ‘Apps’ and select ‘Draw.io’ and create a new grain/mind map. The teacher can then share an editable link to the Mind map with students. Students will not need their own accounts to access and collaborate/edit. Draw.io is added as an app within the Sandstorm server. \*when engaging with apps in the « open » community, please remember that members providing support are volunteers (glitches happen and please be respectful and patient).
- **Inspiration or Kidspiration** as computer based or iPad apps: Highly visual concept mapping software that allows the user to easily insert images from a large media folder. School districts commonly license these applications for use on their devices.
- **Bubbl.us:** is an online collaborative concept mapping software – each individual with an account is able to be invited to contribute to a given map being created in the cloud. With a paid educator account, a teacher can invite students using a link to either view or collaborate (students do not need to provide their information or sign up for an account). A 30 day free trial and an Educator/Non-profit discount are offered.
- For schools using ‘Google Classroom’ **MindMap or Miro** offer free collaborative mind mapping (login required)
- Teachers should always be aware of appropriate permissions in their context/school districts. These might include parental consent, student informed consent or it may not be permitted to have students sign up using g-mail or other account information.
- Twitter can be a great place to search for examples, research, blogs and new mind mapping tools. There are even a few related hash tags you can follow:
- Tweets about mind map

**No/Low Tech Options:** Collaborative or Individual drawing on chart paper or using sticky notes on a whiteboard or on a table with a group of students are great options for kinesthetic or non-digital mind mapping. A primary teacher might even have students use kinesthetic, solid objects to create their own mind map. Teacher might begin helping students develop their ability to connect ideas by providing a skeleton. This will help scaffold learning and introduce students to different ways to connect ideas. Freeform Concept maps can be drawn by hand or using some of the available draw applications made for smart phones and tablets!

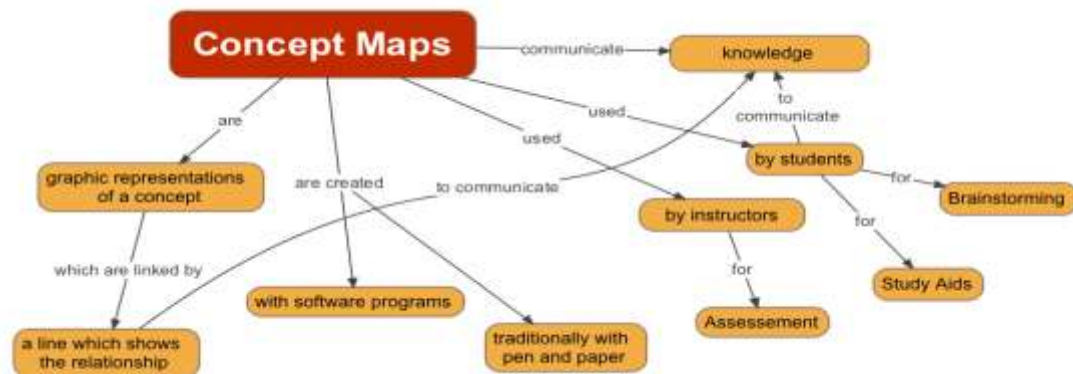
**How to make a concept map?****Concept Mapping:**

A concept map is information graphic which illustrates concepts and the relationship between the concepts in a hierarchical manner. The concepts are represented within containers and the relationship is expressed by lines connecting the concepts. The lines include a proposition or statement. The proposition is usually a verb. Concept map is very much like an outline, except better, because a concept map makes allowances for cross-links and multiple connections between thoughts and ideas. Concept maps are also better for learning than mind mapping because mind mapping is not structured with different levels of specificity. Concept maps are often used by teachers to assess the knowledge of the students, before and after the subject matter are taught. The maps may be used by students not only to brainstorm ideas, but to succinctly organize thoughts. An added plus is that once the concept map is developed, it is a wonderful tool to use as a study aid.

### How to Make a Concept Map?

Concept maps can of course be made with pencil and paper, no technology involved. However, one of the nice things about using a computer to produce a concept map is the ability to easily move and rearrange the concepts. Drawing programs like Adobe Illustrator and word processing programs like Microsoft Word can produce concept maps. However, an application developed specifically for creating concept maps might be a better choice as they are simple to learn and use.

**Concept Map Tools:** There are three very good concept mapping tools available on the web: VUE, Cmap tools, and the bubbl.us website.



**Concept mapping for education:** Concept mapping can be a powerful tool in the world of education, helping students to perform at higher cognitive levels and helping teachers to explain complicated subjects and assess student understanding.

#### Students can use concept mapping to:

- Organize and structure new material
- Increase learning by relating new and old knowledge
- Map out relationships between things such as vocab words, characters in a story, events in history, etc.
- Plan/outline writing projects
- Design their own representations of knowledge
- Brainstorm new ideas
- Take notes
- Create study guides
- Design complex structures

#### Teachers can use concept mapping to:

- Plan curriculum
- Assess understanding or diagnose misunderstanding of students
- Explain complex ideas
- Assist struggling readers

**As educators:** incorporate concept maps into their teaching methodology, they can provide aids to help facilitate the process for students:

- Give a focus question to get the wheels turning.
- Create a parking lot (list of key concepts) to help students determine what to include in their map.

- Provide expert skeleton maps so students have a structure to follow. These are small concept maps started by an expert on the topic which students can then expand upon.

### **Concept maps are especially useful as evaluation tools.**

For example, instructors can have students create a concept map at the beginning of the semester to assess existing knowledge. Concept mapping allows for this productive small group work among students and teachers in any subject matter.

**Conclusion:** Concept mapping is a visual or diagrammatic representation of concepts which make understanding of concept easy and also provide meaningful learning among Science learner. Concept map as a tool enhances the Achievement among learner of secondary school students especially in learning Science. As learner collect information and organize it systematically. At first it consume lots of time but after the preparation it become very easy to recall, revise the concept. Complex topics are merged in a single page in the form of diagram highlighting the key concept and linking relationship with related concepts using nodes and arrows. It is very attractive and creates interest in learning among learner. In foreign countries its use is broader but in India this method is very less in practice. Here the learner constructs his own knowledge as learner by himself create the concept map which enhances their critical, logical and cognitive thinking ability which in turn enhances the achievement among learner.

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- <https://skillful-learning.org/cgi-sys/suspendedpage.cgi>
- <https://skillful-learning.org/cgi-sys/suspendedpage.cgi>
- [https://www.lucidchart.com/pages/concept-map#:~:text=A%20concept%20map%20is%20a,arrows%20\(also%20called%20arcs\).](https://www.lucidchart.com/pages/concept-map#:~:text=A%20concept%20map%20is%20a,arrows%20(also%20called%20arcs).)

## RELATIONSHIP OF BADMINTON PLAYING ABILITY AND SELECTED PHYSICAL FITNESS VARIABLES

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### **Abstract**

*The goal of the present study was relationship between playing ability and physical fitness variables of badminton players. The subjects for the present study were 75 male badminton players who competed in the inter-university competition in the state of Karnataka were chosen. The age of the subjects were 19 years to 25 years. The Speed and Reaction time were chosen as the physical fitness variables. Standardized test were used to gather all the data. Moment of the Pearson's Product to ascertain the relationship between playing ability and particular criterion variables.*

**Keywords:** Badminton, Speed, Reaction time, playing ability

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### **Introduction:**

Sports are a fantastic way to get involved in physical activities that benefit a lot of people. Many nations place a high value on sports because they recognise its genuine benefits and necessity in a person's personal and professional life. Sports are physical exercises that are extremely important to any athlete or professional sportsperson. It has a lot of implications for them and their lives. Sports provide excellent opportunities for athletes both nationally and globally. Sports and games activities are organised in a few countries to commemorate the birthdays of a few events or festivals; for example, the Olympic Games are organised to honour the Olympiads of ancient Greece.

Sports are high-quality physical activities that provide an escape from stress and worry. It has a broad reach and a skilled career for athletes. It has the potential to provide athletes with the necessary call, celebrity, and money. As a result, we may argue that sports can be undertaken for both personal and professional reasons. It benefits our body, mind, and spirit in each approach. Some people play it every day for their physical and mental health, fun, and so on. Others play it to gain a beloved reputation in their lives. No, you will forget its values in your personal and professional life. It features both outdoor and indoor video games in which athletes from many countries compete.

### **Badminton game**

Badminton is a popular fast-paced indoor sport. To be successful in badminton you need excellent court speed and agility, with a good background of endurance. The fitness training for badminton should focus on speed, agility, reaction time and endurance, with also strength and flexibility also important.

Badminton is a popular indoor, fast-paced sport. To be successful in badminton, one must have outstanding court speed and agility, as well as a strong endurance foundation. Badminton fitness training should emphasise speed, agility, endurance and reaction time. A player must be physically tough in addition to having speed, agility, and acute abilities.

See what are the relative fitness requirements for badminton Training should be sport-specific, addressing the specific needs of a badminton player. On court training, such as playing games and badminton drills, will provide some fitness benefits, but it needs to be supplemented with extra off-court training, such as resistance exercises in the gym and other cross training activities. Here is some more information about training for specific physical attributes that are important for badminton.

Without physical fitness, athletes would be unable to win a competition or have an advantage over their opponents because they would struggle to maintain their performance throughout the

tournament. Physical toughness can be divided into two categories: strength and endurance. It can help players by allowing them to stay on the court for extended periods of time. Endurance and stamina are essential factors in allowing players to continue in the game for longer periods of time. In a long rally game, players that lack stamina will quickly run out of air. Because it is more difficult to overcome a weary player, his or her opponent will be more confident in winning the game. To stay in the game, a player must be physically robust.

In the modern game of badminton, a player must continuously be in motion for a set period of time (up to 75 minutes depending on the player's standard), varying his pace from fast to slow, medium to fast, and vice versa, and frequently hopping, skipping, jumping, lunging, and changing direction while in motion. This necessitates a significant amount of cardio-vascular endurance on the part of the badminton player. The world's top badminton-playing nations, particularly China, Indonesia, Malaysia, and Korea, are well aware of this and focus on the development of fundamental physical fitness variables and related issues. They begin training a youngster, focusing on fitness aspects that are expected to have a big effect on the child's future success. Flexibility, agility, balance, cardiovascular endurance, strength, reaction time, power, and so on that are suited for a given age range.

Fitness standards are embedded into fitness components to some extent. A fit player must be strong, fast, powerful, nimble, lean, athletic, muscular, and have a high level of endurance. Furthermore, there are links to aesthetic requirements in terms of movement quality. We may also anticipate the athlete to be energetic and explosive. A higher level of fitness is frequently reflected in better-quality fitness demonstrated in movements around the court. This is to be expected, because if this fitness is special to badminton and one gets fit by training on these motions, one will undoubtedly become a better (more skilled) mover in the game. As a result, the quality of skilful mobility in the game, Fitness and talent are inextricably linked in the execution of great movement that meets aesthetic requirements.

Physical fitness is defined as the ability and hobby to deal with the demands of a variety of activities. It's not exactly athletic overall performance. A healthy individual can live his or her life to the fullest. Physical and mental health play vital roles in people's lives, and individuals who are both physically and emotionally sound are less sensitive to scientific conditions.

### **Purpose of the study**

The Main purpose of the study was to relate the physical fitness variables and playing ability of badminton players.

### **Methodology**

For the present study, subjects were seventy-five (75) inter-university badminton male Players who were represented in inter-university competition. The subjects were selected from different universities in Karnataka state. The Random sampling method used for this study. The age of the subjects was 19 to 25 years.

**Statistical procedure:****Table 1. Shows the mean, standard deviation of Speed and playing ability of badminton players.****Table 2. Shows the mean, standard deviation Of Reaction Time and playing ability of**

Correlations					
				Speed	Plying ability
Speed	Mean	Std. Deviation	Pearson Correlation	1	.021
	5.8301	.69185	Sig. (2-tailed)		.857
			N	75	75
Plying Ability	38.0667	3.51573	Pearson Correlation	.021	1
			Sig. (2-tailed)	.857	
			N	75	75

**badminton players.**

Correlations					
				Reaction Time	Plying Ability
Reaction Time	Mean	Std. Deviation	Pearson Correlation	1	-.056
	.4283	.10116	Sig. (2-tailed)		.634
			N	75	75
Plying Ability	38.0667	3.51573	Pearson Correlation	-.056	1
			Sig. (2-tailed)	.634	
			N	75	75

**Conclusion:** In the above table, the speed and badminton playing ability is .021 it is Weakly Positive correlatonship. Because the speed makes it much more difficult to return and gives the player a better chance of earning a point. If a player has less speed, he (or she) may not be fast enough to hit the shuttle at the highest point. If a player takes the baseline clear when the shuttle has already fallen low, a lot of energy will be needed to hit a clear. A drop shot won't be too effective, while a smash will not be possible. In Reaction Time and badminton playing ability the value is -.056. It is moderately negative relationship. Because particularly the high speed of the shuttlecock leaves too little a time to react, thus, badminton player should quickly and accurately decide during the game. In brief, the fast return of the shuttlecock in less than one second necessitates quick thinking and reacting to the stimulus during the game.

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## TEACHERS' PERCEPTION ASCERTAINS EFFECTIVE ALTERNATIVE WAYS OF TEACHING LEARNING PROCESS

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### Introduction

An additional scholar advocating the use of authentic texts before adapted texts is Gilmore, who highlights the importance of preparing students for the language they will encounter in “real life”. He states that: If our goal in the classroom is to prepare learners for independent language use, then surely we are obliged at some stage to present them with realistic models of discourse, messy and unpredictable as it is (Gilmore, 2004: 367).

English occupies an important place in the world today. Every country, every citizen of the world prefers to learn English. English has become the channel of communication in all sorts of communication gadgets operating with English. Much of the communication at the administrative level and organizational level is being done in English with little emphasis on regional or local language.

### Importance of Teaching Language

Now a day's everyone knows the importance of English language in today's world, importance of English language in our society and importance of English in daily life. The importance of English language in non-spoken countries as well increases day by day. From elementary to college, most of the countries worldwide include English as one of their major subjects.

- The syllabus for English for secondary school clearly states that pupils should “develop their ability to read different types of texts for pleasure and to obtain information and knowledge” and “have the ability to understand and to assimilate texts of various shapes and degrees of difficulty” (www.skolverket.se). Several studies performed recently reveal that textbooks and printed learning materials are the dominant teaching aids in schools in Sweden. The textbook has been given such a substantial function in teaching since it is expected to realize the goals of the curriculum. In addition, research has shown that textbooks provide both teachers and students with a sense of coherence, entirety and security in teaching. Nevertheless, the role that printed learning materials play in education varies depending on the teacher and the subject matter (Farrell, 2003: 2553). Some researchers are against the use of materials intended for language teaching and declare that textbooks “do not prepare [learners] for the reality of language use”, whereas more authentic texts give learners exposure to the more typical usage of the language (Tomlinson, in Carter and Nunan, 2001: 68). Research carried out in wealthy nations demonstrates that, although there are now a number of alternative learning materials available, the textbook is still relied upon to a great extent and it also functions as the core teaching resource among a vast majority of teachers around the world (Farrell

According to Alice, a great advantage of using alternative learning materials is that you encounter new vocabulary and new texts, and also that the subject of English becomes “more enjoyable with a variation in learning materials”. She defined this material as something new and “not just the same old textbooks”, and said that it might be suitable for pupils who normally dislike the subject of English as well as other languages. Both Karin and Niklas emphasized the value of achieving variation in lessons and learning materials and found these texts very suitable to attain this variation. Karin also stated, similar to Alice, that pupils who do not normally have a great interest in English might increase their engagement when working with alternative texts.

How did the students engage with the texts used in an action research project in the subject of English? • To what extent were the students able to comprehend the texts used in the action research project? • To what extent did the students find these texts useful for their language development?

**Purpose and Aim** The purpose of this investigation is to explore the possible role of alternative learning materials in the subject of English through an action research project in year nine, secondary school. The aim is to investigate the participating students' engagement and comprehension of the texts used in the project. During three weeks of my final teaching practice, I did action research when I introduced alternative learning materials in two different groups. In addition to my action research, I carried out interviews with pupils to explore whether they found alternative learning materials useful and possible to comprehend.

**Here are nine typical approaches to consider:**

- Differentiated instruction. ...
- Lecture-based learning. ...
- Technology-based learning. ...
- Group learning. ...
- Individual learning. ...
- Inquiry-based learning. ...
- Kinesthetic learning. ...
- Game-based learning.

**2 Definitions** Some significant concepts need clarifying: learning materials,

alternative learning materials and textbook. In the Swedish National Encyclopedia online, the term learning materials is defined as a “pedagogical aid in teaching, earlier more or less synonymous to textbook”. In addition, it is stated that “the concept of learning materials has increasingly broadened, and mainly everything can be used as a foundation for teaching”. Yet the author argues that it is “reasonable to delimit the term to the type of materials produced and intended for teaching”

Ingela Korsell (2007: 26) defines learning materials as “objects shaped by the human being that are used in teaching to facilitate learning”, and she states that learning materials can be divided up into primary and secondary pedagogical materials. The former were produced to be used in teaching whereas the latter were not intended for teaching but can nevertheless be used in that type of context.

In the Encyclopaedia of Education (2003: 2553), a textbook is defined as a “printed and bound artefact with which one was provided [...] for each year and course of study. It contained [...] the core content and all sorts of exercises and study questions at the end of sections or chapters”. In addition, it is stated that textbooks are “commissioned and written by authors or firms who are hired to write to specifications set by whatever authorities develop the standard curriculum for a system of schools”.

**Literature review:** This section introduces literature on learning materials and other important concepts connected to learning materials. To begin with, it presents an historical background to the use of learning materials in educational settings. It also introduces diverse views concerning the use of different learning materials in the language classroom. In addition, this section shows how alternative learning materials relate to the Swedish steering documents for school.

The National Curriculum and Syllabuses for English As mentioned above, the steering documents for the Swedish school system do not specify what learning materials to be used in school, neither are there any instructions on how teachers are to teach or what lessons should contain. However, the documents contain guidelines and specific goals, and these goals presuppose that pupils should be able to use 15 various types of materials and sources of information in their learning. The goals also require a way of working characterised by variation and the use of different types of learning materials in English. When examining the syllabus for English in secondary school, it is clearly stated

that pupils should “develop their ability to read different types of texts for pleasure and to obtain information and knowledge”. Additionally, regarding “goals that pupils should have attained by the end of the ninth year in school”, pupils should “be able to read and assimilate the contents of relatively simple literature and other narratives, descriptions and texts putting forward argument in subjects they are familiar with”. Further on in the syllabus, underneath the headline “assessment in the subject of English”, it is stated that pupils should have the ability “to understand and to assimilate texts of various shapes and degrees of difficulty”. When assessing pupils’ reading ability, one should also explore “to what extent pupils, with the help of different strategies, can adapt their reading to the nature and purpose of the text ([www.skolverket.se](http://www.skolverket.se)). To conclude this section, I would also like to emphasize the importance of engagement and motivation, since these aspects are the main focus of this dissertation:

### **Research Hypotheses**

The researcher has formulated the following hypotheses for the present study.

1. There is a significant relationship between the perception of student teachers about learning English and their attitude towards English.
2. There is a significant relationship between the perception of student teachers about teaching English and their attitude towards English.
3. There is a significant relationship between the perception of student teachers about learning language skills in English and their attitude towards English.
4. There is a significant relationship between the perception of student teachers about teaching language skills in English and their attitude towards English.
5. There is a significant relationship between the perception of studentteachers about learning English and their achievement motivation.
6. There is a significant relationship between the perception of studentteachers about teaching English and their achievement motivation.
7. There is a significant relationship between the perception of studentteachers about learning language skills in English and their achievement motivation.
8. There is a significant relationship between the perception of studentteachers about teaching language skills in English and their achievement motivation.

**Method:** Various procedures were followed in the construction and standardization of data gathering instruments and the tools adopted to measure the impact of different variables that are included in the study will be discussed. The methods adopted in selection of the sample, collection of data, scoring and analysis

This dissertation has two dimensions. To begin with, action research was carried out in year nine, secondary school, during a three-week period when alternative learning materials were used instead of the existing textbooks and exercise books. Secondly, data were gathered from interviews with pupils participating in the action research project in regard to the topic of alternative learning materials. The lessons and the additional evaluation function as the centre of this dissertation. In the following section I will include a detailed description of the lessons, since this research could not have been carried out without them.

**Data collection:** The student-teachers were given necessary instructions about the various instruments and motivated them to respond genuinely to all the items. The tools and personal data sheet were administered. The data on each variable in the investigation was collected and properly used for further analysis. In the current research, Academic for this dissertation, three different methods for data collection were used: questionnaires, observation notes from the action research project and interviews. As an introduction to the lesson series, the pupils in the two groups answered a

questionnaire during approximately thirty minutes of their first lesson. The questionnaire contained aspects such as the pupils' familiarity with English outside of the school environment and their views regarding the use of alternative learning materials in the subject of English (see appendix 1). During my teaching, I carried out continuous note taking throughout all of the ten lessons. To be able to perform the lessons and to manage to register as many relevant incidents as possible, my supervisor noted down her observations as well. When a certain lesson was completed, I typed out a more detailed description of the lesson on the computer where I compared both of our sketches. I soon realized that it would be difficult for me to both teach the lesson and to succeed in registering incidents at the same time. For that reason, I made the decision of letting my supervisor function as my assistant to a certain extent.

**Results of the action research:** The aim of this dissertation has been to investigate the possible role of alternative learning materials in the subject of English through an action research project carried out at a secondary school. The data consist of observation notes from the action research, questionnaires and interviews. In this section, the results from the action research, e.g. observations as well as interviews and questionnaires, are presented. Apart from the data gathered during the lessons, I carried out questionnaires among the pupils as part of the action research; a pre-questionnaire as an introduction to the threeweek period and an evaluation questionnaire. The latter was conducted two weeks after the action research project was finalized and answered by 27 pupils, whereas the prequestionnaire was answered by 26 pupils. To begin with, I will present the results from the pre-questionnaire. For a complete overview of the questionnaire, see appendix 1.

### **Suggestions for Further Research**

The following are the topics suggested by the investigator to understand more about the problems in the field of English language teaching especially pertaining to motivation and perception

1. Aspiration for learning English among the students of secondary classes in different districts.
2. Fear of failure manifested by students of high school classes in learning English
3. A study of learning outcomes of students of different stages pertaining to English language learning
4. Perception of teacher educators about the involvement of studentteachers in colleges of education in the acquisition of the skills of English
5. Perception of rural and urban students about the use of English for future professional accomplishment

### **6 Conclusions:**

My intention with this dissertation has been to explore the possible role of alternative learning materials in the subject of English through an action research project carried out at a secondary school. More specifically, the aim has been to examine how the pupils engaged with the texts used in the project, to what extent they were able to comprehend the texts, and to what extent they found the texts useful for their language development. As mentioned above, the selection of learning materials are connected to a number of factors. Whether certain materials are effective or not depends on aspects such as the requirements of the tasks, the social atmosphere of the classroom and students' abilities. It is important to stress that the results from this research cannot be generalised and discussed in terms of alternative materials versus textbooks. My investigation concerns the particular tasks and the materials I decided to use, as well as the particular students whom I selected to be the participants of the project. At this point, and with the above considerations in mind, I can conclude the following: • The pupils' engagement with the texts differed to a great extent depending on the materials and the design of the task. Engagement among the students was particularly visible when it comes to the materials used in connection with the songs, as well as the news articles. Some of the negative aspects in regard to engagement mainly concerned the group-work task and the story-writing

task. The level of engagement could be linked to aspects such as the texts' connections to the pupils' own lives, the variation in the tasks and the presence of new and unfamiliar vocabulary and expressions. • In general, the students' ability to comprehend the texts used in the project was high and particularly visible in connection with the news articles. Some pupils stated that the texts used in the project had a somewhat higher degree of difficulty compared to textbooks, whereas others found the texts used in the project to be on the same level as textbook texts. According to the questionnaire, ¼ of the pupils stated that they found no text particularly difficult.

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## BLENDED LEARNING: AN INNOVATIVE TEACHING TECHNIQUE

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### Abstract

*Blended learning is an innovative teaching method that adapts the advantages of both traditional and E-learning, ICT is supported for online teaching and learning in the classroom. It has scope for collaborative learning; constructive learning and computer assisted learning (CAI). Blended learning access to global resources and materials that meet the students' level of knowledge and interest. Self-pacing for slow or quick learners reduces stress, increases satisfaction, and information retention. As it incorporates diverse modes so it is complex and organizing it is a difficult task. Blended learning is important because it breaks down the traditional walls of teaching, ones that don't work for all students and now with access to present-day technologies and resources we can tailor the learning experience for each student Blended learning also offers flexible time frames that can be personalized to each person, offering them the ability to learn at their own pace. The present paper discusses the concept of blended learning, blended learning models and examples, learning activities, role of teacher and advantages, implementation Scope and future of blended learning in classroom is discussed. The present paper also tries to explain that how blended learning is an approach that needs to be adopted in present day classroom.*

**Keywords:** Blended learning, learning activities, Innovative teaching models, classroom activities

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### Introduction

The education system has brought changes and challenges from traditional to advance mode of teaching and learning process means from traditional chalk and talk classroom to technological based web based learning E-learning, M-learning, E-resources, cloud computing and blended learning or hybrid learning. Blended learning is a training method that combines traditional in-class, instructor-led teaching with eLearning content to create a more flexible learning experience by blending these methods, learners can benefit from the guidance and interaction of an in-class experience while having access to dynamic and flexible learning opportunities outside the classroom. In online learning offers personalized, self-paced learning with Learning components that blend themselves to interactive media such as games, videos, tutorials, quizzes and social media components, all accessible from the learner's home page in the Learning Management System (LMS)—and accessible from the learner's smart phone or tablet. Innovative teaching strategies don't always mean introducing the latest and greatest technology into the classroom, instead of innovative teaching is the process of proactively introducing new teaching strategies and methods into the classroom. ICT main aim to introducing new teaching strategies and methods in to teaching and learning process improve academic outcomes and address real problems to promote equitable learning.

### Blended Learning:

“Blended learning, also known as hybrid learning, is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods.”

### Blended Learning Models

**Face-to-face driver model:** In face –to- face driver model teacher uses different methods of teaching in conventional classroom. Students learn according to their own pace.

**Rotation model:** In rotation model students rotate between different situations such face-to face classroom and online learning platform on a fixed schedule.



**Flex model:** In this method material is primarily delivered through online platform. Teachers provide only support and guidance. It is totally self-learning as students learn independently and practice new concepts in digital environment.

**Online lab Model:** In online lab method course is completely designed in the platform and students should complete their course in computer lab.

**Self-blend model:** Self – blend model gives students the opportunity to take classes beyond what is already offered at their institution. They should attend traditional classes and also select to supplement their learning through online course offered remotely.

**Online driver model:** In this model students work at remote place and material is primarily delivered through online platform. Students are given opportunity to interact with teacher in online platform if they have doubt.

### **Blended Learning Examples for 2023**

1. Flipped Classroom: One of the most popular blended learning examples. In this method, students watch recorded lectures or video tutorials before attending class during class, teachers focus on interactive activities such as discussions, problem-solving, and group work.

Flipped classroom method is highly effective because it enables students to learn at their convenient time and review difficult concepts before attending class. It also allows teachers to engage with students on a deeper level and provide individualized support.

2. Gamification: The Gamification is an another effective blended learning method. It involves incorporating gaming elements such as points, badges and leader boards into the learning process.

Gamification makes learning more engaging and purposeful for students and helps them retain information better and promotes healthy competition among students, which can improve learning capacity.

**3. Personalized Learning:** The Personalized learning is a method of teaching that addresses the unique needs and learning styles of each student involves using data analytics and technology to create personalized learning paths for each student. In this method enables teachers to provide targeted support based on individual learning needs. Personalized learning has been shown to improve student engagement and academic performance.

**4. Collaborative Learning:** The Collaborative learning is an innovative teaching method that involves students working together in groups to solve problems or complete tasks and promotes teamwork, communication, and critical thinking skills. In this method encourage, collaborative learning can be facilitated through online platforms such as discussion forums, video conferencing, and collaborative document editing tools.

**5. Micro-learning:** The Micro-learning is a method of teaching that delivers small, bite-sized lessons or modules. It is particularly effective for teaching specific skills or concepts. In this modules can be conveniently accessed online, and students can learn at their convenience and this method is ideal for busy students who do not have a lot of time for long lectures or assignments.

**6. Virtual Reality:** Virtual reality is an emerging technology that can be used to enhance blended learning. It involves creating a simulated environment that students can explore and interact. Virtual reality can be used to create immersive learning experiences that are not possible in a traditional classroom setting-example, students can explore historical sites, scientific phenomena, or engineering designs in a virtual environment.

**7. Mobile Learning:** Mobile learning involves delivering learning materials to students via mobile devices such as smart phones or tablets. In this method is particularly effective for students who prefer to learn anywhere and anytime. Mobile learning can be delivered through apps, videos or interactive modules. It is an ideal method for busy students who need to study during their commute or between classes.

**8. Social Learning:** Social learning involves using social media platforms such as Twitter, Facebook, and LinkedIn to facilitate learning. Social media can be used to connect students with peers and experts in their field of study. It can also be used to share resources, ask questions and collaborate on assignments. Social learning can be particularly effective for students who are more comfortable with online communication than face-to-face interaction.

**9. Adaptive Learning:** Adaptive learning is a method of teaching that uses data analytics and technology to adjust the learning experience based on each student's performance. It involves providing personalized feedback, recommendations and resources to each student. In this learning can be delivered online and it allows students to receive targeted support to improve their understanding of concepts.

**10. Blended Learning Platforms:** Blended learning platforms are tools that combine different learning activities, such as videos, quizzes, interactive activities, and assessments, into a single platform. They allow teachers to create and deliver customized learning experiences for their students.

#### **Blended Learning Programme: Learning Activities**

Blended Learning Programme is takes place mostly in the form of group activities and enables learners to be active, engage and develop knowledge and skill in this learning activities students are motivated to learn in a meaningful learning activity. In learning activities are effectively integrated with conventional face-to-face session and technology enhanced online learning platform.

The different learning activities are described in below.

**Audio-visual Presentation:** Audio visual presentation motivate the students and clarify the concepts and ideas using different teaching material like CD, DVD embedded audio files, interactive videos, microphones, power point presentation and videoconferencing tools.

**Demonstration:** It is a useful approach often used as skill development programme. It allows the learner to perform demonstration themselves. It attracts and holds attention and provides opportunity for the learner to perform after the classroom teaching.

**Discussion Groups:** Discussions are usually focused around a specific activity or current theme and the teacher's role is to stat the discussion and provide learning materials. Discussion may be for whole group or for small group.

**Brainstorming:** It is a problem solving technique which involves generating ideas and sharing concepts in a short time. It is often used in face-to-face classroom. In online platform it is used as group activity.

**Case Studies:** Case study method focus on one particular situation to explore problem and develop solution. This method makes the student to actively engage in learning process. The best case studies are based on the real situations and life experiences.

**Project Groups:** This method encourage co-operative learning, individuals work on their own task, share ideas and feedback. This enable individual to develop team work virtual communication skill.

**Problem Based Learning:** In this method a problem is triggered among students and allow then to react towards it. The teacher creates a problem situations or allow them to discuss on real life problems this will encourage the learners to apply their knowledge to get solution for a complex problem.

**Quizzes:** In this activity student's work through a series of questions, it is used as an assessment activity. It is highly motivating activity which arouse interest and excitement to the learners.

**Debates:** It is a useful method of enabling learners and engaging them in an active discussion situation. This method allows learners to explore opposing sides of an argument.

**Reflective Practices:** In this activity individuals or small groups reflect on their learning experience. It is used as an assessment activity for improving learner's performance and motivation.

**Virtual Visitors or Guest Speaker:** Teacher invites an experienced practitioner or expertise to visit the group either in classroom or as a virtual visitor. By this activity the learners explore the concept in different perspectives.

### **Role of a teacher**

The facilitator can combine two or more methods of teaching. The instructor can begin a course with a well-structured introductory lesson in the classroom and then proceed with follow up materials online. Facilitator must focus on literacy instruction, using technology and face to face instruction in order to develop independent learners.

Facilitator's role can be broken down into the following four categories.

1. Communication.
2. Develop in online course content and structure.
3. Guiding and individualizing learning
4. Assessing, grading and promoting learning.
  - Teacher must co-ordinate co-operative grouping.
  - Teacher must personalize materials.
  - Teachers must assess and provide actionable feedback.

### **Scope and Future of Blended Learning:**

- Greater time flexibility, freedom, and convenience by working part of the time online from home.
- Access to unlimited updated resources available through the web.
- Enhance skills in time management, critical thinking and problem-solving.
- 24/7 access to online course materials.
- Receive more frequent feedback from their instructors.
- More interaction with the instructor and fellow students.
- Increased success as measured by fewer course withdrawals and higher grades.
- More participation in classroom discussions and ability to choose environment-Online or Face-to-Face, in which they feel more comfortable.
- More time to reflect and refer to relevant courses and other research materials.

### **Advantages of blended learning**

- The major advantage that blended learning offers is scale, whereas one instructor can teach only a limited number of students in face to face instruction, use of IT expand instructors access to students.
- The instructor no longer needs to be physically in the same room as the student and hence reach out to students who are enrolled on other colleges and universities.
- Blended learning format offers time flexibility for both faculty and students and its creative use of the face to face class.

Example: as the reading and theory could be delivered to students through online environment the face to face time could be used to discuss key issues like in the flipped classroom.
- Posing of class materials assignments for formative and summative assessments and instructions for presentations and external links for reference tutorials and self directed learning topics saves classroom, time.
- Online objective tests for self- assessment can be graded automatically and instantly allowing more productive use of instructor time.
- Online content allows students unlimited access, ability to fill in gaps in their background knowledge.
- Online quizzes helped students identify those areas that they need to review.

- Online communication is the ability to bring in outside experts and resources and connect students in different classes and institutions.

### Implementing Blended Learning in Classroom

Blended learning is refers to an instructional approach that combines traditional method like face-to-face classroom instruction with online learning activities .In integrated both physical and digital learning environment allowing for a mix of in-person interaction and online resources.

1. **Use a variety of teaching tools:** Incorporate digital technology into your classroom lessons along with traditional methods of instruction. Switching between computer-based or gamified learning and face-to-face instruction will keep students engaged in their learning and strengthen lessons. It can also empower students to move at their own pace.
  2. **Make learning accessible for students:** Learning should continue after students leave the classroom. A benefit of incorporating digital learning is that it allows students to access information, activities, and games anywhere, anytime. Digital learning provides flexibility that supports student success. Some teachers use digital resources to assign homework to students on vacation to ensure continuous learning.
  3. **Personalize learning pathways for each student:** Each student is unique with their approach to their learning. Make sure to use resources that have varying degrees of difficulty to encourage students that need it, while challenging those that have already mastered the material. This will build confidence and guarantee every student is working at their ability level and by their efforts when facing new challenges.
  4. **Choose the blended learning model that works for you:** Test out different models of blended learning to see what fits best in your classroom. Some of the popular models to consider are Station Rotation Model, Flipped Classroom Model, and Flex Model but there are a variety of models to choose from. Adapt your plans as you go and share your success with fellow educators so that their students can gain the same benefits from a blended learning environment.
- **Station Rotation Model:** Students rotate through different learning stations in class. This could be a mixture of group work, online learning, small group instruction and full class collaboration.
  - **Flipped Classroom Model:** Students are first introduced to concepts at home through online coursework and then practice in class with teacher assistance.
  - **Flex Model:** Students work through online learning activities on a customized and fluid schedule with teacher assistance as needed.

### Conclusion

Blended learning provides more flexible, interactive, and efficient and varied learning experiences for students and it can enhance student's learning outcomes, improve motivation and it is an effective way for achieving learning objectives and also used an alternative learning for the teacher, with the rich integration of technology teachers will be able to improve their teaching skills. Prepares students for the future Blended learning offers a multitude of real-world skills that directly translate into life skills from self-learning, self-engagement and better decision making. Reflection develops metacognitive skills in students.

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## THE IMPACT OF GAMIFICATION ON ACADEMIC ACHIEVEMENT AND SCIENTIFIC INTEREST IN LEARNING SCIENCE AMONG SECONDARY SCHOOL STUDENTS

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### Abstract

*The present study aimed to examine the impact of Gamification among secondary school students in learning science. The idea of gamifying education is one that is still relatively new but is quickly gaining ground. Based on the premise that people are fundamentally competitive, integrating game components will encourage people to engage in a learning experience or professional assignment. In this regard the author has made an attempt to engage students through Gamification. The present study is experimental in nature and randomized control two groups design was adopted. The researcher has employed purposive sampling technique and chosen 60 secondary school students as samples to conduct the experimental study. The researcher has carried out the experiment for a period of one month and found the results. In a web-based programming learning environment, we looked into the effects of Gamification on students' learning, behaviour, and engagement based on their personality factors. According to users' personality types, Gamification appeared to have different effects on them. Our findings suggest that the impact of Gamification depends on the unique user attributes.*

**Key words:** Gamification, scientific interest, academic achievement, science and computer gaming

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### Introduction:

According to the contemporary idea of education, the teacher should work for the child's total development. To do this, the modern teacher is driven by a desire to make his instruction easier and more engaging. Along with being an effective teacher, he must be able to comprehend the psychology of his students if he is to achieve this goal. The major goal of instruction should be to influence the learner's behaviour in ways that are good for the child's overall development. The only way to achieve these changes is by adopting effective teaching techniques. "Even the best curriculum and the perfect syllabus remain dead unless quickened into life by the right methods of teaching and the right resources," the Secondary Education Commission (1965) stated.

Understanding the problems (such as concepts) that shape science is important for both teaching and studying science. Knowing how students perceive these concepts and their learning challenges is crucial for teachers. When attempting to comprehend scientific subjects, pupils create their own mental concepts, according to cognitive theories of learning (Pines and West, 1986). Students' views will diverge from scientific ones depending on their background, experience, attitude, and aptitude (Nakhleh, 1992).

It is well acknowledged that the usage of media enhances learning activities in addition to assisting teaching and learning processes. Today, computer-assisted learning may be quickly used to enhance the quality of teaching and learning due to the speed at which technology is developing. New computer languages have developed recently to enable effective coding and programming, which has in turn fostered the creation of video games for educational purposes. With the introduction of Gamification, science lectures are no longer seen as a stuffy and uninteresting topic. Computer-assisted games are superior to the conventional method of science instruction for active learning in the classroom because they may occupy and amuse pupils.

In order to boost engagement, Gamification involves integrating game mechanics into non-game venues, such as a website, online community, learning management system, or corporate internet. Gamification aims to inspire, collaborate, share, and interact with customers, staff members, and partners. Gamification is the application of gaming techniques to enhance and personalise



learning. Because games still teach skills that may be used in real life, such problem-solving and critical thinking, Gamification for learning might be advantageous (Suyono and Rusy, 2021) discuss social awareness, collaboration, and teamwork.

In the present context of technology merging with education, Gamification is still at a nascent stage. Nonetheless, the small-scale spread of this technology into education has only come to make the present education system better, as with games and other digital formats, learners experience relatedness. At the same time, the inclusion of Gamification creates an environment that makes a student accept their reality as a learner. The addition of gaming elements in the case of understanding or presenting a subject matter provides students with the opportunity to speak independently and with confidence. This is because gaming is a familiar language, and any explanation derived from there will help make it easier to understand. The added advantage of games in learning is that they provide students with a path to pick a particular skill.

Gamification boosts student participation in the classroom. The kids were then evaluated based on how engaged they were. The researchers discovered that the gaming environment in the classroom was beneficial and improved output.

Gamification in education refers to the use of game design principles to a learning environment by educators. Usually, the aim is to increase learning engagement. Given the stark contrasts between, for example, chess, The Sims, and tag, it might be challenging to break the concept of a "game" down into individual game design components. The science of Gamification is simple to grasp, and the idea of atoms and molecules is simple to comprehend. The practise of "Applying Gamification to improve the quality of teaching and learning of Chemistry in high schools" has been embraced in Indonesian secondary schools.

#### **Objectives of the study:**

- 1.To find out the effectiveness of Gamification on scientific attitude, academic achievement and gender among secondary school students.
- 2.To compare the significant difference if any between the post-test means scores of the control group and the experimental group students in learning science through Gamification

#### **Hypotheses of the study:**

**H<sub>0</sub> 1** There is no significant difference between the pre-test & post-test mean scores of the control group and experimental group with respect to academic achievement.

**H<sub>0</sub> 2** There is no significant difference between the pre-test & post-test mean scores of boys and girls of the control group and experimental group towards academic achievement.

#### **Material and method:**

The present study is experimental in nature and a random sampling method were employed for selecting 60 students of two different schools of Kalaburagi city and aimed to measure the effectiveness of Gamification over the traditional method in Science subject. In further the researcher has divided the groups into parallel and experimental by adopting randomized two group pre-test post-test design. For data collection the researcher has administered pre-test and post-test and the same were analyzed through appropriate statistical technique.

**Results:** the obtained data were analyzed and represented systematically and the same were given below:

**H<sub>0</sub> 1** There is no significant difference between the pre-test & post-test mean scores of the control group and experimental group with respect to academic achievement.

**Table 1: Represents the mean scores of pre-test & post-test of CG & EG towards academic achievement**

Group	Variation	N	Mean	SD	df	t-value	p-value	Remarks
CG	Pre-test	30	7.68	2.712	29	19.736	0.000*	S
	Post-test	30	17.10	1.215				
EG	Pre-test	30	6.10	2.960	29	28.315	0.000*	S
	Post-test	30	21.58	1.338				

Note: \* indicates Significant at 0.05 level

The paired sample 't' table 1 reveals that, the pre-test mean scores of the control group where N=40, mean value is 7.68 and post-test mean value is 17.10 is greater and Standard Deviation is 2.712 & 1.215 of the control group which greatly differs with 39 degrees of freedom and the obtained t-value is 19.736 and the p-value is 0.000 which is lesser than the critical or required value at 0.05 level of significance. The pre-test mean scores of the experimental group where N=40, mean value is 6.10 and post-test mean value is 21.58 is greater and Standard Deviation is 2.960 & 1.338 of the control group which greatly differs with 39 degrees of freedom and the obtained t-value is 28.315 and the p-value is 0.000 which is lesser than the critical or required value at 0.05 level of significance.

**Inference:** Therefore, we can say that the above stated null hypothesis is rejected. And it can be restated as there is a significant difference between the pre-test and post-test mean scores of the control group and the experimental group with respect to academic achievement.

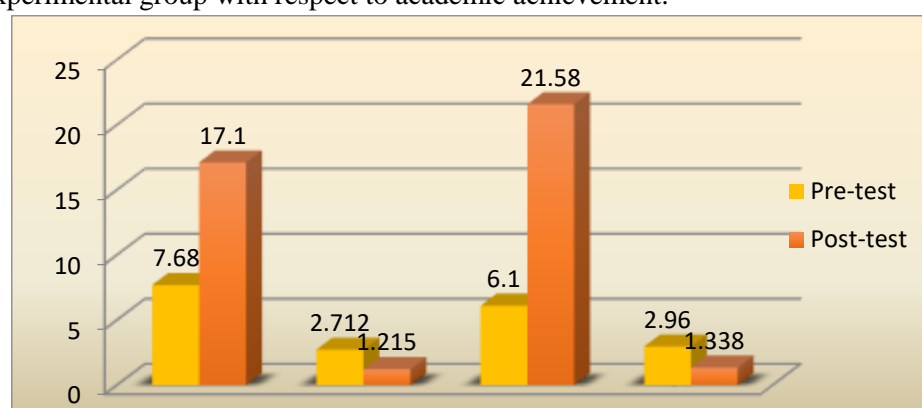


Fig.1: shows the comparison of mean scores of pre-test & post-test of CG & EG towards academic achievement

**H<sub>0</sub> 2** There is no significant difference between the pre-test & post-test mean scores of boys and girls of the control group and experimental group towards academic achievement.

**Table 2: Represents the mean scores of pre-test & post-test of boys & girls of CG & EG towards academic achievement**

Groups	Variation	Gender	N	Mean	SD	t-value	p-value	Remarks
CG	Pre-test	Girls	15	8.85	2.996	2.816	0.011*	S
		Boys	15	6.50	1.792			
	Post-test	Girls	15	16.95	1.099	24.532	0.000*	S
		Boys	15	6.50	1.792			
EG	Pre-test	Girls	15	7.50	3.456	3.364	0.002*	S
		Boys	15	4.70	1.380			
	Post-test	Girls	15	21.15	1.089	2.095	0.043*	S
		Boys	15	22.00	1.451			

Note: \* indicates Significant at 0.05 level

The above table 2 depicts that, the pre-test mean scores of the control group boys where  $N=20$ , mean value is 8.85 and girls mean value is 6.50 is lesser than boys mean score and Standard Deviation is 2.996 & 1.792 which greatly differs with 19 degrees of freedom and the obtained t-value is 2.816 and the p-value is 0.011 which is lesser than the critical or required value at 0.05 level of significance. And the mean value is 16.95 and girls mean value is 6.50 is lesser than boys mean score and Standard Deviation is 1.099 & 1.792 which greatly differs with 19 degrees of freedom and the obtained t-value is 24.532 and the p-value is 0.000 which is lesser than the critical or required value at 0.05 level of significance.

The mean value is 7.50 and girls mean value is 4.70 is lesser than boys mean score and Standard Deviation is 3.456 & 1.380 which greatly differs with 19 degrees of freedom and the obtained t-value is 3.687 and the p-value is 0.002 which is lesser than the critical or required value at 0.05 level of significance. The post-test mean scores of the experimental group boys where  $N=20$ , mean value is 21.15 and girls mean value is 22.00 is lesser than boys mean score and Standard Deviation is 1.089 & 1.451 which greatly differs with 19 degrees of freedom and the obtained t-value is 2.095 and the p-value is 0.043 which is lesser than the critical or required value at 0.05 level of significance.

**Inference:** Therefore, we can say that the above stated null hypothesis is rejected. And it can be restated as there is a significant difference between the pre-test & post-test mean scores of boys and girls of the control group and experimental group towards academic achievement.

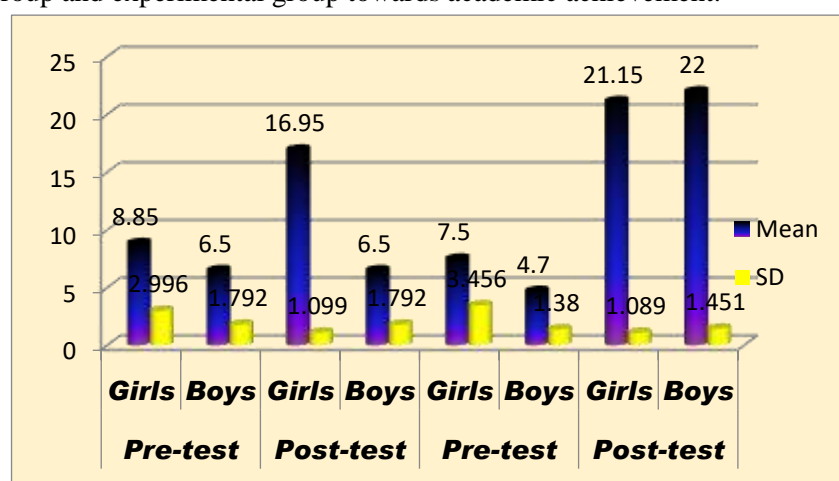


Fig.2: shows the comparison of mean scores of pre-test & post-test of girls & boys of both the groups

### Discussion:

In the present study the researcher has examined the impact of Gamification (module) showed generally positive results on the students. The researchers showed that there is a significant achievement differences between experimental group and control group. In the present study t-test and Pearson product moment correlation results revealed that the mean scores of the Gamification (module) group were significantly higher than that of the control group i.e. traditional teaching group, so far as achievement in science is concerned. Thus, as far as achievement is concerned, the Gamification (module) proved more effective in class-room teaching. The analysis of the responses on the opinionnaire and scientific interest scale made it clear that the students liked learning by Gamification (module).

### Conclusion:

It was found that students took less time to master the concepts when compared to the time taken during the traditional methods of teaching. As there was immediate feedback from the Gamification (module) the students were able to understand their mistakes and rectify through practice. Thus from the teacher and students' point of view Gamification has distinct advantages that make students prefer this software over traditional methods of learning. Managements while making

policy decisions should look into such studies of Gamification Learning on students 'performance and invest on computers and software not just for the sake of the subject on computers but to be used as a self-learning tool in all subjects so that students can improve in all the subjects like Mathematics and Science etc.

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## MINDSPARK: AN INNOVATIVE TOOL FOR TEACHING & LEARNING MATHEMATICS

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### Abstract

*Mindspark is an adaptive learning platform designed to support personalized education in maths and other subjects. It is an online program that utilizes artificial intelligence (AI) to provide individualized instruction and practice to students. Mindspark tailors the learning experience to each student's abilities and learning pace. It provides individualized instruction, allowing students to progress at their own speed and focus on areas where they need additional support. This personalized approach can help students build a solid foundation in maths and prevent them from falling behind or becoming disengaged due to a one-size-fits-all curriculum. Mindspark offers a range of interactive lessons, practice exercises, and assessments that adapt to each student's learning needs and progress. The platform analyses student responses and behaviour to determine their level of understanding and then dynamically adjusts the content and difficulty of subsequent activities. The platform provides detailed reports and analytics for teachers and parents, enabling them to monitor student progress, identify areas of strength and weakness, and make data-driven instructional decisions and guide them accordingly.*

**Key Points;** Mindspark, Innovative method/tool, Mathematics teaching and learning.

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### Introduction:

Mathematics means to learn or to study or gain knowledge. The term mathematics evolved from the Greek word 'mathema', which implies 'subject of instruction'. Mathematics is all around us and in everything we do. It is the building block for everything in our daily lives. Mathematics is a subject of numbers, shapes, data, measurements and logical operations. Mathematics involves abstract thinking and development of logical and analytical skills. It encompasses a wide range of areas, including arithmetic, algebra, geometry, calculus, probability, statistics and more. Mathematicians explore and investigate patterns, relationships and properties of numbers and shapes, trying to understand the underlying principles that govern them.

### Need and importance of Mathematics in the present curriculum:

Mathematics is not limited to theoretical concepts but also has practical applications. It is referred to as the "language of science" as it provides a framework for describing and analysing phenomena in various disciplines. Mathematics has a great reach in all areas of our lives like medicine, engineering, finance, life science, economics etc. It also plays an important role in the fields like cryptography, data analysis, optimization, computer graphics and many other fields. It provides us with the tools and techniques for solving problems, modelling real-world situations, and making informed decisions.

Mathematics is a powerful tool for global understanding and communication that organizes our lives and prevents chaos. It provides an effective way of building mental discipline.

According to Gauss "Mathematics is the queen of science and arithmetic is queen of all mathematics". Aristotle defined mathematics as "the science of quantity". Kant said "Mathematics is the indispensable instrument of all physical researches. Bacon said "Mathematics is the gateway and key to all science". The use of symbols makes mathematical language more elegant and precise than any other language. The study of mathematics always proceeds from simple to complex and from concrete to abstract. Mathematics is known as an 'exact' science because of its precision. It is the only subject which can claim certainty of the results. In mathematics, the results are either right or wrong, accepted or rejected. There is no midway possible between the right and wrong. Mathematics can verify the validity of the results and convince others of its validity with consistency and objectivity. This holds good not only for the expert, but also for anyone who uses mathematics at any level.

Parents and teachers want their children to succeed in mathematics. Using creative approaches to instruction can get students excited about mathematics. Apart from the traditional methods used in the classroom, we must also embrace the latest trends in teaching. One such development is the use of computer assisted learning. This helps the students to learn the concepts easily in small steps. Students can choose their pace of learning. When students are given the opportunity to choose how they learn and demonstrate their understanding of a concept, their motivation increase. It gives them the chance to understand how they learn best, provides confidence over their own learning, and allows for the space to practice different approaches to solving maths problems.

So for teaching/learning mathematics different methods, approaches and innovative tools are essential, in that Mindspark in one. Mindspark is widely used in schools, both as a supplementary resource to support classroom instruction and as a tool for independent learning. Although it is used for various subjects and at different grades.

#### **Mindspark an innvoative tool/ method:**

Mindspark is a computer-based adaptive learning system, which primarily uses questions to help children learn. It is an AI-powered personalised adaptive online Maths learning platform that effectively allows students to advance at their own pace.

It adapts itself to every student's learning level and progressively questions a student on a particular concept, providing feedback for their answers. If the student responds correctly, the next question presented is marginally-difficult compared to the previous one, which ebables the student to self-learn the concept gradually and thoroughly.

Mindspark is an adaptive learning platform designed to support personalized education in maths and other subjects. It is an online program that utilizes artificial intelligence (AI) to provide individualized instruction and practice to students. Mindspark tailors the learning experience to each student's abilities and learning pace. It provides individualized instruction, allowing students to progress at their own speed and focus on areas where they need additional support. This personalized approach can help students build a solid foundation in maths and prevent them from falling behind or becoming disengaged due to a one-size-fits-all curriculum.

Mindspark offers a range of interactive lessons, practice exercises, and assessments that adapt to each student's learning needs and progress. The platform analyses student responses and behaviour to determine their level of understanding and then dynamically adjusts the content and difficulty of subsequent activities. The platform provides detailed reports and analytics for teachers and parents, enabling them to monitor student progress, identify areas of strength and weakness, and make data-driven instructional decisions and guide them accordingly.

#### **Advantages/Impact of using this technology in present Mathematics education;**

The teaching of mathematics in schools can vary depending on the specific school, its curriculum, and the approach adopted by the educators. However, schools often have more flexibility in designing their mathematics programs.

- ✧ **Curriculum customization:** Schools may have the freedom to select or develop their own mathematics curriculum, allowing them to tailor it to their students' needs and learning objectives. This can enable a more comprehensive or specialized approach to teaching mathematics.
- ✧ **Small class sizes:** Secondary school often have smaller class sizes compared to middle and primary sections. This can facilitate more individualized attention and support for students, enabling teachers to provide personalized instruction and address students' specific learning needs in mathematics.



- ✧ **Enhanced resources:** Schools often have greater financial resources, which can translate into a wider range of teaching materials, manipulatives, textbooks, and technological resources for teaching mathematics. These additional resources can enhance the learning experience and provide students with different ways to engage with mathematical concepts.
- ✧ **Highly qualified teachers:** Schools typically have high standards for hiring teachers, seeking educators with specialized expertise in their subject areas. In mathematics, this can mean that teachers have advanced degrees in mathematics or related fields and possess strong pedagogical knowledge. This expertise can contribute to the quality of instruction and students' understanding of mathematical concepts. Teachers are also given in-service training for enhancing their teaching skills and update themselves to latest technology.
- ✧ **Focus on critical thinking and problem-solving:** Schools often emphasize critical thinking and problem-solving skills in their mathematics programs. This may involve engaging students in real-world applications of mathematics, encouraging them to think analytically, and fostering a deeper understanding of mathematical concepts beyond rote memorization.
- ✧ **Enrichment opportunities:** Schools may offer additional opportunities for students to explore and excel in mathematics. These could include math clubs, competitions, guest speakers, field trips, or partnerships with other schools or organizations that promote mathematical learning. These enrichment activities can further nurture students' interest and passion for mathematics.

#### Uses of this method are;

- ❖ It adapts to each student's individual learning pace.
- ❖ It provides instant and detailed feedback based on student response.
- ❖ It Helps students discover the why behind subject.
- ❖ It Offers inquiry based learning to ensure progress on the basis of real learning.
- ❖ It provides granular content to promote real learning.

#### CONCLUSION

The boom in technology forces us to embrace the latest trends in learning, the use of computer assisted learning along with the traditional methods of teaching used in the classroom. The teachers must integrate the traditional methods with technology in the right proportion so as to deliver the best teaching learning experience to the students.

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## ENHANCING ENGLISH LANGUAGE LEARNING OF B.ED. STUDENT-TEACHERS THROUGH BLENDED LEARNING

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### Abstract

*This conceptual paper investigates the critical importance of English language competency in the education segment, with a special focus on Bachelor of Education (B.Ed.) student-teachers. English proficiency is essential for educators since it allows them to shape future generations' language skills and communication effectively with peers. Innovative teaching approaches are required to satisfy the growing needs of education in a worldwide environment. Blended learning, which blends traditional face-to-face training with online materials, appears to be a promising technique. This paper initially emphasizes the importance of English language competency in teacher education, emphasizing the need for B.Ed. student-teachers to have strong language skills for effective communication. The advantages of blended learning for B.Ed. student-teachers are explored and its potential to increase engagement through multimedia and interactive online content. Recognizing problems such as technology access and digital literacy among B.Ed. students, options for addressing these obstacles are also discussed. The paper finishes by highlighting the possibilities of blended learning as an innovative teaching approach for elevating English language learning for B.Ed. student-teachers.*

**Keywords:** English, Language, Learning, Student-teachers, Blended Learning

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### Introduction

English language proficiency stands as a cornerstone in the realm of education, particularly for individuals embarking on the journey towards a Bachelor of Education (B.Ed.) degree. The importance of this proficiency cannot be overstated, as educators wield the profound responsibility of shaping the language skills of future generations. They are the conduits through which knowledge and understanding flow, making the mastery of English language skills an essential attribute for any aspiring teacher. In an era where our world is more interconnected than ever before, teachers are called upon to embrace innovative teaching models that not only enhance their own language proficiency but also empower them to impart these skills effectively. This conceptual paper embarks on an exploration of a transformative educational approach: blended learning. At its core, blended learning melds traditional classroom teaching with the dynamic realm of online resources and activities. It is a model that has been gaining prominence across various educational domains, including teacher education. Within the context of B.Ed. programs, the potential of blended learning to revolutionize English language education for student-teachers is a compelling topic.

This paper journeys through the intricate setting of English language proficiency in teacher education, underscoring its critical role. It emphasizes the awful need for B.Ed. student-teachers to possess not just a basic command of the English language, but rather a mastery that enables them to communicate effectively with students and colleagues alike. As researcher delve deeper, define blended learning and dissect its key components, including face-to-face interactions and the integration of online resources. Furthermore, we explore how this innovative approach can be tailored to meet the specific needs and demands of B.Ed. programs, fostering the development of proficient and adaptive educators. The benefits of adopting blended learning within B.Ed. programs come into focus, illuminating how this approach can offer flexibility for student-teachers to navigate the complex balance between academic coursework and practical teaching responsibilities and delve into

the potential for increased student engagement through the integration of multimedia and interactive online content, effectively harnessing the power of technology to enhance language education.

### **Language Skills**

Effective communication is the lifeblood of the teaching profession. Teachers serve as conduits of knowledge, mentors and facilitators of learning and their ability to communicate clearly and effectively with both students and colleagues is paramount. In the context of Bachelor of Education (B.Ed.) student-teachers, the need for strong language skills is particularly critical. This part delves into the significance of robust language skills for B.Ed. student-teachers, highlighting how language proficiency is pivotal for successful communication in educational settings.

1. **Facilitating Student Learning:** The primary responsibility of a teacher is to facilitate the learning process for their students. To achieve this, B.Ed. student-teachers must possess strong language skills. A robust command of language enables them to explain complex concepts, answer questions and engage in discussions that enhance students' comprehension and critical thinking abilities. When teachers can articulate ideas clearly and concisely, students are more likely to grasp the subject matter and develop a deeper understanding.
2. **Effective Classroom Management:** Language proficiency also plays a crucial role in classroom management. Clear and authoritative communication is vital for maintaining discipline, setting expectations and creating a conducive learning environment. B.Ed. student-teachers who lack language skills may struggle to establish control in the classroom, leading to disruptions and hindrances in the learning process.
3. **Building Positive Relationships:** Teachers are not only conveyors of knowledge but also mentors and role models. Establishing positive relationships with students is contingent on effective communication. When B.Ed. student-teachers communicate with empathy, respect and clarity, they foster trust and rapport with their students, which in turn can positively impact students' motivation and engagement in learning.
4. **Collaborative Teaching:** In the teaching profession, collaboration with colleagues is often essential. Whether it is planning lessons together, sharing teaching strategies, or discussing student progress, effective communication among educators is paramount. B.Ed. student-teachers need strong language skills to engage in meaningful conversations with their colleagues, exchange ideas and contribute constructively to the school's educational community.
5. **Parent-Teacher Communication:** A critical aspect of a teacher's role is communicating with parents or guardians. This communication serves to keep parents informed about their child's progress and to address any concerns or questions they may have. Proficient language skills are indispensable for conveying information accurately and building positive relationships with parents, which can contribute to a supportive learning environment.

This resource offers practical language teaching strategies, highlighting the significance of strong language skills for educators.

Therefore, the need for B.Ed. student-teachers to possess strong language skills is paramount for their success in the teaching profession. These skills underpin effective communication with students, colleagues and parents, facilitating the learning process, classroom management and the development of positive relationships. Strong language skills empower B.Ed. student-teachers to fulfill their role as effective educators and mentors, shaping the future of their students.

### **Blended Learning and its Components**

Blended Learning is an approach to learning that combines face-to-face and online learning



experiences. The physical presence of both teacher and student are required over time, place, path, or pace. Blended learning is a pedagogical approach that combines traditional face-to-face teaching with online learning components to create a more flexible and effective learning experience. It blends the best of both worlds, leveraging the advantages of in-person interactions and the opportunities offered by digital technology.



The components of blended learning typically include:

1. **Face-to-Face Teaching:** Face-to-face teaching refers to the traditional classroom setting where students and teachers interact in person. This component of blended learning involves in-class lectures, discussions, group activities, hands-on experiments and other forms of direct interaction between students and teachers. Face-to-face teaching provides opportunities for immediate feedback, real-time discussions and hands-on learning experiences that are often essential for certain subjects and concepts.
2. **Online Teaching:** Online teaching, as the name suggests, takes place in the digital realm. It involves the use of various online platforms and resources to deliver educational content. Online teaching can encompass a wide range of activities, including:
  - **Synchronous Activities:** These are real-time interactions that occur online, such as live video lectures, webinars, or virtual discussions.
  - **Asynchronous Activities:** These are self-paced activities that students can access at their convenience. Examples include pre-recorded video lectures, discussion forums, online quizzes and digital course materials.
  - **Assessment and Feedback:** Blended learning typically includes a mix of assessment methods that align with the learning objectives of both the face-to-face and online components. Assessment strategies may include traditional in-class exams, online quizzes, written assignments, group projects and peer assessments.
  - **Flexibility and Personalization:** One of the strengths of blended learning is its flexibility. Students can engage with course materials and activities both inside and outside the

classroom, allowing for personalized learning paths that cater to individual needs and schedules.

Overall, blended learning is a versatile educational approach that combines face-to-face teaching and online learning components. It allows educators to leverage the advantages of both settings while providing students with flexibility, personalized learning experiences and opportunities for interaction and engagement. The educational platform is now undergoing a makeover. It is aiming to use modern technology in order to meet expansion challenges and cater to individual demands (Becker et al., 2017). While it is constantly looking for new ways to achieve the goal of providing everyone with access to high-quality educational opportunities, it is not yet fully prepared to abandon traditional methods of knowledge transfer (Guskey, 2002) due to issues with inadequate budgets, inadequate facilities, and the benefits of face-to-face interaction (Philipsen et al., 2019). Even the students are experiencing a double personality. When asked which style of teaching they prefer-traditional classroom teaching or ICT-supported teaching-teacher applicants are frequently virtually evenly split (Vaughan, 2010). Blended learning design is critical to ensuring that these components work together seamlessly to achieve the intended learning outcomes.

### **Challenges and Strategies**

Challenges related to technology access and digital literacy among Bachelor of Education (B.Ed.) students is crucial for the successful implementation of blended learning. Challenges and suggest strategies to overcome them:

1. **Limited Technology Access:** Some B.Ed. students may not have access to the necessary devices (e.g., computers, tablets, smartphones) or a reliable internet connection to participate in online learning activities.
2. **Uneven Digital Literacy:** B.Ed. students may have varying levels of digital literacy. While some may be tech-savvy, others may struggle with using online tools and platforms effectively.

### **Strategies to Address these Challenges:**

1. **Equity and Accessibility:** Device Loan Programs: Establish programs to provide loaner devices to students who lack access to technology. These programs can be funded through the institution or partnerships with tech companies. Partner with internet service providers to offer discounted or subsidized internet plans for students. Explore options like mobile data hotspots for students in areas with limited connectivity.
2. **Digital Literacy Training:** Pre-course Digital Literacy Modules: Prior to starting the B.Ed. program, offer digital literacy modules or workshops to ensure that all students have a baseline level of digital skills. These modules can cover basic computer skills, navigating online platforms and using common software tools. Provide ongoing digital literacy support throughout the program.
3. **Flexible Learning Options:** Asynchronous Learning: Incorporate asynchronous elements into the blended learning model, allowing students to access course content and participate in activities at their convenience.
4. **User-Friendly Platforms:** Platform Selection: Choose user-friendly learning management systems (LMS) or online platforms that are intuitive and require minimal technical expertise.
5. **Continuous Support:** Help Desk Support: Establish a 24/7 help desk or support hotline where students can get immediate assistance with technical issues. Encourage students to provide feedback on the blended learning experience and any technology-related challenges they encounter. Use this feedback to make improvements.
6. **Peer Collaboration:** Collaborative Learning: Promote peer collaboration and peer-assisted learning among students. Encourage them to work together on assignments and share tips and strategies for using technology effectively.



By implementing these strategies, B.Ed. programs can mitigate technology access and digital literacy challenges, making blended learning more accessible and effective for all students. These efforts help ensure that B.Ed. students can participate fully in their education, regardless of their technological background or access to resources.

### Conclusion

Blended learning, as an innovative teaching model, holds immense potential to enhance English language learning for Bachelor of Education (B.Ed.) student-teachers. By integrating both face-to-face and online teaching, blended learning offers a flexible, personalized and engaging approach to language acquisition. It leverages multimedia, interactive content and technology tools to create dynamic learning experiences that cater to diverse learning styles.

Blended learning allows B.Ed. student-teachers to access learning materials at their convenience, facilitating the balancing of academic coursework with practical teaching responsibilities. It promotes active participation, real-world relevance and collaboration, which are essential skills for educators. Therefore, blended learning has the potential to revolutionize English language learning for B.Ed. student-teachers by offering a flexible, engaging and effective approach.

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## ROLE OF BLENDED LEARNING – AN INNOVATIVE METHOD IN PRESENT SCENARIO

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### Abstract

*Blended learning is an innovative concept that embraces the advantages of both traditional teaching in the classroom and ICT supported learning including both offline learning and online learning. It has scope for collaborative learning; constructive learning and computer assisted learning (CAI). Blended learning needs rigorous efforts, right attitude, handsome budget and highly motivated teachers and students for its successful implementation. As it incorporates diverse modes so it is complex and organizing it is a difficult task. The present paper discusses the concept of blended learning, its main features and prerequisite of its implementation. Scope of blended learning in Indian educational system is also discussed. The present paper also tries to explain that how blended learning is an approach that needs to be adopted.*

**Keywords** Blended Learning, ICT Supported Teaching Learning Process, Traditional Teaching Learning Process, and Computer Assisted Learning, Online Learning.

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### Introduction

The educational system at present is in a transition stage. To meet the challenges of expansion and for catering individuals need it is trying to adopt new technologies and exploring new paths to reach the goal of quality educational opportunities for all, at the same time due to various factors like deficient budgets, lack of facilities, advantages of face to face interaction, it is not completely ready to leave the traditional modes of knowledge transfer. Even the students are in a state of dual mind. When a group of teacher trainees were inquired about the mode of teaching they will prefer from tradition classroom teaching and ICT supported teaching the students were nearly evenly divided between both the choices.

The traditional mode of teaching in spite of its few shortcomings provides a much needed human touch to the teaching learning process. Personality and behaviour of the teachers directly influences the blooming personality of the students. Only face to face interaction meets the affective objectives along with cognitive and psychomotor. Face to face traditional approach helps in developing a strong value system. Social skills like cooperation, sharing, expression and respecting other's views are more easily developed in traditional mode of teaching. Students learn not only from books, or from teachers teaching inside classroom but also from the co-students, through their peer group interaction, they learn many skills in playground and their small social interactions in canteens, lounge etc. All this is necessary for a proper personality development

To make their knowledge correlate with the present technological advancement and globalization, to minimize the teaching errors, to improve the quality, to increase students exposure ICT supported teaching learning process is a good option. ICT supported teaching provides new dimension to teaching learning process, introduces students to the wide pool of knowledge and opens before them innumerable opportunities to learn, unlearn and relearn. All types of learners whether in-service, physically challenged all can be benefitted by this mode of teaching. It helps reaching to all students. In the words of Swami Vivekanand "if people cannot reach school schools should reach them", ICT supported learning is exactly doing the same.

### Blended Learning

Blended learning is the concept that includes framing teaching learning process that incorporates both face to face teaching and teaching supported by ICT. Blended learning incorporates direct instruction, indirect instruction, collaborative teaching, individualized computer assisted learning. As the figure shows it includes:

- a) Face to face teaching-
- b) Student interaction with course content-
- c) Peer group interaction-
- d) Group discussion and exchange of ideas-
- e) Accessing e-library-
- f) Virtual classroom-
- g) Online assessment-
- h) e-tuitions-
- i) Accessing and maintaining educational blogs-
- j) Webinars-
- k) Viewing expert lectures in YouTube-
- l) Online learning through videos and audios-
- m) Virtual laboratories-

All these features when blended in one frame it is called blended learning.

### Main Characteristics of Blended Learning

The main features of blended learning are-

- **Students have the option of the two modes-** students in blended learning can select either the traditional mode of classroom teaching where they can get personal interaction with teacher and their classmates or they can choose ICT supported teaching learning. This largely depends on the nature of content and objectives being targeted. Sometime course designer or teachers themselves decide on the mode appropriate for topic being dealt with.
- **Teachers are well versed with both the modes** – it is an important feature of the blended learning that teachers are very dynamic, techno savvy and fully trained to work efficiently in both the formats- traditional classroom format and ICT supported format. They will be well equipped in using traditional methods and other modern technologies
- **Students get face to face interaction as well they interact in virtual space-** students get ample of time to interact with other students pursuing same course. They can interact with them inside college campus and also in virtual space. Thus their group become very large and has much diversity so the student's knowledge becomes wide and they also develop a feeling of understanding, love and harmony with students of other cultures and countries.
- **Students get full experience in using new technology-** the present century is the century of ICT. Today the illiterate is not only the one who cannot read and write but a person who is not well versed with modern technologies is also illiterate. Today all professions demand expertise in ICT so blended learning help to make student's ICT experience rich. Students involved in blended learning gain capability to exploit available technologies to the fullest of their benefit
- **Students get training in different life skills-** life skills are those skills that are needed to lead a happy peaceful and successful life. The major life skills are empathy, decision making capability, love, patience, communication, self-management, critical thinking. The blended learning helps the students to practice these skills. Students get acquainted with few skills like love, empathy, patience in classroom through his teachers, classmates, and few like self-management, decision making, critical thinking, communication through the online experiences.
- **All round development of personality is targeted.** In blended learning the students get full opportunity for all round development of the personality. All the aspects of personality namely- cognitive, physical and emotional are developed through blended learning which is difficult to achieve in traditional mode or ICT approach if followed in isolation. Tradition classroom teaching is helpful in memory level and understanding level of teaching and so help in cognitive domain development and at same time teacher's behaviour, playground experience and social group with classmates develop affective and physical domain at same time online experiences help in reflective level of learning so develop higher faculties of mind and social networking sites and other social interactions though internet help in right type of value development.

- **Physical development is possible with in school campus-** the online learning and ICT supports teaching learning process is often targeted with the blame that it ignores physical development of the students. The blended learning overcomes this limitation. As it included school experience also so student get time for playing, physical work, yoga inside the college campus.
- **Students get wide exposure and new perspectives of the course content-** due to variety of experience students get wide exposure and their content knowledge is enriched, they get to see various new dimensions of the content gain practical useful knowledge.
- **It has a human touch-** due to physical presence of teacher via traditional approach students get that human touch which is very necessary for balanced student's emotional quotient and very necessarily up to secondary level.
- **It provides multicultural and multi dimension approach to teaching learning process-** blended learning approach provides student opportunity to communicate and share their views and feeling with the students all over the world thus it makes teaching learning process multicultural and variety of experience bring with it the interdisciplinary and multidimensional factor also.
- **Makes teaching learning process child centered-** blended learning is designed to provide maximum gain to students and thus reach the goal of child centered education.
- **Diverse role of teacher-** teacher in blended learning is playing different role, traditional role of a teacher in classroom, she acts as motivator, as a resource person, as an organiser, as a developer, when she develops content to be provided through ICT, as a guide on the side. Thus teacher gets freedom from the monotonous traditional roles and she can try her hands in diverse areas that are good for her professional growth also.
- **Student constructs knowledge rather than just consuming it.** Blended learning also includes constructivism. Students construct their own knowledge rather than depending others to design teaching-learning strategies for them.

**Prerequisite of Blended Learning:** Implementing blended teaching is not an easy task. It requires certain fundamental preparations in all the elements of teaching learning process- teacher, student, content designing, and infrastructure. The following are the basic requirements for implementing a successful blended learning.

1. Well trained teachers-
2. Teachers with scientific attitude-
3. Teachers with wider outlook and positive approach towards change –
4. Complete facilities like well-furnished computer lab, internet connection, provision for video chatting-
5. Students have access to internet at their private computers- Flexibility in the system-
6. Fully aware and agreed Parents-
7. Formative evaluation and continuous internal assessment-

These are few essentials and basic requirements without which the blended learning cannot be executed successfully.

### **Advantages of Blended Learning**

Blended learning has following advantages-

- ❖ As part of learning is done through ICT, online or offline mode so teachers and students get more time in the classroom for creative and cooperative exercise.
- ❖ Students gain advantage of online learning and CAI without losing social interaction element and human touch of traditional teaching'
- ❖ It provides more scope for communication. Communication cycle is completed in blended learning which is not possible if we follow only traditional approach
- ❖ Students become more techno savvy and they gain enhanced digital fluency
- ❖ Students have more strengthened professionalism as they develop qualities like self-motivation, self-responsibility, discipline
- ❖ It updates course content and so gives new life to established courses

**Implementation of Blended Learning in Indian Education System:** Implementing blended learning needs a full dedication on the part of educational authorities and managements of educational institutes. It needs a well-planned design that include all from individuals top to bottom of the educational hierarchy. For preparing educational institutes for blended learning we will need to increase educational budgets, it can be done by taking help of NGOs and also coordinating with the industrial and corporate sector. These sectors can be motivated to give their financial inputs for blended learning execution as these sectors will be most benefited if, the output from these educational institutes are more efficiently groomed for the global market. The other very important issue that has to be considered is development of right type of attitudes towards this ground-breaking concept in all those who are concerned with educational system. For changes in attitudes of parents, community, teachers and students awareness programmes, seminars, discussion forums should be organised. These can be utilized to make people aware about the benefits of blended learning so that a right mind set is prepared for its implementation. Mass media can well be utilized for this purpose.

**Conclusion:** To conclude it can be said that blended learning is to some extent is the solution to problems prevailing in our educational system. If implemented in a well-planned, organised way with right type of attitudes it can become the future of our educational system. It is in our own benefit that steps for adapting blended learning are soon initiated. Teacher training programmes both in-service and pre-service have to be reoriented to prepare teachers for blended learning approach. The finance and efforts that are put in for various projects to meet education for all should be re directed in preparing our primary schools for blended learning as it will cater many problems simultaneously and both finance and efforts are more fruitfully utilized.

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**BLENDED LEARNING: AN INNOVATIVE STRATEGY FOR 21<sup>ST</sup> CENTURY LEARNERS**

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**Abstract**

*This paper presents the need of integrating the innovative methods and strategies for teaching 21st century learners. This paper reflects on the need of techno savvy methods, - blended learning an innovative strategy for 21st century learners. The technological rise of the 21st century and widespread integration of those technologies into our society, combined with access to the internet has integrally changed teaching in just a few years. Blended learning is a format rapidly spreading in education worldwide.. The paper reflects on the meaning of blended learning, its types, and advantages.*

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**Introduction**

The teaching landscape is rapidly changing, the technological rise of the 21st century and widespread integration of those technologies into our society, combined with access to the internet has integrally changed teaching in just a few years. Blended learning is a format rapidly spreading in education worldwide. The idea of it looks attractive as it enables the preservation of traditional forms of learning, shaped by centuries of pedagogical experience and enjoying a lot of human loyalty, despite the temptation of handing over many educational functions to new technologies

**MEANING OF BLENDED LEARNING**

Blended learning is a natural development to the growing accessibility of eLearning, online resources and the continued need for a human component in the learning experience. A blended learning approach ensures that the learner is engaged and driving his or her individual learning experience. This approach also helps cater to the individual needs of the learner, most students have unique learning styles and a blended approach is more likely to cater to those needs than a traditional classroom teaching experience

**TYPES OF BLENDED LEARNING MODELS:**

Due to its modular design, blended learning can come in numerous shapes and sizes and be personalized to fit the individual. These types of modals can include:

- **Online** – Instruction occurs via an online platform, with periodic face-to-face meetings.
- **Rotation:** Student rotates between self-paced online learning and face-to-face instruction. Schedules are fixed but flexible.
- **Flex:** Most instruction is delivered online, with teachers providing as needed support in small-group settings.
- **Personalized blend:** Teacher designs face-to-face and anywhere, anytime learning options that straddle the physical classroom and virtual spaces. Learning is the constant and time is the variable.
- **Online lab:** Instructions takes place in a brick and mortar lab. Delivered by an online teacher and supervised onsite by paraprofessionals.
- **Self-blend:** Students take online courses to supplement their tradition schools face to face course catalogue.
- **Face-to-face:** Teacher offers primarily face-to-face instruction, supplemented with technology in the classroom or computer lab.

**ADVANTAGES OF BLENDED LEARNING FOR STUDENTS**

- **Increase student interest:** when technology is integrated into school lessons, learners are more likely to be interested in, focused on, and excited about the subjects they are studying.



Subjects that might be monotonous for some – like math and science, while also increasing information retention.

- **Keep students focused for longer:** The use of computers to look up information & data is a tremendous lifesaver, combined with access to resources such as the internet to conduct research. This engagement and interaction with the resources keeps students focused for longer periods than they would be with books or paper resources, this engagement also helps develop learning through exploration and research.
- **Provides student autonomy:** The use of eLearning materials increases a student's ability to set appropriate learning goals and take charge of his or her own learning, which develops an ability that will be translatable across all subjects.
- **Instill a disposition of self-advocacy:** Students become self-driven and responsible, tracking their individual achievements, which helps develop the ability to find the resources or get the help they need, self-advocating so they can reach their goals.
- **Promote student ownership:** Blended learning instills a sense of 'student ownership over learning' which can be a powerful force propelling the learning, It's this feeling of responsibility that helps the feeling of ownership.
- **Allow instant diagnostic information and student feedback:** The ability to rapidly analyse, review and give feedback to a student's work, gives the teacher the ability to tailor his teaching methods and feedback for each student, while improving time efficiency.
- **Enables students to learn at their own pace:** Due to the flexibility of blended learning and the ability to access internet resources allows students to learn at their own pace, meaning a teacher can help speed up the learning process or give more advanced resources if necessary.
- **Prepares students for the future:** Blended learning offers a multitude of real-world skills, that directly translate into life skills.

Studies on blended -learning implementation in higher education suggest that b-learning makes students' transfer theoretical knowledge to real-life (Osguthorpe ve Graham, 2003); makes them responsible for their own learning by means of the flexibility of how, what, when to study (Graham, 2006) and also helps students get prepared before lessons, review materials and further investigate the content and self-evaluate (Kirişcioğlu, 2009). Various results about b-learning effects on academic success and attitude towards lessons are remarkable. Some of them indicated that b-learning increases academic success (El-Deghaidy & Nouby, 2008; Yılmaz, 2009) and positively effects lesson attitudes (El-Deghaidy & Nouby, 2008) while some showed no significant effect on academic success and attitudes (Delialioğlu & Yıldırım, 2007). Besides, Ateşet al. (2008) mention possible inequalities in b-learning implementation since there are students who have no PC and/or Internet access and computer use skills that we need to consider before implementation. Nevertheless, many studies revealed students' positive perceptions and views on b-learning (Ateşet al., 2008; Baran et al., 2010; Ersoy, 2003; Geçer & Dağ, 2012; Tsai et al., 2011, Uğur, 2007; Yılmaz, 2009; Yılmaz & Orhan, 2010). Likewise, it is identified that their social presence perceptions increase the pleasure of b-learning (So & Brush, 2008).

## CONCLUSION

All students no matter their age learn differently and teaching methods should reflect this, by designing teaching programmes in a way that reaches visual, auditory and kinetic learners alike. With the heavy integration of technologies we'll be able to improve teaching, information retention, engagement, responsibility and enjoyment. Students never outgrow their learning styles, meaning blended learning is more important than ever, no matter what the industry is, from schools to corporations, in all walks of life.



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## A STUDY ON ASSOCIATION BETWEEN CORE MUSCLE ABILITY AND CARDIO RESPIRATORY ENDURANCE OF KHO-KHO PLAYERS

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### Abstract

*Core muscles are essential for proper load balance within the spine, pelvis, and kinetic chain. Cardiorespiratory endurance tests monitor how well the heart, lungs, and muscles perform during moderate to high-intensity exercise. Increasing cardiorespiratory endurance improves oxygen uptake in the lungs and heart and can help a person sustain physical activity for longer. The purpose of the study was to find out the association between core muscle ability and cardio respiratory endurance of kho-kho players. The study includes physical tests like the forward medicine ball toss test, backward medicine ball throw test and Beep test for 30 male kho-kho players of Kuvempu and Davanagere University for the present investigation. core muscle strength assessed through 2 standardized tests forward medicine ball toss test, Backward medicine ball throw test and cardio respiratory endurance assessed through Beep test. On the basis of the results and within the limitations of the study it was concluded that there is no significant difference in abdominal strength and back strength. There is significant difference in cardio-respiratory endurance.*

**Keywords:** *Core Muscle, Cardio Respiratory Endurance, Kho-Kho Players.*

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### Introduction

Cardio respiratory endurance is an indication of a person's overall physical health. Cardio respiratory endurance tests monitor how well the heart, lungs, and muscles perform during moderate to high-intensity exercise. Increasing cardiorespiratory endurance improves oxygen uptake in the lungs and heart and can help a person sustain physical activity for longer. Other names for cardiorespiratory endurance include cardiovascular fitness, cardiovascular endurance, and cardiorespiratory fitness. The cardiorespiratory endurance is, how a person can measure it.

The core is the group of trunk and hip muscles that surround the spine, abdominal viscera and hip. Core muscles are essential for proper load balance within the spine, pelvis, and kinetic chain. They spare the spine from excessive load and are essential for load transfer between the upper and lower body. Abdominal, gluteal, hip girdle, par spinal, and other muscles work in concert to provide this needed spinal stability. Having a strong, stable core helps us to prevent injuries and allows us to perform at our best. There is also an upper quadrant core (glenohumeral and scapulothoracic joints) and a lower quadrant core (hip and trunk Core Trunk Muscles: Abdominals; thoracolumbar; lumbar and lateral thoraco-lumbar muscles).

### Objective of the study

The purpose of the study was to find out the association between core muscle ability and cardio respiratory endurance of kho-kho players.

### Procedure

The study includes physical tests like the forward medicine ball toss test. Backward medicine ball throw test and Beep test for 30 male kho-kho players for the present investigation.

**Forward Medicine Ball Toss Test:** The subject was instructed to tall kneel, defined as a ninety degrees of knee flexion and a neutral trunk position, on a pad that is placed on the floor in a standardized position. The medicine ball, of predetermined mass, is held at the chest in line with the nipple level. In order to complete the designed task the individuals were asked to throw the medicine ball using two hands, in a chest pass like fashion. The individual is instructed to not rock back or pump prior to the throw; this is intended to minimized momentum and any muscles substitution that

may occur during the task. The subject is allowed to fall forward after the initial throw, but they are instructed not to catch themselves with their hands. The distance of the throw is measures in inches. This medicine ball toss test was demonstrated to negatively correlate to a double leg lowering core stability test ( $p=0.023$ ). A better performance on the core stability test had an increased negative correlation to the medicine ball toss test. The forward medicine ball test has not yet been validated against a gold standard measurement of trunk strength.

**Backward Overhead Medicine Ball Throw Test:** The subject was instructed to stand at a standardized marked position with weight equally placed over the feet. The medicine ball is held at a point around the height of the knees. The subject is then instructed to flex their knees lowering the medicine ball toward the ankles as the knees are flexed. At this point to initiate the throw the subject extends the legs and subsequently the back, elevates the shoulders, and flexes the shoulder to allow for the medicine ball to be tossed over the head in an attempt to throw the medicine ball as far as possible. The distant of the throw is measures in inches. The reliability of the backward overhead medicine ball has been demonstrated to be high, with an interclass correlation coefficient equal to 0.86. The backward overhead medicine ball has not been validated against a gold standard measurement of trunk strength.

**Beep Test:** The Beep Test requires participants to run back and forth between two points positioned 20 meters apart. The participants must maintain a running speed determined by a pre-set audio tone, the sounds like a “beep”, throughout the duration of the test. The required running speed or pace increases as the test progresses.

### Findings of the study

The raw data on Forward Medicine ball toss, backward Medicine ball throw to assess abdominal strength and Beep test to assess Cardio-respiratory endurance were subjected to statistical treatment. The mean and standard deviation of tests are provided in table 1.

**Table 1. Details on descriptive statistics of subjects on Forward Medicine ball throw, backward Medicine ball throw and Beep test.**

	Level of participation	N	Mean	Std. Deviation	Std. Error Mean
Forward Medicine ball throw performance	Inter-Collegiate level	30	4.33	.29	.05273
	Inter-University level	30	4.33	.54	.09888
Backward Medicine ball throw performance	Inter-Collegiate level	30	6.22	.64	.11696
	Inter-University level	30	6.07	.70	.12743
Cardio-respiratory performance	Inter-Collegiate level	30	42.92	4.70	.85896
	Inter-University level	30	46.27	4.00	.73024

Table 1 depicting mean and standard deviation of subjects makes it clear that the scores are normally distributed and homogeneity of sample is also acceptable. The data was further treated with 't' test in order to make inferences. Details are given table 2

**Table 2. Summary on 't' test for comparing Forward Medicine ball throw, backward Medicine ball throw and Beep test.**

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Forward Medicine ball throw performance	-.059	58	.953	-.00667	.11206
Backward Medicine ball throw performance	.867	58	.389	.15000	.17297
Cardio-respiratory performance	-2.971	58	.004	-3.35000	1.12742

Table 2 makes it very clear that there is no significant difference in abdominal strength between kho-kho players at inter-collegiate and inter-university levels. Cardio-respiratory endurance strength differed significantly between the two groups under investigation. The obtained 't' ratio is -2.971 and is found to be higher than the tabulated value required for significant difference at .05 levels. Hence, there is significant difference found in Cardio-respiratory endurance between Inter-university and intercollegiate kho-kho players.

**Discussion on findings:** On the basis of reviews gone through it was understood that the role of core strength and cardio- respiratory is very much essential for all sports persons especially in kho-kho game. Under the limitations of the study, there is no significant difference was observed in abdominal strength of inter-collegiate and inter-university kho-kho players: so coaches and players should concentrate on these aspect to enhance the overall performance of kho-kho players.

**Conclusion:** On the basis of the results and within the limitations of the study it was concluded that there is no significant difference in abdominal strength and back strength. There is significant difference in cardio-respiratory endurance on the basis of levels of participation.

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## BLENDDED MODE OF LEARNING: AN INNOVATIVE APPROACH

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### Abstract

*Blended learning, also known as hybrid learning, is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods. It is an innovative learning concept including both offline learning and online learning. It has a scope for collaborative learning, constructivist learning, and computer assisted learning (CAI). Blended learning needs highly motivated teachers and students for its successful implementation. The advantages of Blended Learning for students include improvement of learning skills, greater access to information, enhanced motivation, satisfactory learning outcomes, and opportunities to learn from each other and to teach each other. With the evolution of digital technologies and the importance of using technology in the process of teaching and learning can be considered at all levels of education (Pre-school to higher education), the NEP 2020 recommends making use of the blended models of learning. The present paper discusses the concept of blended learning, its main features, scope of blended learning and its implementation in education system. The present paper also tries to explain that how blended learning is an approach that needs to be adopted.*

**Keywords:** *Blended learning, approach, Flipped classroom, synchronous, asynchronous, e-learning, online learning, offline learning, ICT*

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### Introduction

Blended learning is not just a combination of online and face-to-face learning mode with the digital learning tools, but it refers to a combination of activities of both (online and face-to-face) the modes in a systematic, organized manner. The student and the teacher, both should be presented in the same space-in a true blended-learning environment. In spite of this, to get a control on the speed or topics of learning, the students must be able to make use of the available digital tools. To re-organize the learning experiences and increase the value of effective face-to face learning in the classroom, a similar program of utilizing technology can be used- known as flipped classroom model. In a flipped classroom model, encouragement can be given to the students to learn at their own pace by making use of their digital learning materials in an easily accessible way. Few resources can be used to transfer the main existing abundant necessary/essential knowledge from teacher to student before each class such as video lectures, podcasts, recordings, articles etc., With the evolution of digital technologies and the importance of using technology in the process of teaching and learning can be considered at all levels of education (Pre-school to higher education), the NEP 2020 recommends to make use of the blended models of learning. NEP-2020 also signifies that the recognition of the importance of face-to face learning in promoting/improving the education and digital learning. This can be made possible and meaningful when there is possibility for appropriate replication for different subjects by making use of the various effective models of blended learning.

### Scope and future of blended learning

- In recent times, education systems worldwide have seen a massive paradigm shift with the advancements in modern technology. Blended learning has become the new catchphrase in the global education space. Blended Learning has its focus on giving personalized experiences to the learners exposing them to web sources, e-learning, online platforms, games, and ICT

models. These encourage the students to retain their interest and inculcate self-learning procedures, the best ways in excelling a language. Hybrid or Blended learning is a form of education system in which students can learn subjects online by watching video lectures at home and studies can be done in class with teachers and students discussing and solving questions. By incorporating information technology into class projects, communication between lecturers and students can be improved and students can better evaluate their understanding of course material using computer-based qualitative and quantitative assessment modules. Blended learning can enable students to become active learners through reasoning and concept application and also allow increased student interaction with peers and instructors. By keeping students engaged in class, it can decrease distraction, enhancing retention and application of acquired information. According to research, a sizable number of students expressed satisfaction with blended learning and found it to be a relevant and effective learning approach.

- Greater time flexibility, freedom, and convenience by working part of the time online from home.
- More interaction with the instructor and fellow students.
- Access to unlimited updated resources available through the web.
- Enhance skills in time management, critical thinking and problem-solving.
- Increased success as measured by fewer course withdrawals and higher grades.
- More participation in classroom discussions and ability to choose environment-Online or Face-to-Face, in which they feel more comfortable.
- More time to reflect and refer to relevant courses and other research materials.
- 24/7 access to online course materials.
- Receive more frequent feedback from their instructors.

Innovative, dynamic and efficient, blended learning certainly has a promising future in the realm of higher education. For it makes the learning experience collaborative and immersive, it has the power to not only revamp contemporary educational models, but also implement unique ones.

#### **Importance of blended learning**

- Blended learning is important, because it breaks down the traditional walls of teaching, the ones that don't work for all students and now with access to present-day technologies and resources we can tailor the learning experience for each student.
- Blended learning also offers flexible time frames that can be personalized to each person, offering them the ability to learn at their own pace.
- Blended learning offers flexibility in terms of availability. In other words, blended learning enables the student to access the materials from anywhere at any time while enjoying the benefits of face-to-face support and instruction.
- Access to global resources and materials that meet the students' level of knowledge and interest.
- Self-pacing for slow/quick learners reduces stress, increases satisfaction and information retention.
- E-learning allows more effective interactions between the learners and their instructions using emails, discussion boards and chat room.
- Students could track their progress.
- Students can also learn through a variety of activities that apply to many different learning styles.
- E-learning could improve the quality of teaching and learning as it supports face-to-face teaching approaches.



- Blended learning also improves other factors for the teacher including more engaged students, better information and feedback on work, team-teaching, extended time with students, more leadership roles, focus on deeper learning, motivate hard to reach kids, new options to teach at home, more earning power, individualized professional development plans.

### **Blending the learning environment (Cleveland, 2018) can**

- Broaden the spaces and opportunities available for learning.
- Enhanced student engagement in learning and Enhance responsibility towards learning.
- Be time management and flexibility in terms of learning.
- Support course management activities (e.g., communication, assessment submission, marking and feedback)
- Enhance the availability and richness of information and resources for students.
- Engage and motivate students through greater opportunities for interactivity and collaboration.
- Be a learning environment that utilizes both online and face-to-face learning activities with appreciable student learning outcomes.
- Be a learning environment that combines traditional (face-to-face) and online (computer-mediated) instruction and interaction.
- Be a blended learning combine's classroom learning with online learning, in which students can, in part, control the time, pace, and place of their learning.
- Provide more opportunities for self-learning and learning in continuous and collaborative manner and Improve opportunities for experiential learning.
- The advantages of Blended Learning for students include improvement of learning skills, greater access to information, enhanced motivation, satisfactory learning outcomes, and opportunities to learn from each other and to teach each other.

### **Components of blended learning**

#### **1. Synchronous Physical/Face-to-face components**

- a) Face-to-face tutoring
- b) Coaching or mentoring sessions
- c) Classroom
- d) Workshops
- e) Conferences
- f) Meetings
- g) Laboratory

#### **2. Synchronous Electronic components**

- a) Internet conferencing
- b) Audio conferencing (i.e., Phone conferencing)
- c) Live video via satellite or video conferencing
- d) Virtual Online classroom
- e) Instant messaging.

#### **3. Asynchronous components**

- a) Online self-paced learning content (webpages)
- b) E-mails, discussion forums
- c) Web or Computer-based instruction
- d) EPSS (Electronic Portable Support Systems) and Job-aids
- e) Books, articles, CD-ROM, Audio (Disc/tape), Video (Disc/tape), White papers etc.,

#### **• Requisites for blended learning**

Implementation of blended learning is not an easy task. It requires certain fundamental

preparation in all the elements of teaching learning process- teacher, student, content designing and infrastructure. The following are the basic requirements for implementing a successful blended learning.

- **Well trained teachers-** though child centered but teachers are an important role in blended learning. Teachers should be well acquainted with the concept of blended learning and fully trained and skilled to blend both types of approaches- tradition and technological. They should be trained to develop content in digital form so that it can be available to students online. They should be well versed with internet browsing and internet terminology, should be aware of all the websites that can be useful for the students while learning online. Teacher should know how to utilize blogs, YouTube facility, software like Skype, goggle talk and others for video conferencing and social networking sites for educational purposes.
- **Teachers with wider outlook and positive approach towards change-** as it is must for the success of any innovative idea or method blended learning process also need teachers that have a wider outlook and should be flexible, they should be ready to accept the changes and very innovative and dynamic.
- **Facilities like well-furnished computer lab, internet connection, provision for video chatting-** it is the compulsory factor of blended learning. Blended learning largely depends on infrastructure, school should not only have good classroom but should also have a well-furnished compute laboratory with sufficient number of computes to cater to all the students of one class and the internet facility, a Wi-Fi campus if possible.
- **Students have access to internet at their private computers-** in addition to school having fully ICT friendly campus. Students should have basic hardware support to learn online and offline at their residence also. This requires a positive attitude and good investment schemes from the government.
- **Flexibility in the system-** the system should be flexible, flexible timetable, examination system all this is very crucial for implementing blended learning.

These are few essential and basic requirements without which the blended learning cannot be executed successfully.

### **Implementation of blended learning**

Implementing blended learning needs a full dedication on the part of educational authorities and managements of educational institutes. It needs a well-planned design that include all from individual to bottom of the educational hierarchy. Implementing blended learning requires a systematic, planned instructional process. An effective teaching-learning process in a blended environment calls for understanding and skills of using appropriate pedagogies with suitable technologies. Assessment of blended learning UGC suggests implementing blended learning as a new mode of teaching-learning in higher education and hence the area of assessment and evaluation needs to be explored again in the light of blended learning mode. Continuous comprehensive evaluation (CCE) should be encouraged in universities and colleges. Focus of new national education policy is learner centered education systems. Summative evaluation will not suffice the need of testing all levels of learning outcomes. Modular curriculum demands assessment at several intervals during and after achievement of learning outcomes specified for every module. Cognitive skills such as logical thinking, application of knowledge and skills, analysis and synthesis of concepts and rules demand evaluation strategies other than summative paper pencil tests. Innovative evaluation strategies are to be used by teachers during teaching learning process.

### **Innovative trends in evaluation and assessment**

1. **Summative Evaluation Strategies:** Open book examination, Group examinations even for conventional theory papers, Spoken/Speaking examinations, On-demand examinations.

2. **Formative Evaluation Strategies:** e-portfolio, Creative products, Classroom/online quizzes, Use of Artificial Intelligence (AI) tools for proctoring as well as assessments.

### **Advantages of blended learning**

- Blended instruction is reportedly more effective than purely face-to-face or purely online classes.
- Blended learning methods can also result in high levels of student achievement more effective than face-to-face learning.
- By using a combination of digital instruction and one-on-one face time, students can work on their own with new concepts which frees teachers up to circulate and support individual students who may need individualized attention.
- Blended learning can lower costs by putting classrooms in the online space and it essentially replaces pricey textbooks with electronic devices that students often bring themselves to class.
- E-textbooks, which can be accessed digitally, may also help to drive down textbook budgets.
- Blended learning often includes software that automatically collects student data and measures academic progress, providing teachers, students and parent's detailed students' data.
- Students with special talents or interests outside of the available curricula use educational technology to advance their skills or exceed grade restrictions.
- Blended learning allows for personalized education, replacing the model where a teacher stands in front of the classroom, and everyone is expected to stay at the same pace.

### **Disadvantages of blended learning**

- Unless successfully planned and executed, blended learning could have disadvantages in technical aspects since it has a strong dependence on the technical resources or tools with which the blended learning experience is delivered.
- These tools need to be reliable, easy to use, and up to date, for them to have a meaningful impact on the learning experience.
- While this type of learning does offer students the ability to go online when necessary, or learn from anywhere, there is no guarantee that each student will have access to the tools that they need to learn on the computer.
- Another problem that may arise is unreliable internet. Many times, the internet may be down. If the whole class does not have access to the same tools, then the teacher will not be able to keep the class on the same page. This creates a learning gap within classrooms. Unless the education system can offer reliable internet and computers to all students, it is not possible to ensure that this is an effective alternative to mainstream education.

**Conclusion:** Blended learning is an educational methodology that blends online or digital components with face-to-face instruction. Including technology in education helps set students up for success later in life, because computers and other connected devices are so integral to communication and education today. The National Education Policy (NEP) has given a rare glimpse in what can be achieved through the transformation of education. NEP (2020) clearly states that it is time to take on a policy that is undoubtedly student centric. The time has indeed come to recognize the fact that the student is the main stakeholder and that efforts must be taken to make the system respond to their dreams and aspirations (UGC, 2020). In this line of thinking the new policy gives the acceptability of many modes of learning including that of face-to-face learning, online learning and distance or virtual mode. It also promotes use of vocational courses, multi-disciplinary courses, and multi-modal approaches there by focusing on Blended teaching-learning. Transition from classroom to computer or vice methods and techniques, available resources indicate that blended learning mode "best of all worlds". It is the best because it helps all learning requirements and styles through a variety of mediums and techniques. Globally have adopted blended learning and is also one of the most adopted learning approaches.

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## MULTIPLE INTELLIGENCE, SELF EFFICACY AND THEIR RELATIONSHIP WITH TECHNO-PEDAGOGY SKILLS AMONG STUDENT-TEACHERS

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### Abstract

*In this study, we examine technology-enhanced pedagogy Skills in the context of teacher learning and classroom practice. We define and discuss technology-rich environments, which encompass a complex combination of Multiple Intelligence and Self-Efficacy of Student-Teachers. Hence this article makes an effort to understand the Multiple Intelligence, Self Efficacy and their relationship with Techno-Pedagogy Skills among Student-Teachers. Sample comprised of 980 student-teachers, Karnataka, India. Apart of 980 student-teachers, 275 male and 705 female Student-Teachers, randomly selected from Teacher Education Colleges affiliated by V.S.K. University. Ballari, India. Tools used for data collection were the (a) Multiple Intelligence Scale: Scale constructed and Standardised by Investigator Surabhi Agarwal and Dr. Suraksha Pal. (b) Self-Efficacy Scale-This scale developed by researcher (C) Techno-pedagogy skills: Scale constructed and Standardised by Investigator Prof. Hemant Lata Sharma and Ms. Leena Sharma. Data collection was spread over a period of three months. Mean, SD, 't' test and ANOVA were the statistical analysis was done.*

**Key Words:** Multiple Intelligence, Self- Efficacy, Techno-Pedagogy Skills, Student-Teachers, Gender

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### Introduction:

The expeditious increase in technological developments and their inclusion in all areas of life have become an expected situation. This circumstances makes the use of current technologies unavoidable in education activities (Mazman & Usluel, 2011; Zhang & Aikman, 2007). Within the scope of work to improve technological facilities in educational settings, teaching programs in addition to learning-teaching processes should be revised within the context of developing technologies. If the student-teachers use of information and communication technologies in the learning and teaching process plays an important role of their duties and responsibilities. That's way, it is necessary to research the required Techno-Pedagogy skills competency and their reflection levels among Student- Teachers (Salih Birisci & Umit Kul, 2019).

### Need and importance of the Study:

Multiple Intelligence and Self-Efficacy are strong and useful in a classroom, is the fact that it can be used for any subject and at any level. Each student comes to a classroom as an individual who has developed a different type of Multiple Intelligence and Self-Efficacy. This means that each student has their own intelligence and Self-Efficacy of superiorities and weakness. These Intelligence and Self-Efficacy domains determine how easily or difficultly a student can learn through a specific Techno-Pedagogy Skills. While using Techno-Pedagogy Skills to balance learning and subject matter a teacher should know how students will understand a subject, which address one of their weak Multiple Intelligence and Self-Efficacy domains by applying their most developed Multiple Intelligence and Self-Efficacy domains.

### Multiple Intelligence:

The Multiple Intelligence theory was published by Howard Gardner in 1983. The new idea was against the traditional approach, which used to take intelligence as a single capacity.

According to Guilford (1967) "intelligence is learning ability and that is a universal ability, regardless of the thing being learned, has definitely been exploded by a number of experiments".

**Self-Efficacy:**

The Student-Teachers beliefs about technology integration in education Ertmer & Newby, 2004) Bandura (1982) elucidate Self-Efficacy Bandura elucidate the Self -Efficiency . concept as a personal assessment of what the individual can do when they encounter certain tasks.

**Scope of the Study:**

The main intention of the present study is to study the Multiple Intelligence, Self Efficacy and their relationship with Techno-Pedagogy Skills among Student-Teachers.

**Objectives of the Study:**

To study the significant relationship between Multiple Intelligence, Self-Efficacy and their relationship with Techno-Pedagogy Skills among Student-Teachers.

**Hypothesis of the Study:**

1. There is no significant relationship between Techno-Pedagogy Skills and its dimensions with Multiple Intelligence scores of Student-Teachers.
2. There is no significant relationship between Techno-Pedagogy Skills and its dimensions with Self-Efficacy scores of Student-Teachers.

**Sample:** The sample comprise 980 student-teachers. In excess of / On the other side of 980 student-teachers, 705 female student-teachers and 275male student-teachers of Teacher Education Colleges in Ballari, koppal and Vijayanagara districts, Karnataka in India. These Teacher Education Colleges are associated/ affiliated/amalgamated by Vijayanagara Sri Krishnadevaraya University, Ballari. Karnataka, India. The random sampling was used in the present study.

**Methodology:** In this study the investigator adopted the descriptive research method under correlation and causal comparative types of research were followed. To know the independent variables (Multiple Intelligence, Self-Efficacy) on dependent Variable (Techno-Pedagogy Skill).

**Tools of the Study:** For the data collection in the present research investigator was used following tools.

**a) Multiple Intelligence Scale:**

Scale constructed and Standardised by Investigator Surabhi Agarwal and Dr. Suraksha Pal.

**b) Techno-pedagogy skills:** Scale constructed and Standardised by Investigator Prof. Hemant Lata Sharma and Ms. Leena Sharma.

**c) Personal Information Schedule:** Prepared by researcher.

**Analysis and Discussion of the Results:** In the present investigation investigator was used SPSS 23 version for the analysis of data and computed 't', mean and 'r' value.

**Result and Discussion:**

**Hypothesis:** There is no significant relationship between techno-pedagogy skills and its dimensions i.e. technological knowledge, pedagogical knowledge, content knowledge, technological pedagogical knowledge, technological content knowledge, pedagogical content knowledge and technological, pedagogical content knowledge with multiple intelligence scores of student-teachers

**Table: Results of correlation coefficient between techno-pedagogy skills and its dimensions with multiple intelligence scores of student-teachers**

Variables	Multiple intelligence scores of college student-teachers			
	r- value	Degrees of freedom	p-value	Sign.
Techno-pedagogy skills	0.2941	978	0.0001	S
Technological knowledge	0.0939	978	0.0033	S
Pedagogical knowledge	0.2407	978	0.0001	S
Content knowledge	0.2644	978	0.0001	S
Technological pedagogical knowledge	0.2523	978	0.0001	S
Technological content knowledge	0.2450	978	0.0001	S
Pedagogical content knowledge	0.2074	978	0.0001	S
Technological, pedagogical content knowledge	0.2453	978	0.0001	S



The results of the analysis indicates

- A significant and positive correlation between the techno-pedagogy skills and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.2941$ ,  $p\text{-value}=0.0001$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as techno-pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the techno-pedagogy skills and multiple intelligence scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological knowledge and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.0939$ ,  $p\text{-value}=0.0033$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the technological knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. pedagogical knowledge and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.2407$ ,  $p\text{-value}=0.0001$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as pedagogical knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the pedagogical knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. content knowledge and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.2644$ ,  $p\text{-value}=0.0001$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as content knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the content knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological pedagogical knowledge and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.2523$ ,  $p\text{-value}=0.0001$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological pedagogical knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the technological pedagogical knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological content knowledge and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.2450$ ,  $p\text{-value}=0.0001$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological content knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the technological content knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. pedagogical content knowledge and multiple intelligence scores of college student-teachers ( $r\text{-value}=0.2074$ ,  $p\text{-value}=0.0001$ ) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as pedagogical content knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-

teachers. In other words, the pedagogical content knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.

•A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological, pedagogical content knowledge and multiple intelligence scores of college student-teachers ( $r$ -value=0.2453,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological, pedagogical content knowledge scores increase or decrease, there is a corresponding increase or decrease in multiple intelligence scores among college student-teachers. In other words, the technological, pedagogical content knowledge and multiple intelligence scores of college student-teachers are interconnected and influence each other.

**Hypothesis:** There is no significant relationship between techno-pedagogy skills and its dimensions i.e. technological knowledge, pedagogical knowledge, content knowledge, technological pedagogical knowledge, technological content knowledge, pedagogical content knowledge and technological, pedagogical content knowledge with self efficacy scores of student-teachers

**Table: Results of correlation coefficient between techno-pedagogy skills and its dimensions with self-efficacy scores of student-teachers**

Variables	Self efficacy scores of college student-teachers			
	r-value	Degrees of freedom	p-value	Signi.
Techno-pedagogy skills	0.5204	978	0.0001	S
Technological knowledge	0.2844	978	0.0001	S
Pedagogical knowledge	0.3776	978	0.0001	S
Content knowledge	0.4138	978	0.0001	S
Technological pedagogical knowledge	0.4537	978	0.0001	S
Technological content knowledge	0.4472	978	0.0001	S
Pedagogical content knowledge	0.3703	978	0.0001	S
Technological, pedagogical content knowledge	0.4269	978	0.0001	S

The results of the analysis indicates

- A significant and positive correlation between the techno-pedagogy skills and self efficacy scores of college student-teachers ( $r$ -value=0.5204,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as techno-pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the techno-pedagogy skills and self efficacy scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.2844,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological knowledge scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the technological knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. pedagogical knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.3776,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as pedagogical knowledge scores increase or decrease, there is a

corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the pedagogical knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.

- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. content knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.4138,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as content knowledge scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the content knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological pedagogical knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.4537,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological pedagogical knowledge scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the technological pedagogical knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological content knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.4472,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological content knowledge scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the technological content knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. pedagogical content knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.3703,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as pedagogical content knowledge scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the pedagogical content knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.
- A significant and positive correlation between the dimension of techno-pedagogy skills i.e. technological, pedagogical content knowledge and self efficacy scores of college student-teachers ( $r$ -value=0.4269,  $p$ -value=0.0001) at a 5% level of significance. Consequently, we reject the null hypothesis. This finding suggests that as technological, pedagogical content knowledge scores increase or decrease, there is a corresponding increase or decrease in self efficacy scores among college student-teachers. In other words, the technological, pedagogical content knowledge and self efficacy scores of college student-teachers are interconnected and influence each other.

**Educational Implications:** The present research have raised some important implications related to the educational needs of the Student-Teachers with special reference to their Multiple Intelligence, Self-Efficacy and Techno Pedagogy Skills.

1. Multiple Intelligence and Self-Efficacy refers to an individual's belief in their ability to succeed in specific tasks or domains. This study highlights the importance of fostering Multiple Intelligence and Self-Efficacy among Student-Teachers.
2. Educational institutions should provide opportunities related to Multiple Intelligence, Self-Efficacy and Techno-Pedagogy Skills for Student-Teachers to engage in hands-on experiences, receive constructive feedback and celebrate their successes.

3. Building Multiple Intelligence, Self-Efficacy and Techno-Pedagogy Skills can boost their confidence in utilizing technology for pedagogical purposes and enhance their overall teaching skills.

**Conclusion:** On the basis of analysis, it has been concluded that the Techno Pedagogy Skills increase or decrease, there is a corresponding increase or decrease in Multiple Intelligence and Self-Efficacy among college student-teachers. In other words, the Multiple Intelligence, Self-Efficacy and Techno Pedagogy Skills of student-teachers are interconnected and influence each other.

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**BRAIN BASED LEARNING: INNOVATIVE APPROACH FOR MEANINGFUL LEARNING**

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**Abstract**

*Educators in recent years have become much more aware that neuroscience is finding out a lot about how brain works, and that some of the discoveries have implications for what happens in schools and classrooms. Brain is a set of modular units that carry out specific tasks. Brain is a collection of units that supports the mind's information processing requirements and not a singular unit whose every part is capable of any function. The brain, being the organ of learning, must be understood if classrooms are to be places of meaningful learning. Understanding the brain has the potential to alter the foundation of education, transform traditional classrooms to interactive learning environments and promote better instructional approaches amongst teachers. Brain-based education is the application of strategies based on principles derived from an understanding of the functionalities of the brain. Brain-based education informs an educator on the modalities of the brain to be able to effectively leverage upon a particular instructional strategy that is aligned with the learning conditions. In present paper concept of Brain based learning, Principles of Brain based learning, Strategies of Brain based learning, Educational implication of Brain based learning in the context of meaningful learning are explored.*

**Keywords:** Brain Based Learning, Meaningful Learning, Strategies of Brain Based Learning

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**Introduction:**

Learning is relatively continuing products of experiences which come out as a result of the interaction between individual and environment. The concept of learning is vital importance in terms of explaining human behaviours. Brain based learning deals with the concept of learning in a neuro-physiological context of learning. Brain is the basic factor in learning, so learning is affected by environmental factors, psychosocial qualities of the individual and chemical structure of the organism; and these interactions reflect on the process of learning.

Effective teachers never stop considering different ways of method of teaching to improve student achievement. Each teacher is different from each other from their learning style. Brain research has provided new knowledge about the many ways that humans learn. Brain-based learning has resulted from educators and researchers put on findings about brain research to guide teaching practice. Brain-based teaching - learning has involved the implementation of designed a lesson plan principles and their impact on education before, during, and after each lesson.

Neuroscience is the scientific study of the brain which is dealing with the structure and function of the brain. Educationists started to comprehend about how the brain works. This understanding helps the teacher educators and student teachers how, when and why learning occurs from a psychological perspective

**BRAIN BASED LEARNING:****Definitions of Brain Based Learning:**

Eric Jensen -Brain Based Education is the purposeful engagement of strategies based on principles derived from solid scientific research. Brain based Learning is also the application of a meaningful group of principles that represent our understanding of how our brain works in the context of education.

Caine & Caine (2002)-Recognition of the brain codes for a meaningful learning and adjusting the teaching process in relation of these codes is called brain based learning. Brain Based Learning is simply the engagement of strategies based on body /mind /brain research. It is a multidisciplinary approach built on the fundamental question; —what is good for the brain? It is also called as brain compatible learning.



Brain-based teaching strategies are effective for all students, regarding of learning challenges. According to Jensen (2008) Brain-based learning is a way of thinking about the learning process. It is not a program, philosophy, or a recipe for teachers and it is not a trend . It is, however, a set of principles and a base for knowledge and skills upon which we can make better decisions about the learning process.

The most recent trend of “brain-based learning” applies findings from cognitive neuroscience. The functions of memory are another central aspect of brain-based learning. Apart from the neuroscience research revealing that all these memory systems are interconnected and interactive (Caine & Caine, 2014, p.17), they contain various memory pathways that have to be used in balance and respected when information retrieve is required (Springer, 2008).

**Principles:** The core principles of brain-based learning follow. Each principle lays out a formula for better retention and learning among students.

**Health and Exercise-**The more active and engaged students are physically, the better their learning outcomes. This requires more than a midday recess or a walk between classes. Allowing students to take walking breaks during lessons and throughout the day, for example, revitalizes students, increases their attention span, and better prepares them to retain information.

**Positive Emotions-**The happier students are, the more they are willing to learn and think effectively. Affirmations from the teacher are one way to raise student self-esteem.

**Group Work-**Working in teams with classmates allows students to learn from one another. This helps them retain information they may not have accepted or understood from the teacher.

**Peer Teaching-**When students teach materials to their peers, it helps them retain that same information. This can be done in small groups or through presentations.

**Practice-**Learning through repetition and trial and error is more effective than simple memorization. Students will gain a better understanding of the subject through practice, rather than just memorizing the details.

**Limited Lectures-**Only 5 to 10 percent of information is retained during a lecture, according to Class craft. Making lessons largely discussion-based promotes student learning.

**Meaningful Information-**Students are more likely to remember information if they are engaged with the lesson. By applying the material to their lives, students will find it meaningful. For example, a lesson on economics could be related to smartphone ownership.

**Written and Verbal Information-**Having students both write and verbalize information will help move it from their short-term memory to their long-term memory.

**Stimulation-**Catching students’ attention through humour, movement, or games stimulates their brains’ emotional center. In turn, this increases students’ engagement and processing of information.

**Less Stress-**Stress chemically changes the brain. In a calm classroom environment, students have the opportunity to perform at higher levels.

**Meaningful learning:** The term of “meaningful learning” has become clear in science education through the work of the educational psychologist David Ausubel. As he suggests, in most contexts, meaningful learning is better than rote learning that meaningful learning serves as a kind for learning which has value in real classroom condition in multidisciplinary contexts. Meaningful Learning engages students emotionally, socially, cognitively. Meaningful Learning promotes success. It increases emotional and cognitive growth of learner. Meaningful learning helps to develop curiosity and boosts the students to the joy of finding. It leads to self-actualization of the students. The knowledge gained through meaningful learning relates to new learning situations. This type of learning stays with students throughout the lifespan. Meaningful learning is active, constructive, and lifelong learning. It allows students to be fully engaged in the learning process

### **Strategies of Brain Based Learning**

**Brain Storm:** An idea generating strategy often used for team problem solving.



**Expert Jigsaw:** - A way of processing large amounts of information by dividing it up among groups of students. Individuals in each group are responsible for learning a specific part and then teaching it to their peers.

**Fishbone diagram:** A problem solving graphic organizer that examines contributing factors for the purpose of determining cause and effect.

**Four Corners:** A cooperative group strategy in which the four corners of a room designates as different views on a topic and students forms groups at the corner representative of their view.

**Graphic Organizer:-**A visual way of organizing information or ideas.

**Inclusion strategies:-**Team building activities that help students to feel part of group.

**Role Playing:** A strategy in which students take on the attributes of certain characters in a short play of scenario. Each student acts out his or her role according to predetermined set of rules.

**Roundtable Round robin:** Cooperative structure in which students respond in turn using paper or other material that is passed from student to student.

**SCAMPER:** A creative thinking strategy in which students consider alternate ways of viewing an artefact or idea by generating ways they could substitute ,combine, adapt, put to other use, eliminate or reverse its uses.

**Talking chips :** A cooperative group strategy designed to control the amount of input a student has into group activity .Students are assigned a specific number of chips or markers (usually four) and use a chip for the opportunity to make a response. When all of a student's chips have been used, the student can make no further responses.

**Think –Pair-Share:** A questioning- response strategy in which a question is posed ,students think about responses, then pair with a partner to share responses, and finally share with the class as a whole.

**Mind maps:** Students can create brain maps showing the connection between ideas or pieces of information.

**Brain breaks:** Short breaks throughout the day can help refresh the mind and improve focus. Simple movements such as stretching, jumping, or dancing can help reset the brain.

**Collaborative learning:** Working with others encourages communication and social interaction, which engages the frontal lobe of the brain.

**Metacognition:** Encouraging students to be mindful of how they learn, think, and process information helps to develop their metacognitive abilities.

**Project-based learning:** In project-based learning, students learn by working on a long-term project that requires critical thinking, problem-solving, creativity, and collaboration.

**Role-playing:** Role-playing involves stepping into someone else's shoes and solving problems from their perspective. This activity enhances empathy and perspective taking.

**Inquiry-based learning:** This approach encourages students to ask questions, explore, and discover information on their own, which stimulates the brain's curiosity center.

**Mindful breathing:** Students can be taught to practice deep and mindful breathing to calm the mind and increase awareness of their thoughts and emotions.

**Visual aids:** The use of visual aids such as videos, images, or infographics engages the brain's visual processing center.

**Gamification:** Introducing game mechanics in learning activities can increase student motivation and keep them engaged.

**Creative writing:** Writing can help students express their thoughts and emotions, which enhances their metacognitive abilities.

**Music and rhythms:** Introducing music or rhythmic activities can activate the brain's auditory processing center and improve focus.

**Visualization techniques:** Students can be taught to visualize concepts, ideas, or processes to improve understanding and memory retention.

**Reflections:** Encouraging students to reflect on their learning experiences can enhance their metacognitive abilities.

**Multisensory learning:** Incorporating multisensory activities such as touching, smelling, tasting or hearing can enhance learning and memory retention.

Brain-based learning activities can be incorporated into any teaching approach to enhance the learning experience for students. These activities help to stimulate and engage different regions of the brain, which leads to better retention, comprehension, and application of acquired knowledge. Incorporating these activities into the curriculum can help students become more engaged, motivated, and successful learners.

**Conclusion:** Brain based learning is a connected with neurology and the science of education, where educational psychology plays an important role. Neuroeducation in the classroom is a scientific tool for educators as well as teachers, designed to help identify to academic failures and assimilates the main cognitive functions in children. Brain based learning also is a constructivism approaches of teaching method whether the brain constructing learning process as finding and structuring knowledge by means of associating them with previous experiences and knowledge. According to constructivism, learning is an interior process that takes place in a person's mind and it is differ from individual to individual. Neurologists and pedagogists can come together and conduct brain based learning researches. By doing this they can analyse how the brains of students work on which activities and can reflect the results to teaching applications.

**Educational Implication of Brain based learning and Role of Teacher:** Teacher has to understand the brain based learning, principles and strategies. So that he / she can design teaching –learning process accordingly to achieve meaningful learning among their students. Brain Based Learning is a Learning approach that is based on the structure and function of the human brain. Distinct from current curriculum methods, brain based learning emphasizes meaningful learning instead of memorization. The findings of neuroscience and psychology provide us with many opportunities of brain-compatible implications for our classrooms. Key findings: **Mental Models** – enhance teacher practice. **Emotions** - impact on student learning. **Learning Environment** – shaping student achievement. **Memory** – can't forget it! **Assessment** – achievement and motivation. **Biology of the Brain** – pathway to understanding. **The body, mind, and brain** - all for one and one for all. **Time** – allotment and student achievement. **Collaborative Learning** – creating synergy. **Thematic Instruction** – enhances student learning. Brain-based teaching involves the implementation of carefully-designed principles with due consideration of their impact before, during, and after each lesson.

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## COLLABORATIVE LEARNING - COOPERATIVE LEARNING AS A STRATEGY OF TEACHING SCIENCE

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### Introduction

Cooperative learning is a subset of collaborative learning. Collaborative learning activities can be formal or informal (structured/unstructured) and either self-paced/asynchronous or done in real-time. Unlike traditional didactic teaching, where the teacher imparts information and students receive it passively, collaborative learning requires active student participation to work. In collaborative learning, the teacher acts as a facilitator, guiding the learning process when needed rather than the source of all knowledge. Student's learning goals may be structured to promote cooperative, competitive or individualistic efforts. In contrast to cooperative situations, competitive situations are one in which students work against each other to achieve a goal that only one or a few can attain. In competition, there is negative interdependence among goal achievements; students perceive that they can obtain their goals if the other students in the class fail to obtain their goals. In individualistic learning situations, students work alone to accomplish goals unrelated to those of classmates and are evaluated on a criterion reference basis. Students' goal achievements are independent; students perceive that the achievement of their learning goals is unrelated to what other students do. The result is to focus on self-interest, personal success and ignore as irrelevant the successes and failures of others. In cooperative learning situations there is a positive interdependence among students goal attainments; students perceive that they can reach their learning goals if the other students in the learning group also reach their goals. No one group member will possess all of the information, skills or resources necessary.

### Need of new methods:

The word '**method**' has been taken from the Latin word which means mode or way. Therefore here it says the technique of delivering knowledge and transmitting scientific skills by a teacher to his or her students and their comprehension and application by them in the process of learning science. According to Valtaire and Spancer, Every method has some goodness in it, and no method is all good. Learners should be told as little as possible and induced to discover as much as possible.

Innovative teaching strategies can help to build better relationships between teachers and students by creating an effective environment that encourages exploration and collaboration. The use of innovative teaching strategies has the potential to revolutionize the way we teach our students.

- It is highly efficient if a teacher has a systematic and logical manner.
- It is convenient and comfortable, and a teacher is free to develop his/ her style of teaching.
- The number of students can listen and prepare notes. It saves time and energy.
- Helps in students' problem solving skills as they bring out their own ideas on issues.
- It helps in sharpening critical and quantitative thinking skills.
- Helps students learn how to explain in their own words what they are thinking and doing and not just to memorize terms.
- It motivates students more to prepare for a class in which they are expected to participate actively in.

**Cooperative learning meaning:**

Cooperative learning, also called small-group learning, is one teaching method that can help students learn academic material and social skills. Understanding more about cooperative learning can help you create a positive social experience in your classroom. Cooperative learning happens when students work in small groups to achieve a common goal. Educators are able to use this method in every grade.

At its simplest, collaborative learning is “any form of learning that occurs due to social interaction between two or more individuals when they are working together on the same task or toward the same goal” (Naji & Croje, 2022).

Cooperative learning is the instructional use of small group so that students work together to maximize their own and each other's learning. Classroom students are organized into small groups after receiving instruction from the teacher. Students then work through the assignment until all members successfully understand and complete it. Cooperative efforts result in participants striving for mutual benefits. So that all group members share a common fate, knowledge that one's performance is mutually caused by oneself and one's colleagues, and feeling proud and jointly celebrating when a group member is recognized for achievement. Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning.

In cooperative learning groups, students have two responsibilities:

- 1) To learn the assigned material.
- 2) To make sure all other members do likewise

Students work together in small groups and learn through interaction with each other while the teacher coaches the process.

- Is where teams of students, with various abilities and skills, work together on different activities to learn about a subject?
- Groups will stay together for weeks, months or years.
- Groups should be 2-5 people in size.

**Steps of Cooperative learning:**

Following are the steps of cooperative learning

1. Use three types of cooperative learning groups: formal, informal, and cooperative base groups.
2. Teach students social skills
3. Integrate all three goal structures: cooperative, competitive, and individualistic.
4. Utilize creative conflict: Use academic controversies to facilitate achievement and cognitive and social development, and implement the peacemaker program.
5. Create a cooperative school: Empower teachers through cooperative teams.

**The five essential elements of effective cooperative learning**

- Positive Interdependence.
- Face-to-Face Promotive Interaction.
- Individual and Group Accountability.
- Interpersonal and Small-Group Skills.
- Group Processing.
- Peer Interaction during Lecture.
- Jigsaw Groups.
- Team Project Roles.

**Use of cooperative learning as a strategy for teaching science:**

- To learn facts and concepts
- Problem solving

- Group assignments
- Conducting experiment
- Assemble a collage
- Prepare a research report
- Prepare a biographical report
- Group investigation
- For providing drill work to a group.
- To create a positive attitude
- Real life experience
- Peer to peer teaching

**Educational Implications:**

Collaborative learning in small groups has been found to significantly improve academic achievement and cognitive outcomes among undergraduate students. A well-designed collaborative learning activity checks all the constructivist learning boxes, as it builds on previous knowledge, engages students' interest, and makes it more likely that students will retain what they have learned since they have discovered it and discussed it with their peers.

The approach has other, broader benefits, too.

If well facilitated, it teaches them how to work effectively within a team, learning first-hand how work can be divided up, completed more quickly, and synthesized so that everyone learns from each other. They learn a skill set that will support them in academia and the workplace, including oral communication, leadership skills, self-management, critical thinking, problem-solving, and creativity. They also learn the value of considering other viewpoints and approaches, an important foundation for building diversity and inclusion in the workplace and other settings. At a social-emotional level, collaborative teamwork helps students form more caring, supportive, and committed relationships. It can help the shy or solitary student to get out of their shell, and it exposes students to new perspectives and working styles. The self-esteem they develop from this process can be the foundation for more robust social skills and emotional well-being.

Finally, experiencing collaborative learning first-hand can demonstrate to students that the outcome of the team's work can be greater than the sum of its parts. Unlike traditional didactic teaching, where the teacher imparts information and students receive it passively, collaborative learning requires active student participation to work. As such, it is a perfect example of a constructive approach to learning, where the learner is in charge of their learning, actively relating concepts and ideas as they construct their knowledge, and drawing on what they already know and their interactions with others.

In collaborative learning, the teacher acts as a facilitator, guiding the learning process when needed rather than the source of all knowledge. In the elementary, middle school, or high school classroom, collaborative learning typically takes the form of teams of students working on an engaging problem or project in a group that is student-led, with little reliance on the teacher. Team members share ideas, build knowledge together by gathering and contributing different information, and present the final product to other teams. On a practical level, students are typically introduced to the topic and discuss it as a class. They then break out into groups of 3–5 and choose a problem from a list provided by the teacher or developed by the class. Each group typically breaks the project into different stages or tasks and divides the work based on their skill sets. They then reconvene, and students with particular skill sets and knowledge teach them to other team members. Ultimately, the students create a way to present or teach what they learned to their fellow students.

**Conclusion:**

Innovative teaching methods can help to build better relationships between teachers and students by creating an effective environment that encourages exploration and collaboration. The use of innovative teaching methods has the potential to revolutionize the way we teach our students. In collaborative learning, the teacher acts as a facilitator, guiding the learning process when needed rather than the source of all knowledge. They learn a skill set that will support them in academia and the workplace, including oral communication, leadership skills, self-management, critical thinking, problem-solving, and creativity.

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## CREATIVE TEACHING METHODS IN EDUCATION

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### Abstract

*In the field of education, innovative teaching techniques are highly valued. In education, there are innovative teaching techniques that promote creativity. Creative teaching focuses on the methods of teaching and learning. It engages the students in active participation, creative output, and overall development of an individual. In today's world, the teaching and learning process requires new technologies to enhance the existing system and achieve educational objectives. Gone are the days when books were the only source of instruction for personalized learning and teaching. Nowadays, there are various modes of instruction that can be used in a classroom setting. By carefully selecting the mode of instruction, teachers can create a safe and fair learning environment that promotes student success. "The smarter the teacher, the smarter the children." This quote highlights the crucial role that teachers play in shaping the minds of their students. A knowledgeable teacher can inspire and motivate children to learn beyond the textbook and explore their creative potential. With the help of new technologies, students can learn in a more interactive and engaging way, making the learning process much more effective. In higher education, there are a variety of teaching methods that are utilized to enhance learning outcomes and ensure student engagement. Some of these include Constructivism, Quantum learning, Integrated learning, Collaborative learning, Demonstration, Discussion, Storytelling, Role-play, field visits, project works, laboratory work, assignments, quizzes, problem-solving approaches, dialogues, seminars, pick and speak, webinars, lectures with PowerPoint presentations, flip classes, audio and video tools. Additionally, online teaching has become increasingly popular in recent years, providing students with a flexible and convenient way to learn and participate in educational activities. These various methods offer a diverse range of approaches to teaching and learning, catering to different learning styles and preferences.*

**Keywords:** Innovative teaching techniques Different learning styles, approaches to teaching, Focus on the creative methods of teaching.

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### Introduction:

Teaching is a process of imparting knowledge, skills, ideas, and values by a specialized authority. According to H C. Morrison, Teaching is an intimate contact between a more mature and less mature personality. The act of teaching promotes students' creativity, and skills, and establishes a more positive environment for the students, which helps their growth and development. A teacher is a role model to her students, and directs the students toward their life challenges, and facing every challenge in life is - creativity. But what is creativity? I believe it is the ability to make or produce new things using skills or imagination. Creative people are open-minded and innovative, and they are able to come up with more than one solution to a problem. When creativity is combined with teaching, it can help children and society grow in a positive way. Thinking about all the possibilities that can emerge when these two forces come together is exciting!

### Creative Teaching Methods in Education:

As a parent or teacher, it is important to understand that there is no single factor that contributes to a child's creativity. However, the social environment in which a child is raised does have a significant impact on their ability to think creatively. Whether it's in the classroom or at home, creating an environment that encourages and fosters creativity can help children reach their full potential. Teachers can play a crucial role in developing creative learning by inspiring their students' interest in learning and guiding them to find innovative solutions to problems. By providing opportunities for children to apply their knowledge creatively, we can help them develop the skills they need to make a positive impact on society.

There are some creative methods that the teacher should use in her classroom:

**1. Audio-video tools:** Using audio-visual aids in the classroom is a great way to make learning more effective. It allows teachers to present lessons in a manner that is engaging and memorable for students. Not only does this help students learn and retain concepts better, but it also improves their critical and analytical thinking skills. By using visual aids, teachers can remove abstract concepts and present them in a more concrete and understandable way. Overall, the use of audio-visual aids is a valuable tool for enhancing the learning experience in the classroom. The use of audio-visual aids, such as videos, PowerPoint presentations, animations, and images, can really enhance the learning experience for students. These tools make it easier for teachers to present complex concepts and ideas in a way that is more engaging and memorable for students. It's great that technology has made it possible for teachers to take advantage of these types of resources. It's definitely a win-win situation for both teachers and students!

**2. Brain Storming Method of teaching:** Brainstorming is a creative technique that involves generating as many ideas as possible without worrying about their validity or appropriateness. This technique was introduced by A.F. Osborn in his book "Applied Imagination". The purpose of brainstorming is to encourage a group of students to come up with a variety of ideas related to a situation or problem without judging or criticizing them. By setting aside any concerns about whether an idea is practical or realistic, the group can explore a wider range of possibilities and potentially discover innovative solutions. Brainstorming is a powerful tool for problem-solving and idea generation. It involves a group of individuals coming together to share their thoughts and ideas, with no criticism or judgment. This encourages participants to freely express themselves, leading to the creation of a large quantity of ideas. Brainstorming is effective in many scenarios, such as generating new messaging ideas, developing a growth strategy, or identifying and solving issues. The advantages of brainstorming include increased creativity, acceptance of all ideas, team building, and an exciting and easy process. However, there are also limitations and drawbacks, such as disinterest from some group members, lack of homogeneity in the group, and conflicts between members. Overall, with proper care and attention, brainstorming can be a highly effective strategy for achieving desired objectives and solving problems.

**3. Classroom outside the classroom:** It's believed that learning experiences outside classroom teaching methods are essential to a well-rounded education. It's the old adage that "experience is the best teacher," and it rings true in so many ways. When we engage in experiential learning, we're not just passively receiving information - we're actively encountering authentic problems, constructing new ideas and hypotheses, testing them out in real-world situations, and interacting with others to gain a deeper understanding of the world around us. It's an immersive process that forces us to engage with multiple disciplines and see the world from different perspectives. We have to make the students lucky enough to have the opportunity to go on regular educational excursions outside of the classroom. These excursions allow them to define education through their personal experiences in an open environment. Science can be learned through manners and nature individually. Additionally, the excursions teach the students valuable lessons about living in a group, being a hero, and feeling self-confident. The sense of brotherhood among fellow students is also incredibly strong. Overall, these excursions provide an incredible learning experience and help the students grow in ways that they never thought possible. There are many educational benefits to going on excursions outside of the classroom that are difficult to put into words. As the renowned British writer Bacon once said, passion is an integral part of education for the youth, while experience is gained by older individuals. What we gain from travelling to different places is something that cannot be learned from books alone. This is because sight plays the most important role in the learning process compared to our other senses. For instance, we may have read about the ancient universities like "Nalanda" and "Takshashila" in books, but the experience of actually visiting the site and witnessing its grandeur firsthand would be a

truly unforgettable learning experience.

**4.Role Play:** It is an acting method that focuses on developing cognitive and social skills. This approach has the potential to shape a student's interests, talents, and attitudes. What is particularly fascinating is that this method places great emphasis on exemplary teaching. It involves dividing the class into small groups and having them imitate the experiences of others through character acting or dramatic techniques. What's neat is that students get to play both the role of teacher and student, which is a really dynamic way to learn. Role-playing is a technique that can help individuals gain a better understanding of situations and problems they may encounter. It involves acting out scenarios and assuming different roles to explore different perspectives and potential solutions. By doing so, individuals can develop empathy, communication skills, and problem-solving abilities. Whether it's in a personal or professional setting, role-playing can be an effective tool for improving interpersonal relationships and achieving desired outcomes. The Role-play method helps to develop the student's vocabulary development, conversation, dialogue delivery, comprehensive abilities, grammar, and cultural habits. Therefore, using this teaching method is more comprehensive and provides students with a realistic language learning environment. It can be enjoyable for students, which helps them develop their language skills in a relaxed atmosphere. Furthermore, it also enhances their teamwork and quick response abilities.

**5. Storytelling method (visually):** Storytelling is an incredibly effective method of teaching language and social studies. Children are naturally drawn to stories, whether they are told by parents, grandparents, or teachers. By incorporating stories into the lessons, the teacher is able to engage the students' imaginations and curiosity, while also imparting important knowledge and skills. As a teacher, it is important to master the art of storytelling and to use it as a means of developing natural forces in children. By telling stories of great men and women, social reformers, writers, saints, explorers, and scientists, the teacher is able to make text items more interesting and accessible to students and help them develop a love of learning that will last a lifetime.

**6. Project based method :** Project-based learning (PBL) is an incredibly effective teaching method that encourages students to develop their problem-solving skills through hands-on experience. By working together in small teams, students are able to tackle complex problems and come up with innovative solutions that they might not have been able to achieve on their own. The educational value of PBL lies in its ability to foster creativity and critical thinking, which are essential skills for success in any field. With PBL, students are empowered to take ownership of their learning and to develop the skills they need to succeed in the world beyond the classroom. Project-based learning (PBL) is an excellent way to enhance creativity and collaboration among students. It's even better when they have the chance to work together across different disciplines and use technology to communicate and produce their work more efficiently. In fact, real-world problems posed by outside organizations or corporations are some of the best opportunities for students to design solutions and gain valuable experience. And the best part is that projects don't have to be overly complex to be effective. Even quick and simple projects can help students make connections across different subjects and learn important skills.

**7. Participation :** Participatory Learning Technique (PLT) which sounds like a great way to organize a classroom. It motivates learners to participate in the act of teaching, creating a peer-based learning process. This approach could really help to make learning more student-centered and increase student participation. It's always more engaging to learn when students feel like they're an active participants in the process. Participation is all about taking part in activities and projects, and sharing in the activities of a group. This fosters mutual learning which is important for personal growth. The participatory learning strategy is based on behaviorism, cognitive and social psychology. Collaboration is essential for participatory culture and is a desired educational outcome. The

Partnership for Twenty-first-century Skills defines collaboration as working effectively and respectfully with diverse teams, being flexible and willing to make compromises to achieve a common goal, and taking shared responsibility for collaborative work while valuing individual contributions. It's clear that participation and collaboration are key to success in both personal and educational settings.

**8. Games and Puzzles:** Every student has a unique learning style, It is important to incorporate various teaching techniques into the classroom environment. One such technique that's found to be particularly helpful is the use of puzzles and games. There are several in-class puzzles and games that have proven to be both enjoyable and effective. For instance, simple crossword puzzles have helped to reinforce key terminology, while the find the object, find the clues game has enabled us to appreciate different approaches to process and thread management. Through assessments of these games, we have gained valuable insights into what makes a good in-class game for teaching different concepts. Overall, incorporating puzzles and games into the classroom can be a fun and effective way to reinforce learning objectives.

**9. Laboratory method :** The laboratory method is a teaching approach that involves students in experimenting and observing. This method allows students to learn by doing (hands-on experience) and teachers to observe and guide their actions. Students play an active role in this method, which encourages them to explore and discover on their own. Through laboratory teaching, students are more engaged and invested in their learning than they would be in other teaching methods. Each student conducts their own experiments and strives to achieve results through their own efforts. This hands-on approach to learning is both effective and engaging, making it a valuable tool for educators and students alike.

**10. Collaborative learning :** It is a great way for students to work together on tasks or activities. It involves working in a small group to ensure that everyone is participating and contributing to the common goal. Group members may work on separate tasks that contribute to a shared outcome, or work together on a single task. This approach can be effective in promoting teamwork, communication, and problem-solving skills.

**Conclusion:** Creative education is an innovative approach that allows students to use their imagination and critical thinking skills to come up with new and unique ideas. It's a great way for students to learn how to take risks and become independent thinkers. I think it's amazing that this type of education encourages divergent thinking, which can lead to unconventional solutions to mainstream problems. It's fantastic to see education moving away from conventional methods and embracing creativity and originality. It is an approach where the learners are free to use their imagination and critical thinking to form new and fresh ideas and add value to their lives.

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## AUGMENTED REALITY PEDAGOGIC APPROACH (ARPA) - NEW PEDAGOGIC APPROACH IN EDUCATION

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### Abstract

*Now a day's different pedagogical approaches are using in education to make teaching learning Process effective. AR is a type of technology which allows digital information & digital images to be displayed on to a real life/time. Augmented Reality superimposes sounds, videos, and graphics on to an existing environment. It uses four main components to superimpose images on current environments: cameras and sensors, processing, projection, and reflection. ARPA –it is a pedagogical approach which is used Augmented Reality technology in Teaching learning process. This paper explores the recent development and innovative uses of AR in formal informal education.*

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### INTRODUCTION:

Teachers and students are adopting new tools & technologies in education to make teaching learning process effective. One such tool is Augmented Reality (AR). AR is a combination of technologies that superimposes computer generated content over a real world environment. During AR activities, students may be motivated & engaged more in the learning process while discovering knowledge & learning through the exploration of concepts, phenomena beyond the walls of traditional classroom. AR is using effectively in all fields like Industry, Medicals, Gaming, Museum, Entertainment and in military.

The word Augmented is derived from a Latin word meaning “to add” essentially. After several developments the term AR was coined in 1990 by Thomas caudell & David mizell.

### AR learning Activity in school education:

In entertainment & Games like Pokemon Go, which overlays virtual creatures on the players surroundings.

In education, AR can create interactive learning experience.

AR does not require Expensive Gadgets. Today almost all people have smartphones. Most of them are active smartphone users & use gadgets to access social media, play games in connection with friends. Students use phones for study purpose, to do the Homework, get information about subject.

AR gives extra information about any subject & makes complex information easier to understand. AR animated content in classroom lessons can catch students attention in changing/dynamic age & motivate them to study. AR gives immersive experience. So students will understand the concept easily & develops the scientific attitude.

Teachers can easily teach the concept with the help of AR & it develops the curiosity among students.

AR reduces the teachers burden & stress users can use AR anywhere, anytime without anybodies permission.

The objective of AR is to create systems that support flexible, personalized learning. Now AR has become modern pedagogical approach of teaching & learning. It can bring out children's potential & enable all around. Special character of AR is sharing the same experience with other users in the same physical space. Over the past few years, it has been more interactive with the application of AR in education. In many countries, education system is on the basis of AR. Over the past few years, classroom has been more interactive with the application of AR in education. We can see the several



developments that make travelling ,fascinating,creating Augmented places &Adding interactive elements influence travelers perception of a place.Today Google Glass ,Microsofts Hololens,&Niantics “Pokemon Go” game are widely used for AR experiences.

Augmented Reality learning technology allows teachers and educators to incorporate personalized,game-based learning that extends beyond the classroom.Use of AR in education sector improves the learning environment by driving student engagement and experience.

### **Examples of AR :**

#### **In Business presentations**

Sometimes presenters can face challenges connecting with audiences and delivering messages. Augmented Reality engages audiences by making them part of the presentation.

For example,instead of asking customers to visualize a light fixture in a certain location,they can use AR to show how it would “ really” look.

**Prototyping:**During the product development stage,designers typically sketch prototypes digitally or on paper and use CAD modeling to produce a facsimile of the end product .

**Research and development:**Companies across industries known for their innovation spend billions of dollars each year on R&D. AR technology means faster and better visualization,improved collaboration,and accelerated time to market, reducing costs.

**Training &learning:**Presentation is vital to sharing knowledge,and AR can be a handy tool for immersing audiences in their learning & it helps students retain knowledge and grasp difficult concepts.

#### **In Industries**

**Engineering:** Common applications for AR in engineering include production, training,and support.In the pump industry,AR helps technicians simulate complicated pump installations in water and wastewater operations rather than relying on a repair manual.

**Medicine and healthcare:** From physician training to surgical visualization and disease prevention simulations,AR’s benefits for healthcare.one healthcare AR application maps a patient’s body,including the precise locations of veins,enabling healthcare professionals to more accurately draw blood or start an IV ahead of a surgical procedure or during a medical exam.

**Retail:** AR can enhance interactions between customers and products.A customer browsing through the aisles of a store can point their smartphone toward a product to prompt an AR app to provide relevant information.customers can visualize furniture in their own homes before buying.

**Manufacturing:** according to Deloitte.AR can play a pivotal role in manufacturing.for example, manufacturing equipment,often involves dozens of processes for hundreds of individual components,requires regular maintenance.AR can train a workforce to maintain equipment and perform remote equipment diagnostics.

**Entertainment:** As 5G technology use increases,AR advances will continue to change how people entertain themselves. According to a Deloitte study millennials and Generation Zers plan to use 5G to stream more video, play more online games with social features,and immerse themselves in more AR digital worlds.

**Space exploration:** Lockheed Martin platform that combines machine learning and augmented reality may soon help humans reach Mars.if a mechanical problem arises on mars,on site astronauts might not receive repair instructions from Mission control on Earth for over 40 minutes.this platform includes an ARvisor that displays an overlay of data,such as thermal,gas mixtures,& other vital information ,a top a physical space, which can help astronauts find their own timely fixes.

**Military and defence:** Nothing can replace the intense and grueling physical aspects of training soldiers for combat.But augmented reality is enabling the military to add a layer of training that can help produce better soldiers.these apps improve situational awareness and train users to process



information quickly and safely. for example, (TAR) Tactical augmented reality provides tactical map during a military operation to help soldiers find friends and identify foes.

There are different types of AR depending on the types of their uses. They are as follows:

- Marker-based
- Markerless
- Location-based
- Projection-based
- Contour-based

### 1. Marker-based AR

**Marker-based AR** is a type of augmented reality that relies on recognizing and tracking distinguished markers or patterns in the real world to superimpose virtual objects on it. These markers could be images, QR codes, symbols, or anything else that can be easily recognized by the AR system.

The marker is needed so the AR application can use it as a reference point and position the virtual content as accurately as possible. On detecting the marker through the camera, the AR system superimposes the graphically created content onto the marker.

**Example**

A QR code can be used as a marker. When the camera is positioned on the QR, the graphic appears on it.

### 2. Markerless AR

As the name suggests, **markerless AR** involves no markers like images or QR codes. Instead, it positions the digital objects by examining the data obtained through the sensors. Markerless AR is divided into the following four types:

#### 3. Location-based AR

This type of markerless AR uses the real-time location and sensors of a smart device to place the virtual object in a physical space.

**Example**

A well-known example of location-based AR is Pokemon Go. It is a smartphone game in which the AR links the virtual image of a Pokemon to a specific location by analyzing the user's data from the camera, GPS, and accelerometer.

#### 4. Projection-based AR

**Projection-based AR** involves projecting digital content onto physical surfaces or objects in the real world. This creates an augmented experience for the user without using a headset or any other device. It uses projectors to display virtual images, animations, prototypes, or information directly in the physical space. Some project-based AR also includes sensors, allowing users to interact with the projection.

**Example**

Some entertainment venues use projection-based AR on floors. They place the projector on the ceiling, casting visuals on the floor, and when a person steps on it, their movements are tracked through sensors and responds accordingly.

#### 5. Contour-based AR

It detects and tracks the contours or outlines of real-world objects and overlays digital content onto them. It uses a computer vision algorithm to recognize and analyze the boundaries of physical objects, which enables proper alignment and integration of the virtual content.

**Example**

It can be used for car navigation systems in low visibility areas by outlining the footpaths or greenbelts, enabling safe driving.

## Educational Implications

- I. **Improved classroom engagement:** Augmented reality is engaging! Studies have shown that student attention and engagement improve when learning with AR. A great example of this is the Episcopal School of Baton Rouge, US, where teachers have been using AR learning experiences as a “hook” to engage and amaze their students. The solar system, the human body and so much more – the teachers have been adding the “wow factor” to their lessons with augmented reality!
- II. **Better interaction and communication:** Augmented reality lets students explore, create and collaborate with their peers. Students can view AR resources together in real time, or even examine and discuss 3D models and worlds created by their peers – all of which encourage interaction! Teachers at Emmanuel College, Australia have been improving interaction by getting students to create incredible buildings in Minecraft, then collaboratively exploring their creations in augmented reality using ClassVR headsets!
- III. **Multi-sensory learning experiences:** Augmented reality = experiential learning! AR lets students actively participate in every lesson, stimulating multiple senses. This multi-sensory approach benefits education by engaging students with the content and improving sensory development. Over in the US, teachers at Stoughton High School have been stimulating students’ senses with engaging 3D models of monuments and locations around Spain – helping students to embrace Spanish culture and improve their language knowledge without leaving the classroom!
- IV. **Create memorable lessons:** Learning is memorable with augmented reality! By senses and creating emotional responses in students, AR helps create unforgettable lessons where learning is productive! For example, in this engaging Physics lesson from the Royal Air Force Aerobatic Team – the Red Arrows – students can examine 3D models of Hawk jets, then create their own with CoSpaces. By getting students to experience these concepts first-hand, teachers can improve cognitive recall and embed the learning into student’s long-term memories.
- V. **Access to endless resources:** With augmented reality, you can access thousands of resources, all at the click of a button! Gone are the days of purchasing expensive plastic models for every classroom in your school. After initially securing a solution like ClassVR (VR & AR headsets designed for education), teachers have all the 3D resources they could ever need – saving valuable time, creating accessibility and reducing costs.

## CONCLUSION:

AR reduces the teachers burden & stress. users can use AR anywhere, anytime without anybody's permission. it has been more interactive with the application of AR in education. Over the past few years, classroom has been more interactive with the application of AR in education. In many countries, education system is on the basis of AR.

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## CONVERTING LESSON AS PLAY – A CREATIVE TEACHING METHOD IN EDUCATION

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### Introduction

. In current scenario, as a product of education, we should expect potentials and socialism from student personally. In this direction, including theatre awareness in education will over whelming. Teacher should attain the character of actor rather than performer.

Theatre represents combination of entire Arts. awareness about the theatre helps the student teacher to stabilize his teaching profession. In wider sense drama considered as experiment rather than performance. According to Nobel play writer B.V. Karanth, Drama is meant for experimentation rather than Entertainment This definition can be utilized by a teacher in various perspectives in his profession, because education is based on continuous representations. In teaching learning process a teacher should involve himself in research. globally education is nothing but collection of information imposing knowledge to the child

### Scope of Art & Culture in India

#### **Visual arts (Sculpture, Architecture, Painting) Performing Arts (Dance, Music, Drama)**

Broadly there are 2 forms of art. Those visual arts and performing arts. visual arts represents eye sight and observations dimension. Whereas performing arts represents attributes of those dimensions. In visual arts we can see sculpture, architecture and painting. Since ancient times it has retained its importance. historically and culturally. visual arts has adjusted itself in accordance with time and place. In performing art majorly we can dance, music and drama. like visual arts. history of performing arts is also an important cultural aspect. In performing arts drama has its own transcendence as it is consist of Expression, songs, dance, storyline, scenery etc.. This performing arts extended its coverage to keep in touch with all arts. In the fulfilment of historical perspectives of music, arts & drama, Bharata Muni had introduced 5<sup>th</sup>veda, which is all about importing knowledge to common people. In this way, in 5<sup>th</sup>veda, the drama, art and music were used as a tool for transforming knowledge.

### Theatre- Indian and Western Vision

Drama is a complex art as it is blended version of various arts (i.e, dance, music, expression etc) : The word 'Natya' is derived from a sanscrit word 'Nat', Which means 'dance', therefore we can say that 'drama' / 'natak' is originated from dance. Also, Bharata Muni, in his 'Natyashastra' called 'drama an excellent / complex art'. this is nothing but drama in the mixture / combination of all other arts. In this context, in the time period of '5th - veda' / Panchamvedha' drama and dance were used just for importing knowledge to public at possible extent. In the global context if we want to know history of drama, we must have to know about '**Greek Theatre**'. Aristotle (335BC) in his book 'Poetics', had explained about 'dramatic theory'. The word 'drama' is derived from Greek word 'Dramo' which means 'action' or 'to-do' this meaning / etymologically give in the context if education says that. individual / person learn much through 'action' and 'experience' In Greek countries. drama was presents in the cultural aspect. Also they believed that 'drama is not the part of culture, but is a part of life." Greek believed that 'Dithyrambus' in related to song dance and 'Dionyses' as goddess of dramatic art. Greek especially 2 to 3 times in a year wereper supposed to perform drama. that was in these festivals. Those festivals include, 'city dionysia' (celebrate during harvest season) and 'Lenea' (celebrated during early winter). During these celebrations, before performing drama,they were supposed to sacrifice a goat on cathedra. The winner playwrighter was awarded with 'goat' and were honoured with a crown of olive leaves. In Greek, a couple mask or

association of two mask's symbol was there, in which one represents 'comedy' while the other represents 'tragedy' from this sign/symbol they represents that life is amalgamation of 'Happiness & Sadness'. The first one who introduced 'actor' to the world was thespis. Before that only one actor was supposed to perform many character. After that thespis introduced arrival of another actor and dialogue delivery. Therefore the number of actors and characters went on increased afterwards. In Greek dramatic history German band (presenters) had very important role. Shakespeare described drama with a word 'play; which is derived from latin word 'ludus'. After that in theatre introduced 'dramatists' as 'play - maker' and theatre as play home.'

#### **Drama as instructional tool :**

- Characters as pupil individual difference
- Plot /Place as classroom design
- Theme of the play as teaching content
- Dialogue and teacher vocal expressions
- Literary elements
- Technical elements like adaptation of ICT in teaching learning
  - Lights
  - Sound
  - costumes and makeup
  - Stage design & props
- Performing elements (essential for actor as well as teacher)
  - Acting
  - Speaking
  - Non-verbal expressions

#### **Functions of drama in the aspect of effective instruction**

Enhancing professional potential/ career potential of teaching informing the various and silent features of theatre.

- To Foster self - expression and self awareness.
- To create aesthetic awareness in order to know every object and matter completely and implementing in teaching -learning process. To strengthen, concentration, logical Organization of ideas and developing analytical thinking.
- As drama is a complex art. It books imagination by enhancing the skills of questioning, cognition /thinking, experimenting /performing through participation.
- As it is a art participation helps in focusing /concentrating and helps in understanding the mind
- By observing several elements of drama and participating in it leads to strengthening the concentration power, Organization of ideas develops analytical thinking.
- Different types of cultural plays enhances endurance & sensitivity of pupil teacher in the context of importing information, makes pupil teacher emotionally - stable.
- It develops appropriate attitudes and creative expression.
- It creates absolute thinking / clean thinking and helps to lead life positively.
- To enhance local, national and global information.
- All round development with the help of theatre activities.

#### **Similarities- Play & Classroom teaching :**

There is similarity in between 'steps of constructing a drama and steps of teaching a topic' several times teacher has to act like a theatre director. As director to tightens the drama by providing accessories to actors and viewers, like that teacher tries to provide teaching learning materials in order to concertize the topic. Teaching and drama both works as a team, with the help of drama. it is easily

to build a difficult complex by dropping / spiriting experiment(Analysis) and then consisting all as a whole(synthesis), (through the way of simple to complex). Is there any similarities between a director (in constructing a drama) and a teacher (in teaching a topics?)

Steps in Constructing drama	Steps in teaching process
Selection of drama	introducing stage
Drama reading	developmental stage
casting	Using instructional material& Technology for effective teaching.
Blocking	5. Using continues & Comprehensive evaluation for good learning.
Characterisation	Preparatory exam
Technical rehearsal	Main exam
Grand rehearsal	introducing stage
Performing the Drama	developmental stage
Selection of content	Using instructional material& Technology for effective teaching.

### Conclusion

According to Bhagavaan Buddha “our process thinking designs our personality”. Teacher should attain acting rather than performance. Drama is a complex art (Bharatha Muni), through theatre awareness teacher gain complete knowledge regarding content transaction. In this aspect drama considered as experiment, always teacher ready for experimentation to attain professional completeness.

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## EFFECT OF GAME BASED LEARNING AMONG HIGHER PRIMARY SCHOOL STUDENTS

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### Introduction

As the world evolves, teachers are learning to integrate digital learning tool in the classroom. Additionally, most teaching programs help educators keep up with the rapidly changing technological advances in education. This means that educators are thoughtfully seeking out new, interactive educational content, like game-based learning. Game-based learning incorporates game characteristics and principles into learning activities. Points like systems, badges, leaderboards, discussion boards, quizzes, and classroom response systems are all components of game-based learning. Game-based learning is an instructional approach that incorporates games, simulations, and interactive activities into the learning process. This approach is designed to make learning more engaging and effective for higher primary school students (typically aged 12-13). At this stage of their academic journey, students are transitioning from foundational knowledge to more complex concepts. Game-based learning offers a dynamic and engaging method to enhance their educational experience.

### Meaning of Game-Based Learning:

Game-based learning involves using various types of games, including digital, board games, card games, and physical activities, to deliver educational content. These games are designed to be both entertaining and educational, making the learning process more enjoyable and interactive. Game-based learning can cover a wide range of subjects, including mathematics, science, language arts, history, and social studies.

### Importance of Game-Based Learning:

- **Engagement:** Games are inherently engaging and fun. They can capture the attention of students, making learning more enjoyable and reducing the likelihood of distractions.
- **Motivation:** Games often include rewards, achievements, and challenges that motivate students to actively participate and work toward goals, fostering a sense of accomplishment.
- **Active Learning:** Game-based learning encourages active participation, as students must make decisions, solve problems, and take actions within the game environment, leading to better retention of information.
- **Critical Thinking:** Many educational games require students to think critically and strategically, enhancing their problem-solving skills and analytical thinking.
- **Teamwork and Collaboration:** Multiplayer games promote teamwork, communication, and collaboration skills, which are important for students' social development.
- **Adaptability:** Some game-based learning platforms adapt to students' performance, providing a customized learning experience that suits individual needs and learning styles.
- **Immediate Feedback:** Games provide instant feedback on students' actions, helping them learn from their mistakes and improve in real time.
- **Reduction of Test Anxiety:** The informal nature of games can reduce test anxiety and make the learning experience less stressful for students.
- **Digital Literacy:** Game-based learning introduces students to technology and digital platforms, essential skills in today's world.
- **Cross-Curricular Learning:** Games can cover a wide range of subjects, allowing students to explore various topics and develop a holistic understanding of different subjects.



- **Problem-Based Learning:** Games often present students with challenges and puzzles to solve, promoting problem-based learning and critical thinking.
- **Reinforcement:** Games often involve repetition and reinforcement of concepts, which can help students retain information more effectively.
- **Life Skills:** Some games focus on teaching life skills such as time management, decision-making, and financial literacy.
- **Accessibility:** Game-based learning can cater to different learning styles, making it more inclusive and accommodating for diverse students.
- **Fun and Enjoyment:** Ultimately, game-based learning makes the educational experience more enjoyable and memorable for students, increasing their enthusiasm for learning.

### **The Impact on Higher Primary School Students:**

The effects of game-based learning on higher primary school students are multi-faceted. This approach can significantly influence their educational journey in several ways:

- **Engagement and Motivation:** Games are inherently engaging, motivating students to actively participate in their learning. The competitive and rewarding nature of games encourages students to invest time and effort in understanding complex concepts.
- **Critical Thinking and Problem Solving:** Educational games often present students with challenges and puzzles that require critical thinking and problem-solving skills. As students strategize and make decisions within the game, they develop cognitive abilities that extend beyond the classroom.
- **Personalized Learning:** Game-based learning can adapt to individual student performance, allowing each student to progress at their own pace and receive targeted support where needed.
- **Immediate Feedback and Mastery:** Games offer instant feedback, enabling students to learn from their mistakes and track their progress, ultimately leading to mastery of concepts.
- **Social and Collaborative Skills:** Multiplayer games foster teamwork, communication, and social interaction skills, essential for students' personal and academic development.
- **Retention of Information:** The interactive and often repetitive nature of game-based learning can enhance information retention, making it a valuable tool for reinforcing key concepts.
- **Reduced Test Anxiety:** The informal nature of games can reduce test anxiety, creating a less stressful learning environment.

### **Objectives of the Study:**

The present study is undertaken which the following objectives:

- To study whether there is a significant difference between control group and experiment group with pretest and posttest performance of students of higher primary schools
- To study whether there is a significant difference between pretest and posttest performance of students of higher primary schools in control group and experiment group
- To study whether there is a significant difference between control group and experiment group with pretest and posttest performance of boy students of higher primary schools
- To study whether there is a significant difference between pretest and posttest performance of boy students of higher primary schools in control group and experiment group

### **Hypothesis of the Study:**

The present study is undertaken which the following Hypothesis:

- There is no significant difference between control group and experiment group with pretest and posttest performance of students of higher primary schools
- There is no significant difference between pretest and posttest performance of students of higher primary schools in control group and experiment group

- There is no significant difference between control group and experiment group with pretest and posttest performance of boy students of higher primary schools
- There is no significant difference between pretest and posttest performance of boy students of higher primary schools in control group and experiment group

**Tools Used for the Study:** The following tools were used for the Data collection

**Sample for the Study:**

The present study involves 50 higher primary schools students from three parallel classes drawn from the Hubballi. The age of the participants was 12-13 years. The control group students were of the same age and studied in the same general school curriculum as the students of the study group. The sample was drawn by using purposive and cluster sample procedure.

**Method of Research:**

The present study is involved a descriptive survey research method which was conducted on higher primary school students. It is descriptive study where a survey was undertaken to assess the effect of game based learning.

**Data Analysis & Interpretation:**

Descriptive statistics with mean and SD, Independent t-test for comparison of two groups, Dependent t-test for comparison of pre-test and post-test scores in each group and A statistical significance was set at 5% level of significance ( $p < 0.05$ ) procedures was used to analysis the data.

**Table 1: Results of t test between control group and experiment group with pre-test and post-test performance of students of higher primary schools**

Variable	Groups	n	Mean	SD	SE	t-value	P-value	Signi.
Pretest	Control group	50	7.26	1.51	0.21	0.8898	0.3757	NS
	Experiment group	50	6.98	1.63	0.23			
Posttest	Control group	50	7.58	1.34	0.19	-10.5734	0.0001	S
	Experiment group	50	10.84	1.72	0.24			
Difference	Control group	50	0.32	1.24	0.17	-10.0348	0.0001	S
	Experiment group	50	3.86	2.17	0.31			

The results of the above table, clearly shows that, the

- No significant difference was observed between control group and experiment group with pretest performance of students of higher primary schools ( $t=0.8898$ ,  $p=0.3757$ ) at 5% level of significance. Hence, the null hypothesis related to pretest performance is accepted. It means that, the pretest performance of students of higher primary schools is similar in control group and experiment group.
- A significant difference was observed between control group and experiment group with posttest performance of students of higher primary schools ( $t=-10.5734$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis related to posttest performance is rejected. It means that, the posttest performance of students of higher primary schools is significantly higher in experiment group as compared to control group.
- A significant difference was observed between control group and experiment group with changes in performance of students of higher primary schools from pretest to posttest ( $t=-10.0348$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis related to changes in performance is rejected. It means that, the changes in performance of students of higher primary schools from pretest to posttest are significantly higher in experiment group as compared to control group. The mean and SD scores are also presented in the following table.

**Table 2: Results of dependent t test between pre-test and post-test performance of students of higher primary schools in control group and experiment group**

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	t-value	p-value	Signi.
Control group	Pretest	7.26	1.51	-0.32	1.24	-1.8304	0.0733	NS
	Posttest	7.58	1.34					
Experiment group	Pretest	6.98	1.63	-3.86	2.17	-12.5976	0.0001	S
	Posttest	10.84	1.72					

From the results of the above table, it can be seen

- No significant difference was observed between pretest and posttest performance of students of higher primary schools in control group ( $t=-1.8304$ ,  $p=0.0733$ ) at 5% level of significance. Hence, the null hypothesis is accepted. It means that, no change was observed between pretest and posttest performance of students of higher primary schools in control group.
- A significant difference was observed between pretest and posttest performance of students of higher primary schools in experiment group ( $t=-12.5976$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, a significant change was observed between pretest and posttest performance of students of higher primary schools in experiment group. Therefore, we concluded that, the change in performance in experiment is higher and significant as compared to control group.

**Table 3: Results of t test between control group and experiment group with pre-test and post-test performance of boy students of higher primary schools**

Variable	Groups	n	Mean	SD	SE	t-value	P-value	Signi.
Pretest	Control group	25	7.12	1.39	0.28	0.4579	0.6491	NS
	Experiment group	25	6.92	1.68	0.34			
Posttest	Control group	25	7.84	1.21	0.24	-9.7689	0.0001	S
	Experiment group	25	11.28	1.28	0.26			
Difference	Control group	25	0.72	0.79	0.16	-8.3216	0.0001	S
	Experiment group	25	4.36	2.04	0.41			

The results of the above table, clearly shows that, the

- No significant difference was observed between control group and experiment group with pretest performance of boy students of higher primary schools ( $t=0.4579$ ,  $p=0.6491$ ) at 5% level of significance. Hence, the null hypothesis related to pretest performance is accepted. It means that, the pretest performance of boy students of higher primary schools is similar in control group and experiment group.
- A significant difference was observed between control group and experiment group with posttest performance of boy students of higher primary schools ( $t=-9.7689$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis related to posttest performance is rejected. It means that, the posttest performance of boy students of higher primary schools is significantly higher in experiment group as compared to control group.
- A significant difference was observed between control group and experiment group with changes in performance of boy students of higher primary schools from pretest to posttest ( $t=-8.3216$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis related to changes in performance is rejected. It means that, the changes in performance of boy students of higher primary schools from pretest to posttest are significantly higher in experiment group as compared to control group.

**Table 4: Results of dependent t test between pre-test and post-test performance of boy students of higher primary schools in control group and experiment group**

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	t-value	p-value	Signi.
Control group	Pretest	7.12	1.39	-0.72	0.79	-4.5476	0.0001	S
	Posttest	7.84	1.21					
Experiment group	Pretest	6.92	1.68	-4.36	2.04	-10.6926	0.0001	S
	Posttest	11.28	1.28					

From the results of the above table, it can be seen

- A significant difference was observed between pretest and posttest performance of boy students of higher primary schools in control group ( $t=-4.5476$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, a change was also observed between pretest and posttest performance of boy students of higher primary schools in control group.
- A significant difference was observed between pretest and posttest performance of boy students of higher primary schools in experiment group ( $t=-10.6926$ ,  $p=0.0001$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, a significant change was observed between pretest and posttest performance of boy students of higher primary schools in experiment group. Therefore, we concluded that, the change in performance in experiment is higher and significant as compared to control group.

### Findings of the Study:

Following are the Findings of the Study:

- The pretest performance of students of higher primary schools is similar in control group and experiment group.
- The posttest performance of students of higher primary schools is significantly higher in experiment group as compared to control group.
- The changes in performance of students of higher primary schools from pretest to posttest are significantly higher in experiment group as compared to control group.
- No change was observed between pretest and posttest performance of students of higher primary schools in control group.
- A significant change was observed between pretest and posttest performance of students of higher primary schools in experiment group.
- The pretest performance of boy students of higher primary schools is similar in control group and experiment group.
- The posttest performance of boy students of higher primary schools is significantly higher in experiment group as compared to control group.
- The changes in performance of boy students of higher primary schools from pretest to posttest are significantly higher in experiment group as compared to control group.
- A change was also observed between pretest and posttest performance of boy students of higher primary schools in control group.
- A significant change was observed between pretest and posttest performance of boy students of higher primary schools in experiment group.

### Conclusion:

As described in the present study, the results of this study suggest that game based learning can effectively promote and enhance students' learning achievement in education, enhancing our understanding of the application and practice of different games in education. When games are used

in combination with good learning, they can be a more effective and less intrusive way of evaluating learning than traditional assessments.

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## EFFECTIVENESS OF 5 E MODEL IN ENHANCING MATHEMATICAL CREATIVITY AMONG IX STANDARD STUDENTS

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### Abstract

*The present study ascertains the effectiveness of 5 E model approach in enhancing mathematical Creativity among IX standard students. Quasi experimental method was used in this study. 80 students constitute the sample of the study. The control and experimental study were subjected to intervention program; the experimental group were taught using 5 E and control group was taught using conventional method. The study found that the learners taught through 5 E model were significantly better in enhancing mathematical creativity than those who were taught through conventional method*

**Key words:** 5 E model, Mathematical creativity

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### Introduction:

Education is a unique and immense benefit in human capital for the present and the future. Education is very much necessary and plays a dynamic role for the growth and advancement of a country. The chief aim of education is to bring the qualitative change among the individuals to meet the demands and the challenges of the society.

While being educated, an individual becomes an agent of change in the structure of education. It is the rational being, who decides the standards and aims of education. Education is positive when the teacher or the educator can produce the specific effects by definite actions or acquisition of particular skills and knowledge among the students.

The students are enabled to analyse the consequences of a phenomenon, to classify the given data on various different bases, to seek alternate solutions, to associate the experiences with the present content, to relate the present content to day to day situations and apply the same in their life. Because of these inabilities they hardly experience the joy of learning. That's why 'teaching learning' process is mere mechanics according to most of them. Azim Premji (2006, P.154) while discussing about school education, stated that, "We teach children that this body of information is a static entity; that it is created and packaged – and the child's job is to possess this end product." (Again supporting the banking concept of education). Hence teaching and learning process need to more interactive and promote invariably whole some personality of the students.

While concentrating on the consequences of current teaching-learning processes, Rote memorization develops brilliant engineers who are world class in reverse engineering. However, the country's need is not just people who 'do' but those who 'dream', who imagine new industries and open up new possibilities".

Education system should develop thinking skills and the ability to transform the knowledge into desirable output. The present system of education should focus on enhancing and fostering creativity among children by teaching them through various innovative strategies, methods, techniques and models of teaching.

Pertinent observations about classroom climate mentioned by Foster (1971) (quoted by Umrao Singh Chaudhari 2005, P.2) are "The present day home and classroom climate is permeated by authoritarianism, narration sickness and censor. They lack flexibility, openness and psychological freedom which play a vital role in facilitation and release of creative potential of the learners."

Summarizing the above referred work helps highlights the following characteristics of our system of education. Merely mechanical Rigid Teacher/authority centered, Negligence towards individual differences. Emphasis on information storage shows that there is no space left for thinking.



“Learning the treasure within”; a report submitted to UNESCO (1999), deals with the future expectations from education for 21st century.

In the twenty-first century, the education should enable the individuals to do in a novelistic way, is only possible by adopting models of teaching and also learning by discovery method, which promotes creative thinking among them.

Mathematics is the pivot of all civilization. Mathematics is that subject which indisputably forms the very basis of entire world commercial system. It is the contributory factor in the prosperity of human race. There is no science, no art, and no profession where mathematics does not hold a key position. The accuracy and exactness of science is determined to a major extent by the amount of mathematics utilized in it. There are various approaches, methods and models in Mathematics which foster creative thinking among students one such is 5 E model.

### **Need and significance of the study**

All civilization comes to a standstill, if mathematics is shut out from daily life. There is no person in this world, who can declare that he can do everything in life without mathematics. There is a great need to apply mathematics for future progress. Mathematics in some way or the other in our day to day life, whatever may be our profession, mode of living or daily routine, one can't live without mathematics.

After deciding ‘why to teach’ and what to teach it is proper to think about ‘how to teach’. In which way subject matter and learning experiences, to be imparted, should be given to the pupils so that set aims and objectives are properly released.

Keeping this in mind the teacher adapts some special ways or devices for imparting the desired theoretical or practical experiences to the students. “The teaching can become meaningful and useful only if the methods of teaching are vitalized and proper facilities are provided for the teaching of the subject” (education commission report 1956). Adequate facilities create an environment in which interest and creative thinking develops and many types of processes may be tried out. Mathematics is essentially an abstract subject and that the young pupils like doing something rather than simply listening.

In the whole system of education, secondary stage is more crucial since it provides ladder for future education. The following researchers viz Boydell(1976) and Knowell's(1973) have asserted that as far as possible “child centered approach, learning through nature and play way method be used in order to nourish creativity in terms of originality and novelty among children”.

The universal objective of high school education is to promote thinking. The subjects prevalent in the school teaching must include curriculum that initiates the thinking process in the minds of the students.

According to the report of All Our Futures by the National Advisory Committee on Creative and Cultural Education, creativity is known as “democratic creativity” referring to the creativity of an ordinary individual. As per this, creativity is a universal phenomenon which is found in every student and has been summarized to mean “imaginative functioning of the mind designed to give a result of good credibility and originality” (NACCCE, 1999, p. 29, para 26).

In order to cater the dynamic learning style of the learners, a teacher need to be innovative and research oriented. Constructivist approach in which 5 E model is a recent innovation in learning psychology, which assist our students in relation to remembering things more effectively within the classroom setting. In this model, the system involves the process of encoding, retrieved and storage whereby it explains how our sensory registers and how the short term and long term memory operates. 5 E model involves brain storming and helps the child to think out of the box. The 5 E's are engage, Explore, Explain, Express/expand and evaluate. This model helps the students to think creatively and innovatively. This helps students to be more focused in their attention on learning by making it more

meaningful to them. Tenyson and his associated also have concluded that “the students develop procedural knowledge, how to attain concepts with practice and also that the more procedural knowledge the students possess, the more effectively they attain and can apply knowledge”.

### **Objectives of the study**

1. To develop lesson transcripts based on 5 E model to develop Mathematical creativity on selected topics of standard IX Mathematics state board syllabus.
2. To compare the effectiveness of 5 E model based method and conventional method of teaching mathematics in terms of enhancing mathematical creativity.
3. To compare mean scores of control group and experimental group in their pre-test with respect to mathematical creativity of standard IX students.
4. To compare the effectiveness of and 5 E Model based approach and Conventional Method of teaching Mathematics in terms
  - fostering Fluency
  - fostering Flexibility
  - fostering Originality

### **Hypotheses of the Study**

1. There is no significant difference in the pre-test scores of mathematical creativity of control and experimental group of Standard IX students.
2. There is no significant difference in the post-test scores of mathematical Creativity of control and experimental group of Standard IX students.
3. There is no significant difference in the post test scores of control and experimental group with respect to the components of mathematical creativity.

### **Variables of the Study**

**The variables are as follows:**

#### **1. Independent Variables**

5 E model based approach

#### **2. Dependent Variables**

Mathematical creativity

#### **3. Moderator Variables**

Gender

### **Operational definitions of the study**

#### **Mathematical creativity**

It is a process where the individual locates gaps in the ideas, thinks of alternative methods and solutions to the problem, persist in unique ideas and does not agree what usually all think that is correct and present a novelty in thinking or doing. Fluency, Flexibility and Originality are the three components of creativity under this study.

Creativity is the capacity or ability of an individual to create, discover or produce a new idea or object including the re-arrangement or re-shaping of what is already Known to him. It is represented by the scores of students of standard IX obtained by administering mathematics Creativity Test.

- **Fluency**

Fluency is represented by number of relevant and unrepeated ideas which the tested produces. Relevance is judged on the basis of the appropriateness of the response when considered in relation to the test problem. An unrepeated idea is one which has been expressed only once under a given problem. Thus it is the Generation of as many as verbal ideas, responses, solutions, questions or suggestions

Number or Quantity of relevant responses or ideas.

### • Flexibility

Flexibility is represented by a person's ability to produce ideas which differ in method or technique or approach to the problem. It is a thought trend process in which all the ideas are going to fall under one type of the method and is treated as flexibility.

This is operationally defined as Generation of a variety of ideas, questions, causes and solutions, as indicated by shifts in approaches or changes in way of thinking such as giving various uses of objects, interpretation of a picture in a novelistic way and providing various methods of solving a problem.

### Originality

Originality represents Thinking of unusual, uncommon, novel and off – the – beaten – track ideas, questions, suggestions, solutions, or ways of doing things as a result of seeing new relationships among ideas, combining remote ideas, stretching beyond the obvious and commonplace, improving things on new lines and looking at the same thing from a new angle.

**Gender:** In the present study gender refers to those biological distinctions, which differentiate male from female. Here Gender refers to Boy and Girl students of standard IX.

### Population

The IX Std. students studying in secondary schools of Bangalore city constitute the population of the study.

### Sample

The sampling procedure was divided into two stages as follows:

In the first stage two English medium schools were chosen according to random sampling, for experimentation.

In the second stage in each of the selected schools, 2 sections of IX Std. were selected randomly for experimentation. Out of the selected two sections in each school, one section was designated as experimental group & the other as control group.

### Selection of School

For conducting experimentation, two English medium schools in Bangalore city were identified, and the following factors were ensured:

1. The support and co-operation of the staff and head master of the school is obtained.
2. Regularity of the students to the school.
3. Co-education school.

### Design of the Study

The researcher has followed the quasi experimental design for testing the Effectiveness of 5 E model in enhancing creative thinking in mathematics among IX standard students. The researcher taught the experimental group using lessons transcripts based on Experiential learning approach and used conventional method of teaching for the controlled group. The pretest and post-test group design was used in the present study.

### Analysis and Interpretation

**Ho-1: There is no significant difference in the pre-test scores of mathematical creativity of control and experimental group of Standard IX students.**

**Table-1.1: source, group, number, mean, standard deviation and 't' value of control and experimental groups with respect to pre-test scores of Mathematical creativity of standard IX students.**

Source	Group	N	Mean	S.D	't' Value	Level of significance
Mathematical creativity	Control	40	21.2273	3.60216	1.094	NS*
	Experimental	40	23.2222	4.55581		

From the table 1.1 it can be seen that, obtained 't' value is 1.094 is less than the table value and is not significant. It indicates that the mean scores of mathematical creativity do not differ significantly. Thus the null hypothesis 'there is no significant difference between control and experimental groups with respect to pre-test scores of mathematical creativity, is accepted. Hence it may be concluded that, experimental and control group were alike and equal with reference to their mathematical creativity before subjected to treatment.

**Ho-2. There is no significant difference in the post-test scores of mathematical creativity of control and experimental group of Standard IX students.**

**Table-1.2: source, group, number, mean, standard deviation and 't' value of control and experimental groups with respect to post-test scores of Mathematical creativity of standard IX students.**

Source	Group	N	Mean	S.D	't' Value	Level of significance
Mathematical creativity	Control	40	22.1250	3.89074	5.91*	0.01
	Experimental	40	26.5000	2.59190		

From the table 1.2 it can be seen that, obtained 't' value is 5.91 is greater than the table value and is significant at 0.01 level. It indicates that the mean gain scores of mathematical creativity differ significantly. Thus the null hypothesis 'there is no significant difference between control and experimental groups with respect to post-test mean gain scores of mathematical creativity is rejected and the alternative hypothesis is accepted. Thus it means 'there is significant difference between control and experimental groups with respect to post-test mean gain scores of mathematical creativity. Hence it may be concluded that, the 5 E model might have helped in understanding of the concepts and knowing the concepts clearly which foster their mathematical creativity and helps them to solve their day to day life problems. The students have better clarity in attaining the concept.

**Ho-3 There is no significant difference in the post test scores of control and experimental group with respect to the components of mathematical creativity.**

**Table No. 1.3 Components, group wise, Number, Mean, Standard Deviation, and 't' values of post –test scores of mathematical creativity**

Components	Groups	N	Mean	SD	't' value	Level of significance
Fluency	Control	40	6.45	1.01	4.409	0.001
	Experimental	40	7.35	0.80		
Flexibility	Control	40	6.675	1.16	5.409	0.001
	Experimental	40	7.825	0.675		
Originality	Control	40	9.000	2.611	4.316	0.001
	Experimental	40	11.325	2.188		
Total Mathematical Creativity	Control	40	22.125	2.59	5.919	0.001
	Experimental	40	26.500	3.89		

From the table 1.3 the obtained 't' value of the components of mathematical creativity such as fluency (4.409), flexibility (5.409), Originality (4.316) and the total mathematical creativity (5.919) is more than the table value, Hence the above null hypothesis is rejected and alternative hypothesis is

accepted, that means there is significant difference in the post test scores of components of mathematical creativity of standard IX students when taught by 5 E model.

This is attributed to the factors that the learning experiences provided by the investigator while teaching using 5 E model might have helped the students to think and come out various ways of solving problems and brought clarity in the attainment of the concept and promote mathematical creativity.

**Tools used in the research:** The following tools were used for collection of data on different variables of the study:

- Creativity Test in mathematics was developed, validated and reliability was established by the researcher. The reliability is found to be 0.71 using split half method.

**Statistical Techniques used for the Study:** The following statistical techniques were used to analyse and interpret the data are measures of central tendency and t test.

### Findings of the study

1. There is no significant difference between control and experimental groups with respect to pre-test scores of mathematical creativity
2. There is significant difference between control and experimental groups with respect to post-test mean gain scores of mathematical creativity.
3. There is significant difference in the post test scores of components of mathematical creativity of standard IX students when taught by 5 E model.

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## EFFECTIVENESS OF CONCEPT ATTAINMENT MODEL ON ACHIEVEMENT AND SELF CONCEPT OF SECONDARY SCHOOL STUDENTS THROUGH TEACHING CIVICS

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### Abstract

*This study aimed at finding the Effectiveness of Concept Attainment Model of teaching on the variables Pupil's Achievement and their Self Concept. A sample of 100 Students of 8 Grade of Annasaheb Kalyani Vidhyalay Satara (MS) was selected randomly. Fifty Students were randomly selected for both controlled and Experimental group. In this study experimental-control (pre-test post-test) parallel group design was used. The study was completed in two phases: Pre-test stage and Post-stage. The data were collected and analyzed with the help of Differential analyses i.e. T-test, A significant difference was found between the mean scores of Achievement between experimental and controlled group and similarly the mean scores of Self Concept between experimental and controlled groups. The study reveals that the achievement of experimental group is higher than the control group. As in the case of self-concept it has been influenced by the concept attainment model (CAM) but not significantly.*

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### Introduction:

The objectives of education have changed from time to time and so has our concept of teaching. What we teach? And how we teach? Depends to a great extent on what we want to achieve. Teaching is both an art and science. Able teachers are always find ways and means to improve their teaching techniques. The improvement of teacher by employing newer methods of teaching is a need of the hour. The ways the knowledge, skills and values are delivered to the learner have a meaning both for a teacher and the student.

The most recent concept of teaching is teach the child how to learn, how to discover, how to think and how to inquire. The emphasis is upon 'know how' rather than 'know what'. In modern world, Knowledge increases at a terrific pace and social change is very rapid. Education can no longer be taken as the preparation of a finished product. Due to science and technological advancement the entire world has been shrunk in its space and time. And it also impacts on all human activities. So that teacher should adopt dynamic methods to create the needs and interest in children. For that teacher should provide conducive environment for the full development of the learner's potentials.

At present, instructional strategies are being developed for teaching Social science in an effective manner. The models can create most suitable environment and stimuli for the student to solve problems pertaining to Social science. The concept Attainment Model (CAM) is designed and developed to teach concepts and to help students to become more efficient at learning.

The CAM developed by Bruner succeeded in the learning the concepts. So a genuine interest was aroused in the minds of investigator to prove the effectiveness of CAM on secondary school students with special reference to Academic achievement and self-concept.

### Concept Attainment Model:

Teaching models are prescriptive teaching strategies designed to accomplish particular instructional goals. They are perspective in that the teacher's responsibilities during the planning, implementing and assessment stages of instruction are clearly defined.

A model of teaching is a description of learning environment. They have many Uses, ranging from planning curriculum courses, units and lesson plans to design instructional materials – text book and work books, multimedia programs and computer assisted learning programs.

A model cannot take the place of fundamental qualities in teacher, such as knowledge of subject



Matter, creativity, and sensitivity to people. It is instead a tool to help good teachers teach more effectively by making their teaching more systematic and efficient. Models provide sufficient flexibility to allow teachers use their own creativity

### **The concept attainment-An Inductive Model:**

In order to develop inductive thinking, higher order-critical thinking the concept attainment is considered as best among other models.

The concept attainment model is an inductive teaching strategy designed to help students of all ages reinforce their understanding of concepts and practice hypothesis testing. The models use positive and negative examples to illustrate concept of simple and complex.

The design of this model first suggested by Joyce and Weil (1972) is based on the work of Bruner, Goodnow, and Austin (1956) who investigated hoe different variables affect the concept learning process. The concept attainment model is also useful for giving students experience with the scientific method and particularly with hypotheses testing.

### **Objective of study: -**

The main objective of this study was to find out the effectiveness of CAM on achievement and self-concept of eighth graders. This is further explicated by the following specific objectives:

- 1) To study the effectiveness of Concept Attainment Model (CAM) and Traditional Method (TM) of instruction on the achievement of Eighth graders
- 2) To find out the effectiveness of CAM and Traditional Method on the self-concept of the pupils.

### **Hypotheses:**

- 1) There will be no significant difference between the mean gains achievement scores of pupils taught Through CAM and TM.
- 2) There will be no significant difference between the mean gains of pupils taught through CAM and TM on the measures of self-concept.

### **Method:**

In this study experimental-control (pre-test post-test) parallel group design was used. The study was completed in two Phases i.e. Pre-test stage and Post-test stage.

The study was conducted in the Annasaheb Kalyani Vidhyalay Satara (MS) The sample selected was purposive but representative of the population. Out of 200 pupils studying in class 8<sup>th</sup> of the said school, 100 were selected on the basis of intelligence and socio-economic status and were randomly assigned to two groups to be taught through two different methods.

### **Tools:**

In order to collect the data on, achievement and self-concept the following tools were used:

- 1) Sherry teal's Swastva bodh parikhan (SBP).
- 2) Achievement test which was developed and standardized by the investigator.

### **Results and Discussion:**

**The hypothesis No.1:** States that "There will be no significant difference between the mean gain achievement scores of pupils taught through CAM and TM", The data related to this hypothesis were analyzed by employing 't' test. The results are presented in Table 1.

**Tabel-1 Difference in the Gains of the Pupils of Experimental And Control Groups on Achievement.**

Groups	N	M	SD	t-value	Level of Significance At 0.01
Experimental Group (CAM)	50	22.76	5.29	3.38	Significant
Control Group (TM)	50	19.02	6.38		

**From Table 1** - It can be seen that the t-value of 3.38(d=98) for Experimental and Control Groups is significant at 0.01 level. Hence, the null hypothesis No.1 is rejected. Hence, it indicates that achievement of experimental group is higher than the control group. This result demonstrates the superiority of CAM over TM in raising the achievement of pupils. The hypothesis No.2 states that, "There will be no significant difference between the mean gains of pupils taught through CAM and TM on the measures of self-concept". The data related to this hypothesis were analyzed by employing 't' test. The results are presented in Tabel-2: Difference in The Mean Gains of the Students Of Experimental And Control Groups On the Measures Of Self-concept

Groups	N	M	SD	t-value	Level of Significance At 0.01
Experimental Group (CAM)	50	4.81	2.39	1.79	Not Significant
Control Group (TM)	50	3.68	2.88		

**Table 2** - Shows that the 't' value of 1.79 f= 98) for the difference in the mean gain scores of pupils studying through CAM and TM are not significant. The mean scores (4.81) of pupils learning Civics through CAM is higher than that of those learning Civics through TM. But, the 't' value could not reach the level of significance model CAM) but not significantly. As indicated by Table 1, the concept attainment model was found more effective in raising the achievement of the pupils than that of the control group. This finding is supported by chitrive (1983), Kumra (1985), Das (1986), Gangrade (1987). In contrast Baipai (198/6), Vaidya and Bajpai 91986), and Chaudhari and Vaidya (1986a, 1986b and 1988b0 found CAM and TM equally effective.

As indicated by Table 2, no significant difference was noted between the self-concept of skills of CAM and TM groups. This finding supported by Chaudhari and Vaidya (1988). Cook (1981) concluded that CAM is super to TM in enhancing the self-concept of pupils

**Educational Implication:** CAM provides a chance to analyze the student thinking process and to help them develop more effective strategies for thinking and concept attainment. In this study CAM has been found to facilitate achievement of learners in Social Science with special reference to Civics. This has an important implication for teaching social science to the school children. Therefore, the social science teachers may be trained in using CAM for teaching of Civics.

Keeping in view the limitations of the present study, and the constraints under which it was conducted, the finding do not warrant wide generalization. It is, therefore, suggested that replication of this study on a larger sample of different age-groups, grade levels, subject areas, sex, socio-economic status and intelligence level, be made to arrive at more reliable and precise results.

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## INSTRUCTIONAL INTERACTIVE COMPETENCIES (IIC) FOR TEACHING - A NEW TRYOUT

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### Abstract

*Microteaching is a constitute teacher training technique. It is a versatile tool that simplifies the teaching skills. This paper explores about the innovations to be carried in context of Instructional Interactive Competencies. In present context, teachers viz., both in-service and pre-service teachers are using constructive approach specifically 5E model lessons in routine. But there we find little mismatch in skill/competencies of what they learnt. Hence there is need to revisit the Microteaching as in terms Instructional Interactive Competencies (IIC) for Teaching in tune with constructivism.*

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### INTRODUCTION:

Education is an important instrument of human development. The quality of education largely depends upon the quality of teachers in general. It is the felt need to improve the quality of teacher education programme. The educationists wanted to reshape teacher education programmes. The method of approach for training in teaching adopted in training institutions needs scientific approach. Supervision of practice teaching is haphazard and mostly unreliable. There is no organized form of feedback regarding the performance of the teacher in the class room. The suggestions offered by the teacher educators are mostly subjective. They are based on general impressions. In this context, the alternative approach is adopted. This innovative method is *Microteaching*.

### ORIGIN AND DEVELOPMENT OF MICRO-TEACHING:

Microteaching is one of the most important developments in the field of teaching practice. Microteaching is a constitute teacher training technique. It is a versatile tool that simplifies the teaching skills. Microteaching is a stimulated skill teaching to provide the feedback to teacher trainee for the modifications of teacher behaviour.

The idea of micro-teaching originated for the first time at Stanford University in USA, when an Experimental Project on the identification of teaching skills was in progress under the guidance and supervision of the faculty members (Bush, Allen, McDonald Acheson and many others). This project was aided by Ford Foundation and Kettering Foundation. The team of experts was assigned the development of testing and evaluation tools to measure the attainment of teaching skills. At this juncture Keith Acheson, a research worker was investigating the utility of video tape recorder in the development of technical teaching skills. This instrument could be used for recording the class interaction and the behaviours of the trainee vividly and accurately.

This lead to the development of a systematic and accurate method of giving feedback to the teacher trainee. Thus, the term micro – teaching was first coined by A. W. Dwight Allen of the university in 1963.

### MICRO-TEACHING IN INDIA:

Micro-Teaching was introduced in India in 1967, with the humble attempt made by D.D. Tiwari of Government Central Pedagogical Institute, Allahabad. In 1970, G.B. Shaw experimented with Micro-Teaching at M.S. University, Baroda. Then the Technical Teachers Training Institute, Madras introduced Micro-Teaching to train the technical teachers. TTTI of Kolkata started micro-teaching by audio-tape. In 1947, Dr. N.L. Dosajh used Micro-Teaching as a teaching device in Teachers Training Institute, Chandigarh. He also wrote a book namely: Modification of Teacher

Behaviour through Micro-Teaching'. NCERT, SCERT, in the different states have been propagating this concept.

In India, B.K. Passi has given a list of 13 teaching skills. M.K. Jangira and Ajit Singh (1982) of NCERT provide a list of 20 teaching skills. Attempts have been made to list teaching skills.

B.K. Passi has given the following list of Teaching Skills in his book "Becoming Better Teacher; Micro-teaching Approach".

1. Writing instructional objectives 2. Introducing a lesson 3. Fluency in questioning 4. Probing questioning 5. Explaining 6. Illustrating with examples 7. Stimulus variation 8. Silence and non-verbal cues 9. Reinforcement 10. Increasing pupil participation 11. Using black board 12. Achieving Closure 13. Recognizing attending behaviour.

### **5E-INSTRUCTIONAL MODELS:**

The principles of constructivism have been used to shape daily teaching practices in order to create more student-centered and effective learning environments. One of these practices based on constructivism is the 5E instructional model developed by Bybee (2006), the leading scientist in the Biological Sciences Curriculum Study (BSCS).

The 5E model is derived from the philosophical lineage of Johann Friedrich Herbart and John Dewey. The main idea behind constructivism is that individuals must be provided opportunities to construct their own knowledge and understanding (Herbart, 1901). Therefore, the learning environment needs to be designed as learner-centered, in which students are afforded opportunities to actively engage in the learning process (Dewey, 1971). In a learner-centered environment with the 5E instructional model, teacher and student roles are no longer traditional.

### **Benefits of 5E Instructional Model:**

The pre-service teachers found that the 5E instructional model differed from the traditional model with the 5E instructional model characterized as being more student-centered (Bozdogan & Altuncekic, 2007; Celik et al., 2018; Metin et al., 2011), creating deeper understanding (Althausen, 2018), and improving students creative thinking and critical thinking (Bozdogan & Altuncekic, 2007; Celik et al., 2018; Polgampala et al., 2016; Qablan & DeBaz, 2015).

During practicum experiences pre-service teachers and the students found the 5E instructional model to be a fun way to teach and learn. According to Althausen (2018), the 5E instructional model made math fun. Students were also more likely to retain knowledge gained from a fun environment (Bozdogan & Altuncekic, 2007; Celik et al., 2018; Duran et al., 2004; Metin et al., 2011; Polgampala et al., 2016).

The benefits of the 5E instructional model were emphasized only in international studies. The international researchers asked frequently about the benefits of the 5E instructional model during their interviews. Unfortunately, the pre-service teachers had a very limited and narrow perception of those benefits (Bozdogan & Altuncekic, 2007; Celik et al., 2018; Duran et al., 2004; Metin et al., 2011; Polgampala et al., 2016).

The 5E instructional model was originally developed in the United States and then adapted by international researchers who emphasized the benefits of the 5E instructional model. U.S. teacher educators need to more strongly convey to pre-service teachers that incorporating the 5E instructional model into their lesson design helps students build a stronger foundation of knowledge through active, creative participation.

As examples of support for using the 5E instructional model as an instructional strategy, Connecticut, Maryland, and Texas Education Agencies have strongly recommend the application of the 5E instructional model (By bee et al., 2006).

**NEED AND SIGNIFICANCE IN PRESENT CONTEXT:**

The 5E instructional model was not only unfamiliar and difficult to implement for the pre-service teachers, but also implementing required effort and time. The challenges faced by the pre-service teachers in implementing the 5E instructional model are specifically applicable to each phase of the 5E model.

During the engagement phase of the 5E instructional model, pre-service teachers were challenged to find appropriate activities that would determine what students know or think about the topic (Demirbas & Pektas, 2015; Iscan et al., 2015; Metin & Ozmen, 2009; Namdar & Kucuk, 2018; Yildiz & Kocak Usluel, 2016).

During the exploration/explanation phase, pre-service teachers found it challenging to shift instruction to a more learner-centred instructional model. Although the pre-service teachers planned a 5E instruction model, their classroom practice was not student-centered (Enugu & Hokayem, 2017; Namdar & Kucuk, 2018; Yildiz & Kocak Usluel, 2016). In addition, pre-service teachers are likely to not address students' misconceptions during this phase (Iscan et al., 2015).

During the elaboration phase, pre-service teachers struggled to find appropriate activities for this phase of the 5E instructional model (Enugu & Hokayem, 2017; Iscan et al., 2015; Metin & Ozmen, 2009; Namdar & Kucuk, 2018; Yildiz & Kocak Usluel, 2016).

Pre-service teachers also struggled with evaluating students' understanding of the concepts (Enugu & Hokayem, 2017; Iscan et al., 2015; Namdar & Kucuk, 2018; Yildiz & Kocak Usluel, 2016). Some of the pre-service teachers did not have an assessment question that was tailored specifically to the content they taught (Enugu & Hokayem, 2017); some of the questions were not clear to the students (Enugu & Hokayem, 2017). The pre-service teachers often ran out of time during the evaluation phase, which led to asking students to finish their assessment at home (Iscan et al., 2015; Namdar & Kucuk, 2018).

Taking into consideration the viewpoints presented in the preceding pages and the development of microteaching work at the Centre of Advanced studies in Education, M.S. University of Baroda and Indoor University, Indoor it was highly desired to work on the follow up programmes for microteaching, which can provide a sound basis for transfer of skills from simulated training situation to real class rooms and to address training packages for constructivism that is 5E Model.

In present context, teachers viz., both in-service and pre-service teachers are using constructive approach specifically 5E model lessons in routine. But there we find little mismatch in skill/competencies of what they learnt and practice. Hence there is need to revisit the Microteaching as in terms Instructional Interactive Competencies (IIC) for Teaching in tune with constructivism.



## CREATIVE TEACHING METHODS IN EDUCATION

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### *Abstract*

*Creative education is when students are able to use imagination, and critical thinking to create new and meaningful forms of ideas where they can take risks, be independent and flexible. Early research viewed creativity as an intellectual ability possessed by few people. Creativity has been linked to intelligence. However, today creativity is viewed as a set of teachable skills not linked to intelligence. Some of the research that was done in early 2000, indicated that as people grow older, their creativity dampens. According to the Robinson Report, by the age of 5, a child's potential for creativity is 98%; by the age of 10, this percentage drops to 30%; at age of 15 it is 12%; and by the time we adults, our creativity is no more than 2%.<sup>[1]</sup>After two decades, employers and universities realized the need to foster creativity in students and eventually in the workforce. Instead of being taught to reiterate what was learnt, students learn to develop their ability to find various solutions to a problem. Coming up with various out-of-the box solutions is known as divergent thinking and there is no one way of cultivating this skill - largely due to the newness of the concept and the limited scientific information on creativity.*

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## INTRODUCTION

Creativity is the ability to synthesize ideas or objects. Creativity is the ability to create new ideas, theories or objects. Creativity is the ability to develop something original. Creativity has several dimensions. Creativity is a process as Being creative means you can think about a task or problem in a new or different way. You'll use your imagination to come up with ideas to solve the problem or task. It's all about: Imagination, generating ideas, visualising, designing, innovative, resourceful well as a product. Creative people are often seen as a rarity: smart, curious, and able to look at the world with fresh eyes. A common misconception is that creativity cannot be cultivated, and that instead some lucky people have an innate sense of creativity. But this assumption is wrong. According to classical psychology research, there are three main types of creativity: exploratory, transformational, and combinational creativity. While we often force ourselves to use exploratory creativity—generating new ideas within a given space—or transformational creativity—ignoring fundamental rules to come up with potentially impossible but highly creative ideas—the reality is that most new ideas come from combinational creativity. Creativity is defined as the process of using imagination and skill to invent a unique product or thought (Scott, 1995). Creativity is defined as the ability to create (Kristeller, 1983). Creativity is an extremely complex phenomenon (Simonton, 2012).

## CREATIVE TEACHING

Creative teaching is defined as educational exchanges facilitated by the teacher that are “unique, customized and meaningful” (Rinkevich, 2011), and that are exciting, engaging and innovative (Craft, 2011). Teachers who frequently assign classwork involving creativity are more likely to observe higher-order cognitive skills — problem solving, critical thinking, making connections between subjects — in their students. And when teachers combine creativity with transformative technology use, they see even better outcomes.

## TEACHING CREATIVELY VERSUS TEACHING FOR CREATIVITY

‘The British NACCCE report (1999) distinguishes between teaching creatively and teaching for creativity. Teaching creatively occurs when teachers use imaginative approaches to make learning more interesting, exciting and effective, while teaching for creativity takes place when forms of teaching that are intended to develop young people’s own creative thinking and behaviour are



introduced. Creative teaching is regarded as a key component in all good teaching, but it does not guarantee that the children are developing their own creative potential. Teaching creativity goes a step further by also developing the creative abilities of the children.'

## **CREATIVE TEACHING METHODS**

### **Flip the Classroom**

In a flipped classroom students review lecture material at home and work on projects and assignments in the classroom. Students in the flipped classroom complete coursework typically sent home as homework in class. The flipped classroom provides a great space for peer-to-peer collaboration. Students can engage one another to complete group projects, debates, and practice. Teachers are not the center of the flipped classroom. Instead, teachers are more flexible, addressing personalized help and direction for students and student groups as they complete their work.

### **Personalized Learning**

Personalized learning adapts what, when, and how we are teaching each student. Instead of selecting a singular method or strategy to teach the whole class, teachers adapt to the strengths of each student to help them succeed. The personalized learning experience is like how we experience different online tools where algorithms tailor our online experiences to meet our interests. When you go to one site, you may see certain content float to the top where I will see something different based on my viewing history or searches. Personalized learning provides a catered learning experience and methods that are optimized for individual students. Though these individualized learning journeys are different for each student, the end goal is subject mastery or meeting standards for their grade level. So, we can think of these as different paths leading to the same place.

**Project-Based Learning (PBL) :** Project-based learning is an effective method that helps students drive their own learning journey. In a PBL exercise, students identify a real-world problem then develop a solution. Project-based learning relies on developing key skill sets such as research, critical thinking, problem-solving, and collaboration. Project-based learning is an active method of learning where students gain mastery through the application of their knowledge rather than rote memorization. Like the flipped classroom, the teacher's role becomes that of a guide and the students take ownership of their learning.

**Inquiry-Based Learning:** Inquiry-based learning develops thinking and problem-solving skills. Instead of driving the class through a lecture-style format, the teacher poses questions, scenarios, and problems. Students then research these topics individually or in groups to formulate their answers. They can then present their findings and supporting evidence to the class along with the other students. Students are then able to further develop their answers by listening to what other students have found as well as identifying areas that require more attention and detail.

**Jigsaws:** Jigsaws are another active learning method. Most importantly, jigsaws introduce the opportunity for students to teach other students. And, as Seneca said, "While we teach, we learn." Explaining something to someone is often considered the best way to truly understand it. With jigsaws, students are divided into groups and given different pieces of information. Students in each group are then tasked with learning the information enough to be able to explain it to someone else. The students are then assigned to different groups where they explain their information to the other members. They complete this process until each group has the full picture of information to complete the puzzle.

**Ask Open-Ended Questions:** Students, especially successful students, may rely too heavily on textbook answers. They may develop over time the tendency to think there are only right and wrong answers. But most questions don't have right or wrong answers. In today's divisive public sphere, students need to exercise conversational skills and empathy. Students need to learn to communicate and collaborate. By asking open-ended questions, teachers encourage vibrant in-class conversations.

Students can piece together different information learned or experienced in their life to stitch together cohesive points. This can encourage students to not only find their voice but express themselves as well.

**Peer Teaching :** As we mentioned when discussing jigsaws, students exhibit mastery when they explain or teach others. Have students choose an area of interest within the scope of the subject being taught. Provide them with the opportunity to independently research the topic and create a presentation on it. Set aside class time for students to present to the class to teach their peers about their topic. With peer teaching, students learn skills such as independent study, presentation skills, and confidence.

**Blended Learning:** Blended learning combines physical and online learning experiences that give students more control over the time, place, path, and pace of instruction. Check out our previous post on blended learning to learn all you need to know. What's exciting about blended learning is that it provides traditional classroom experiences as well as online tools and learning opportunities. It's not an all-or-nothing method. Still, technology is a key component of blended learning as it is for students in the real world. The flexibility of blended learning enables students to have more control over their learning methods – perhaps they'll watch online lectures at home and engage in peer groups for collaborative activities or maybe they'll prefer to join lecture-based virtual classes and do their homework independently.

**Feedback:** Feedback is incredibly important. Students need to learn how to offer constructive feedback as well as accept feedback. Provide students with a mechanism for providing feedback. In a virtual classroom, feedback tools like polling or emojis are a great way for quick feedback cycles. You can even challenge or ask students to expand upon their feedback then ask other students with opposing opinions to discuss why they think differently.

**Active Learning:** Many of the innovative learning strategies we discussed are active learning strategies. Active learning methods encourage students to discuss, contribute, participate, investigate, and create. Active learning challenges students by questioning them, requiring problem-solving and critical thinking. Most importantly, active learning engages students and requires them to be active in the classroom. Students that participate in their learning are more likely to succeed in your class.

**CONCLUSION:** Creative teaching is seen to involve teachers in making learning more interesting and effective and using imaginative approaches in the classroom. Teaching for creativity by contrast is seen to involve teachers in identifying children's creative strengths and fostering their creativity. Creativity at work is the process of generating novel and useful ideas to either introduce new products, processes, or services in the workplace or improve the existing ones. As such, creativity at work has been considered essential for improving organizational performance and making businesses flourish. One reason is that it taps into students' natural curiosity and desire to explore and discover. Creative teaching methods encourage students to think critically, solve problems, and work collaboratively, which helps them develop important life skills that they will use long after they leave the classroom.

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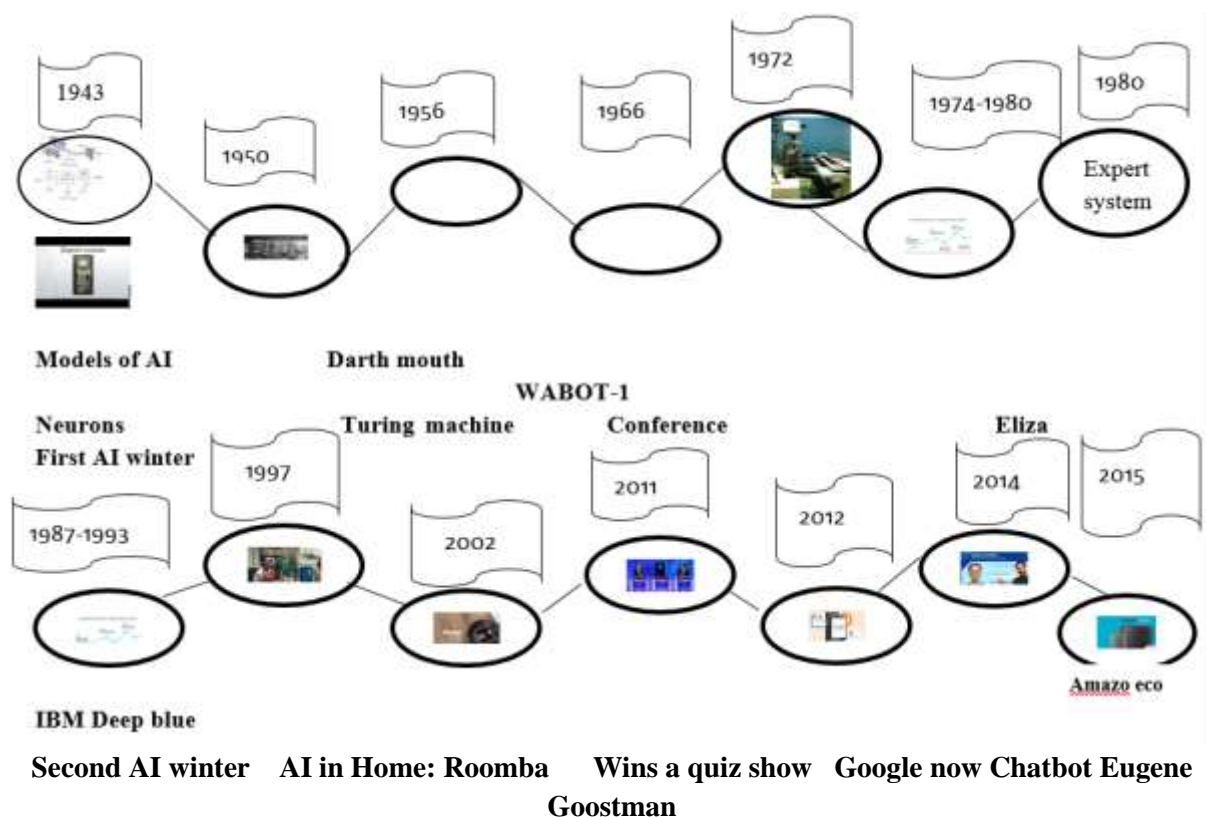
## INFLUENCE OF ARTIFICIAL INTELLIGENCE (AI) IN CURRENT EDUCATION SYSTEM

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**Introduction** Education is the prime factor which plays an important role in development of country as we know that no two individuals are absolutely alike. Each and every pupils have different learning abilities. Teaching – learning method needs to be upgraded by traditional method to modern education system. Because nowadays our lives have become more fast paced and more hectic than ever before. We communicate, share our thoughts, interacts and spend whole time in online. So regarding this a new revolution is started by more powerful technology I.e. AI. This AI playing vital role in our lives and dominating all the other, it occupying in every field like Medical, Agriculture, Education, Industries etc. Here we talking about quality of the education which focuses on the whole child, regardless of their gender, race, ethnicity economic status. AI is a machine ability to perform human-like cognitive functions, like perceiving, reasoning, learning, interacting, problem solving, Identifying, patterns, writing what not. AI in education has opened up new possibilities for learners of all ages. By its education software development has revolutionized traditional learning methods. Earlier education system was strict and rigid there was less focus on creativity and independent thinking. Rote memorization, lack of technological knowledge, low level of participation and achievements, no flexible time but AI has helped to overcome from all these conflict

**Meaning of Artificial Intelligence (AI):** Artificial Intelligence in education is the use of computers that mimic human perception and decision making to complete tasks in the classroom.

**Root of AI:**



**Traditional Vs Online education system :****Types of AI : 1. Weak AI or Narrow AI:**

- Narrow AI is a type of AI which is able to perform a dedicated task with intelligence. The most common and currently available AI is Narrow AI in the world of Artificial Intelligence.

	<b>Traditional</b>	<b>Online</b>
<b>1</b>	Less flexible in terms of time and place	More flexible compared to terms of time and place
<b>2</b>	Traditional education does need not to deal with technical challenges	Deal with various technical challenges such as power failure, internet connectivity and other issues with mobile device
<b>3</b>	More practice experiences can gained traditional education the practicals are performed	Less particles experienced can be gained in online education
<b>4</b>	It allows students to participate in other school activities and develop interpersonal skills	It does not lead to the participation of students in other
<b>5</b>	One way transfer of knowledge	Multiway transfer of knowledge
<b>6</b>	Extremely costly	Extremely affordable

- Narrow AI cannot perform beyond its field or limitations, as it is only trained for one specific task. Hence it is also termed as weak AI. Narrow AI can fail in unpredictable ways if it goes beyond its limits.
- Apple Siri is a good example of Narrow AI, but it operates with a limited pre-defined range of functions.
- IBM's Watson supercomputer also comes under Narrow AI, as it uses an Expert system approach combined with Machine learning and natural language processing.
- Some Examples of Narrow AI are playing chess, purchasing suggestions on e-commerce site, self-driving cars, speech recognition, and image recognition.

**2. General AI:**

- General AI is a type of intelligence which could perform any intellectual task with efficiency like a human.
- The idea behind the general AI to make such a system which could be smarter and think like a human by its own.
- Currently, there is no such system exist which could come under general AI and can perform any task as perfect as a human.
- The worldwide researchers are now focused on developing machines with General AI.
- As systems with general AI are still under research, and it will take lots of efforts and time to develop such systems.

**3. Super AI:**

- Super AI is a level of Intelligence of Systems at which machines could surpass human intelligence, and can perform any task better than human with cognitive properties. It is an outcome of general AI.
- Some key characteristics of strong AI include capability include the ability to think, to reason, solve the puzzle, make judgments, plan, learn, and communicate by its own.
- Super AI is still a hypothetical concept of Artificial Intelligence. Development of such systems in real is still world changing

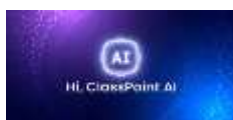
## AI Tools: Related to Education

### 1. CHAT GPT



Chat GPT is a natural language based AI tool that interacts and provides dynamic responses to your queries. With its learning ability and natural language process, ChatGPT can help you in creating high quality study notes with ease, further, ChatGPT can greatly help your students by interacting with them and providing them accurate and apt to the **question responses**, ChatGPT can greatly help your students and can act as a **teaching assistant** to you

### 2. Class Point Ai



ClassPoint Ai is a new & innovative feature that uses AI technology to generate quiz questions from any PowerPoint slide. A quiz-making sidekick that read your PowerPoint slide and write an academic question using Bloom's Taxonomy Levels. You can choose for 3 different types of questions: **Multiple Choice, Fill in the Blanks, and Short Answer**, and generate multiple questions to get the best question for your learning objectives.

### 3. Educational Copilot



Education Copilot is an AI-powered platform that simplifies lesson-making plans and instruction techniques for educators and college students as well. The platform generates customizable lesson plans, academic handouts, templates, PowerPoint, and scholar performance reviews in seconds. Educators can shop time, power, and awareness on scholar studying and improvement with its unique AI lesson planner feature.

### 4. Slidesgo :



Slidesgo AI is a platform that offers AI-powered tools for creating presentations and other design-related content. Slidesgo introduces its AI Presentation Maker, a tool designed to simplify the process of creating stunning presentations. With a few clicks, users can generate professional slideshows that cater to their specific needs. This feature streamlines the design process, making it accessible to individuals who may not have extensive design experience

### 5. Canva :



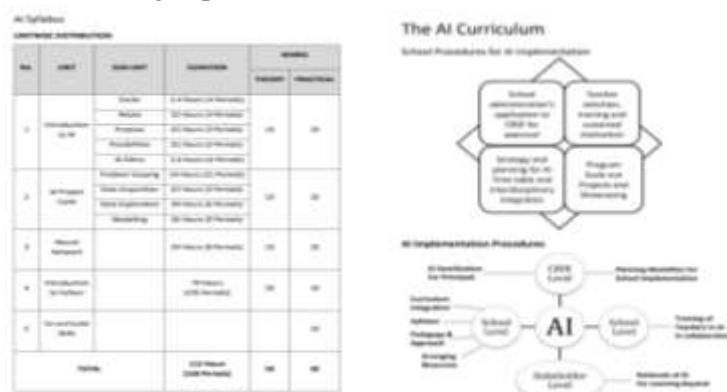
Canva for Education is the learning-based extension of Canva, where interactive, immersive teaching and learning can take place virtually. In times when gathering students in a classroom isn't possible or remote learning has become preferable, Canva's transformative AI tools are **helping teachers streamline classroom tasks, allowing them to devote more time and energy to classroom engagement and individual students' needs**

**Implementations in current education**



**Example 1: AI in curriculum**

- CBSE has introduced artificial intelligence as an optional subject in class 9<sup>th</sup> from 2019-20 onwards to enhance the multidisciplinary approach in teaching learning
- At secondary level, a skill subject may be offered as additional sixth subject along with the existing five compulsory subjects.
- The main aim is to strive together to make our students future ready and help them to incorporate the AI to improve their learning experience.

**Example 2: Automated school attendance system**

- AI based attendance systems uses finger print recognition, facial recognition, voice recognition technology to verify the identity of attendance they can be used in schools, business and other institutions to keep track of students and employees. which eliminates the proxy attendance or error caused by manual method.

**Example 3 : Assistive Technology**

AI can help special needs students access a more equitable education for example it includes text to speech software, screen reader, large print books, word prediction capabilities



- Electronic worksheets, Alternative keyboards, Talking calculator, Alternative keyboards, Audio books, Variable speed tape recorder
- **Example 4 : QR codes in school text books**
- The Ministry of Human Resources (MHRD) has announced on 29th Mar, 2018 that from next year, NCERT published textbooks will carry QR Codes.



- These QR Codes will contain additional resources such as web links to movies to help students understand the concepts better.



### Pros and cons of AI:

#### Pros:

- Personalized learning: personalized learning is an educational approach that helps students learn at their own pace and explore their strength main thing is to supports diverse learner.
- Organized information: AI can quickly process vast amounts of data and extract valuable insights.
- Generate response: AI powered tools generate the quick answer based on a customer's message.
- Feedbacks: personalized feedback gives them immediate knowledge about how well they understand the concept, and they can compare their performances in every stages.
- Education at any time: AI based applications provide an opportunities to study in free time
- Virtual mentors : AI based platforms provides virtual mentors to track the students progress, student can get immediate feedback from the virtual mentors
- Grading system : AI software helps to paper evaluator to evaluate students papers is the main advantage of artificial intelligence in education.

#### Cons :

- Reduced human interactions : the main drawback of AI is the students are unable to get social skill.
- Lack of creativity : machines can't match human creativity
- Job displacement : some AI tools can replace the few task of teachers such as grading and providing feedbacks
- Less communication: there could be communication gap between teachers and students if robots were used as part-time tutors
- Cost : AI requires cost of maintenance and repair hence school needs to expand their budgets to covers the expenses
- Privacy : as of now, there is zero expectation of privacy for any inputs into those systems
- Dependence of AI : over dependence of AI may causes loss of creativity ,critical thinking skills and human intuition. Limits the decision making capabilities.

**Conclusion :** In a nutshell, this study covers on influence of AI in education system has been introduced with the help of several literature reviews, articles ,paper publications, reports regarding AI were helped to bring up this study in a better way.AI in education has brought revolutionary act which includes more advantages and helps to solve the backwardness of child in whole development .many of the students depriving from higher education stages but this AI can solve this problem by

levelling out inequalities between those who can and cannot afford education by offering them free access irrespective of time, age and economic stages. Many schools are already incorporated the application of AI in all the ways. AI tools making everything easy and saving everyone's time. and there is one misconception is running out ie. "AI replacing the teachers"!! NO, AI cannot replace the human connection and empathy that teachers bring to the classroom. teacher inspire and guide students, not just import the knowledge. rather than both AI and human instructor will work closely together to bring holistic development in education.

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## NATIONAL MISSION IN EDUCATION THROUGH ICT

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### *Abstract*

*National policies have greater implications for promotion of equity, access, and sustainability in the arena of education. The Indian national educational policy of 1986, which was subsequently modified in 1992, stressed the need for using Educational Technology (ET) to improve access, quality and governance of education. Two Central government schemes have emerged out of these policies. The ICT role in education continued to get the attention of the Government of India. National Curriculum Framework (2005) and Sarva Siksha Abhiyan (SSA) also recommended to create an environment for optimal utilisation of ICT in education. In continuation to this, many schemes and programmes have been introduced to effectively implement ICT in teaching and learning to increase the access at all levels of education. The present paper attempts to discuss the National Mission on Education through Information and Communication Technology (NMEICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners.*

**Key Words:** *ICT, NMEICT initiatives, SWAYAM*

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**Introduction:** The National Mission on Education through Information and Communication Technology (NMEICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time anywhere mode. This was expected to be a major intervention in enhancing the Gross Enrolment Ratio (GER) in Higher Education by 5 percentage points during the XI Five Year Plan period. The three cardinal principles of Education Policy viz., access, equity and quality could be served well by providing connectivity to all colleges and universities, providing low cost and affordable access-cum-computing devices to students and teachers and providing high quality e-content free of cost to all learners in the country. NMEICT encompasses all the three elements.

The major initiatives are as follows.

**SWAYAM:** SWAYAM is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. This is done through a platform that facilitates hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be accessed by anyone, anywhere at any time. All the courses are interactive, prepared by the best teachers in the country and are available, free of cost to any learner. More than 1,000 specially chosen faculty and teachers from across the country have participated in preparing these courses. The courses hosted on SWAYAM are in 4 quadrants – (1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts. Steps have been taken to enrich the learning experience by using audio-video and multi-media and state of the art pedagogy / technology. Courses delivered through SWAYAM are available free of cost to the learners, however learners wanting a SWAYAM certificate should register for the final proctored exams that come at a fee and attend in-person at designated centres on specified dates.

**SWAYAM PRABHA:** The SWAYAM PRABHA is a group of 40 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite. Every day, there will be new content for at least (4) hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convenience. The channels are uplinked from

BISAG-N, Gandhinagar. The contents are provided by IITs, UGC, CEC, IGNOU. The INFLIBNET Centre maintains the web portal. It includes forty channels and more than 120600 number of titles.

**National Digital Library of India:** National Digital Library of India (NDLI) is a virtual repository of learning resources which is not just a repository with search/browse facilities but provides a host of services for the learner community. NDLI provides user group-specific services such as Examination Preparatory for School and College students and job aspirants. Services for Researchers and general learners are also provided. NDLI is designed to hold content of any language and provides interface support for 10 most widely used Indian languages. It is built to provide support for all academic levels including researchers and life-long learners, all disciplines, all popular forms of access devices and differently-abled learners. It is developed, operated and maintained from Indian Institute of Technology Kharagpur.

**e-PG Pathshala:** e-PG Pathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT) being executed by the UGC. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences, linguistics and languages have been developed by the subject experts working in Indian universities and other R & D institutes across the country. Every subject had a team of principal investigator, paper coordinators, content writers, content reviewers, Language editors and multimedia team.

**Shodhganga: a reservoir of Indian Theses:** The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009 Amendment made on 2016) dated 5th May 2016 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would overcome serious problem of duplication of research and poor quality resulting from the "poor visibility" and the "unseen" factor in research output. As per the Regulation, the responsibility of hosting, maintaining and making the digital repository of Indian Electronic Theses and Dissertation (called "Shodhganga"), accessible to all institutions and universities, is assigned to the INFLIBNET Centre.

**e-ShodhSindhu:** Ministry of Education has formed e-ShodhSindhu merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. The e-Shod Sindhu will continue to provide current as well as archival access to more than 10,000 core and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines from a large number of publishers and aggregators to its member institutions including centrally-funded technical institutions, universities and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act.

**e-Yantra:** e-Yantra is a robotics outreach program funded by the Ministry of Education and hosted at IIT Bombay. The goal is to harness the talent of young engineers to solve problems using technology across a variety of domains such as: agriculture, manufacturing, defence, home, smart-city maintenance and service industries.

**FOSSEE (Free/Libre and Open Source Software for Education) :** FOSSEE (Free/Libre and Open Source Software for Education) project promotes the use of FLOSS tools to improve the quality of education in our country. We aim to reduce dependency on proprietary software in educational institutions. We encourage the use of FLOSS tools through various activities to ensure commercial software is replaced by equivalent FLOSS tools. We also develop new FLOSS tools and upgrade existing tools to meet requirements in academia and research.

**Spoken Tutorial:** Spoken Tutorial is a multi-award winning educational content portal. Here one can learn various Free and Open Source Software all by oneself. Our self-paced, multi-lingual courses ensure that anybody with a computer and a desire for learning, can learn from any place, at any time and in a language of their choice. Alongside these, there are some courses relevant at School level, too, which help school students to visualise difficult concepts of Math and Science. These can also be used by Teachers to prepare lesson plans, explain abstract concepts and give digital assignments to students.

**Virtual Labs:** Virtual Labs project is an initiative of Ministry of Human Resource Development (MHRD), Government of India under the aegis of National Mission on Education through Information and Communication Technology (NMEICT). This project is a consortium activity of twelve participating institutes and IIT Delhi is coordinating institute. It is a paradigm shift in ICT-based education. For the first time, such an initiative has been taken-up in remote-experimentation. Under Virtual Labs project, over 100 Virtual Labs consisting of approximately 700+ web-enabled experiments were designed for remote-operation and viewing.

**National Educational Alliance for Technology :** MoE has announced a National Educational Alliance for Technology (NEAT) as a Public-Private partnership model between the Government (through its implementing agency AICTE) and the Education Technology companies of India. Through an open invitation and screening, companies are invited to showcase their products on a National Portal developed for the learners, who may procure them based on their requirements.

**E – Governance:** "Samarth" is an initiative by the Ministry of Education started in 2019, under the National Mission on Education through Information and Communication Technology NMEICT-II (now NMEICT-III), with an aim to enable the universities and Higher Education Institutions (HEIs) through a digital framework for planning, management, delivery, and monitoring of services for students, staff, and other stakeholders. Under the project, the HEIs are provided with a fully managed, cloud based, comprehensive ERP that is custom built for HEIs of the country.

**VIDWAN:** VIDWAN is the premier database of profiles of scientists / researchers and other faculty members working at leading academic institutions and other R & D organisation involved in teaching and research in India. It provides important information about expert's background, contact address, experience, scholarly publications, skills and accomplishments, researcher identity, etc. The database developed and maintained by Information and Library Network Centre (INFLIBNET) with financial support from the National Mission on Education through ICT (NME-ICT). The database would be instrumental in selection of panels of experts for various committees, taskforce, established by the Ministries / Govt. establishments for monitoring and evaluation purposes.

**IRINS:** IRINS is web-based Research Information Management (RIM) service developed by the Information and Library Network (INFLIBNET) Centre. The portal facilitates the academic, R&D organisations and faculty members, scientists to collect, curate and showcase the scholarly communication activities and provide an opportunity to create the scholarly network. The IRINS is available as free software-as-a-service to the academic and R&D organisations in India.

**ShodhShuddhi:** Based on the recommendation of Sub-Committee, National Steering Committee (NSC) of e-ShodhSindhu, The Ministry of Education, Govt. of India has initiated a programme "ShodhShuddhi" which provides access to Plagiarism Detection Software (PDS) to all universities/Institutions in India since

**Conclusion:** Fortunately, India is at the verge of major transformation. The National Mission on Education through Information and Communication Technology (NMEICT) is engaged in bringing world class opportunities of higher education and research to the country so that Indian students are not finding lacking when facing an international platform. For this, the Government has launched joint ventures and signed MoUs to help the Indian student benefit from the world opinion. This is a



supreme opportunity which needs to be fully harnessed. ICT field is to be explored seriously and rolled out, in an appropriate manner, synchronizing with the Digital India Programme. Such a judicious use of Information Communication Technology (ICT) will yield major dividends in a relatively short time and can greatly benefit the education sector, both school and higher education.

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## INTEGRATION OF ICT IN EDUCATION: KEY CHALLENGES

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### Abstract

*The role of Information & Communication Technology (ICT) in Education is undisputed globally. ICT have potentially powerful tool for extending educational opportunities. Studying the challenges to the use of ICT in education may assist educators to overcome these barriers and become successful technology adopters in the future. This paper provides -analysis of the barriers to technology integration in education. The major barriers were lack of confidence, lack of competence, and lack of access to resources. Since confidence, competence and accessibility have been found to be the critical components of technology integration in schools, ICT resources including software and hardware, effective professional development, sufficient time, and technical support need to be provided to teachers. No one component in itself is sufficient to provide good teaching. However, the presence of all components increases the possibility of excellent integration of ICT in learning and teaching opportunities. Generally, this paper examined key challenges of ICT envisaged in our 21st century Education & how we overcome the problems that we face in use of ICT in 21st century of education.*

**Keywords:** Teaching learning process, , ICT, Integration, challenges

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### Introduction

ICTs can play the same role in our information and communication process and their outcomes as played by other technologies in making our lives quite comfortable and purposeful. The ICT has been developing very rapidly nowadays. Therefore, in order to balance it, the whole educational system should be reformed and it should be integrated into educational activities, Traditional learning was hard, introduction of ICT has change the traditional concept. It has the potential to transform the nature of education. ICT and their role have a tremendous potentiality of serving its cause and helping the persons connected with the process and product in a number of ways

### The importance of ICT in Teaching and learning process

Several studies have reviewed the literature on ICT and learning and have concluded that it has great potential to enhance student achievement and teacher learning. Wong et al. (2006) point out that technology can play a part in supporting face-to-face teaching and learning in the classroom. Many researchers and theorists assert that the use of computers can help students to become knowledgeable, reduce the amount of direct instruction given to them, and give teachers an opportunity to help those students with particular needs (Iding, Crosby, & Speitel, 2002; Shamatha, Peressini, & Meymaris 2004; Romeo, 2006). While new technologies can help teachers enhance their pedagogical practice, they can also assist students in their learning. According to Grabe and Grabe (2007), technologies can play a role in student skills, motivation, and knowledge. They claim that ICT can be used to present information to students and help them complete learning tasks.

ICT is the convergence of computer, communication and content technologies. It has attracted the attention of academia, business, government and communities to use it for innovative profitable propositions. In order to compete in a global competitive environment, a highly skilled and educated workforce with aptitude and skill sets in application of ICT is inevitable for every nation. ICTs are a potentially powerful tool for extending educational opportunities, as it assists in carrying out their activities and functions such as record keeping, research work, instructional uses, presentations, financial analysis, examination results management, communication, supervision, MIS, teaching learning activities, and general school management functions. ICT benefits schools in several ways: (i) enhancing learning in classroom; (ii) improving school management and related tasks; (iii) improving accountability, efficiency and effectiveness in school activities; (iv) introducing usage of Power Point presentations and internet.

### Key Challenges in integration of ICT in Education

ICT have potentially powerful tool for extending educational opportunities. But there are multiple issues and challenges the implementation of ICT in the 21st century. The challenges are-

**Availability-** The ICT facilities are not available in the school. Most of the schools are not in a position to afford the purchase, maintenance and other expenditure involve in its use.

**Lack of knowledge-** In the 21st century most relevant or biggest challenge is lack of knowledge to handle ICT equipment. Teacher's lack of knowledge and skills is one of the main hindrances in the use of ICT in education. They simply do not have the knowledge, expertise or organizational capacity needed.

**Cultural challenge-** Diversities of culture in different part of the world are also challenges in introducing ICT in education. A large proportion of educational software produce in the world market is in English also. But in India where English is not the first language this represents a serious challenge in integrated ICTs use in education system.

**Insufficient funds-** Effective and efficient use of technology depends on availability of hardware, software and having access to resources by teacher and students and administrative staff. In developing countries, technology implementation into education system is a difficult task as it requires a magnum of funds. The teaching aids for ICT demands a lot of funds and setting up the infrastructure, maintenance and support of ICT facilities are some of the problems that the Educational Institution are facing.

**Lack of time-** Teacher has been found to be the major predictors of the use of new technologies in instructional setting. The teachers teach more than one subject and then they have to teach ICT which means they have a heavy load. These teachers' do not have time to design, develop and incorporate technology into teaching and learning. The teacher needs time to collaborate with other teacher's as well as learn how to use hardware and software.

**Pace of change-** In the 21st century modern Education structure, staffing and ways of operating have a strong momentum that is not easy to halt or redirect it. It is relatively easy to utilize ICT to sustain and improve current organizational constructs and approaches, making useful but incremental progress. It is incredibly difficult to conceive of new ways of working with organizational constructs that are fundamentally different from the status quo and require a shift in terms of strategy, competence, skills, and organizational structure.

**Lack of trained teacher-** A major challenge in the use ICT in 21st century is the lack of knowledge and skills. The teachers do not want to have transition to new methodologies and way of teaching-learning. They will want to stick over the broadcast model of teaching instead of interactive model designed through the use of ICT.

**Lack of equipment-** The developing of ICT infrastructure in a country is depending on availability of resources. Resources like- computer, printer, projectors, scanner etc. which are not available in every institution.

### Resistance to change & negative attitudes.

Much research into the barriers to the integration of ICT into education found that teachers' attitudes and an inherent resistance to change were a significant barrier (Cox et al., 1999a; Watson, 1999; Earle, 2002; Becta, 2004; Gomes, 2005; Schoepp, 2005). From his/her analysis of the questionnaires, Gomes (2005) found that science teachers' resistance to change concerning the use of new strategies is an obstacle to ICT integration in science teaching. At a broader level, Becta (2004) argued that resistance to change is an important barrier to teachers' use of new technologies in education. Watson, an Australian researcher, (1999

**Lack of technical support.**

Without both good technical support in the classroom and whole-school resources, teachers cannot be expected to overcome the barriers preventing them from using ICT (Lewis, 2003). Pelgrum (2001) found that in the view of primary and secondary teachers, one of the top barriers to ICT use in education was lack of technical assistance.

**Conclusion**

Revolution in information and communication technologies has reduced national boundaries to meaningless lines drawn on maps. In this scenario, education has been identified as one of the services which need to be opened up for free flow of trade between countries. ICTs use in modern education can save a lot of money of the Government. Moreover, a lot of qualitative improvement can be seen as resource persons for the training can be best of the world. ICT can be helpful in quality and standards of education by implementing it in various phases of education. But lack of resources within the educational sector educational is a hindrance in the implementation of ICT in developing in 21st century. The task of employment and integration of ICT in modern education is facing a lot of challenges. the challenges like- availability of ICT facilities in educational institution, lack of knowledge to handle ICT equipment, language problem, insufficient funds, lack of trained etc. but we can overcome the challenges- to create awareness on ICT Education, to formulate policies to promote broad access to skills and competencies for learning and adopting ICT, enlarge community participation for self-sustainability in ICT application, develop supportive infrastructure facilities such as electricity, internet, etc. Government should actively. Responsible authorities have to try and overcome these challenges, so that the modern education can benefit, ICT to be useful for teaching as well as for personal and professional work. Application of ICT in teaching makes teaching more innovative, interesting, interactive, easy and effective. It complements the traditional teaching learning process.

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## GAMIFICATION: A GAME-BASED INNOVATIVE PEDAGOGY FOR E-LEARNING IN 21<sup>ST</sup> CENTURY

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### Abstract

*Today's learners are digital natives and have new profile. They grew up with digital technologies and have different learning styles, new attitude to the learning process and higher requirements for teaching and learning. Teachers are facing new challenges and have to solve important issues related to the adaptation of the learning process towards students' needs, preferences and requirements. Teachers have to use different teaching methods and approaches that allow students to be active participants with strong motivation and engagement to their own learning. Modern pedagogical paradigms and trends in education, reinforced by the use of ICT, create prerequisites for use of new approaches and techniques in order to implement active learning. Gamification in training is one of these trends. The aim of the current work is to study and present the nature and benefits of gamification and to provide some ideas how to implement it in education. Concept of Gamification: According to Kapp, gamification is "using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems." (Kapp, 2012)*

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Gamification is the use of game thinking, approaches and elements in a context different from the games. Using game mechanics improves motivation and learning in formal and informal conditions. Various definitions overlap and can be summarized as follows: ***Gamification is an integration of game elements and game thinking in activities that are not actually games.***

Games have some distinctive features which play a key role in gamification:

- **Users** are all participants – students (for educational institutions); employees or clients (for companies),
- **Challenges/tasks** that users perform and progress towards defined objectives;
- **Points** that are accumulated as a result of executing tasks;
- **Levels** which users pass depending on the points;
- **Badges** which serve as rewards for completing actions;
- **Ranking of users** according to their achievements.

### Differences between Gamification and Serious Games

There are some terms and concepts that have similarities - gamification, game inspired design, serious games, simulations and games. The boundaries between them are not clearly defined.

**Game inspired design** is the use of ideas and ways of thinking that are inherent in games. Game inspired design does not express in adding game elements, but rather in using of playful design.

**Gamification** is the use of game metaphors, game elements and ideas in a context different from that of the games in order to increase motivation and commitment, and to influence user behavior (Marczewski, 2013). **Serious games** are games designed for a specific purpose related to training, not just for fun. They possess all game elements, they look like games, but their objective is to achieve something that is predetermined.

**Simulations** are similar to serious games, but they simulate real-world things and their purpose is user training in an environment resembling real life.

**Games** include everything mentioned above and they are designed for entertainment.

All the above-mentioned concepts have one thing in common – they use elements that are inherent in games and their purpose is to support learning and to improve users' engagement.

### Rationale in using Gamification in education

According to Gabe Zichermann, cited by (Giang, 2013), the use of game mechanics improves the abilities to learn new skills by 40%. Game approaches lead to higher level of commitment and

motivation of users to activities and processes in which they are involved. Game mechanics are familiar to consumers as most of them have played or continue to play different games. Although this conclusion applies to companies and their employees, it is unconditionally true for education.

The main problems in modern education are related to the lack of engagement and motivation of students to participate actively in the learning process. Because of that, teachers try to use new techniques and approaches to provoke students' activity and motivate them to participate in training. One possible solution is to reward the efforts and achieved results by awards, which leads to increased motivation for participation and activity. That decision is based on the use of game elements in the learning process.

Gamification in education is the use of game mechanics and elements in educational environment. E-learning, based on modern ICT, creates favorable conditions for the implementation of gamification – the processes of processing students' data and tracking their progress are automated and software tools can generate detailed reports.

Implementation of game elements in education is logical since there are some facts that are typical for the games and training. Users' actions in games are aimed at achieving a specific goal (win) in the presence of obstacles. In education there is a learning objective, which has to be achieved by performing specific learning activities or interaction with educational content. Tracking the players' progress in games is an important element, because next steps and moves are based on their results. In education tracking the students' progress is essential to achieve the learning objectives. Students' learning path is determined by the achieved levels of knowledge and skills (Glover, 2013). Collaboration in education is a milestone for the effective implementation of active learning. Unlike training games possess a strong competitive element. The focus in learning process should be rather towards developing skills for collaboration and teamwork and responsibility for the performance of the group instead of competition between students.

Gamification is not directly associated with knowledge and skills. Gamification affects students' behavior, commitment and motivation, which can lead to improvement of knowledge and skills (W. Hsin-Yuan Huang, D. Soman, 2013).

#### **4. How can Gamification be used in education?**

The development of an effective strategy for the implementation of gamification in e-learning implies a depth analysis of existing conditions and available software tools. The main steps of the strategy include:

##### **1) Determination of learners' characteristics**

When teachers implement new approaches in learning process it is essential to define students' characteristics (profiles) in order to determine whether the new tools and techniques would be suitable. The key and decisive factors are the predisposition of the students to interact with the learning content and to participate in learning events with competitive nature.

It is essential teachers to establish and take in mind what skills are required by the participants to achieve the objectives – whether the tasks and activities require special skills by learners. If tasks are very easy or difficult, is possible demotivation of learners and negative outcome.

Students' motivation to participate in training depends on the context of learning process and what follows from their achievements (W. Hsin-Yuan Huang, D. Soman, 2013).

##### **2) Definition of learning objectives**

The learning objectives have to be specific and clearly defined. The purpose of education is to achieve the learning objectives, because otherwise all activities (including gamification activities) will seem pointless. The objectives determine what educational content and activities to be included in learning process and selection of appropriate game mechanics and techniques to achieve them.

##### **3) Creation of educational content and activities for gamification**



The educational content should to be interactive, engaging and rich in multimedia elements. The training activities should be developed tailored to the learning objectives and allow (Simões, J., R. Díaz Redondo, A. Fernández Vilas, 2013):

- **Multiple performances** – the learning activities need to be designed so that students can repeat them in case of an unsuccessful attempt. It is very important to create conditions and opportunities to achieve the ultimate goal. As a result of repetitions students will improve their skills.
- **Feasibility** – the learning activities should be achievable. They have to be tailored and adapted to students' potential and skill levels.
- **Increasing difficulty level** – each subsequent task is expected to be more complex, requiring more efforts from students and corresponding to their newly acquired knowledge and skills.
- **Multiple paths** – in order to develop diverse skills in learners, they need to be able to reach the objectives by various paths. This allows students to build their own strategies, which is one of the key characteristics of the active learning.

#### 4) Adding game elements and mechanisms

The key element of gamification is the inclusion of tasks that learners have to perform. The performance of tasks leads to accumulation of points, transition to higher levels, and winning awards. All these actions are aimed at achieving predetermined learning objectives. Which elements will be included in training depends on the defined objectives (what knowledge and skills should be acquired as a result of the task). Activities that require independent work by students bring individual awards (such as badges). Activities requiring interaction with other learners are the social element of training, they make students a part of a big learning community and their results are public and visible (such as leaderboards) (W. Hsin-Yuan Huang, D. Soman, 2013).

#### 5. Software Tools for Gamification

There are many tools for gamification. Some of them are web-based (cloud services) and do not require installation of special software and allow access at any time and from any location. Among the most popular gamification tools are: Socrative, Kahoot!, FlipQuiz, Duolingo, Ribbon Hero, Class Dojo and Goal book. Badge OST<sup>TM</sup> and its add-on Badge Stack is a free plugin to Word Press that automatically creates different achievement types and pages needed to set up badging system.

Mozilla Open Badges Project is a project which goal is to enable the identification and recognition of acquired knowledge and skills of students outside the classroom – results of informal learning. Via Mozilla's Open Badges project anyone can issue wins and display badges through shared technical infrastructure (Mozilla Open Badges).

##### 5.1. Gamification and LMS

Educational institutions use LMS to manage the learning process and offer a variety of electronic courses with learning resources and activities. LMS allow integration of Web 2.0 tools which improves their functionality and responds to the new educational paradigms and the necessary for collaboration and cooperation between all participants in learning.

LMS are suitable environment for gamification because they have tools for automatic tracking of students' results and progress. It is possible to retrieve data about the time that students spent for viewing and interacting with content. Learners are encouraged to be active participants in discussions, forums and blogs, to take part in developing learning content by creating wiki pages.

Recently, part of LMS offer new functionalities related to gamification. Docebo offers Gamification App which allows administrators to create badges or awards that learners can win for completing activities inside the LMS (Docebo Help & Support).

Accord LMS offers many social features that foster cooperation and team building. Leaderboards and badges reward students' contributions and accomplishments (Accord LMS).



Blackboard has an achievements tool and allows students to earn recognition for their work. Rewarding learners can keep them motivated and engaged in courses. Teachers can indicate criteria for issuing badges and certificates (Blackboard).

## 5.2. Gamification in Moodle

Moodle is one of the most popular learning platforms that allow teachers to manage online learning. Moodle is among those LMS which develop and offer features aiming to facilitate gamification of the learning process. Some of Moodle gamification capabilities are (Muntean, 2011), (Henrick, 2013):

- **User's picture/avatar.** User profiles contain field for uploading a photo, so students can add a photo or avatar to their profile.
- **Visibility of the students' progress.** Progress helps users understand that their actions, that may initially seem unrelated and small, are connected in a greater whole and lead to the achievement of a certain goal (The Beginner's Guide to Gamification). Moodle offers opportunities for visualizing the students' progress in e-courses by Progress bar (Figure 1). Progress bar is a Moodle plugin and visually shows what activities or resources students have to complete and their progress in the course. Tracking progress is possible thanks to the option Completion tracking.
- **Display of quiz results.** The results of quizzes or assignments that measure the level of acquired knowledge and skills by students can be visualized in additional block in course – Quiz results. Quiz results block can contain top results – students with the highest grades and/or the lowest grades or group results (Figure 2) and adds competitive nature of the learning.
- **Levels.** The Level up! Block displays the current level of students in courses and the progress towards next levels. Level up! is a Moodle plug-in that automatically captures and attributes experience points to students' actions according to pre-defined rules. Teachers can set the number of levels, the experience required to get to them, the amount of experience points earned per event. There is a possibility to display the ranking of the students (so called ladder) (Moodle).
- **Feedback.** The instantaneous and positive feedback is the main reason that makes users to feel motivated, engaged and encouraged in their actions. Tests and assignments, as well as all other activities in Moodle provide opportunities for feedback – general, specific, for correct answers or for wrong answers. Feedback can be used as a correction of students' actions and can be a stimulus and motivator to their further activities in the learning system.
- **Badges.** Badges can be given to learners upon completion of a number of activities or for achieving a certain level of knowledge and competence. They can be used to display students' achievements and rewards. Learners can share and demonstrate their badges and achieve social recognition (The Beginner's Guide to Gamification). Moodle has completion tracking feature that can be activated for each course. This option allows teachers to reward students for each completed activity as one possible award is a badge. Moodle Badges Free is a library of badges that can be given as a reward for achieved knowledge, skills and learning experience. Moodle Badges are designed to work in Moodle 2.5, Moodle 2.6 and Moodle 2.7, on web, tablet and iPhone, and also can work with Mozilla Open Badges (Moodle).
- **Leaderboard.** Ranking Block is a plug-in for Moodle that allows and shows leaderboard of students based on their points. Ranking Block monitors included activities and accumulates points to students based on course completion feature. Leaderboards are visible to all users and they are a way of obtaining recognition from other learners. Students can see where they stand and compare their results and achievements to their colleagues. Leaderboards encourage competition between learners and motivate them to be more active participants in the learning process.

In addition Moodle supports Conditional activities to restrict access to learning content in e-courses. Teachers can set multiple activity completion conditions/criteria which must be met by the students in order to access the activity. Conditional activities are a tool that creates prerequisites for setting

learning objectives that must be met by the students in order to continue to the next activities. In conclusion, there are different ways to implement gamification in Moodle. The system features – automatic data processing and tracking of students' progress along with completion tracking and conditional activities are the base for gamifying it.

**6. Conclusion:** E-learning is suitable for easy and effective integration of gamification. Game techniques and mechanisms can be implemented in the learning process as activities which purpose is to achieve certain learning objectives, increase learners' motivation to complete them and engage students in a friendly competitive environment with other learners. Gamification is an effective approach to make positive change in students' behavior and attitude towards learning, to improve their motivation and engagement. The results of the change have bilateral nature – they can affect students' results and understanding of the educational content and create conditions for an effective learning process.

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## **THEME - 4**



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## INCLUSIVE LEARNING AND SPECIAL EDUCATION

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### **Abstract**

*All women fight for equal rights. In every region and in every society, women are undervalued; they face personal insecurity because of violence in their homes and communities. Gender discrimination is a universal problem in all the communities. Minorities are often restricted from participating fully or effectively in economic, social and political life. Yet it is women who belong to minority population groups whose choices, opportunities and life chances, are restricted in both public and private spheres. Where minorities suffer poor access to education, health services and employment, it is often the women from those minority groups, whose needs are least, recognized.*

**Key words:** *Women, Discrimination, minority.*

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### **Introduction**

India is the first largest country in terms of population and largest democratic country. India glorifies the principles of secularism and pluralism. Indian constitution promotes prohibition of discrimination on grounds of religion, race, caste, sex or place of birth but this type of cultural, religious, and social diversity leads to varying forms of intersectional discrimination for the minority communities, for example, Dalit, Muslims, and Christians, or religious minorities who are also linguistic minorities or belong to indigenous communities (Adivasis) and such challenges are intensified when it comes to women of the minority community.

It represents various communities - 80% of population is covered by Hindus, 15% by Muslims, 2.5% by Christians, 1.8% by Sikhs, and 0.7% by jains. The controversial term “minority” is used in the Constitution in some articles like Article 29, Article 30, Article 350(A), and 350(B) but a concrete definition is not given in the Constitution. Six communities are declared as minority communities namely Muslims, Christians, Sikhs, Buddhists, Jains and Zoroastrians as per clause (c) of section 2 of the National Commission for Minorities Act, 1992.

### **Discrimination against minority**

This act of discrimination against the minority isn't limited to India but is a global problem and Women get the worst of it, minority women often experience discrimination from both within and outside their communities and suffer disproportionately from the economic, social and political marginalization affecting their communities as a whole. Minority women are often subjected to abuse, discrimination, and stereotypes for instance, manual scavenging is often reserved for Dalit women, in both urban and rural areas and they are paid menial wages for this degrading and unsanitary task. These women are forced into doing undignified and ill-suited jobs and are intimidated if they try to adopt any alternative livelihoods. Their daily lives are immersed with hate speeches, anti-minority sentiments, violations, discrimination and they are not able to take any action in spite of having various legal rights and lack of awareness, poverty, and fear add more factors to this problem.

### **Problems faced by minority women in India**

For a long time, women in India were in the clutches of patriarchal society and were denied even the basic rights; all of this was intertwined with gender inequality and abuse. Women were subjected to many social evils like child marriages, sati sahangaman, widow exploitation, devadasi system, etc.

But in recent years, the social situation of women has significantly improved, the practice of these social evils has almost vanished and the taint of gender inequality has reduced. These changes were possible because of various social, economical and cultural developments in the country, increase in awareness, educational opportunities and even healthcare facilities but unfortunately these

developments and changes didn't seep to the minority communities. Women of religious minority face challenges from everywhere and they can't even turn to their own community for help.

- They are subjected to constant abuse, both physical and mental, they even lack the basic facilities required for a dignified life due to their poverty-ridden background.
- They encounter unjust and unfair treatment as compared to their male in every aspect of life such as: education, job opportunities, security, health care facilities, etc.
- India's religious minorities face many problems related to violence and discrimination, particularly Muslims are targeted.
- We can observe difference in socio-cultural practices, hard work and background. The identity of a female belonging to the minority is often associated with a male in the family and in rural areas they are even considered the property of her father or husband thus failing to create her own concrete identity.
- The problem of security is common to all women of the country and not just the women belonging to the minority community but these women are often left feeling more insecure, both physical and psychological and are prone to abuse and threats from both their community and the majority community.
- Due to the difference in identity, the minority community develops a sense of inequality. They are forced to miss out on many academic and employment opportunities.
- Large numbers of people of the minority community belong to the lower strata of the society and results in backwardness for the whole community. They fail to practice the need for education and proper healthcare facilities for women.
- They are assumed to be socially, economically or culturally poor even when that's not true. They are often treated with racial slurs, verbal abuse and are often the victims of eves teasing. All of these problems take a toll on their physical as well as mental health and they are left to suffer alone with no or very little support.
- Violence against women is a very old concept in Indian history. In ancient times, women were affected the most during wars; they were taken slaves, raped and killed. The situation is still substandard and violence against women include dowry-related harassment, death, marital rape, wife battering, sexual abuse, deprivation of healthy food, female genital mutilation, etc.
- There have been many incidents of violence against the minority communities in the past and females of these communities always got the worst of it, for instance, Gujarat riots, severe violence resulted in as many as 2,000 killed, 100,000 displaced and many others injured and all of this was accompanied by high levels of sexual violence against minority women and those accused of associating with Muslims.

#### **Government initiatives**

- **Nai Roshni:** For women empowerment, the Ministry of Minority Affairs started "Nai Roshni", a Leadership Development Programme for Minority Women in 2012-13. The objective of this scheme is to empower and develop confidence among minority women, including their neighbors from other communities living in the same village/locality, by providing knowledge, tools, and techniques for interacting with the Government institutions, banks and other departments at all levels.
- **Scholarships:** Many scholarships like, National Scholarship is also available for the females of the minority community. This scholarship, offers a scholarship amount of up to 12,000 rupees to minority girl students studying in class 9 to 12 and for college students up to 32,000 rupees. This scholarship is given to meritorious students belonging to Muslim, Christian, Sikh, Buddhist, Jain and Parsi communities.

- **Schemes:** Various national schemes are also available for the women of the minority community, the main objective of these schemes is to promote a better lifestyle for unheard women and provide them with jobs, education, health care, etc.
- Particular attention should be given to the violence, threats and harassment experienced by religious minority women. In order to do this, police and prosecutors must be adequately trained in treating minority women victims in an appropriate, respectful and confidential manner and always enabling victims to be assisted by women officers. FIRs concerning such cases must be filed and followed up promptly.

The Preamble of the Constitution declares India to be Secular and in the spirit of secularism and pluralism, all of the citizens should be treated equally and should be given equal opportunities irrespective of their gender or caste or religion. For the true development of this country, it is necessary that all resources are put to use and no capable person is considered a liability in society whether a man or women. Women of the minority community constitute a large population of the country and keeping them oppressed won't help us in any way, giving equal treatment and respect to them will lead to a better future. Religion and gender-based hate crimes should stop, Communal tension and riots kill the true spirit of the Constitution and this practice should be curbed, various governmental policies should be introduced for the same.

### Conclusion

There is no doubt in saying that the situation of the women belonging to the minority community of this country is very unfortunate and they suffer from unimaginable discrimination and abuse everyday but as compared to the past, the condition of these women has shown improvement, for instance, due to education, they are able to afford some sort of concrete lifestyle and their living conditions have also significantly improved. Even the cases of violence have reduced. All of these changes are possible because of the progressive nature of the country and an increase in awareness, along with significant steps and measures are taken by the government.

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## INCLUSIVE CLASSROOM TEACHING AND ROLE OF TEACHER'S IN INCLUSIVE EDUCATION

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### Abstract

*The plan of inclusion in schools is being implemented in countries around the world. This expansion challenges teachers to search for pedagogy and practices that will support their professionalism in addressing diversity in their classroom. In this, inclusion highlighted as an on-going and never-ending process. It is grounded in the ideologies of social justice, democracy, human rights and access to education for all. Inclusion is discussed in three terms: (1) As inclusive education that stands for the process of increasing participation and decreasing exclusion. (2) As inclusive pedagogy that focuses how to teach in inclusive schools. (3) As inclusive practice that stands for how the concept of inclusion gains meaning in practice. Teaching learning vision builds on a notion of education that creates a learning environment that empowers students and gives them space to feel the energy of their minds and develop their capabilities. Student's empowerment can develop through deep understanding, confidence and complexity together with an understanding of community responsibilities, democratic commitment and social justice. In that environment, teachers create a learning space that supports students and engages them in their learning inspiring teaching practices promote inclusion, honour diversity, cultures and ethnic experiences, and build the learning environment on the different contributions and identities of each student. Teachers in these practices understand the experiences and perspectives their students bring to the educational settings and respond to the variety in the group as they design the curriculum, learning activities, classroom climate, instructional materials, teaching techniques. Bringing this together, our perspective is that inclusive schools are learning communities that invest in the presence, participation and achievement of everyone in the school, both staff and students, where everyone's presence is valued and noted, their participation is meaningful, and where they get the opportunity to achieve and show their strengths.*

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### Introduction

Inclusion as we know it today has its origins in Special Education. The development of the field of special education has involved a series of stages during which education systems have explored different ways of responding to children with disabilities, and to students who experience difficulties in learning. In some cases, Special education has been provided as a supplement to general education provision; in other cases, it has been entirely separate. In recent years, the appropriateness of separate systems of education has been challenged, both from a human rights perspective and from the point of view of effectiveness. Special education practices were moved into the mainstream through an approach known as "integration". The main challenge with integration is that "mainstreaming" had not been accompanied by changes in the organization of the ordinary school, its curriculum and teaching and learning strategies. This lack of organizational change has proved to be one of the major barriers to the implementation of inclusive education policies. Revised thinking has thus led to a re-conceptualization of "special needs". This view implies that progress is more likely if we recognize that difficulties experienced by pupils result from the ways in which schools are currently organized and from rigid teaching methods. It has been argued that schools need to be reformed and pedagogy needs to be improved in ways that will lead them to respond positively to pupil diversity – seeing individual differences not as problems to be fixed, but as opportunities for enriching learning.

### Aims and Objectives of Inclusive Education

1. To develop and utilize Individualized Education Programmes (IEP) as a means to impart personalized and need based educational experiences to all students, abled or disabled.
2. To develop democratic thinking in young students and make democratization of education (vital goal of NPE 1992) possible.
3. Provide educational opportunities to all students, irrespective of their backgrounds and capabilities.

4. To provide appropriate vocational services to students with disabilities and direct them to careers suited for them.
5. To provide Transition Services and develop a post-secondary school plan for each student with a disability, so that they can acquire help and adjust at the higher levels of education.
6. To provide a coordinated and comprehensive instructional program from kindergarten through high school.
7. Help teachers in identifying the strengths and weaknesses of students and provide appropriate assistance wherever and whenever required.
8. To make use of the latest ICT based and non-ICT based teaching learning tools in classroom to enhance the learning capabilities of not just disabled students but also fully able students as well.
9. Making use of specialized instructors, medical experts, therapists, support agents and various experts in the process of education.
10. To encourage students with disabilities to take up leadership roles and responsibilities, making them more independent and less reliant on other's help.
11. Getting parents to be actively involved in their child's education by constantly communicating and coordinating the child's learning activities.

### **Pedagogy inclusive learning**

Inclusive pedagogy is a method of teaching in which instructors and classmates work together to create a supportive environment that gives each student equal access to learning. Inclusive classrooms work to ensure that both teacher and student participation promote thoughtfulness and mutual respect.

### **Inclusive learning**

A significant feature of our classrooms in India is the learners' diversity. Over the years, the policy of inclusive education has become an important part of all the initiatives taken by the Government of India for the education of children and has gradually replaced the earlier movement of integrated education. Many people working in the field, however, consider these two terms to mean the same thing. In their words "inclusive education means including children with disabilities in regular classrooms that have been designed for children without disabilities". In fact, inclusive education challenges all exclusionary policies and practices in education. It is based on the growing international understanding on the rights of all children to a common education in their locality regardless of their background, attainment or disability. It aims at providing good quality education and a community-based education for all. The term 'inclusive education' is a step ahead of integrated education in that, it goes beyond children with disabilities and refers to an education system that Inclusion is not confined to the disabled. It also means non-exclusion NCF, 2005 Inclusive education is about embracing all NCF, 2005 "All children and young people of the world, with their individual strengths and weaknesses, with their hopes and expectations, have the right to education. It is not our education system that has a right to certain type of children. Therefore, it is the school system of a country that must be adjusted to meet the needs of all children." B. Lindqvist, UN Rapporteur, 1994 accommodates all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions.

### **Scope of Inclusive Education**

The concept of Inclusion is often discussed as though it applies only to students with disabilities. In reality, Inclusive Education has much wider scope.

1. Valuing all students and staff equally.
2. Reducing student's exclusion from schools and focusing their increase participation in the cultures, curricula and communities of local schools.



3. To respond to the diversity of students in the locality, there is a need for restructuring the culture, policies and practices in schools.
4. Reducing barriers to learning and participation for all students in the schools. Especially those who are categorized as having special educational needs.
5. *Learning* from attempts to overcome barriers to the access and participation of particular students to make changes for the benefit of students more widely.
6. Viewing the difference between students as resources to support learning, rather than as problems to be overcome.
7. Acknowledging the right of students to an education in their locality.
8. Improving schools for staff as well as for students.
9. Emphasizing the role of schools in building community and developing values, as well as in increasing achievement.
9. Fostering mutually sustaining relationships between schools and communities

### **Different Socio-cultural factors learning**

**Family is viewed as a complex set of interacting relationships.** This system depends on bi-directional influences. Under this broad perspective, there are many factors which can be the prime focus on their own.

**Family structure:** Nuclear and extended family set-up has different kinds of childrearing practices and value systems. Quality and quantity of time spent with the child often has an immense effect on the child's development. Children coming from broken Advance Certificate Course in Inclusive Education – Cross Disability

**Child rearing practices:** Different parenting styles-authoritative, authoritarian, permissive and uninvolved parenting all have their own effect on the child. Where authoritative parenting encourages the child to express his thoughts, feelings and desires; the children with authoritarian parents are more submissive and anxious in nature. Adjustment with the environment also depends on the parenting style as well.

### **Personal Factors:**

**Physical & Mental Health:** A healthy and happy child can participate in various activities which shape his social development, personality, self-esteem and confidence.

**Temperament of the child:** An easy to warm up child is curious, can take criticisms and failure adequately, is social, joyful and can cope with the stress.

### **Social Factors**

**a. Cultural Values:** Different cultures have their own sets of values which influence the child's sense of self and coping strategies.

**b. Prejudices:** Prejudices regarding gender, different ethnic groups or even towards certain physical characteristics can come as a hindrance for the children to learn adequately.

### **Importance of Pedagogy in Teaching**

- A thoughtfully developed pedagogy improves the quality of teaching. It makes the student more receptive during learning sessions.
- An appropriate pedagogy helps impart education to students with different learning styles/abilities. Students develop a deeper understanding of subject matter.
- A correct pedagogical approach is required for students with special needs students from disadvantaged groups, viz. females or minorities.
- A thoughtfully developed pedagogy makes students develop higher level cognitive skills, viz. analysis, synthesis and evaluation.

### **Factors Affecting Pedagogy**

**Competence of the instructor:** A competent teacher keeps the students motivated, interested and eager to learn.



**Learning styles of the students:** An idea about the students' learning styles helps instructors adopt the appropriate pedagogical approach.

**Field of study:** The field of study also influences the choice of pedagogy. For instance, physics requires a balance of theory and laboratory sessions.

**Availability of additional resources:** Projectors, virtual laboratories, etc. help widen the scope of the teaching-learning process. Such educational resources keep the learning sessions alive and students engaged.

**Education System:** The policies of an education system, curriculum standards, etc. also influence the pedagogical approach.

### **Teaching Strategies for Inclusive Classroom**

**Assumptions behind Inclusive Education:** Assumptions of inclusive education are opposite to integrated education. Inclusive Education assumes that changes the system to fit the child. It is essential to addresses all types of individual needs, not just disability.

**Problem with the system not with the child:** It is quite essential to assumes that all children can learn and that all children need their learning to be supported in diverse ways. In this model of inclusive education, it is not the Child, but the education system, which is seen as a problem.

**Encourage each student to complement each other:** One of the most important teaching strategies in inclusive classroom settings is that you can involve each student share an "island of competency" with the rest of the class. For example, if a student struggles academically but enjoys music, the student should be encouraged to make up or sing "review songs" to help the rest of the class study

**Develop concrete as well as abstract thinking:** If you teach topics, you may cover plenty of material; if you teach questions, you can teach students how to think. Students who understand the material on a more basic level can give a simpler answer to the big question, whereas students who understand the material on a deeper level can give a more complex answer. Concrete thinkers and abstract thinkers can both answer the big question and join in the discussion, even though they have comprehended the question in different ways.

**Developing goals before teaching:** Students who enter an inclusive classroom require close attention in an inclusion setting as opposed to mainstream setting. Teachers must be sure to meet the goals and to help the student achieve much more than what the other students require in the classroom. Rather than pulling a child out of the classroom, try incorporating those goals into the lesson

### **Role of Teacher in Inclusive Education**

- Identification of the children with disabilities in the classroom
- Referring the identified to the experts for further examination and treatment.
- Accepting the children with disabilities.
- Developing positive attitude between normal and disabled children.
- Placing the children in the classroom in proper places so that they feel comfortable and are benefited by the classroom interaction.
- Removing architectural barriers wherever possible so that children with disabilities move independently.
- Involving the children with disabilities in almost all the activities of the classroom.
- Making suitable adaptation in the curriculum transaction so that the children with disabilities learn according to their ability.
- Preparations of teaching aids/adaptation of teaching aids which will help the children with disabilities learn.
- Parental guidance and counselling and public awareness programme through school activities.

## Conclusion

Inclusive practice is being created in classrooms and schools all around the world. However, while schools have separate provision for pupils based on their abilities and the teacher education prepares pupil teachers accordingly, subject teachers are often not educated for inclusive practice and are challenged to transfer the general recommendations to their practice. General and subject teachers report that they do not have the preparation or skills needed to teach diverse groups of pupils in inclusive setting. Developing inclusive practice demands a welcoming disposition towards diversity, an understanding of learning as a creation of meaning and an assumption that all pupils are inherently competent. Just as the human species is diverse, the curricula, teaching practices and learning situations must mirror that diversity, rather than expecting pupils to assimilate to existing school and subject structures. Teaching for equity, using teaching practices that presume diversity from the beginning and building on pupil resources can be considered simply as good teaching for all. The inclusion movement challenges teachers, also science teachers, to investigate their values and beliefs, to review their understandings of teaching, learning, curriculum, and to reinvent their roles as participants in school change. Instead of relegating pupils who do not meet school or classroom requirements to separate settings, school practices can adapt, improve or create educational environments to address pupils' resources.

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## TEACHING STRATEGIES TO TEACH GENDER ISSUES IN SCHOOL EDUCATION

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### Abstract

*This paper describes the views of Gender issues, Gender-means a concept, design or value-refers to the system of social relationships that distinguish the functions and roles of women and men because of biological differences or nature. At the same, the society then standardized to 'culture' and as if no longer negotiable, such that it is appropriate for men, while others for women. Various efforts were made to elevate and position of women as equal to men through a variety of institutions, both formal and non-formal. The final goal to be achieved is the realization of gender equality in the midst of society. Among the strategies to achieve justice is to involve women in development. The provision of equal opportunities for women to perform activities in various fields as men apparently do not guarantee for the realization of gender equality. Gender roles tend to change over time. It is important to individuals have present that the world was not always as they know it today, and the future can be completely different. How the future may look depends on humanity and the way they think. Teaching Strategies form the major instruments in reaching out to students the necessary knowledge and practices that are required to bring about this Gender Sensitivity and as a result attain the much needed goal of mutual respect, progressive collaboration and a constructive environment related to Gender. Gender is not a women's issue; it is a people's issue. "Femininity" does not exist in isolation from "Masculinity". The construction and power of one determines the construction and power of the other. Gender relations are neither "natural" nor given, they are constructed to make unequal relations seem "natural", and can be naturalized only under the duress of socialization.*

**Keywords:-** Gender, Issues, Education, Teaching, Teaching Strategies.

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### Introduction

Now it is time to teach to gender issues more meaningfully. We have already gone through the Gender Issues and are aware of the status of Gender Equality in India. There is much efforts required to break the societal stereotypes and look at all the Genders in the same light. School is an important medium which can disseminate the message of Gender equity and equality through its practices. By internalizing Gender sensitivity into the curriculum, pupils will grow in a manner where they are Gender Sensitive and hence Gender Equality can be achieved in a systematic manner. Teaching Strategies form the major instruments in reaching out to students the necessary knowledge and practices that are required to bring about this Gender Sensitivity and as a result attain the much needed goal of mutual respect, progressive collaboration and a constructive environment related to Gender.

### Gender Issues

Gender refers to the characteristics of women, men, girls and boys that are socially constructed. This includes norms, behaviors and roles associated with being a woman, man, girl or boy, as well as relationships with each other. Gender issues include all aspects and concerns related to women's and men's lives and situation in society, to the way they interrelate, their differences in access to and use of resources, their activities, and how they react to changes, interventions and policies. Gender issues include all aspects and concerns related to women's and men's lives and situation in society, to the way they interrelate, their differences in access to and use of resources, their activities, and how they react to changes, interventions and policies. Gender roles tend to change over time. It is important individuals have present that the world was not always as they know it today, and the future can be completely different. How the future may look depends on humanity and the way they think.

### **Importance of Gender issues in the Societies.**

Gender equality prevents violence against women and girls. It's essential for economic prosperity. Societies that value women and men as equal are safer and healthier. Gender equality is a human right. It saves lives, **It results in better healthcare, It helps businesses, It's good for the economy, Children are healthier, It leads to better legal protections, It leads to better racial equality, It reduces poverty, It reduces human trafficking, It can lead to peace.**

### **Some of the Important Teaching Strategies to teach Gender Issues**

Specific strategies can be used to make students conscious of gender issues which would result in developing an attitude of gender equality among students.

- **Film Analysis:** Films have good scope to do this task as it involves both audio and visual channels to convince the masses.
- **Advertisement Analysis:** These are product oriented and commercial. They try to convince people of their product through the existing socio-cultural patterns.
- **Analysis of Biographies:-**Directly or indirectly, biographies reflect the values of the contemporary society. The students can be asked to write a biography of a person whom she/he thinks has played a significant role in their life.
- **Analysis of data collected from Interviews:-**The students can interview men and women from the perspective of gender issues, bring the data to the class and discuss to take proper decisions about gender issues which lead to nullify gender disparities.
- **Lecture Strategy:** Although Lecture Strategy is teacher dominant, yet through careful and meticulous planning can be used to develop Gender Equality among students. Teacher should use examples and information in her lecture which imposes Gender related values.
- **Narration Strategy:** Teacher can narrate a story, anecdote or an incident in class and focus on Gender, such that students are able to pick up morals and qualities from them which propose Gender equality.
- **Review Strategy:** Review could be usefully used when you have to change a stereotyped thought process or when you want to plant new thoughts related to Gender among students.
- **Group Discussion:** Pupils could be asked to discuss on a current topic of Gender Issue and come out with valuable outcomes where they promote Gender Equality.
- **Problem Solving:** Teacher should give such problems to students where students discover a solution to the problem through systematic.
- **Analysis of Autobiography:-**It gives the readers an inner view of the person in different occasions involving their struggles and success.
- **Role playing:-** It is an experience based technique which can be used by teachers and students in the exploration of wide variety of social issues. Here students can be made to enact a social problem followed by discussion. In the context of teaching gender issues, the students can be asked to enact a situation, where gender disparity is involved.
- **Project Strategy:** Small projects can be given to pupils where they collect data about men and women in different fields and analyze it to understand their role and contribution in various fields.
- **Videos:** videos depicting contemporary issues related to gender issues can be made use of.
- **Books:** Number of books depicts the problems related to gender in a very effective way. Students can be exposed to these books.
- **Text books:** Text books can be very well used to teach gender issues. Students should be guided to analyze texts from gender perspective.
- **Cartoons:** Many social issues related to Gender can be effectively represented to create powerful impact on the pupils.

- **Posters:** Posters can be used to teach Gender Issues too. They can reach to large number of students and can produce the necessary outcome on each of them.
- **Flash Cards:** The roles of men and women to build a Gender Equal Society can be very effectively highlighted using flashcard.
- **Filmstrips and Transparencies:** Filmstrips and Transparencies are another very useful instructional aids in teaching Gender Issues.
- **Print media:** Teacher can use news very effectively to teach gender related issues.
- **Bulletin Boards/Information Boards:** Asking students to display information which can build a positive Gender related mindset can develop the value of Gender Equality
- **Pictures and Photographs:** Pictures from newspapers and other print media depicting disparity between men and women can be exhibited to have discussions on the same.
- **Charts:** Teacher can customize the chart with necessary information which can build a positive and conducive attitude related to Gender among students.

#### **Suggestions to promote gender issues within a classroom.**

Be Reflective and Be Objective, Use gender-neutral language, Avoid stereotyping children, Self-regulate your interaction with the children, Ask all students to participate in a variety of classroom chores, Seat and Group Students Intentionally Use Project Based Learning, Avoid asking students to speak on behalf of their gender, Choose course materials by both men and women, Avoid separating supplies or materials by gender, Be a role model, Ask children to draw their idea., Woman visibility, Videotape your class to examine your own teaching methods, Feedback from Colleagues and Students.

#### **The role of the teacher in Gender issues**

Teachers play an important role in the early upbringing and changing mindset of students. Teachers can show gender equality based behavior in class room. There are certain ways through which teachers change the mind set of students. Gender related issues have been placed in our curriculum. Therefore a sound knowledge of gender issue is a must for a teacher. A teacher is an agent of change, promotes gender equality in classroom and removes the stereotype thinking from the society by changing the mindset of young generation. Teachers reinforced the behavior which is appropriate to the class. Give more equal opportunity to students in academic setting. In the classroom an effort must be made to integrate boys and girls and not separate them in the Seating arrangements. A teacher can use mixed sitting arrangement, where boys and girls both sit together. Teachers set examples, while asking question teachers make sure their body language, gesture don't favor irrespective of gender. Social issues regarded as the core concept of the theme, child abuse, domestic violence women's right harassment at workplace etc. should be discussed by the teachers. Gender neutral language needs to be promoted by the teachers. Teachers need to pick stories and fables that do not perpetuate hierarchies that will eventually get transmitted from one generation to another.

#### **Conclusions**

Recent decades have seen female educational attainment and achievement levels equal, or surpass, those of their male counterparts in many developed countries. In spite of these changes, persistent gender differences are evident in the kinds of subjects and courses taken by young women and men within secondary and tertiary education. It totally depends on the decision of the student. It is not like if he/she is studying in a single gender schools he/she won't succeed in life. If the gender segregated schools wants to catch up with the co-ed schools they should invest more on their resources. Gender roles tend to change over time. It is important individuals have present that the world was not always as they know it today, and the future can be completely different. How the future may look depends on humanity and the way they think.

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## UNDERSTANDING DIVERSITY, EQUITY, AND INCLUSION IN HIGHER EDUCATION

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### *Abstract*

*Understanding the unique components of diversity, equity, and inclusion is essential for institutions of higher education to increase student success outcomes and to prepare graduates for the world of work. This chapter will focus on how diversity, equity, and inclusion as a single entity is perceived by enrolled students, particularly minority students, and how institutions may help to increase students' awareness of such topics and the impact on their lives upon graduation. Discussions will lend themselves to strategies that institutions may employ to demystify these terms for enrolled students. Specific focus will be given to the use of inclusive competencies and methods institutions may implore to promote inclusive practice. Implications will be provided on how colleges and universities may develop innovative strategies to increase student engagement centered on these concepts and provide opportunities for students to share their experiences and ideas for integration on their respective campuses.*

**Key Words:** *Diversity, Equity, and Inclusion.*

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### INTRODUCTION

In today's society, the terms diversity, equity, and inclusion are often spoken of in varying organizations, both public and private, including corporations and institutions of higher education. Because these terms are typically coined in a single phrase, they are sometimes considered a single entity or having very similar definitions if viewed differently. However, by definition and through practice, each term has a distinct meaning. These differences often yield varying perspectives and outcomes, which sometimes cause institutions difficulty utilizing them collectively towards organizational success. While understanding the unique components of diversity, equity, and inclusion is essential for organizational success, it is even more vital for institutions of higher education as these entities provide graduates trained to enter the workforce each year. Furthermore, it is critically important that graduates have a complete understanding of what diversity, equity, and inclusion mean as an enrolled student and the impact that it may have as they broach the world of work. On the one hand, the authors of this chapter discovered that students could not articulate the meaning of these terms collectively nor the impact they may have on their respective disciplines. On the other hand, students are incredibly passionate about equity and diversity and its impact on society as a whole.

Higher education institutions serve as a crucial part of society, providing students with the skills and knowledge necessary to succeed in their professional and personal lives. However, as society has evolved, so have the challenges that these institutions face. In recent years, there has been an increasing awareness of the importance of diversity, equity, and inclusion (DEI) in higher education. In this blog post, we will explore why DEI is essential to the success of higher education institutions and the students they serve.

Before diving into why DEI is essential to higher education, it's important to understand what these terms mean. Diversity refers to the differences in personal characteristics, experiences, and cultural backgrounds that individuals bring to a particular setting. Equity is the concept of ensuring fairness and justice in opportunities and outcomes, regardless of differences. Inclusion involves creating an environment in which all individuals feel welcome, valued, and supported.

In higher education, DEI means acknowledging and embracing the unique perspectives and experiences that students, faculty, and staff bring to the institution. It involves creating an

environment where individuals from all backgrounds feel supported and included, and where equitable opportunities are provided for all.

### **Benefits of Diversity, Equity, and Inclusion in Higher Education:**

There are numerous benefits of DEI in higher education. Here are just a few:

- **Increased Innovation:** When individuals with diverse backgrounds and experiences work together, they bring a variety of perspectives and ideas to the table. This can lead to more innovative solutions and approaches.
- **Improved Learning Outcomes:** Research has shown that students who are exposed to diverse perspectives and experiences have better academic outcomes, including higher grades and graduation rates.
- **Enhancing Social and Cultural Competence:** Exposure to individuals from different backgrounds helps students develop greater cultural competence and empathy, preparing them for success in an increasingly globalized world.
- **Strengthening Communities:** DEI can help to create a sense of belonging and community among students, faculty, and staff, promoting a more positive campus culture.

### **The Role of Higher Education Institutions in Promoting Diversity, Equity, and Inclusion:**

Higher education institutions play a crucial role in promoting DEI on their campuses.

- **Recruitment and Retention:** Institutions can actively recruit and retain a diverse student body, faculty, and staff. This involves creating outreach programs, offering scholarships and financial aid, and providing support services for underrepresented groups.
- **Curriculum and Pedagogy:** Institutions can also incorporate DEI into their curriculum and pedagogy. This can involve offering courses that explore diversity and inclusion, using inclusive teaching practices, and providing opportunities for experiential learning that expose students to diverse perspectives and experiences.
- **Creating a Supportive Environment:** Institutions can also create a supportive environment for students, faculty, and staff. This involves providing resources and support services, such as mental health services, counseling, and diversity and inclusion training.
- **Leadership and Accountability:** Finally, institutions can demonstrate leadership and accountability in promoting DEI. This involves setting clear goals and benchmarks, holding individuals and departments accountable for their role in promoting DEI, and regularly evaluating progress and making adjustments as needed.

### **Challenges to Diversity, Equity, and Inclusion in Higher Education:**

While the benefits of DEI in higher education are clear, there are also challenges that institutions face in promoting it. Some of these challenges include:

- **Resistance to Change:** Some individuals may be resistant to change and may not see the value in promoting DEI. This can make it challenging to implement new initiatives and policies.
- **Lack of Resources:** Promoting DEI requires resources, including funding, time, and personnel. Institutions may struggle to allocate these resources, particularly in times of budget cuts.
- **Unconscious Bias:** Unconscious bias can impact the recruitment and retention of diverse faculty and staff, as well as the experiences of underrepresented students.
- **Lack of Institutional Support:** Without institutional support and leadership, efforts to promote DEI may not be sustained or prioritized.

DEI is critical to the success of higher education institutions and the students they serve. Promoting DEI can lead to increased innovation, improved learning outcomes, greater cultural competence, and stronger communities. Higher education institutions play a crucial role in promoting DEI through recruitment and retention, curriculum and pedagogy, creating a supportive environment, and demonstrating leadership and accountability. While challenges exist, institutions can overcome

these obstacles by addressing unconscious bias, allocating necessary resources, and promoting institutional support and leadership. By prioritizing DEI, higher education institutions can create a more equitable and inclusive society for all.

### Conclusion -

As per the research, the awareness of DEI is at the medium level so HEIs need to take efforts to spread awareness of DEI on higher scale. The study suggested few ways to increase awareness on DEI. There are certain challenges at individual level and organisational level in the area of DEI. At individual level, clashes & conflicts due to disrespect towards other's opinions, discrimination, favouritism, difficulty in understanding the perspective of peers are few challenges. At organisational level, the challenges include increase in cost of training, increase in labour turnover /more attrition due to poor understanding of DEI, spoiling organizational culture, non- support to the policies etc. Certain opportunities unveil in the area of DEI at individual level, professional level and organizational level. At individual level, the opportunities include updating cultural knowledge, promoting active participation in decision making or suggestions, adaptability, freedom & flexibility, tolerance for different styles of culture etc. At professional level, the opportunities related to DEI include experimentation & innovative ideas, collaboration & problem solving, team performance, leadership attitude etc. At organisational level, the opportunities related to DEI include overall performance, healthy organizational culture, organizational effectiveness, etc. The consistent efforts are required to increase awareness of DEI in HEIs. It is not one time activity, but a continuous process. Frequent trainings, workshops are required to keep the organizational work flow tuned with initiatives of DEI. The workforce in the HEI is required to be ready to face the challenges related to diversity management. If the teachers are well conversant with the challenges and opportunities related to diversity management, then it could be inculcated to their students in a subtle way.

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## CONCERNS AND CHALLENGES FACED BY EDUCATORS WORKING WITH VISUALLY CHALLENGED STUDENTS

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### Abstract

*This study focusses on the multifaceted concerns and challenges encountered by educators when teaching students with visual impairments. The education of visually challenged students demands a unique skill set, strategies, and an understanding of the students' individual needs. Drawing from a diverse range of qualitative and quantitative research, this study examines the myriad issues that educators face in this specialized field. The key concerns encompass the shortage of accessible learning resources, difficulties in addressing diverse learning styles, navigating the limitations of assistive technology, and the emotional and psychological support required for both educators and students. Additionally, this article explores the importance of fostering inclusive classroom environments and the role of professional development in equipping educators with the necessary tools and knowledge to effectively support visually challenged students. By shedding light on these challenges, this research seeks to promote a deeper understanding of the complexities inherent in teaching visually impaired students and to provide insights into potential solutions for enhancing their educational experiences.*

**Keywords:** visually challenged, educators, Concerns and obstacles

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### Introduction

In the realm of inclusive education, educators play a pivotal role in fostering an environment that ensures equal access to knowledge and opportunities for all students, including those with visual impairments. Visual impairment, which encompasses varying degrees of blindness and low vision, presents a unique set of challenges for both students and educators alike. Understanding and addressing these concerns is paramount to creating an equitable educational experience for visually challenged students.

According to the World Health Organization (WHO), an estimated 253 million people worldwide were visually impaired in 2020, with the majority of cases being preventable or treatable. The educational journey of visually challenged students begins in early childhood and extends into higher education and vocational training. This journey, however, is fraught with a multitude of challenges for educators who are tasked with adapting their teaching methods, materials, and environments to cater to the diverse needs of these students (WHO, 2020).

This introduction aims to shed light on the concerns and challenges faced by educators when working with visually challenged students. It is crucial to recognize that the experiences of educators are intertwined with the experiences of their visually impaired students. As such, addressing these challenges is not only a matter of educational policy but also a human rights imperative, as articulated in the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which calls for inclusive education that ensures equal access for all (United Nations, 2006).

The term Visually Impaired refers to individuals with any degree of visual loss that cannot be fully corrected with glasses or contact lenses. Visual impairment can range from mild to severe. Visually challenged students school teachers" refers to educators who work in schools or educational settings specifically designed to serve students with visual impairments or blindness. These teachers are responsible for providing specialized instruction and support to visually challenged students to ensure they receive a quality education tailored to their unique needs and abilities.

This comprehensive exploration of the concerns and challenges faced by educators in the realm of inclusive education for visually challenged students will encompass a range of topics. These

topics will include adapting teaching materials, utilizing assistive technology, promoting a supportive classroom environment, and addressing the socio-emotional needs of visually challenged students. Additionally, we will delve into the importance of professional development for educators to equip them with the knowledge and skills necessary to meet the unique needs of their visually impaired students. To gain a deeper understanding of these concerns and challenges, we will draw upon a wide range of research studies, educational policies, and expert opinions from the field of inclusive education. By addressing these issues, we hope to contribute to a more inclusive and equitable educational landscape for visually challenged students and empower educators with the knowledge and strategies they need to make a meaningful difference in the lives of these students.

### **Review of related literature**

Numerous studies have explored the challenges encountered by educators when working with visually impaired students. These challenges often revolve around the scarcity of accessible educational materials, limited training opportunities for teachers, and the need for specialized teaching strategies. For example, Smith (2017) highlighted the persistent shortage of Braille textbooks and tactile learning resources, which hinder the educational progress of visually impaired students. Additionally, Johnson et al. (2019) discussed the importance of professional development programs aimed at enhancing educators' skills in addressing the unique needs of visually challenged students. These studies collectively underscore the multifaceted challenges faced by educators in this field.

A recurring theme in the literature is the emotional and psychosocial challenges experienced by both educators and visually impaired students. Smith and Brown (2018) conducted a qualitative study revealing that educators often grapple with feelings of inadequacy and the emotional toll of witnessing their students' struggles. Similarly, Thomas (2020) explored the psychological impact of visual impairment on students, emphasizing the importance of support services within educational settings. These studies emphasize the need for schools to provide not only academic support but also psychosocial resources to address the emotional challenges inherent in teaching and learning for visually impaired individuals.

### **Concerns and obstacles faced by school teachers of visually challenged students**

Teachers of visually challenged students face a unique set of issues and challenges that require specialized skills, resources, and support to effectively educate and support their students. Working with visually impaired or blind students can be rewarding but also demanding. In this introduction, we'll outline some of the key issues and challenges faced by school teachers of visually challenged students:

- a) **Limited Access to Learning Materials:** Visually challenged students often require learning materials in accessible formats such as Braille, large print, or digital text. Teachers must ensure that these materials are readily available and up-to-date, which can be resource-intensive.
- b) **Specialized Training:** Teachers need specialized training in techniques such as Braille instruction, tactile graphics, and assistive technology to effectively support visually challenged students in their learning.
- c) **Individualized Instruction:** Each visually challenged student has unique needs, abilities, and preferences. Teachers must develop individualized education plans (IEPs) and adapt instructional strategies to meet the specific requirements of each student.
- d) **Accessibility and Technology:** Teachers must be proficient in the use of assistive technologies like screen readers, magnification software, and accessible digital tools to ensure students can access educational content and resources.



- e) **Physical Accessibility:** The physical environment of the school, including classrooms, hallways, and restrooms, must be designed to accommodate visually challenged students' needs, including ramps, tactile cues, and other accessibility features.
- f) **Orientation and Mobility:** Teachers may need to collaborate with orientation and mobility specialists to help students navigate the school environment safely and independently.
- g) **Social Inclusion:** Promoting social inclusion and peer interactions can be challenging, as visually challenged students may experience isolation or have difficulty participating in extracurricular activities without proper support.
- h) **Advocacy:** Teachers often need to advocate for their visually challenged students to ensure they receive appropriate accommodations, resources, and support from school administrators and staff.
- i) **Emotional and Psychological Support:** Visually challenged students may experience emotional and psychological challenges related to their disability. Teachers need to provide a supportive and nurturing environment to address these needs.
- j) **Parent and Community Involvement:** Teachers must engage parents, families, and the broader community to raise awareness about the unique needs and abilities of visually challenged students and to foster a supportive network.
- k) **Assessment and Evaluation:** Traditional assessment methods may need to be adapted to accurately measure visually challenged students' progress and understanding.
- l) **Professional Development:** Ongoing professional development is crucial for teachers to stay updated on best practices and emerging technologies for educating visually challenged students.

In the subsequent sections of this discussion, we will delve deeper into each of these challenges, exploring the strategies and solutions that teachers and educational institutions can employ to address them effectively and create inclusive learning environments for visually challenged students.

#### **Key issues and potential outcomes associated with teaching visually challenged students:**

In summary, addressing the concerns and obstacles faced by educators working with visually impaired students requires a multifaceted approach that combines accessible resources, training, technology integration, and a commitment to inclusivity. By implementing these educational implications, schools can create an environment where visually challenged students can thrive academically and personally. School teachers of visually challenged students face a unique set of issues and challenges in their profession. These challenges can impact both the teachers and the students, and addressing them effectively is crucial for ensuring quality education and equal opportunities. Here are some of the key issues and potential outcomes associated with teaching visually challenged students:

- a) **Lack of Accessible Learning Materials: Issue:** Access to appropriate textbooks, materials, and resources in accessible formats (Braille, audio, tactile) can be limited.  
**Outcome:** Teachers may need to spend extra time adapting materials or seeking accessible resources, potentially affecting their workload and the quality of instruction.
- b) **Specialized Training and Support: Issue:** Teachers may require specialized training in techniques such as Braille instruction, assistive technology, and adaptive teaching methods.  
**Outcome:** With proper training and support, teachers can provide more effective instruction, ultimately improving student outcomes.
- c) **Individualized Instruction: Issue:** Visually challenged students often require individualized teaching plans and accommodations.



**Outcome: Tailored** instruction can help students reach their full potential, but it can also be time-consuming for teachers who must create and implement these plans.

- d) **Technology Accessibility:Issue:** Ensuring that technology and software used in the classroom are accessible can be challenging.

**Outcome:** Overcoming this issue ensures that visually challenged students can use technology effectively, opening up new learning opportunities.

- e) **Inclusive Classrooms: Issue:** The need for inclusive classrooms where visually challenged students can learn alongside sighted peers can be difficult to achieve.

**Outcome:** Inclusive environments promote social integration and diversity, fostering a sense of belonging for visually challenged students.

- f) **Emotional and Behavioral Challenges:Issue:** Visually challenged students may experience emotional and behavioral challenges due to their disability or experiences with discrimination.

**Outcome:** Teachers can play a crucial role in providing emotional support and addressing these challenges to create a positive learning environment.

- g) **Advocacy and Accessibility Awareness:Issue:** Teachers may need to advocate for accessibility improvements and educate others about the needs of visually challenged students.

**Outcome:** Raising awareness can lead to improved resources and a more inclusive educational system.

- h) **Limited Career Opportunities: Issue:** Visually challenged students may face limited career prospects, and teachers may need to work on developing their vocational skills.

**Outcome:** Teachers can help students prepare for successful careers and greater independence.

- i) **Legal and Policy Challenges: Issue:** Teachers may need to navigate complex legal and policy issues related to special education and disability rights.

**Outcome:** Proper understanding and adherence to these regulations can ensure that visually challenged students receive the services and accommodations they are entitled to.

Addressing these issues and challenges can lead to positive outcomes for both visually challenged students and their teachers, ultimately creating a more inclusive and equitable educational system. Collaboration among educators, administrators, parents, and advocacy groups is essential to overcome these challenges effectively.

### **Educational Implications**

- a) **Inclusive Curriculum Development:** Educators should actively collaborate with curriculum developers to ensure that educational materials are accessible and inclusive, incorporating features such as Braille texts, tactile diagrams, and audio resources. This will facilitate equal participation of visually impaired students in mainstream educational settings.
- b) **Specialized Training and Professional Development:** Schools and educational institutions must invest in specialized training programs and professional development for educators working with visually impaired students. This training should encompass techniques for effective communication, assistive technology proficiency, and strategies for accommodating diverse learning needs.
- c) **Accessible Technology Integration:** Schools should prioritize the integration of accessible technology, such as screen readers, magnification software, and adaptive devices, into the learning environment. This will empower visually impaired students to navigate digital platforms and educational resources effectively.

- d) **Individualized Education Plans (IEPs):** Develop and implement comprehensive IEPs for visually impaired students, outlining specific goals, accommodations, and support services. Regularly review and update these plans to address evolving needs and challenges.
- e) **Inclusive Teaching Strategies:** Encourage educators to adopt inclusive teaching strategies that cater to various learning styles and preferences. Employ multisensory approaches, hands-on learning, and collaborative activities to enhance the overall learning experience for visually impaired students.
- f) **Psychosocial Support Services:** Establish a support network within schools that offers psychosocial counseling and emotional support for both educators and visually impaired students. This can help address the unique emotional challenges that may arise due to the visual impairment.
- g) **Advocacy and Awareness:** Schools should actively promote awareness and advocacy for visually impaired students within the broader school community. This includes educating peers, parents, and administrators about the needs and capabilities of visually challenged students to foster a more inclusive and empathetic environment.
- h) **Resource Allocation:** Allocate resources and funding for the procurement of assistive devices, specialized educational materials, and personnel, such as orientation and mobility instructors and Braille transcribers, to better serve visually impaired students.
- i) **Collaboration with Support Organizations:** Establish partnerships with local and national organizations that specialize in visual impairment to access expertise, resources, and networking opportunities. This collaboration can provide valuable support to both educators and students.
- j) **Continuous Evaluation and Improvement:** Continuously assess the effectiveness of educational strategies and accommodations for visually impaired students. Encourage feedback from educators, students, and parents to identify areas for improvement and refine approaches over time.

## Conclusion

The concerns and obstacles faced by educators working with students who are visually impaired are complex and multifaceted. These dedicated professionals encounter challenges ranging from the lack of accessible educational materials to the need for specialized training and support. However, with a commitment to inclusivity, collaboration, and the implementation of innovative strategies and technologies, these challenges can be overcome.

Educators play a pivotal role in shaping the educational experiences of visually impaired students, and their efforts are essential in fostering a more inclusive society. By addressing the concerns and obstacles head-on, schools and educational institutions can create an environment where visually impaired students can not only access quality education but also develop the skills and confidence needed to thrive academically and in their future endeavors. The journey toward inclusivity and equal educational opportunities for visually impaired students is ongoing, but with dedication and a collective commitment, progress can be made, ultimately benefiting all members of the educational community.

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## EDUCATIONAL SOFTWARE IN EDUCATION

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### Abstract

*If we look at the advantages of preparing educational software, this educational software is useful for students, professors, academic interested, universities, educational affairs, administrative system, etc. to work effectively according to their academic intelligence. For students to compete with the modern world and enhance their knowledge, this educational software has become important for teachers to impart more knowledge to their students. Also, this educational tool has played a vital role in the field of education to adopt simplicity in training for individual assignments, to create and share educational resources, to quickly create lessons to give students results in a timely manner, to reduce manpower in educational institutions, colleges, universities, and to maintain transparency in the affairs of the education system.*

**Key Note:** How educational software can be useful for students, lecturers, educational institutes, universities, and administrations system is informed.

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**Introduction:** Modern educational system is highly dependent on Educational Software. In addition to that, after the corona virus, we see that the Education system is using more and more Educational Software. Education software helps teachers, learners, and parents all at the same time. These solutions provide users a variety of advantages, ranging from better visibility and content distribution to analytics and improved forms of communication. Education Software are more advantageous since they also provide improved efficacy, efficiency, smart content, enhanced communication, consolidation of data and information.

**Benefits of Educational Software For institutions-** Improved student engagement, Time saving, student Assessment, Media Learning, Distance Learning, Cost effective other.

**Smarter Content** – Education software has the potential to transform the way content is prepared and delivered to students. Artificial intelligence-enabled digital content provides information tailored to students' to the intellectual level. And used by students of different generations. Digital content has the added benefit of instructor monitoring and often includes built-in assessments that teachers can use to administer tests and analyze student results.

**Clear Communication-** Seamless communication between teachers, parents, and students is essential for the learning process. To effectively teach students, there must be a high degree of respect and trust. Through forums, portals, and other interactive features, educational software and applications aid in the development of strong links between all parties. Parents and children have access to resources that facilitate communication among themselves, teachers, and admins.

**Enhanced Efficiency and Efficacy** – Any institution's objective is to become more productive and efficient, and education software assists businesses in accomplishing this goal. Teachers can use classroom management software to avoid distractions and enhance attentiveness on course content. Admins can use information systems' insights to impact policy and administrative choices. Admins benefit from educational software as well.

### Major Education Software's

A helpful place to begin understanding education software is identifying the best education software's.

**Schoology :** Schools can embrace Schoology's interactive tools to make the world more reachable to their students. Students are given a number of assignments since there are so many various ways to deliver knowledge. The software is loved because of its appealing appearance, multiple features,

students, and teachers. The bulk tool for tasks is likewise of great quality! Schoology has a variety of functions, such as the numerous sorts of evaluation question pieces that are available.

Thanks to custom e Learning app development, Individual assignments can also be assigned to customize training. Its capacity to combine courses is exceptional, and you will also appreciate the messaging it provides and how it is delivered to your mail. Creating and sharing teaching resources is really useful. Schoology provides students with a customized learning platform that allows them to engage in a one-of-a-kind digital learning experience. Students can share their work both locally and globally. Additionally, the software provides a highly customizable e-platform.

Data, analytics, and targeted learning are all part of it, as are effective communication and cooperation. Its staff is exceptional at finding innovative initiatives to increase free and business products. After these additions have been approved or are in the pipeline, it will take some time for them to make their way from development to users. Schoology charges a monthly fee of ten dollars. It also offers a free version to its users.

**Google Classrooms:** Google Classroom is a Google App is another best education software that facilitates teachers to create and manage lessons quickly, provide timely feedback, and communicate with their students. Google Classroom is available for any device. You can use it with your phone, tablet, and laptop. With google classrooms it is easy to create assignments, upload lesson content, make announcements, share links and YouTube videos, and do a lot more.

All contents shared in a Google Classroom will be posted to Google Drive, allowing you to view them from anywhere. In the classroom, you can also create a quiz to distribute to the students.

**Talent LMS:** Talent LMS is another gifted product of eLearning app development services. To allow other departments to browse the site, split it into sections. Everything is well-organized, and you can access information in a variety of ways.

The programme is customizable, allowing your team to design or buy courses to match your unique needs. With this education software you can also make graphs and statistics for customer based as per their usage and it is easy to track groups or development of a particular student. TalentLMS features strong analytics and writing skills and is extremely adaptable. It has various useful integrations, and, most importantly, is a low-cost LMS. Another significant advantage is the customer service.

To aid with any issues, there is a knowledge base, a customer success manager, a helpline, and a live chat channel. Moreover, every question you raise is met with a prompt and dedicated response.

**Litmos :** Litmos is another great education software which is also intuitive to use. Employee, customer, partner, and compliance training are the most common applications for the software. Litmos, when integrated into the system, provides multiple different features that are paramount for businesses.

To begin with, it makes it easier to increase the performance training of both internal and external groups. It also accelerates the rate at which you can enhance your talents. Additionally, Litmos provides a seamless online course builder in the form of a module that applies content development tools supported by multiple formats. The software also includes virtual instructor-led training, tests, and quizzes to assess retention of knowledge. Litmos aids in the building of eCommerce, the simple management of your programmes, and the updating of each one facilitated by messages and notifications. The good parts don't just end here, this education software also delivers learning routes, data and interactive dashboard that assesses performance to analyse the impact of learning.

**Wisenet :** Wisenet's cloud-based platform enables higher education institutions to enhance successful learning outcomes, increase productivity, and develop business through a suite of integrated apps. For more than 20 years, Wisenet has been the premier seller of cloud-based solutions for education and

training organizations. It collaborates directly with clients to continually create all services and products while staying ahead of the competition by leveraging world-class technology.

This software allows you to grant ownership to individual leads, which is really beneficial. It's also useful for keeping track of customer information and saving all papers in one place. It aids in the reduction of time spent on processes that would otherwise take a lifetime. Furthermore, numerous users can access all client documents and information in a single location with a few taps on their screen.

**Workday Student:** Workday Student is an information system for students and professors that ties Workday Financial Management, Human Capital Management, Payroll, and more at a single place.

It unifies an entire campus in a single cloud-based, customisable, and user-friendly interface. The workday is well-organized and easy to access. It's a multifunctional tool that can be used for HR, student data, CRM, and a variety of other things. Secondly, one login can help you do a plethora of work.

Workday Student assists great enterprises to actively participate and reduces the number of programmes that must be logged into on a daily basis. The education software is a great tool for teachers to deliver notifications, homework, comments, and other information to their students. It allows students to keep track of upcoming deadlines and also inform them to their fellow students. It saves times for students who are hunting internships and jobs since it saves all the past application data.

**Dyknow :** Dyknow is the ultimate monitoring option for K-12 schools and districts with school-issued devices. Dyknow Classroom Management provides teachers with the resources they need to combat distractions, increase active learning, and successfully implement technology in the classroom.

Dyknow allows teachers to see real-time thumbnails of all students, block websites and applications, engage students, and review student activity history after class. Dyknow also aids K-12 administrators and technology coaches in accessing detailed device use data in order to identify squandered funds by evaluating how school-issued devices and technology tools are used. One thing precious than any money is time, and Dyknow helps you save that. The Real-Time Activity Tracker is useful for evaluating how many students visit certain websites and identifying a student or two who are using the system inappropriately.

This further goes on to sending private message to students who are distracted from their path. Dyknow has a feature relevant to this 'Freeze Screen' which can turn out to be really useful.

**ClassDojo :** ClassDojo is a classroom management education software that emphasises positive reinforcement and parent communication. It's useful to be able to keep track of what happens and show the children's and parents' successes as well as areas for improvement. You will be left in awe when you discover how appreciation and reporting language can be adjusted to the needs of the classroom. Another useful feature is the ability to display parent-child chats as well as public communications.

ClassDojo also assists parents in tracking their children's progress. This will be extremely beneficial, especially if you are a busy parent who is unable to attend school meetings. You can contact your child's teacher and request updates. This system enables you to deliver real-time feedback to students on their activities, participation, and performance.

**Socrative :** The impact of quick feedback in the learning process cannot be overstated. Socrative is an effective approach to monitor and assess learning in the classroom or the business. Monitoring and assessment save instructors time while providing learners with engaging and interesting experiences.

Instead of monitoring the clock, learners will be actively engaged in entertaining activities that include the entire class in collaborative learning, such as the popular Space Race quiz. Socrative is an



outstanding piece of software for evaluating in-class low-stakes formations. It allows students to assess their knowledge and evaluate how the class as a whole is performing. With Socrative teachers can identify areas where students need improvement allowing them to raise questions and answer them as soon as they arise.

**Lanschool :** Thanks to Lenovo's backing, LanSchool has been putting purposeful technology in the hands of enthusiastic educators for over 30 years.

LanSchool's classroom management, filtering, and student safety solutions improve student learning and collaboration while maximising teaching time and keeping students and school networks secure. Monitoring, limiting exposure, and sharing programmes and information on additional screens from a central location is advantageous. Because everyone is actively involved in the subject, it tremendously aids in the distinction of a lecture.

Students will watch your screen and follow your routine in a little window. You have no problem if a pupil is unable to focus on the monitor due to lighting issues or their classroom location.

**Kahoot :** Kahoot! converts presentations, training, and events into engaging experiences in companies of all sizes. Using Kahoot!, anybody can create and deliver interesting learning experiences, known as kahoots, on any topic in minutes. The most exciting aspect of Kahoot! is how it keeps kids interested. They can observe what their classmates are saying and reply to questions. They also compete with one another, but in a friendly way.

With Kahoot Students are kept motivated and interested in the course content. Other instructors have also created kahoots that you can see publicly and customize for your kids' lessons, making it a bit easier for a teacher to instantly put something up. The speed may be adjusted to accommodate the needs of the kids. However, while using this feature it can be a bit confusing to format math.

**Edmodo :** Edmodo assists students, teachers, parents, and administrators in improving their learning abilities. It enables learners to connect with people and customers in order to fulfil their full potential. Edmodo is listed amongst the largest global learning network for K-12 students, teachers, and admins. It has the potential to keep clients interested throughout the learning process. Customers may activate a free administrator account using this instructional tool, which speeds up learning programmes. It also awards badges to learners who perform well on assessments.

It also offers a platform that connects students, administrators, and parents via online classroom discussions. Furthermore, Edmodo aids students in poll creation and creates a community network for greater learning and communication. Customers can also customise the app to match their individual needs while also monitoring their growth.

## Conclusion

This brings us to the conclusion that technology is an important component of the modern-day classroom, with education software having grown in popularity over the last few decades. This software is simple, budget-friendly, and straightforward to use.

When it comes to turning digital in the educational sector, there is a boost in this industry. Many organizations own education software and have taken standard teaching approaches to a whole new level. In the modern world today we see that software has played an important role in all fields. In that regard, it is special that this educational software is still important in the educational arena.

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## INCLUSIVE LEARNING AND SPECIAL EDUCATION: PUPILS WITH SPECIAL NEEDS

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### **Abstract**

*Education is the most essential ingredient in the development and empowerment of individuals, and inclusion in education irrespective of the varied socio-economic differences and the differences in 'abilities' and 'disabilities' (Prasiner,2003). Successful inclusion of children with special needs is possible only when the regular schools are involved and committed to inclusion. Inclusive Education (IE) is a new approach towards educating the children with disabilities with normal ones within the same classroom. The feeling of belongingness among all community members – teachers, students and other functionaries is developed through inclusive education. A child has special educational needs if they have a learning problem or disability that makes it more difficult for them to learn than most children their age. Pupils with special needs may have problems with schoolwork, communication or behavior. Parents can get help and advice from specialists, teachers and voluntary organizations. These children have learning disabilities, intellectual disabilities, physical disabilities, or emotional difficulties. Teachers training programs, adapted curriculum, teacher's attitudes, materials, Life skill activities and equipment's provision and financial sources are essential for the successful implementation of Inclusive Education. The present paper is an attempt to highlight that provides provision of life skill strategies to strengthen Inclusive Education. Education department must provide life skill training to the teachers through Block resource centers time by time*

**Key words:** *Disability, Inclusion, life skill and Pupil with special needs.*

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### **Introduction:**

Special children mean children who have either mental or physical disability. These children are different when compared to normal children in all aspects. Mainly speaking their growth rate mentally and physically will not be comparable to that of normal children. Special Education Teachers are the professionals who have –training related to students with special needs, provide day –to –day instruction and other support for Pupil with special needs.

### **Inclusion**

An inclusive approach to education means that each individual's needs are taken into account and that all learners participate and achieve together. It acknowledges that all children can learn and that every child has unique characteristics, interests, abilities and learning needs.

### **Inclusive Education**

**Inclusive education** means that all students attend and are welcomed by their neighbourhood schools in age-appropriate, regular classes and are supported to learn, contribute and participate in all aspects of the life of the school.

Inclusive education is about ensuring access to quality education for all students by effectively meeting their diverse needs in a way that is responsive, accepting, respectful and supportive. Students participate in the education program in a common learning environment with support to diminish and remove barriers and obstacles that may lead to exclusion. Inclusive education is carried out in a **common learning environment**; that is, an educational setting where students from different backgrounds and with different abilities learn together in an inclusive environment.

### **Who is a Child with Special Needs?**

According to the Child Care Law Centre, a child with special needs is one who requires some form of special care due to physical, mental, emotional or health reasons. Because each child is unique and has unique needs, no single approach to caring for children with special needs can be applied to all children, even those with the same disability or special need.

Every child is a special person, but some children may need special care due to physical, emotional, health, or development needs. The kinds of special needs vary greatly. They may be simple allergies, developmental delays, a diagnosed disability, or a serious illness. Here are some of the broad categories of special needs:

### **What is Disability?**

Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. In other words, it is the consequence of an impairment that may be physical, cognitive, mental, sensory, emotional, developmental, or some combination of these. A disability may be present from birth, or occur during a person's lifetime.

**Behavior:** A learning disorder characterized by specific behaviour problems over such a period of time, and to such a marked degree, and of such a nature, as to adversely affect educational performance, and that may be accompanied by one or more of the following:

### **Characteristics**

In addition to the above, these students often manifest the following characteristics:

- low self-esteem
- regularly breaks social or cultural norms that are usually well established for the age level
- deviates in a significant manner from the behaviour that is normally expected in the situation

### **Deaf and Hard-of-Hearing**

An impairment characterized by deficits in language and speech development because of a diminished or non-existent auditory response to sound.

### **Characteristics**

- significant gaps in written or spoken language
- on-going speech or language difficulties
- moderate to profound hearing loss
- student is unable to access the curriculum without major or significant intervention by a specialist teacher of the deaf

### **Speech Impairment**

A disorder in language formulation that may be associated with neurological, psychological, physical, or sensory factors, that involves perceptual motor aspects of transmitting oral messages, and that may be characterized by impairment in articulation, rhythm, and stress.

### **Language Impairment**

A learning disorder characterized by an impairment in comprehension and/or use of verbal communication or the written or other symbol system of communication, which may be associated with neurological, psychological, physical or sensory factors and which may:

### **Learning Disability**

A learning disorder evident in both academic and social situations that involves one or more of the processes necessary for the proper use of spoken language or the symbols of communication, and that is characterized by a condition that:

### **Life Skill:**

Life Skills Education for individual with special needs Life skills are considered as a variety of skills which are very essential for every individual to lead an independent and successful lifestyle. Individual with special needs felt difficulty in acquiring knowledge, communicating with others, maintaining hygiene and safety, sensory processing, doing work and activities independently, having social relationship, etc. So, Purpose of Life skills education The purpose of Life skills education for

individual with special needs is to develop confidence, to receive proper education, to find new ways of thinking and problem solving, to acquire greater sense of self-awareness, to obtain better communication skill, to live collaboration and cooperation with others, to manage their time, to spend their leisure time usefully, to gain the benefits of life, etc.

**Major Skills are:**

1. **Daily living skills** education various skills required to perform day-to-day life activities independently and confidently are called as Daily living skills education. They are personal care skills, safety awareness skills, housekeeping skills, cooking skills, functional skills, money handling skills, etc.

a. **Personal care skills:** which are needed to maintain good health and hygiene are called as Personal care skills. World Health Organization has mentioned rightly about hygiene as “conditions and practices which help to maintain health and prevent the spread of diseases”. Personal care skills are brushing teeth, washing hair, bathing, using pads, dressing self, eating with utensils, eating balanced diet, proper exercise, enough sleep, etc.

b. **Safety awareness skills** which are necessary to make the individuals aware of the safety measures and allow to lead their life more independently are called as Safety awareness skills. Safety awareness skills are crossing the street safely, protecting from harmful persons, avoiding danger situations, stranger awareness, fire safety skills, knowledge about the community signs, street signs, abduction prevention, tolerating sounds in the community, identifying danger and respecting emergency procedures, etc.

c. **Housekeeping skills** which are performed for keeping the house neatly are called as Housekeeping skills. They are sweeping, mopping, dusting the walls, bathroom and bedroom cleaning, using washer and dryer on own, ironing clothes, fold clothes, make own bed, cleaning the dining table after meals, watering house plants, pulling out the weeds, dusting the furniture, handwash dishes, wash car, put wastes away, etc

d. **Cooking skills** which are needed for planning and cooking well balanced meal are called as Cooking skills. They are buying and storing food items, washing, peeling and cutting vegetables and fruits, baking, steaming and cooking food items, making juices, handling the vessels and dishes, washing and cleaning dishes and dining table, handling knife, operating oven, refrigerator, mixer, grinder, electric stove, understanding the kitchen safety, using the cooking tools, reading and following recipe, etc.

e. **Functional skills** that support individuals in independent living are called as Functional skills. They are taking public transportation such as looking up the public bus schedule in online, finding out the bus stop locations which are near to the house, schools, colleges, offices, etc, practicing paying the bus fare and getting the balance correctly, etc. Reading the signs such as crosswalk, stop sign, don't walk at an intersection, floor may be wet, caution, enter/exit signs, men's/women's restroom signs, railroad tracks, bike lane, etc. Making shopping list for shops like grocery shop, stationery, laundry, departmental stores, fruit shops, etc.

f. **Money handling skills** which are required for handling money transaction in the day-to-day life activities are called as Money handling skills. They are counting money, paying bills for different purchases, shopping, managing bank accounts, withdrawing money from bank, depositing money in the bank, allocating money for daily purposes, maintaining monthly budget, paying payments for travel, money allotment for entertainment purposes, etc.

1. **Academic skills** education Specific skills required for study related purposes are called as Academic skills education. They are functional reading skills, functional math skills, writing comprehension skills, visual comprehension skills, functional motor skills, etc.

a. **Functional reading skills** which are required for reading purposes are called as Functional reading skills. They are recognizing the symbols and sounds, reading words and sentences, learning with correct spelling, speaking with correct pronunciation, stress, pause and annotation, verbal comprehension, linguistic comprehension, speaking fluently, spoken language, conversational speech, etc

b. **Functional math skills** required for doing calculations are called as Functional math skills. They are doing math problem, understanding time, speed and distance calculation, counting, doing addition, subtraction, multiplication and division problems using money, understanding measurement and volume, problem solving, reasoning, etc

c. **Writing comprehension skills** Specific skills required for writing purposes are called as Writing comprehension skills. They are handwriting, writing without spelling mistakes, organizing ideas, using words and phrases, vocabulary, etc

d. **Visual comprehension skills** required for visual purposes are called as Visual comprehension skills. They are reading, doing math, observing maps, charts, symbols, pictures, viewing distance object, reading newspaper, visual discrimination, etc

e. **Functional motor skills** required for limb activities (performing actions) are called as Functional motor skills. They are hand-eye coordination, balance, jump, run, climb, manual dexterity, hold the objects, ride a bike, car, handle the apparatus/objects, operating the instruments, adaptive dance, play, sports activities, self-defense, yoga, etc.

1. **Cognitive skills** education Specific skills required to recognize various cognitive functions such as classifying, comparing and contrasting, creative thinking, critical thinking, analysis, synthesis, defining, dividing, evaluating, hypothesizing, identifying, ordering, predicting, rank ordering, reasoning, remembering, arguing, etc. are called as Cognitive skills education. They are perception, attention, memory, thinking, logical reasoning, learning, etc

a. **Perception Skills** required to interpret the received information from the surroundings by our sensation (sense organs) are called as Perception skills. They are visual perception, auditory perception, feeling, smell, taste, speech perception, social touch, etc.

b. **Attention skills** required to be focused on what is going on around ourselves are called as Attention skills. They are focused attention, sustained attention, divided attention, etc.

c. **Memory skills** required to record and also to recall and recognise the facts which we are observing and receiving are called as Memory skills. They are short-term memory, working memory, long-term memory, episodic memory, visual memory, auditory memory, recognition memory, etc.

a. **Thinking skills** required to think critically about the perceiving facts are called as thinking skills. They are paying attention, observation, interpretation, reflection, inference, explanation, remembering, processing, analyzing, judging and evaluating, reasoning, problem solving, decision making, concept formation, etc.

e. **Logical reasoning skills** required to use a systematic step to arrive a conclusion are called as Logical reasoning skills. They are deductive reasoning, inductive reasoning, thinking creatively and critically, information processing, analysis, synthesis, evaluation, problem solving, etc

4. **Social skills** education Specific skills required for individual with special needs to getting along with others such as sharing, making requests, interacting and communicating with others, following give and take policy, making friendship and relationship, shaking hands, expressing gratitude, taking turn, expressing empathy, etc. and to participate in the activities of society are called as Social skills education. They are self-awareness, social responsibility, travelling, problem solving, verbal and non-verbal communication, team work, etc.



a. **Self-awareness skills** required to get aware of self are called as Self-awareness skills. They are identifying needs, methods to manage stress and emotions, self-analysis, respecting others, following directions, organize yourself, using manners, respecting personal space, hide frustrations, coping stress and emotions, taking balanced diet, exercise, sleep, rest, maintaining health, etc.

b. **Social responsibility skills** required to be a responsible person of the society are called as Social responsibility skills. They are respecting individuals and cultural differences, environment conservation activities, labor practices, volunteer in the NGOs, being a member for the growth of the organization, safety social relationships, team work, demonstrating appropriate behaviour and respect toward others, recognizing authority, following instructions, etc.

c. **Travelling skills** required to be a successful traveller are called as travelling skills. They are journey planning, preparation to travel, using transports, behaving appropriately, getting about, staying safe, identifying and mitigating risk, informing to home about the program, travel map route, valuing other culture and perspectives, observing, respecting others values and beliefs, health care, taking notes about the places, dealing with unexpected situations, knowing about road safety, how to interact with passengers, how to ask help, how to pack things quickly, road signs, using emergency numbers, etc.

d. **Problem solving skills** required to solve problems arising during collaborating with others and a part of the society are called as Problem-solving skills. They are following directions, using kind words, listening to others, avoiding conflicts, conflict resolution, reasoning out your vision, being polite, asking permission, accepting the differences, using time wisely, analysing each step, having patience, being a good support to others, avoiding power struggles, recognising difficulties and seeking assistance, etc.

e. **Verbal communication skills** required to communicate verbally with others are called as Verbal communication skills. They are effective speaking, listening, understanding, interacting, using appropriate words, sentences, verbs, adjectives, etc. in speech, arguing, pronouncing correctly, written matters, responding appropriately to others, etc.

f. **Non-verbal communication skills** required to communicate non-verbally with others are called as Non-verbal communication skills. They are gestures, eye contact, facial expressions, cues, sign language, actions, symbols, pictures, pointing, nodding, body language, tone voices, texting, etc.

g. **Team work skills** required to build team and work efficiently are called as Team work skills. They are listening to others, giving chances to others, celebrating diversity and individuality, nurturing shared respect and empathy, cooperation, goal setting, taking responsibility, making friendship and relationship, shaking hands, expressing gratitude, greeting others, flexible approach, turn taking, etc.

5. **Occupational skills** education Specific skills required to prepare the individual with special needs for meaningful work and to reach their highest potential are called as Occupational skills education. These are practical oriented skills which makes the individual with special needs to qualify for a job. They are appropriate work habits, job-seeking skills, vocational skills, etc.

a. **Job-seeking skills** required for job searching related skills are called as Job-seeking skills. It is an act of looking for an employment. They skills related to that are looking for jobs on newspaper and online advertisements, friends and relatives help for job opportunity, seeking help from local resources, preparing resume, filling out applications, writing cover letters, arranging necessary documents and certificates, preparing for interview, self-introductory skills, filling out paperwork, etc.

b. **Vocational skills** required for occupation related skills are called as Vocational skills. They are hands-on experience, adequate training, good oral and written communication skills, technical



skills, managerial skills, clerical skills, leadership skills, interpersonal skills, job responsibilities, career maturity, time management, aptitude skills, using Strong Interest Inventory, Career Key, Vocational Aptitudes, Differential Aptitude Test, SWOT analysis etc

### Conclusion:

Life skills education paves the way for individual with special needs to empower them to live independently and confidently. These skills help them to live their life positively and to achieve their dreams. It also assists them to express their potential to the fullest. Life skills education lays the basis for learning all other 21st century skills in their life and improves their standard of living. Individual with special needs must learn all the life skills and have to achieve success in all their future.

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## A STUDY ON PSYCHOLOGICAL PROFILE OF THE CHILDREN WHO ARE ACADEMICALLY POOR

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### **Abstract**

*Children are constantly growing and developing, in this process, sometimes children get into learning problems at school. In fact, it is not limited to the school environment alone, but many factors lead to the problem, mainly the child's family environment, peer group, education system more than all these, psychological factors of the child are the reasons why the child has learning problem in school and it is directly reason for child educational poor performance. Therefore, while finding a solution to increase the educational performance of the children adopting a holistic strategy and not simply focusing on a few aspects is essential to improving a child's educational performance. The most crucial component of this method is preparing the child's psychological status to support learning. In order to measure psychological factors, it is extremely important to collect a psychological profile of the children. Therefore the present research aims at study the Psychological Profile of the Children who are academically poor. To fulfill the aim and objectives of the study in this research focused on children intelligence, attitude, emotional factors, behavioral aspects, adjustment, anxiety, stress, temperamental factors which plays major role in shaping the behavior in future, interpersonal relationship, psychological problems which contribute to children poor academic performance etc are taken into account.*

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**Key Words:** Psychological Profile- Children -Academically Poor

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### **Introduction:**

The concept of 'Psychological Profile' can be defined in different ways by different professionals in different fields, here is the definition of 'Psychological Profile' in the field of education carries two sub concepts that is 'Psychological profile of the children' and 'psychological profile of the teacher'. The teacher psychological profile is helpful in measuring how teachers' psychological factors affect their teaching and children's learning ability, and children psychological profile is helpful in measuring how child psychological factors contribute to enhancing children's competence in school and how its significantly plays major role in child academic performance.

#### **❖ Components of psychological profile:**

When psychological profile is viewed from the perspective of children's educational performance, the following components can be seen in it.

1. **Intelligence:** In the field of psychology, the word intelligence is used a lot and many psychologists have given different types of definitions among those Kendra Cherry (2022) definitions covers all the aspects of learning process he defined "Intelligence involves mental abilities such as logic, reasoning, problem-solving, and planning".

Intelligence it is the most significant factor in improving children's academic achievement. The best personal indicator of academic success is intelligence (Deary, Strand, Smith, & Fernandes, 2007). It is also found in other research that the child is suffering from some psychological problem but fails to improve his academic performance even though his intelligence is high. For instance children with relatively high intelligence may not reach their academic achievement potential when they experience sleep problems (Stephen A. Erath, Kelly M. Tu, Joseph A. Buckhalt, and Mon El-Sheikha 2015 and 2016). Even though several studies have shown that intelligence is not the only element that leads to good academic success, if a child's IQ is low, their academic performance will be much lower. Therefore the association between intelligence and academic achievement is well established (Diana Lopes Soares, Gina Cláudia Lemos, Ricardo Primi, Leandro S. Almeida 2015).

Following the above discussion we can understand that there is correlation between intelligence and academic performance of the children. The same opinion even in identified with another study that intelligence and academic achievement are two different, but interrelated, constructs (Fatih Kaya et al 2015 ). Therefore, it is essential to raise IQ in order to improve the academic performance of students who have low academic performance.

**2. Attitude:** In simple words attitude means an individual's mental state toward another person, an object, or a circumstance is known as their attitude. The thoughts, outlook, and feelings are all a part of attitude ( Richard M. Perloff 2016). The attitude affects many aspects of a person's life, and this type of attitude also has an enormous impact on a child, which is directly related to academic performance. It is also significant relationship with parents and teacher attitude towards child also play major role.

3. A child's motivation, attitude,
4. temperament, and feelings toward school can also affect his/her
5. learning and educational outcomes. Various studies have dem-
6. onstrated that the way children learn can affect their ability to
7. achieve academically (Sternberg et al., 1998). Positive correl a-
8. tions between children's attitudes toward school and academic
9. achievement have been found (Ak & Sayil, 2006; Marjoribanks,
10. 1992; Price, 2000)

**3. Emotional Factors:** Emotions are mental states triggered by neuro physiological adjustments, which can be variously connected to ideas, feelings, behavioural reactions, and a level of pleasure or discomfort ( Daniel L (2011), Panksepp and Jaak (2005), Cananac and Michel (2002), Damasio AR (1998), Ekman et al (1994)).

Following are the points give more information about how and when emotional factors effect on children academic performance.

1. The emotional context may enhance the ability to recall specifics and retain them in long-term memory.
2. The primary factor in selecting a certain course and continuing to learn may be interest and such kind of to have interest and disinterest depend on persons' emotional factors
3. Happy emotions are referred to as "accomplishment emotions" since they can arise from successful learning or lead to success (Ainley and Hidi 2014).
4. Negative emotions affects on children learning process and reason for low performance.
4. **Behavioral Aspects:** Behavioral aspects how a person reacts to his or her surroundings, including setting personal objectives, learning new abilities, and changing how they react to certain experiences.

Two specific types of behaviors can be linked to academic achievement: prosocial behavior and peer problems. These two behaviors have been linked to various academic skills such as study habits, and classroom behavior, and peer interactions, which in turn affect academic performance (Wentzel 1993, 1998).

The level of participation in sports, cultural, co-curricular, and extracurricular activities, associations with classmates and teachers at school, maintenance of social relationships, personal aspects like hygiene, conduct in school, method of communication, behavior related to health and hygiene, etc. are among the behavioral factors that have a direct impact on a child's academic performance.

5. **Adjustment:** Adjustment is a minor adjustment or change made to provide the right fit, appearance, or outcome (Definitions from Oxford Languages). And such a kind of adjustment in terms of school children, we can understand in three aspects like personal adjustment, social adjustment and adjustment with school environment.

Following are the some of the opinion of the researchers, who made an effort to understand the link between children's level adjustment with school and its impact on academic performance.

- a. A child's school adjustment is crucial to their development and acts as the foundation for their entire life. It is connected to a child's development and accomplishments as well as their attitudes toward learning, anxiety, loneliness, and social support. Children's motivation for academics is impacted by interpersonal relationships.
- b. Children are supported by friendship in the classroom and benefit from it when adjusting. Peers can provide help when dealing with issues, and children can handle rejection (Erath, S.A et al., (2008).
- c. Student academic achievement is impacted by the school adjustment. In comparison to other students, those with higher school adjustment had superior academic accomplishment. It is commonly accepted that unfit behaviour can have an impact on a person's academic success as well as his or her personal growth and development ( Shivagunde, S. & Kulkarni, V. V 2012).

6. **Anxiety:** Your body's natural reaction to stress is anxiety. In another words we can say that Arousal of the nervous system is a cause of anxiety, which is a subjective experience of tension, apprehension, nervousness, and worry (Spielberger, 1983). Regarding this some are the significant work shown as under.

While physiological symptoms of anxiety include sweaty palms, cold, nervousness, panic, fast pace of breathing, racing heartbeat, or an upset stomach, psychological symptoms of anxiety in students include feeling nervous before a tutorial class, panicking, going blank during a test, feeling helpless while doing assignments, or lack of interest in a difficult subject (Ruffins, 2007).

1. High levels of anxiety influence on the decrease of working memory, distraction, and reasoning in students (Aronen et al., 2005).

7. **Stress:** Stress can be defined as any type of change that causes physical, emotional or psychological strain. Stress is your body's response to anything that requires attention or action. Everyone experiences stress to some degree. Academic stress is a term used in the world of education to describe children who are under pressure to meet their academic requirements. Low academic performance may result if parents, teachers, and students themselves are unable to manage the academic stress. Additionally, academic stress can result in psychological problems in addition to poor academic achievement. Academic stress can reduce motivation, hinder academic achievement, and lead to increased college dropout rates (Pascoe et al., 2020).Academic stress has also been shown to negatively impact mental health in students (Li and Lin, 2003; Eisenberg et al., 2009; Green et al., 2021).

8. **Temperamental Factors:** Activity, regularity, initial reaction, adaptability, intensity, mood, distractibility, persistence-attention span, and sensory threshold are the nine temperament features that have the most influence over temperament (Chess, S., & Thomas, A 1977, 1996, 1999).

Temperament is usually found early in a child's life and finds its presence most consistently throughout the child's school years. So it is natural that it usually has a direct bearing on the child's learning and academic performance. Since almost a century ago, researchers have looked into temperamental traits in relation to education. Supportive viewpoints on its contribution to children' academic progress have been expressed (Poffenberger et., al 1924 ; Terman L M 1925; Oates et.,al 1928 ; Bending and Sprague 1954; Wagner and Sober 1964 ).

9. **Interpersonal Relationship:** Good interpersonal connections can be extremely beneficial for advancing children' academic skill development. Self-determination theory (SDT) claims that positive interactions can satisfy an adolescent's fundamental psychological desire for social relatedness (Deci and Ryan 2000). In this connection in the present research it tired to understand how the children interpersonal relationship will affect their academic performance.

**10. Psychological Problems:** Children's academic performance is directly impacted by their mental health. The child's academic performance and educational success are negatively impacted by untreated childhood psychiatric problems such as ADHD and learning difficulties. The health, employment, and status of the child as an adult are all impacted by poor educational outcomes. This is especially true for psychiatric problems that start at age 7 and last past the age of 16. (Dr. Neville 2013).

**Aim and Objectives of the Study:** The study is aimed to understand psychological profile of the children who are academically. In view of this, to meet aim of the study following objectives have been formulated

To know the socio-economical conditions of the children

1. To review components of psychological profile in connection to poor academic performance of the children
2. To understand whether psychological aspects are reason for their poor academic performance

### **Findings and discussion:**

Keeping in view the objectives of the present research, a semi structured interview Schedule was prepared and primary data was collected in primary schools which are located at Shikaripura, Shivamogga District of Karnataka. Total 16 students those who are academically poor were taken into account to collect primary data.

Several questions were formulated in the interview schedule in an attempt to understand more about the social and economic circumstances of the students, who were academically poor performance. In it 11 (68.75%) were belongs to other backward community, 04 (25.0%) were belongs to schedule cast and 1 (06.25%) were belongs to schedule tribe. In the present research also gender wise information of children was collected total 10 (62.50%) were male and 06 (37.50%) were female and all the children age was between 10 and 13.

In order to find out the financial status of the children, in the interview schedule, it was asked some general questions about the financial status of their family, mainly about the occupation of their parents, type of house. Majority that is 81.25 children's parents occupation was agriculture and co-agricultural and majority that is 62.5% children living in semi pukka houses.

In this present research interview scheduled consists several questions made to investigate psychological profile of the school going children, those who are academically poor. The study mainly focused on to investigate children's happiness in life, Is children feel loneliness in life, about the children level of depression, about stress of the children, temperament level and social participation of the children. It is cleared the present research more number of the children replied that they are unhappy in life and feel loneliness in their life. Due lack of concentration in teaching and learning process children facing difficulty in education which leads to depression as well as stressful in learning process. Some students also replied that due to inferiority they were not interested in social participation.

**Conclusion:** Based on the above in detail discussion about the psychological profile of the children who are academically poor, the study came to conclude that there is direct relation between academic performance of the children and their academic performance. So that it is urgent need to address the psychological issues of the children is helpful to increase the academic performance of the children. Psychological counseling, psychiatric care and introducing the concept of school social work in educational institution may helpful to get desire academic performance of the children, those who are basically facing psychological issues.



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## DIVERSITY ISSUES IN EDUCATION

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### Abstract

*The inequities and difficulties brought on by variations in students' origins, such as race, ethnicity, socioeconomic status, gender, sexual orientation, aptitude, and more, are referred to as diversity issues in education. These problems may have a big effect on how well students are educated and on their overall experience. Race and ethnic differences are one major issue. Minority students frequently struggle academically, have greater dropout rates, and have more difficulty enrolling in advanced courses. Tracking and biased discipline are two discriminatory methods that can make these discrepancies worse. Furthermore, culturally insensitive curricula may inaccurately reflect various viewpoints. Another urgent concern is the discrepancies in socioeconomic status. Low-income students frequently have restricted access to educational resources, such as competent instructors, current textbooks, and extracurricular activities. This disparity feeds a negative feedback loop. Gender diversity is important. Gender stereotypes can affect students' self-esteem and career choices. Ensuring an inclusive curriculum and combating gender bias is essential. Addressing diversity issues in education requires systemic change. Implementing equitable funding, diversifying the teaching workforce, providing culturally responsive curricula, and promoting inclusive policies can help bridge these gaps. Encouraging dialogue, awareness, and sensitivity among educators and students is crucial for fostering an inclusive and equitable learning environment, where every student has an equal opportunity to succeed. Ultimately, tackling diversity issues in education is essential for promoting social justice and creating a more equitable society.*

**Keywords:** Diversity issues in education, Race and education, Ethnicity and education, Low-income backgrounds, Access to educational resources, Inclusive education policies, Awareness in schools, Sensitivity in education, Social justice in education, Equitable society.

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### Introduction:

The time period "range in education" refers to a extensive category of disparities amongst students in phrases of their histories, identities, and life experiences. Race, ethnicity, social fame, gender, sexual orientation, capability, and cultural heritage are only some of the differences that exist. While range may be an asset in academic environments, it also affords some of difficulties and inequities that should be addressed. The life of discrepancies among pupil corporations is one of the most critical demanding situations within the place of diversity issues in education. These inequalities take many specific paperwork, which includes unequal get right of entry to great studying materials, discrepancies in instructional performance, and varying rates of achievement. Such disparities frequently result in success problems for underprivileged corporations, which feed cycles of downside. Racial and ethnic disparities are particularly salient in educational contexts, where minority students often experience lower academic achievement, higher dropout rates, and limited access to advanced educational opportunities. Discriminatory practices, including tracking and biased discipline, can exacerbate these disparities. Furthermore, curricula that lack cultural sensitivity can fail to represent diverse perspectives accurately, contributing to the erasure of certain groups' experiences. Socioeconomic disparities also play a significant role in shaping the educational landscape. Students from low-income backgrounds often contend with inadequate access to quality teachers, up-to-date learning materials, and extracurricular activities. This imbalance perpetuates a cycle of disadvantage, as educational opportunities are closely tied to socioeconomic status. Additionally, gender diversity introduces its own set of challenges, as gender stereotypes can influence students' self-perception and career choices. Ensuring an inclusive curriculum that addresses

gender bias is essential in fostering an equitable learning environment. Addressing diversity issues in education requires systemic change, encompassing equitable funding, diversifying the teaching workforce, providing culturally responsive curricula, and promoting inclusive policies. Encouraging dialogue, awareness, and sensitivity among educators and students is essential for creating an educational environment where every student has an equal opportunity to succeed. Ultimately, tackling diversity issues in education is a vital step toward promoting social justice and creating a more equitable society.

### **What is Diversity?**

Diversity in education refers to the presence of a wide range of student backgrounds, experiences, and characteristics within educational settings. It encompasses a variety of dimensions, including but not limited to:

**Racial and Ethnic Diversity:** This relates to the presence of students from different racial and ethnic backgrounds, including various minority groups and underrepresented populations.

**Socioeconomic Diversity:** It refers to students from various economic backgrounds, ranging from low-income to high-income families. Socioeconomic diversity can impact access to educational resources and opportunities.

**Gender Diversity:** Gender diversity encompasses students of all genders, including cisgender, transgender, and non-binary individuals. It also considers issues related to gender equality and inclusivity.

**Cultural Diversity:** Cultural diversity includes students from different cultural backgrounds, nationalities, and traditions. It involves respecting and valuing the cultural heritage and customs of individuals.

**Religious Diversity:** This dimension acknowledges students from various religious beliefs and practices. It also includes those with secular or non-religious worldviews.

**Linguistic Diversity:** Linguistic diversity involves students who speak different languages or dialects, including those who are bilingual or multilingual.

**Ability and Disability Diversity:** Students with a wide range of abilities and disabilities should be included and provided with appropriate support and accommodations to ensure an inclusive educational environment.

**Sexual Orientation and LGBTQ+ Diversity:** This dimension acknowledges students with diverse sexual orientations, including lesbian, gay, bisexual, transgender, queer, and other identities within the LGBTQ+ community.

**Age Diversity:** Age diversity can apply to settings such as universities, where students of various ages, from traditional college-aged students to non-traditional or adult learners, may be present.

**Neurodiversity:** Neurodiversity recognizes the differences in neurological functioning among students, including those with conditions like autism, ADHD, dyslexia, and others.

**Geographic and International Diversity:** Students from various geographical locations and international backgrounds contribute to a diverse learning environment, bringing different perspectives and experiences.

**Ideological and Political Diversity:** This dimension encompasses students with a wide range of political and ideological beliefs and viewpoints.

Diversity in education is not just about having a diverse student body but also about creating inclusive and equitable educational environments where all students feel valued, respected, and have an equal opportunity to learn and succeed. It involves acknowledging and celebrating differences while actively working to address issues of bias, discrimination, and inequity that may arise based on these differences. Educators and institutions often aim to promote diversity as a means of preparing students for the pluralistic and interconnected world they will encounter beyond the classroom.

**Diversity Issues in Education in Government- Run Institutions:**

Diversity issues in education within government-run institutions can encompass a wide range of challenges related to the inclusion and equitable treatment of individuals from diverse backgrounds. These issues can vary depending on the specific country, region, and context, but some common diversity-related challenges in government-run educational institutions include:

**Racial and Ethnic Disparities:** Government-run institutions often struggle with addressing racial and ethnic disparities in education. Students from marginalized racial and ethnic backgrounds may face barriers in access to quality education, disparities in discipline and suspension rates, and limited representation among teachers and administrators.

**Socioeconomic Inequality:** Socioeconomic disparities can impact educational opportunities. Students from lower-income backgrounds may have limited access to resources, extracurricular activities, and advanced coursework, which can hinder their academic achievement and future prospects.

**Gender Equality:** Ensuring gender equality in education involves addressing issues such as gender-based violence, stereotyping, and gender bias in curricula and teaching methods. Additionally, there may be disparities in access to educational opportunities for transgender and non-binary students.

**Inclusion of Students with Disabilities:** Government-run institutions must provide equitable access and support for students with disabilities. This includes accommodating physical disabilities, learning disabilities, and neurodiversity, as well as addressing bullying and discrimination.

**Language Barriers:** Many countries have diverse linguistic populations, and language barriers can impede educational progress. Providing appropriate language support and resources for English language learners or speakers of minority languages is crucial.

**Cultural Competency:** Teachers and administrators may need training in cultural competency to create inclusive environments that respect and celebrate diverse cultures and traditions. This can help prevent cultural insensitivity or bias in the classroom.

**LGBTQ+ Inclusivity:** Government-run educational institutions need to create safe and inclusive environments for LGBTQ+ students and staff. This includes addressing issues of discrimination, harassment, and providing resources like LGBTQ+ support groups.

**Religious Diversity:** In areas with diverse religious populations, schools must be sensitive to the needs of students from various faith backgrounds, respecting their religious practices and beliefs while maintaining a secular learning environment.

**Indigenous Rights and Education:** In regions with Indigenous populations, addressing historical injustices, acknowledging Indigenous knowledge, and respecting Indigenous rights in education are critical issues.

**Teacher Diversity:** The diversity of the teaching workforce is crucial for fostering inclusive learning environments. Efforts to recruit and retain teachers from underrepresented backgrounds are essential.

**Access to Technology:** In the digital age, equitable access to technology and the internet is a significant concern. Students without reliable access may be at a disadvantage in terms of online learning and digital literacy.

To address these diversity issues in government-run educational institutions, it is essential to implement policies and initiatives that promote equity, inclusion, and diversity. This may involve changes in curriculum, teacher training, anti-discrimination policies, affirmative action programs, and efforts to close achievement gaps. Collaborative efforts among government agencies, schools, communities, and advocacy groups are often necessary to effect positive change and create more inclusive educational systems.

**Diversity Issues in Education in Private- Run Institutions:**

Diversity issues in education in private-run institutions share many similarities with those in government-run institutions but may also present some unique challenges. Private educational

institutions, while often autonomous in their decision-making, still need to address issues related to equity, inclusion, and diversity. Here are some of the common diversity issues in private-run educational institutions:

**Socioeconomic Diversity:** Private schools can have higher tuition fees and selectivity in admissions, potentially limiting access for students from lower socioeconomic backgrounds. This can create a lack of economic diversity among students and contribute to disparities in educational opportunities.

**Racial and Ethnic Diversity:** Private schools may have lower racial and ethnic diversity compared to public schools, primarily due to factors like location, cost, and admission policies. Lack of diversity can result in students having limited exposure to peers from different racial and ethnic backgrounds.

**Access and Affordability:** The cost of tuition and associated expenses in private institutions can be a barrier to access for many families, particularly those with lower incomes. Scholarship and financial aid programs can help mitigate this issue but may not always be sufficient.

**Inclusion of Students with Disabilities:** Private schools may have different resources and policies for accommodating students with disabilities, which can impact the inclusivity and accessibility of these institutions.

**Gender Diversity:** Some private schools may have specific gender policies or traditions that can affect the experiences of transgender and non-binary students. Ensuring a supportive and inclusive environment for all gender identities is important.

**LGBTQ+ Inclusivity:** Private institutions may vary in their acceptance and support of LGBTQ+ students and staff, which can affect the well-being and sense of belonging of individuals within the school community.

**Cultural Competency:** Like public schools, private institutions should promote cultural competency among staff and students to ensure that diverse cultural backgrounds are respected and valued.

**Teacher and Staff Diversity:** The diversity of the teaching and administrative staff in private schools can also be a concern. A lack of diversity among educators can affect the overall educational experience for students.

**Religious and Ethical Diversity:** Some private schools have religious affiliations or specific ethical principles, which can create challenges related to the inclusion of students from different religious or ethical backgrounds.

**Curriculum and Inclusivity:** Private institutions may have more flexibility in designing their curriculum, but they must still ensure that it reflects a diverse range of perspectives and histories.

Addressing diversity issues in private-run educational institutions often requires a commitment to equity, inclusivity, and social responsibility. These institutions can take steps to promote diversity and inclusion, such as implementing inclusive admission practices, providing financial aid and scholarships, offering diversity training for staff, and fostering a welcoming and respectful school culture. Collaboration with community organizations and advocacy groups can also be valuable in addressing diversity-related challenges in private educational institutions.

#### **How can Diversity Issues in Education be Tackled?**

Addressing diversity issues in education requires a multifaceted and sustained effort at various levels of the education system, from individual classrooms to school districts, higher education institutions, and government policy. Here are some strategies to tackle diversity issues in education:

**Inclusive Curriculum and Materials:** Ensure that curricula are diverse and inclusive, reflecting the contributions and perspectives of various cultures, races, genders, and identities. Incorporate literature, history, and other subjects that represent a wide range of voices and experiences.

**Teacher Training and Professional Development:**

Provide ongoing training and professional development for teachers and staff on cultural competence, diversity, equity, and inclusion. Encourage educators to reflect on their own biases and develop strategies to create inclusive classrooms.

**Anti-Bias Education:**

Implement anti-bias education programs that promote empathy, tolerance, and understanding among students. Address stereotypes, prejudices, and discriminatory behavior through age-appropriate discussions and activities.

**Diverse Faculty and Staff:**

Recruit and retain a diverse teaching and administrative staff to serve as role models and provide diverse perspectives. Promote policies that ensure equal opportunities for educators from underrepresented groups.

**Affirmative Action and Inclusive Admissions:**

Use affirmative action policies, where legally permissible, to increase diversity in educational institutions. Employ holistic admissions processes that consider students' backgrounds and experiences in addition to academic achievement.

**Access to Resources:**

Ensure equitable distribution of resources, including funding, technology, and extracurricular opportunities, to schools and communities with historically disadvantaged populations.

**Culturally Responsive Teaching:**

Adopt teaching practices that are culturally responsive and consider the diverse needs and learning styles of students. Foster classroom environments where students feel safe sharing their perspectives and identities.

**Mentoring and Support Programs:**

Establish mentoring programs that connect students from underrepresented groups with mentors who can offer guidance and support. Provide resources and support networks for first-generation college students and others facing unique challenges.

**Community Engagement:**

Involve parents, families, and communities in the educational process to bridge the gap between home and school. Partner with community organizations that can provide additional resources and support.

**Data Collection and Analysis:**

Collect and analyze data on student outcomes, discipline, and participation by demographic groups to identify disparities and inform targeted interventions. Hold institutions accountable for addressing disparities through transparency and reporting.

**Policy and Legislation:**

Advocate for and enact policies and legislation that promote diversity, equity, and inclusion in education, including anti-discrimination laws and funding equity measures.

**Awareness and Cultural Competency Training:**

Organize awareness campaigns and cultural competency training for students and staff to promote understanding and respect for diverse identities.

**Conflict Resolution and Restorative Practices:**

Implement conflict resolution and restorative justice practices to address conflicts and disciplinary issues in a way that fosters understanding and reconciliation.

**Continuous Assessment and Improvement:**

Regularly assess the effectiveness of diversity initiatives and make adjustments as needed to ensure progress toward equity and inclusion.



Tackling diversity issues in education is an ongoing process that requires commitment, collaboration, and a dedication to promoting a more inclusive and equitable learning environment for all students. It often involves a combination of policy changes, institutional practices, and individual efforts to make a meaningful difference.

**Conclusion:**

Diversity issues in education are complex and multifaceted, encompassing disparities related to race, ethnicity, socioeconomic status, gender, ability, and more. Addressing these issues is not merely a matter of equity and justice; it is essential for fostering inclusive and enriched learning environments that prepare students for a diverse world.

To conclude, tackling diversity issues in education requires a holistic approach. This involves inclusive curricula, culturally competent educators, equitable access to resources, and anti-bias programs. Educational institutions must actively promote diversity and inclusion, reflecting the experiences and identities of all students. Collaboration with communities, policy changes, and ongoing assessment are critical components of this journey. By recognizing the value of diversity, we not only bridge achievement gaps but also empower students to thrive in a global society where diversity is the norm, ultimately building a more equitable and harmonious future.

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## LEARNING BARRIERS AND BEHAVIOURAL PROBLEMS

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### *Abstract*

*Learning barriers and behavioral problems are significant challenges that educators, parents, and policymakers must address to ensure the academic success and well-being of students. This abstract provides an overview of the key factors contributing to these challenges and explores potential solutions. Learning barriers encompass a wide range of issues that impede students' ability to acquire knowledge effectively. These barriers can include learning disabilities, language barriers, inadequate access to educational resources, and socioeconomic disparities. Identifying and addressing these barriers early is crucial for creating an inclusive learning environment. Behavioral problems among students can disrupt the learning process and affect both individual and classroom outcomes. These problems can manifest as disruptive behavior, attention difficulties, aggression, or withdrawal. Understanding the underlying causes, such as environmental stressors or emotional trauma, is essential for effective intervention. One approach to addressing these challenges is the implementation of personalized learning strategies. Tailoring instruction to individual student needs can help overcome learning barriers and engage students more effectively. Additionally, creating a positive and inclusive school climate that fosters social-emotional learning can mitigate behavioral problems and promote a healthier classroom environment. Furthermore, collaboration among educators, parents, and mental health professionals is critical to identifying and addressing learning barriers and behavioral problems comprehensively. Early intervention, targeted support, and ongoing assessment are key components of successful strategies. In conclusion, recognizing and addressing learning barriers and behavioral problems are essential for fostering an inclusive and effective educational system. By implementing personalized learning, promoting a positive school climate, and fostering collaboration among stakeholders, educators and policymakers can work together to create a nurturing environment that supports the academic and emotional growth of all students.*

**Keywords:** Learning barriers, Behavioral problems, Educators, Parents, Well-being, Key factors, Challenges, Learning disabilities, Inclusive educational system, Positive school climate, Nurturing environment, Academic growth, Emotional growth.

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### **Introduction:**

Learning barriers and behavioral problems are significant challenges that can impact the educational experience and overall well-being of students. These issues are of concern to educators, parents, and policymakers alike, as they can hinder students' academic success and social development. Understanding the nature of these challenges, their underlying causes, and potential solutions is crucial for creating effective and inclusive educational environments. Learning barriers encompass a wide range of obstacles that impede students' ability to acquire knowledge effectively. These barriers can include learning disabilities that affect a student's cognitive functions, language barriers that hinder comprehension, inadequate access to educational resources, and socioeconomic disparities that create disparities in opportunities. Identifying and addressing these barriers early in a student's academic journey is essential for promoting equity and creating an inclusive learning environment where all students can thrive. Behavioral problems among students can disrupt the learning process and have far-reaching consequences for both individual students and the classroom as a whole. These problems can manifest in various ways, such as disruptive behavior that disrupts the learning environment, attention difficulties that hinder engagement, aggression that poses safety concerns, or withdrawal that isolates students from their peers. Understanding the underlying causes of these behavioral issues, which can range from environmental stressors to emotional trauma, is essential for effective intervention and support. Addressing learning barriers and behavioral problems often requires a multifaceted approach. One effective strategy is the implementation of personalized

learning techniques that tailor instruction to the individual needs and learning styles of each student. Additionally, fostering a positive and inclusive school climate that promotes social-emotional learning can help mitigate behavioral problems and create a healthier classroom environment. Collaboration among educators, parents, and mental health professionals is also critical in identifying and addressing these challenges comprehensively. Early intervention, targeted support, and ongoing assessment are key components of successful strategies to overcome learning barriers and address behavioral problems.

Thus, learning barriers and behavioral problems are complex issues that require a holistic and collaborative approach to address effectively. By recognizing the importance of early intervention, personalized learning, a positive school climate, and collaboration among stakeholders, educators and policymakers can work together to create nurturing educational environments that support the academic and emotional growth of all students.

➤ **Learning Barriers and Behavioural Problems in the 1900s:**

Learning barriers and behavioral problems in the 1900s were influenced by the educational practices, societal norms, and limited understanding of psychology and child development prevalent during that era. Here are some key aspects of learning barriers and behavioral problems in the 1900s:

**Limited Understanding of Special Needs:** In the early 1900s, there was limited understanding of learning disabilities and other special needs. Many students with conditions like dyslexia or ADHD faced significant barriers to learning, often without proper diagnosis or support.

**Strict Discipline:** The discipline in schools during the early 1900s was often characterized by strict rules and corporal punishment. This approach sometimes led to behavioral problems as students rebelled against harsh disciplinary practices.

**Gender Norms:** Gender norms heavily influenced education during this period. Girls and boys were often subjected to different educational expectations and opportunities, which could lead to learning barriers and behavioral issues related to inequality.

**Limited Mental Health Awareness:** Mental health issues were not well understood or addressed in schools. Students facing anxiety, depression, or other mental health challenges might not have received appropriate support, potentially leading to behavioral problems.

**Lack of Special Education Services:** Special education services were virtually non-existent in the early 1900s. Students with disabilities often had limited access to education, and those who did attend regular schools faced significant barriers.

**Homogeneous Classrooms:** Classrooms in the 1900s were typically homogeneous, with little consideration for students' diverse backgrounds, learning styles, or individual needs. This lack of differentiation could contribute to learning barriers and behavioral issues.

**Role of the Teacher:** Teachers in the early 1900s were often expected to maintain strict control over their classrooms. They had limited training in child psychology or behavior management, which could affect their ability to address behavioral problems effectively.

**Limited Resources:** Schools in the 1900s had limited resources, both in terms of instructional materials and support services. This lack of resources could hinder efforts to address learning barriers and behavioral problems.

**Parental Involvement:** Parental involvement in education varied widely. Some parents had little interaction with schools, while others were actively involved. Parental support and advocacy could play a significant role in addressing learning and behavioral challenges.

**Evolution of Educational Psychology:** Towards the latter half of the 1900s, the field of educational psychology began to emerge. Researchers and educators started to develop a deeper understanding of child development, learning theories, and effective teaching practices.

It's important to note that educational practices and awareness of learning barriers and behavioral problems evolved significantly over the course of the 20th century. By the latter decades of the century, there was a greater recognition of the need for inclusive education, special education services, and the importance of addressing both learning and behavioral challenges in a more holistic and individualized manner.

➤ **Learning Barriers and Behavioural Problems in the Last Decade:**

Over the last decade, there have been notable developments and changes in the landscape of learning barriers and behavioral problems in education. Here, we explore some key trends and shifts in these areas:

**Technology and Digital Learning:** The widespread adoption of digital technology in education has introduced new dimensions to learning barriers. While technology can enhance learning, it has also brought challenges related to screen time, digital distractions, and cyberbullying. Moreover, access to technology and the internet has become a critical factor in education, with the digital divide persisting as a major learning barrier.

**Remote and Online Learning:** The COVID-19 pandemic accelerated the shift toward remote and online learning. While this mode of education offers flexibility, it also poses challenges, particularly for students who struggle with self-discipline, lack access to necessary resources, or require in-person support. Behavioral issues, such as disengagement and isolation, have also emerged in this context.

**Mental Health Awareness:** There is a growing recognition of the profound impact of mental health on learning and behavior. Schools and institutions have become more proactive in addressing students' mental well-being. Learning barriers associated with anxiety, depression, and other mental health conditions are receiving increased attention.

**Inclusive Education:** The importance of creating inclusive learning environments has gained prominence. Efforts to identify and remove barriers related to disabilities, language proficiency, and cultural differences have expanded. Schools are increasingly embracing inclusive practices to accommodate a diverse range of learners.

**Trauma-Informed Education:** A better understanding of the impact of trauma on students' behavior and learning has led to trauma-informed approaches in education. Recognizing and addressing trauma-related barriers have become critical for educators.

**Social-Emotional Learning (SEL):** SEL programs have become a vital part of curriculum design. These programs aim to improve students' emotional intelligence, interpersonal skills, and self-regulation, helping to mitigate behavioral problems and improve overall well-being.

**Special Education:** Advances in special education have led to more tailored support for students with learning disabilities and behavioral challenges. There is a greater emphasis on early diagnosis and intervention.

**Parent and Teacher Collaboration:** Schools are recognizing the importance of strong partnerships between parents and educators. Collaboration and open communication between these stakeholders are seen as essential in addressing learning barriers and behavioral issues effectively.

**Equity and Access:** Efforts to bridge the digital divide and address disparities in educational opportunities have intensified. Policymakers and educators are working to ensure that all students have equitable access to quality education and support services.

**Data-Driven Approaches:** The use of data analytics and assessment tools has grown. Schools are increasingly using data to identify students at risk of learning barriers or behavioral problems and to tailor interventions accordingly.

➤ **Steps to Overcome Learning Barriers and Behavioural Problems:**

We can conclude that the past decade has Overcoming learning barriers and learning problems can be a challenging but achievable process. Here are some steps you can take to address and overcome these obstacles:

**Self-Assessment:**

Start by identifying the specific learning barriers or problems you are facing. Is it a lack of motivation, difficulty concentrating, poor time management, or something else? Understanding the root cause is crucial.

**Set Clear Goals:**

Define clear and realistic learning goals. Knowing what you want to achieve will give you a sense of purpose and direction.

**Develop a Learning Plan:**

Create a structured learning plan that includes a schedule, study materials, and resources. Having a plan can help you stay organized and on track.

**Seek Support:**

Don't be afraid to reach out for help. You can seek assistance from teachers, tutors, classmates, or educational professionals. They can provide guidance and support tailored to your specific challenges.

**Improve Time Management:**

Effective time management is crucial for successful learning. Use techniques such as setting priorities, creating to-do lists, and using time management apps to stay organized.

**Enhance Study Skills:**

Develop effective study techniques that work best for you. This may include active learning strategies, note-taking methods, or mnemonic devices.

**Address Motivation:**

Find ways to stay motivated by connecting your learning to your interests and passions. Break your goals into smaller, achievable tasks to maintain a sense of progress.

**Manage Stress:**

High stress levels can hinder learning. Practice stress-reduction techniques such as deep breathing, meditation, or exercise to stay calm and focused.

**Improve Concentration:**

Create a distraction-free study environment. Turn off notifications, set designated study times, and use techniques like the Pomodoro technique to enhance concentration.

**Adapt Learning Styles:**

Recognize that people have different learning styles (visual, auditory, kinesthetic). Experiment with various approaches to see which one suits you best.

**Take Breaks:**

Regular breaks during study sessions can help prevent burnout and improve retention. Short, frequent breaks are more effective than long, infrequent ones.

**Use Technology Wisely:**

Embrace technology as a learning tool, but avoid distractions. Use educational apps, online courses, and digital resources to enhance your learning experience.

**Stay Persistent:**

Learning is a gradual process, and setbacks are common. Stay persistent, stay positive, and don't give up when facing challenges.

**Monitor Progress:**

Regularly assess your progress and make necessary adjustments to your learning strategies. Reflect on what's working and what isn't.

**Seek Professional Help:**

If learning problems persist and significantly impact your life, consider seeking professional help from a psychologist or learning specialist.

Remember that overcoming learning barriers and problems may take time and effort. Be patient with yourself and stay committed to improving your learning skills and experiences. witnessed significant changes in the understanding and approach to learning barriers and behavioral problems in education. The integration of technology, the emphasis on mental health, the push for inclusive practices, and the recognition of trauma's impact are some of the key shifts that have shaped the educational landscape. Addressing these challenges requires ongoing adaptation and collaboration among educators, parents, and policymakers to ensure the academic success and well-being of all students.

➤ **Indian Governmental Initiatives to Overcome Learning Barriers and Behavioural Disabilities:**

The Indian government has launched several initiatives to address learning barriers and problems in education. These initiatives aim to improve access to quality education, enhance the learning experience, and tackle various challenges faced by students across the country. Some notable initiatives include:

**Sarva Shiksha Abhiyan (SSA):** SSA is a flagship program aimed at achieving universal elementary education. It focuses on providing free and compulsory education to all children aged 6 to 14 years. SSA also emphasizes improving the quality of education, teacher training, and the development of infrastructure.

**Rashtriya Madhyamik Shiksha Abhiyan (RMSA):** RMSA is focused on improving the quality of secondary education. It works to enhance infrastructure, teacher training, and curriculum development in government schools at the secondary level.

**Digital India:** The Digital India campaign aims to leverage technology to bridge the digital divide and improve access to digital resources for education. Initiatives like the Digital India e-learning platform provide educational content to students across the country.

**National Mission on Education through Information and Communication Technology (NMEICT):** This mission seeks to provide e-content and e-learning resources to both students and teachers. It includes initiatives like the National Digital Library and e-pathshala, which offer a wide range of educational resources.

**Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** PMKVY is a skill development program that aims to enhance the employability of youth across India. It provides training and certification in various skills, helping students acquire practical skills and find employment.

**Mid-Day Meal Scheme:** This program provides nutritious meals to schoolchildren, with the aim of increasing school attendance and improving nutrition. It helps overcome barriers related to hunger and malnutrition.

**National Scholarship Portal:** The government offers various scholarships to economically disadvantaged students. The National Scholarship Portal simplifies the application and disbursement process, making it easier for eligible students to access financial aid for education.

**SWAYAM (Study Webs of Active Learning for Young Aspiring Minds):** SWAYAM is an online platform that offers free courses and learning resources across various subjects and levels. It allows students to access high-quality education from top institutions.

**Samagra Shiksha Abhiyan:** This initiative integrates school education from pre-primary to secondary levels and focuses on improving the overall quality of education. It includes teacher training, infrastructure development, and measures to enhance the learning environment.



**National Education Policy (NEP) 2020:** The NEP 2020 introduces significant reforms in the education sector, including a more flexible and holistic approach to learning, emphasis on critical thinking and problem-solving and increased use of technology in education.

These initiatives demonstrate the Indian government's commitment to addressing learning barriers and improving the overall education system in the country. They aim to provide equitable access to quality education and create a conducive learning environment for all students, regardless of their socio-economic background.

➤ **Conclusion:**

In conclusion, learning barriers and behavioral problems can significantly impact an individual's educational journey and overall well-being. These challenges are multifaceted and can arise from a variety of factors, including cognitive, emotional, environmental, and societal influences. However, with the right strategies, support systems, and interventions, it is possible to overcome these obstacles and achieve success in learning and personal development.

Addressing learning barriers often involves a combination of self-awareness, effective study techniques, time management, and seeking appropriate support from teachers, peers, and professionals. It also requires a commitment to continuous improvement and resilience in the face of setbacks.

Similarly, behavioral problems can be managed through awareness, self-regulation, and interventions that address the underlying causes, whether they are related to emotional well-being, social dynamics, or environmental factors. Early identification and intervention are crucial in preventing behavioral issues from escalating and negatively impacting one's educational and life outcomes.

Ultimately, understanding and addressing learning barriers and behavioral problems are essential for creating inclusive, supportive, and nurturing learning environments that empower individuals to reach their full potential. By recognizing the importance of these challenges and working collectively to overcome them, we can foster a society where everyone has equal opportunities to thrive and succeed in their educational and personal pursuits.

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## **BREAKING BARRIERS: EMPOWERING TRANSGENDER STUDENTS THROUGH EFFECTIVE STRATEGIES AND RECOMMENDATIONS FOR INCLUSIVE EDUCATION**

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### **Abstract**

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*Individuals of any age or gender who defy preconceived notions about what men and women are "supposed" to look like, act in particular ways, or have different personal traits are considered transgender. Transgender individuals were counted for the first time in the 2011 Census, with an estimated 4–9 lakh people in our nation. This article discusses the challenges faced by transgender students in the educational system, emphasizing the need for robust policies, anti-discrimination measures, teacher training, and transgender-inclusive content. It advocates for curriculum revision, a supportive school culture, and the establishment of student advisory groups and peer support networks. It emphasizes the importance of community involvement in this transformative journey. Educational obstacles impede the educational path of transgender children, and empowering those calls for a community-wide commitment from educators, administrators, parents, and students. Transparency in reporting and accountability for discrimination and harassment incidents are crucial. Continuous assessment and improvement of transgender-inclusive policies and practices, guided by the voices and experiences of transgender students and their families, is necessary to create an inclusive, empowering, and equitable environment.*

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**Key words:** *Transgender, Empowerment, curriculum Inclusion, School Culture, Diversity*

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### **Introduction**

Individuals of any age or gender who defy preconceived notions about what men and women are "supposed" to look like, act in particular ways, or have different personal traits are considered transgender. Inclusive education is a teaching model that promotes a shared learning environment, aiming to ensure fair treatment and equal opportunities for all students. The discourse on gender identity and expression has evolved, challenging societal norms and expectations. This has highlighted the unique experiences of transgender individuals, especially in education. Schools should serve as sanctuaries for intellectual growth and personal development, regardless of gender identity or expression.-

In 2014, the Supreme Court of India recognized transgender as the third gender (Pallav Das, 2019). According to the 2011 census, 4,87,803 lakhs are classified as transgender, with 54,854 under 6 years old and a literacy rate of 56.07% (Census, 2011). To create a more inclusive and equitable educational environment, effective strategies and recommendations for empowering transgender students are crucial. Transgender students face numerous challenges in their educational journey, including discrimination, bullying, mental health disparities, and lack of access to resources. Regardless of medical treatment, the National Legal Authority Service judgment protects the right to self-identify as a transgender person. This article aims to break down barriers and promote inclusive education for transgender students by exploring legal and policy frameworks, creating a supportive school culture, training and professional development, curriculum and instruction, support services, and bullying prevention strategies. Embracing transgender students goes beyond mere compliance with laws and policies; it requires fostering understanding, empathy, and respect within educational institutions.

This article serves as a guide for educators, administrators, parents, and community members to champion the cause of transgender students and contribute to a more equitable educational

landscape. Transgender people usually have higher or secondary education, but they often face discrimination in all aspects of life, such as abuse, isolation, and the prohibition of peer gatherings in public places. By breaking down barriers and promoting a more inclusive and empowering educational experience, we can unlock the potential of every student and contribute to a more equitable educational landscape. Recognizing the obstacles to learning encountered by transgender students is essential in formulating efficacious tactics to establish an inclusive learning environment (Prakasha C., Jagannath K. Dange, 2023). Transgender students face many learning barriers some of them are explained as follows:

**1. Bullying and Harassment:**

Comparing transgender pupils to their cisgender (non-transgender) counterparts, transgender children experience more bullying and harassment at school. Their emotional health and capacity for concentration can both be significantly impacted by such unpleasant encounters. Learning in an environment where one feels unsafe or unsupported can be exceptionally challenging. Students who experience harassment find it difficult to excel academically (Bhumika Rajdev, 2020).

**2. Mental Health Services:**

Anxiety and sadness can result from the strain and stigma that come with being transgender. These gaps in mental health might make it difficult for students to learn and perform well in class.

**3. Lack of affirmation:**

A hostile learning environment may result from transgender students' gender identity not being acknowledged or recognized. Their academic goals may be derailed by this lack of affirmation, which can be emotionally upsetting.

**4. Invisibility:**

Students who identify as transgender could feel marginalized or invisible from the curriculum and teaching resources. They may feel disassociated from the subject since gender diversity is not represented or discussed.

**5. Unequal Access to Resources:**

Students who identify as transgender might have difficulty finding resources that can meet their unique needs. This includes convenient restrooms, locker rooms, and medical services, which could present logistical and psychological challenges.

**6. Name and Pronoun Misuse:**

Insensitive or incorrect use of names and pronouns by teachers and peers can be distressing for transgender students. This can undermine their self-esteem and hinder their ability to focus on learning.

**7. Teacher Training:**

Lacking sufficient training on Lesbian, Gay, Bisexual, Transgender, and Queer inclusiveness, educators may find it difficult to foster an affirming environment in the classroom. As a result, transgender students may experience miscommunication and a lack of support.

**8. Social Isolation**

Due to their fear of discrimination or rejection, transgender students may face social isolation. Isolation can cause learners to lose interest and enthusiasm in their studies.

**9. Absences and dropout rates:**

Due to the hostile climate, bullying, or mental health issues, some transgender students may miss class or drop out. This blocks their educational path and reduces their possibilities for the future. Due to their infrequent education and lack of social acceptance, they do not receive the proper education. They are compelled to leave school every day due to harassment, even though they are enrolled, or they choose to leave on their own (Ambrose P, 2019).

**10. Stigma and Stereotypes:**

The perception of transgender students by teachers and peers may be influenced by stereotypes and misconceptions about transgender people, which may result in low expectations or unfair treatment.

**11. Exclusion:**

Exclusion was another factor that was found to hinder transgender students' academic success and pleasure in school. One example of this is when transgender students are excluded from particular classes or schools entirely because they don't feel accepted, which limits the amount of learning they get to experience. You discover that transgender students draw themselves from activities that other children take for granted. Many gender-variant children don't engage in physical activity (PE), as you'll see. Many studies demonstrate the link between exercise and improved mental and physical health. Then there is the question of overnight and field excursions for schools. Gender-variant children will typically skip the field excursion. Numerous academics have confirmed and hypothesized that transgender social marginalization affects their sense of self, self-assurance, or personal and social responsibility. Therefore, to build a better society and further the nation's growth, it is essential to educate all groups of people about transgender issues. (Gayatri Reddy, 2005).

**12. Lack of Ideal personality:**

Youth who identify as transgender often endure high levels of loneliness. Gender identity, biological gender and sexuality, and transgender identity are not commonly discussed subjects in youth programs or libraries (Raj Kumar, 2016).

**Strategies**

Certainly, creating a transgender-inclusive education environment requires a thoughtful and comprehensive approach. The transgender community may benefit from good health, a high literacy rate, and a dignified life by effectively carrying out all of the plans. They may also be able to smile and break bad habits like prostitution and begging (Jagannath K. Dange, Prakasha C. et al., 2022). Here are some effective strategies for achieving transgender- inclusive education:

**1. Policy Development and Implementation**

- ☐ Create anti-bullying and anti-discrimination policies that specifically protect transgender students.
- ☐ Permit students to use their preferred names and pronouns.
- ☐ Make sure transgender students have access to gender-congruent restrooms and locker rooms.

**2. Teacher Training and Professional Development**

- ☐ Provide educators with instruction on vocabulary, challenges, and the best ways to foster inclusiveness in the classroom.
- ☐ Teach teachers how to address gender identity-related issues with respect and support, including how to use appropriate names and pronouns for transgender children.

**3. Curriculum Inclusion**

- ☐ Educators should incorporate transgender history, literature, and contributions into their curricula to increase awareness and representation.
- ☐ Ensure that textbooks and instructional materials are free of bias and gender stereotypes.

**4. Safe and Supportive School Culture:**

- ☐ Develop a climate of acceptance and respect within the school community, starting with the leadership.
- ☐ Include strategies that foster inclusiveness, diversity, and empathy, such as programs to raise awareness and encourage transgender people.

- ☐ Establish groups to network and seek assistance for individuals of all genders and sex identities, such as Gay-Straight Alliances.

#### **5. Mental Health and Supportive Services:**

- ☐ Provide counselling and mental health services that are conscious of the special needs of transgender students.
- ☐ Create counselling services or support groups exclusively for transgender students.
- ☐ Ensure the secrecy of students seeking assistance.

#### **6. Advocacy and Representation for Transgender Students:**

- ☐ Construct a council or student advisory group, including transgender students, to provide feedback on school policies and procedures.
- ☐ Enabling transgender students to get involved in clubs, organizations, and student government.

#### **7. Parent and Community Engagement:**

- ☐ Engage parents, guardians, and the community in conversations about fostering an inclusive learning environment.
- ☐ Encourage collaboration with transgender community organizations to offer assistance and services.

#### **8. Accountability and reporting procedures:**

- ☐ Implement distinct reporting procedures for instances of bullying, harassment, or discrimination.
- ☐ Hold people and organizations responsible for handling such crises quickly and successfully.

#### **9. Regular Review and Improvement:**

- ☐ Constantly evaluate the performance of transgender-inclusive policies and practices.
- ☐ To make the necessary modifications, get input from the families and students who identify as transgender.

#### **10. Student Education and Awareness:**

- ☐ Educate students about gender diversity, respect, and inclusion by holding workshops or awareness campaigns for them.
- ☐ Encourage the student allies and peer support.

#### **Recommendations**

The following suggestions can help foster an inclusive learning environment and empower transgender students:

##### **1. Policy Development and Implementation**

- ☐ **Adopt Thorough Anti-Discrimination Procedures:**
- ☐ Ensure that policies are created and implemented that clearly forbid harassment and discrimination on the basis of gender identity and expression.
- ☐ Ensure that these regulations cover all school-related activities, including extracurricular and academic ones.
- ☐ **Supportive Name and Pronoun Policies:**
- Enact supportive name and pronoun policies that permit transgender students to use their preferred names and pronouns in correspondence and records kept by the school.

##### **2. Teacher Training and Professional Development**

- ☐ **Inclusive Training:**
- Educators should get continuous training on transgender matters, such as gender identity and expression, to enable them to provide an inclusive learning environment in the classroom.
- ☐ **Cultural Competency:**
- Teach educators to identify and confront their own prejudices and preconceptions in order to build compassion and understanding for students who identify as transgender.

### 3. Instruction and Curriculum

- **Inclusive Curriculum:** To encourage diversity and inclusion, include Transgender history, literature, and contributions in the curriculum.
- **Gender-neutral terminology:** To promote a more inclusive learning environment, emphasize the use of gender-neutral vocabulary and instructional strategies.

### 4. Safe and Supportive School Culture:

- **Leadership and Role Modelling:** School leaders should set the tone by demonstrating a commitment to inclusion and diversity.
- **Student-driven initiatives:** Provide assistance and motivation to groups and organizations led by students who address transgender problems, like Gay-Straight Alliances (GSAs).
- **Mental Health and Counselling:** Make certain that transgender students have access to mental health services that meet their specific requirements.

### 5. Mental Health and Supportive Services:

- **Mental Health and Counselling:** Make certain that transgender students have access to mental health services that meet their specific requirements.

### 6. Advocacy and Representation for Transgender Students:

- **Student Advisory Groups:** Create student advisory groups with transgender kids to solicit their opinions on procedures and regulations at the school.
- **Visibility and Representation:** Provide transgender students with opportunities to communicate their experiences and tales, fostering empathy and compassion among their classmates.

### 7. Parent and Community Engagement:

- **Workshops and Information Sessions:** To inform parents and other caretakers about transgender issues and the importance of inclusiveness, host workshops, and information sessions.
- **Community Collaborations:** Establish alliances with LGBTQ+ groups to offer resources, assistance, and knowledge.

### 8. Accountability and reporting procedures:

- **Transparent Reporting:** Establish unambiguous reporting procedures for instances of bullying, harassment, or discrimination. Make sure that these mechanisms are easily available and extensively disseminated.
- **Timely and Effective Responses:** Holding people and organizations responsible for reacting to reported issues in a timely and efficient manner is important.

### 9. Regular Review and Improvement:

- **Continuous Assessment:** Evaluate the efficacy of transgender-inclusive practices and policies on a regular schedule. Use input from transgender students and their families to make the required adjustments.

### 10. Student Education and Awareness:

- **Classroom Discussions:** Encourage open discussions about gender diversity, respect, and inclusion in the classroom.
- **Peer Support:** Promote peer support and ally ship among students, fostering a positive school culture.

**Conclusion:** The journey to empower transgender students through inclusive education transcends policy implementation and legal compliance. It is a journey rooted in empathy, respect, and the collective commitment to create a safe and affirming educational landscape where transgender students can thrive academically, emotionally, and socially. The obstacles are not insurmountable; they range from harassment and discrimination to a lack of understanding and representation. Rather, they act as a call to act, one that encourages bridging gaps, confronting prejudices, and



illuminating the way toward inclusivity. The creation and execution of policies is the first step in empowering transgender students, but the work doesn't stop there. It is fostered via professional development programs for teachers that promote empathy and cultural competency. Yet, it is not only within the four walls of our educational institutions that change must occur. Empowerment extends to our communities and homes. Parents, caregivers, and community members play pivotal roles in championing the cause of transgender students. It is their support, understanding, and advocacy that fortify the foundations of inclusive education. It necessitates a heart-driven commitment to affirming the identities and experiences of transgender students. It thrives on the compassion and courage to stand against discrimination and bullying, the willingness to challenge stereotypes and biases, and the resolve to create spaces where every student can flourish. It is the richness of our diverse identities and experiences that fuels innovation, fosters empathy, and ignites progress. By breaking down the barriers that hinder transgender students' access to quality education, we unlock their potential and contribute to a brighter, more inclusive future for all. We embark on this journey together, educators, administrators, students, parents, and community members alike. The path to empowering transgender students may be challenging, but it is a path worth treading. Let us not merely dismantle barriers but build bridges of understanding and acceptance. Let us commit to an educational landscape where every student, regardless of gender identity or expression, can rise above challenges and achieve their dreams. In this collective commitment, we lay the foundation for a future where transgender students no longer face barriers, but instead, are empowered to break boundaries, redefine possibilities, and contribute to a world that embraces the beauty of diversity in all its forms.

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## ANALYSIS OF AGGRESSION AND ITS IMPACT ON PERFORMANCE AMONG THE PLAYER OF VOLLEY BALL AND BASKET BALL PLAYER

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### Abstract

*The purpose of the study was to “compare the aggression between basketball and volleyball players. Method: Sixty male interuniversity basketball (N1=30) and volleyball (N2=30) players from Punjabi university Patiala, Punjab, India were selected as the subjects for the study. The subjects were represented North zone Inter-varsity competition and all India inter-varsity championship in their respective sports and age ranging from 18 to 24 years. These subjects were selected in terms of purposive sample from respective games. The sport aggression inventory (SAI) standardized by Mr. Anand Kumar and Mr. Prem Shankar Shukla (1998) was used for this study. It was hypothesized that there would be significant difference between basketball and volleyball players on the degree of aggression. The independent ‘t’ test was used to compare the degree of aggression between basketball and volleyball players. The level of significance for testing the hypothesis was set at 0.05 level of confidence. Findings: The mean and standard deviation of the score of basketball players was 14.5 and 1.19 respectively whereas the mean and standard deviation of the score of volleyball players was 11.06 and 1.33 respectively. The calculated t- value was 10.48 which showed significant difference between basketball and volleyball players on the degree of aggression. ( $t_{cal}=10.48 > t_{tab}=2.009$ ). The aggression level of basketball players was found to be higher than the volleyball players. The t-value required to be significant for 58 degree of freedom was 2.009 at 0.05 level of confidence.*

**Keywords:** - Sports Aggression Inventory, Aggression, Volleyball, Basketball.

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**Introduction** - Aggression in sport can be caused by a number of factors. The most identifiable reasons are the rules of the game (level of physical contact), frustration, instinct, presence, arousal, environmental cues, self- control and also the behavior of those around. Other factors in aggression include personality, media involvement, coaching, role models and the society we live in. The following is an insight into the term aggression in sport, using the social learning theory and environmental cues theory I will explain examples of each theory and try and contrast them.

In sport, aggression is a characteristic that can have many negative as well as positive effects on performance. Aggression is defined as “any type of behavior intended towards the goal of harming or injuring another lived being who is motivated to avoid such treatment”. Most people view aggression as a negative psychological characteristic; however, some sport psychologists agree that aggression can improve performance (Widmeyer & Birch, 1984). This is called an assertive behaviour (Bredemeier, 1994), where a player will play within the rules of the sport at a very high intensity, but will have no intention to harm an opponent. In sport, aggression has been defined into two categories: hostile aggression and instrumental aggression (Silva, 1983). Hostile aggression is when the main aim is to cause harm or injury to your opponent. Instrumental aggression is when the main aim is to be non-aggressive but to win the ball. Coulomb and Pfister (1998) conducted a study looking at aggression in high-level sport. They found that experienced athletes used more instrumental aggression in which they used to their advantage and that hostile aggression was less frequently used. Experienced athletes used self-control to help them with their aggression.

Frustration is known to play a key role in aggression. It is the view that is innate and also something that is learned (aggression). It can occur in many different circumstances and one of those can be an athlete not achieving his or hers goal targets. Having a point disallowed or being fouled by an opponent on more than one occasion can lead to frustration. Dollard (1939) argues that aggression is innate and only occurs in a frustrating situation but Miller (1941) claimed to differ. He stated that it was frustration that made aggression more likely, he also stated that for one or more reasons athletes won't show this aggression in their

profession. An example of this can be when a coach under uses a player, who out of professionalism or even out of respect for the coach won't show aggression. However, this could affect the personal life of an athlete, where they keep all their aggression out of their profession and channel it into their social life. This is related to Freud's notion of displacement, where we want to do something we know is not acceptable for instance confront the coach, but for some reason keep it channeled.

### **Review of Literature**

Burris (1955) conducted a study on aggression in boxers and wrestlers as measured by projective techniques. In this study, Rosenzweig P. F. conducted selected TAT Pictures, and a sentence completion test was administered at intervals throughout the season to the following college groups. Nine boxers, eight wrestlers, nine cross-country runners and seventeen control subjects. The tests were analyzed for number, severity, and direction of aggressive responses. Significant differences indicated that the boxers were least aggressive of the groups, and that they tended to direct their aggressive feelings inwardly (introjective) rather than outwardly upon persons or things in their environment (extrajective).

Ciccolerella and Elizabeth Margaret, (1978) conducted a study to determine any differences in aggression of male and female Athletes. Subjects for this study included male and female undergraduate students at Alma College and Brigham Young University who participated in interschool basketball, softball (baseball for men), tennis, and swimming during the 1977-78 academic calendar year. The study employed the Minnesota Multiphasic Personality Inventory (MMPI) as the measuring instrument. The scales of the MMPI selected to determine aggression were 2 (depression), 3(hysteria), 4(psychopathic deviancy), 5(masculinity - femininity) and 9(hypomania). The statistical analysis included a univariate analysis of the five selected MMPI scales and an inspection of group mean profiles. The conclusion of this study was that female varsity athletes were more aggressive than male varsity athletes.

Husman and F. Burris (1955) conducted a study on aggression in boxers and wrestlers as measured by projective techniques. In this study, Rosenzweig P. F. conducted selected TAT Pictures, and a sentence completion test was administered at intervals throughout the season to the following college groups. Nine boxers, eight wrestlers, nine cross-country runners and seventeen control subjects. The tests were analyzed for number, severity, and direction of aggressive responses. Significant differences indicated that the boxers were least aggressive of the groups, and that they tended to direct their aggressive feelings inwardly (introjective) rather than outwardly upon persons or things in their environment (extrajective). Indications were that the intensity and direction of aggression of these various athlete and non-athlete groups were quite different. The Thematic Apperception test was judged the best instrument for assessing aggression.

McGuire et al (1992) conducted a study on aggression as a potential mediator of the home advantage in professional Ice Hockey. Based on the subject-defined delineation between aggressive and non-aggressive ice hockey penalties established by Midmeyer and Brich, 13 measures were used on data collected from the official game reports and penalty records of the National Hockey League for the 1987-1988 seasons. Both macro-analytic and micro analytic strategies and analyses were employed. Initial analysis revealed that home team won 58.3 percent of the decided games. Further analyses showed a significant interaction between game location and performance. Home team incurred more aggressive penalties in games they won whereas visiting teams incurred more aggressive penalties in games they lost. Implication for the potential role of aggression in contribution to the home advantage is discussed.

Ranbir Singh Dahiya (1986) conducted a study with an objective to find out the difference between combative sportsman and track & field athlete on aggression with the hypothesis that

combative sportsman are like to differ from track & field athlete in aggression. The data was collected during 12<sup>th</sup> inter University Championship / athletic meet held at North India University in 1998-1999, 249 combative Sportsman and 210 track & field athletes were randomly drawn for conducting the study. Aggression score test standardized by Pati 1976, Containing 16 options were used to assess the aggression behavior of the individual. The Combative mean score indicate that athlete had significantly higher level of aggression compare to combative sportsman.

Reusser and Janet (1987) conducted a study on an analysis of the aggressive and nonaggressive behavior of a college basketball coach. An inter-collegiate female basketball coach selected by the investigator was videotaped six times during the 1985- 86 basketball season. The data were systematically analyzed by Cheffer's ,daptation of Flanders Interaction ,nalysis System and the emotional dimension of Cheffer's system, CAFIAS. She find out that the subject did not become more aggressive while losing as opposed to winning. More aggressive behavior was exhibited during home gameswhen compared to away games. The subject became more aggressive when first and second halves were compared and became less aggressive as the season progressed. The subject was silent for more extended period of time and emitted more directive behavior as the season progressed.

#### Methods :-

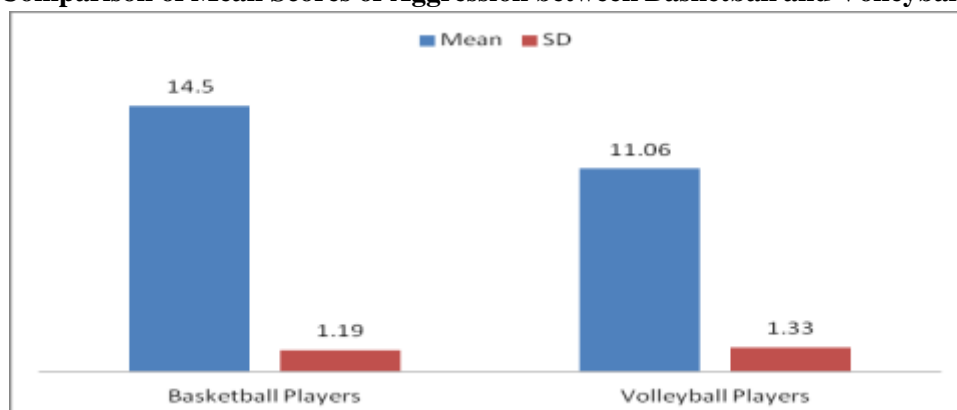
- ☐ **Subjects** - Sixty male interuniversity basketball (N1=30) and volleyball (N2=30) players from Punjabi University Patiala, Punjab, India were selected as the subjects for the study. The subjects were represented North zone Inter-varsity competition and all India inter- varsity championship in their respective sports and age ranging from 18 to 24 years. These subjects were selected in terms of purposive sample from respective games.
- ☐ **Selection of Variables** - Aggression level considered as a variable for this study. The sport aggression inventory (SAI) standardized by Mr. Anand Kumar and Mr. Prem Shankar Shukla (1998) was used for measuring aggression level of basketball and volleyball players.
- ☐ **Hypothesis** - It was hypothesized that there would be significant difference between basketball and volleyball players on the degree of aggression.
- ☐ **Collection of data** - The criterion measure chosen to test the hypothesis was the scores obtain in sport aggression inventory (SAI) standardized by Mr. Anand Kumar and Mr. Prem Shankar Shukla (1998).
- ☐ **Administration of Test** - Based on expert opinion and by personal understanding the sports aggression inventory by Anand Kumar and Prem Shankar Shukla (1998) questionnaire was used. The aggression questionnaire was distributed to basketball and volleyball players. To ensure maximum cooperation from the subjects the investigator had a meeting with selected subjects in presence of coach. Subjects were oriented and explained regarding the purpose and the procedure of the questionnaire. Sports Aggression Inventory consists of 25 items in which 13 items are keyed "YES" and 12 are keyed "NO". The statements which are keyed "YES" are 1,4,5,6,9,12,14,16,18,21,22,24 and 25 and the statements which are keyed "NO" are 2,3,7,8,10,11,13,15,17,19,20 and 23.
- ☐ **Scoring of Questionnaire** - Maximum score for each statement was one. Sores obtained for each statement was added up which represent an individual's total score on aggression.
- ☐ **Statistical Procedure** - In order to compare the aggression level between basketball and volleyball players, the independent t-test was employed. The level of significance chosen to test the hypothesiswas 0.05,  $P < 0.05$ .

**Findings** - Findings pertaining to the variable aggression which was subjected to the independent 't' test has been given in Table 1.

**Table 1: Significance Difference of Mean of Aggression between Basketball and Volleyball Players**

Group	Basketball Players	Volleyball Players
Mean	14.5	11.06
Stand. Dev.	1.19	1.33
Variance	1.431	1.78
N	30	30
t-ratio	<b>10.48*</b>	
Degrees of Freedom	58	
Critical Value	2.009	
P- value	0.00001	

Table 1 reveals that the mean and standard deviation of the score of basketball players was 14.5 and 1.19 respectively whereas the mean and standard deviation of the score of volleyball players was 11.06 and 1.33 respectively. The calculated t- value which was calculated as **10.48\* (P=0.00001)** which showed significant difference between basketball and volleyball players on the degree of aggression. (tcal=10.48 >ttab=2.009).

**Figure 1: Comparison of Mean Scores of Aggression between Basketball and Volleyball Players**

**Discussion** - The present study was conducted to compare the aggression between university level male basketball and volleyball players. Results of the present study showed that basketball players have exhibited statistically significant differences with regard to aggression as compared to volleyball players. While comparing the means, basketball players had shown greater aggression than volleyball players. It may be due to the nature of play of basketball players because they used to compete with their opponents directly whereas volleyball players do not contact with their opponents.

**Discussion of Hypothesis** - In the light of findings of the study, the hypothesis that there would be significant difference between basketball and volleyball players on the degree of aggression was accepted.

**Conclusions** - Within the limitations of the study, the findings pertaining to the study resolved statistically significant difference of aggression between university level basketball and volleyball players. The results show that university level basketball players had significantly greater aggression than volleyball players.

Within the limitations of the present study following conclusions may be drawn:

- ☐ In regard to aggression, there was a significant difference between the means of University

level male basketball and volleyball players.

- ☐ The aggression level of basketball players was found to be higher than the volleyball players.

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## AVIGATING THE COMPLEXITIES OF INCLUSIVE EDUCATION: A THEMATIC REVIEW OF CHALLENGES AND SOLUTIONS

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### Abstract

*Inclusive education is a noble concept that seeks to provide every student, regardless of their abilities or differences, with an equitable opportunity to learn and excel within the same educational setting. Despite its widespread endorsement, the successful implementation of inclusive education is met with a multitude of intricate challenges. This paper conducts a systematic thematic literature review to comprehensively examine these challenges, categorizing them into five distinct themes: curriculum adaptation, teacher training, classroom practices, student support, and policy frameworks.*

**Keywords:** *Inclusive education, teacher training, classroom practices, challenges, diversity, accessibility, assessment methods, teacher attitudes, collaboration,*

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### Introduction:

Inclusive education is a visionary concept that embodies the aspiration to provide every student, irrespective of their abilities or differences, with an equitable opportunity to thrive within the same educational environment. Rooted in the belief that diversity should be celebrated and embraced, it aspires to foster an inclusive society that values and cherishes the unique attributes of each individual. While the principles of inclusive education are widely endorsed and revered, the practical realization of this vision poses a formidable challenge within educational systems across the globe.

This paper embarks on an extensive exploration of the intricate and multifaceted challenges that accompany the noble pursuit of implementing inclusive education. Our analysis is structured around several pivotal themes, each of which represents a critical aspect of the broader endeavour: curriculum adaptation, teacher training, classroom practices, student support, and policy frameworks. Through an in-depth examination of these themes, we aim to illuminate the complex landscape of obstacles that educators, policymakers, and students confront when endeavouring to transform inclusive education from an ideal into a tangible reality.

**Thesis Statement:** This paper contends that the challenges associated with the implementation of inclusive education are diverse and multifaceted, encompassing issues such as the adaptation of curricula to cater to diverse learner needs, the adequate preparation of teachers, the cultivation of inclusive classroom practices, the provision of robust student support, and the navigation of intricate policy landscapes. An appreciation of these challenges is indispensable for engendering meaningful change within our educational systems and advancing the noble cause of inclusive education.

As we delve into each of these thematic challenges, it becomes increasingly apparent that the journey toward inclusive education is fraught with complexities, uncertainties, and debates. Nevertheless, it is a path worth traversing, for the rewards of an inclusive society, where every individual is afforded the opportunity to realize their full potential, are immeasurable. Within this odyssey through the challenges of inclusive education, we endeavour not only to identify obstacles but also to propose innovative solutions and ignite a collective commitment to making inclusive education an attainable reality for all learners.

This comprehensive thematic literature review aims to shed light on the multifaceted challenges within inclusive education, providing a structured framework for understanding and addressing these hurdles. It is our hope that by dissecting these challenges, we can contribute to a more inclusive and equitable educational landscape, where diversity is celebrated, and every student has the opportunity to flourish.

**Thesis Statement:** This paper contends that the challenges related to implementing inclusive education are diverse and multifaceted, encompassing issues such as adapting curricula to diverse learner needs, adequately preparing teachers, fostering inclusive classroom practices, providing robust student support, and navigating complex policy landscapes. An understanding of these challenges is essential for fostering meaningful change in our educational systems and advancing the cause of inclusive education.

As we delve into each of these thematic challenges, it becomes evident that the path toward inclusive education is paved with complexities, uncertainties, and debates. Nevertheless, it is a path worth traversing, for the rewards of an inclusive society, where every individual has the opportunity to reach their full potential, are immeasurable. In this journey through the challenges of inclusive education, we hope to not only identify obstacles but also propose solutions and inspire a collective commitment to making inclusive education a tangible reality for all learners.

### **Thematic Literature Review on Challenges in Implementing Inclusive Education**

A thematic literature review on challenges in implementing inclusive education involves summarizing and synthesizing existing research on specific themes or areas related to inclusive education. Here's how you can structure a thematic literature review on this topic:

#### **Theme 1: Curriculum Adaptation Challenges**

- Begin by summarizing research findings related to challenges in adapting the curriculum to accommodate diverse learners.
- Identify key issues, such as the need for differentiated instruction, accessible materials, and appropriate assessment methods.
- Discuss how curriculum challenges impact the effectiveness of inclusive education programs.

#### **Theme 2: Teacher Training Challenges**

- Summarize studies that focus on challenges related to teacher preparation for inclusive education.
- Highlight issues like the adequacy of teacher training programs, the need for ongoing professional development, and teacher attitudes toward inclusion.
- Examine how teacher training challenges affect the ability of educators to meet the diverse needs of students.

#### **Theme 3: Classroom Practices and Strategies**

- Review literature on classroom practices and strategies employed in inclusive settings.
- Discuss challenges such as managing diverse student abilities, fostering collaboration among students, and addressing behavioral issues.
- Examine how classroom practices impact the overall inclusion experience for students with and without disabilities.

#### **Theme 4: Student Support Services and Resources**

- Summarize research related to the availability and effectiveness of support services for students with disabilities.
- Highlight challenges such as limited access to specialized services, insufficient assistive technology, and the role of paraprofessionals.
- Discuss the impact of these challenges on the inclusion and academic success of students with disabilities.

#### **Theme 5: Policy Frameworks and Implementation**

- Analyze the role of policies and legislation in shaping inclusive education practices.
- Discuss challenges related to policy inconsistencies, funding limitations, and compliance with legal mandates.

- Examine how policy challenges influence the overall implementation of inclusive education at the institutional and systemic levels.

**Synthesis and Analysis:**

- After reviewing each theme, provide a synthesis of the common challenges and patterns identified in the literature.
- Discuss how these challenges are interconnected and how they contribute to the complexity of implementing inclusive education.
- Analyze the broader implications of these challenges for the success of inclusive education programs and for the well-being of students with disabilities.

**Conclusion:**

- Summarize the main findings of the thematic literature review, emphasizing the challenges in implementing inclusive education across the themes.
- Reflect on the importance of understanding these challenges for educators, policymakers, and stakeholders.
- Offer insights into potential strategies and recommendations to address these challenges and enhance the effectiveness of inclusive education.

Remember to cite the relevant studies and sources in each theme and provide proper references in your review. This structured thematic literature review will help you present a comprehensive overview of the challenges in implementing inclusive education and their impact on different aspects of the educational system.

**In conclusion**

Understanding these challenges is vital for meaningful change within our educational systems. Educators, policymakers, and stakeholders must collaborate to address these obstacles and enhance the effectiveness of inclusive education. By doing so, we can contribute to the creation of a more inclusive and equitable educational landscape, where diversity is celebrated, and every student is empowered to thrive.

In conclusion, this thematic literature review not only highlights the challenges but also offers insights into potential strategies and recommendations to address them. Through continued dedication and a collective commitment, we can work towards the realization of inclusive education, ultimately creating a society where every individual has the opportunity to flourish and contribute to the betterment of our global community.

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## CORRELATES OF SELF-CONFIDENCE IN LEARNING MATHEMATICS AND ACHIEVEMENT IN MATHEMATICS AMONG SECONDARY SCHOOL STUDENTS

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### Abstract

*The Present study is aims to provide insight into the factors that might influence students' attitudes towards self confidence in learning mathematics and how this attitude might impact their mathematics achievement. Main objectives of the study are to analyze and measure the Levels of Self-Confidence in Learning Mathematics with respect to Mean score of Achievement in Mathematics and To study the relationship between Achievement in Mathematics with Attitude towards Self-Confidence in Learning Mathematics of Secondary School Students. The study is characterized as descriptive research of the survey type. The research is being conducted in secondary schools in the Mysuru District of Karnataka State. The research study includes a sample of 495 students who are currently studying in the IX Standard. This sample represents students from Mysuru, K R Nagara, and Nanjanagodu taluks of Mysuru District. The investigator developed a tool to measure the level of achievement in mathematics and attitudes towards Self-Confidence in learning mathematics Scale. The Findings shows the strong positive correlation ( $r = 0.748$ ) suggests that there is a robust relationship between students' attitude towards self-confidence in learning mathematics and their actual achievement in the subject. Schools and educators can focus on programs and interventions that enhance students' self-confidence in learning mathematics. Building a positive attitude can directly contribute to improved academic performance.*

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### Introduction:

Mathematics education is a critical component of secondary school curricula worldwide. Proficiency in mathematics not only equips students with essential problem-solving skills but also opens doors to various educational and career opportunities. Within the realm of mathematics education, self-confidence plays a pivotal role. The confidence that students have in their mathematical abilities significantly influences their learning experience and academic achievements. Understanding the factors that correlate with self-confidence in learning mathematics and academic achievement is crucial for educators, policymakers, and researchers. This understanding can inform the development of effective teaching strategies and interventions aimed at enhancing students' confidence and performance in mathematics.

Self-confidence in learning mathematics is not merely a psychological state; it is a dynamic force that profoundly influences students' academic achievements, especially in the realm of mathematics education. In secondary school settings, where the complexity of mathematical concepts increases, the impact of self-confidence becomes particularly significant. A student's belief in their own abilities can shape their entire learning experience, affecting their willingness to tackle challenging problems, engage in class discussions, and persist through difficulties. Understanding the impact of self-confidence on achievement in mathematics among secondary school students is pivotal for educators, parents, and policymakers. This understanding can illuminate the pathways to fostering a positive learning environment and enhancing overall academic performance in mathematics. Self-confidence is an important factor that can influence students' achievement in learning mathematics (K Kunhertanti and R H Santosa, 2018 and Ciftci, S. Koza; Yildiz, Pinar, 2019). While some studies have shown a positive correlation between self-confidence and mathematics learning achievement, others have found no significant relationship between the two. However, even when there is no significant relationship, self-confidence can still contribute to mathematics learning achievement to some extent.

**Need and Rationale of the Study:**

There exists a significant confidence gap among secondary school students in mathematics. Some students approach the subject with self-assurance, while others experience anxiety and lack confidence. Understanding the factors that contribute to this gap and how it affects their achievement is crucial for developing targeted interventions. The confidence levels of students can vary based on their socio-economic background, gender, and cultural factors. Investigating the impact of self-confidence on mathematics achievement helps in identifying disparities. Addressing these disparities is vital for promoting educational equity and creating an inclusive learning environment for all students.

Confident students are more likely to engage actively in mathematics classrooms. Understanding the link between self-confidence and engagement helps in designing curricula and teaching practices that enhance student participation, leading to a more interactive and stimulating learning experience. Self-confidence in mathematics not only impacts academic success but also influences students' attitudes towards lifelong learning. By nurturing confidence during secondary education, students are more likely to pursue higher education and careers in STEM fields, which are increasingly essential in the modern workforce.

Research findings on the impact of self-confidence on mathematics achievement provide valuable insights for policymakers and curriculum developers. Evidence-based policies and curriculum adjustments can be made to support students' self-confidence, ensuring that education systems are responsive to the psychological needs of students. Fostering a Growth Mindset: Understanding the relationship between self-confidence and achievement can contribute to fostering a growth mindset among students. When students believe that their abilities can be developed with dedication and hard work, they are more likely to approach challenges with resilience and enthusiasm, positively influencing their academic achievements. Investigating the impact of self-confidence in learning mathematics among secondary school students is essential for creating an inclusive, supportive, and engaging learning environment. By addressing the confidence gap, educators can enhance teaching strategies, promote equity, and contribute to the overall well-being and success of students in mathematics and beyond.

**STATEMENT OF THE PROBLEM:**

The statement of the problem of the present survey is, “Correlates of Attitude towards Self-Confidence in Learning Mathematics and Achievement in Mathematics among Secondary School Students”

**DEFINITION OF TECHNICAL TERMS:**

- **Correlates:** Variables or factors that are associated with or related to one another. In this context, the study is exploring factors that are associated with students' attitudes towards self-confidence in learning mathematics and their achievement in mathematics. In this study, correlation is used to explore the relationship between students' attitudes towards self-confidence in learning mathematics and their achievement in mathematics.
- **Attitude:** A psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. In this study, attitude refers to students' perceptions, feelings, and beliefs regarding their self-confidence in learning mathematics.
- **Learning Mathematics:** The process of acquiring mathematical knowledge and skills, which involves understanding mathematical concepts, solving problems, and applying mathematical principles
- **Self-Confidence:** The belief in one's abilities to accomplish a specific task or to meet a challenge. In this context, self-confidence pertains to students' confidence in their ability to learn and excel in mathematics.

- **Achievement in Mathematics:** Refers to the level of success or proficiency a student attains in the subject of mathematics. This can be measured through various assessments, tests, or examinations. Math Achievement Test will be used to assess this variable. Each question will be written to evaluate your knowledge and proficiency in the fundamental topics covered by the subject.

**VARIABLES:****Independent Variables:**

- Self-Confidence in Learning Mathematics (**Affect**)

**Dependent Variable:**

- Achievement in Mathematics

**Moderate Variables:**

- Gender (Boys and Girls)
- Locality (Urban and Rural)
- Type of Schools (Government, Aided and Unaided)

**OBJECTIVES OF THE STUDY:**

- To study the Levels of Self-Confidence in Learning Mathematics with respect to Mean score of Achievement in Mathematics among Secondary School Students.
- To study the relationship between Achievement in Mathematics with Attitude towards Learning Mathematics such as Self-Confidence of Secondary School Students.

**HYPOTHESES OF THE STUDY:**

- There is no Significant relationship between Achievement in Mathematics and Attitude towards Self-Confidence in learning Mathematics among Secondary School Students.

**RESEARCH METHODOLOGY:**

The study is characterized as descriptive research of the survey type. The research is being conducted in secondary schools in the Mysuru District of Karnataka State. this study aims to provide insight into the factors that might influence students' attitudes towards learning mathematics and how these attitudes might impact their mathematics achievement. The research design involves collecting data through surveys and analyzing correlations between different variables, but it does not involve experimental manipulation of variables.

**POPULATION OF THE STUDY:**

The population for your study consists of students studying in various secondary schools in the academic year 2022-2023 in standard IX in Mysuru District. According to the Department of Public Instruction of Karnataka, there are a total of 135,279 students studying in 768 secondary schools across seven taluks in Mysuru District. Out of the 768 secondary schools, the distribution is as follows:

- 232 schools are run by the Department of Education.
- 134 schools are run by Aided Management.
- 348 schools are run by private Management.
- 46 schools are run by the Social Welfare Department.
- 8 schools are under Central Government.

Among the entire student population, there are 46,686 students studying in standard IX. The researcher has chosen a random sampling strategy to select three taluks out of the seven in Mysuru District for conducting the research. The selected taluks are Mysuru, K R Nagara, and Nanjanagudu Taluks.



**SAMPLING:**

The research study includes a sample of 495 students who are currently studying in the IX Standard. This sample represents students from Mysuru, K R Nagara, and Nanjanagudu taluks of Mysuru District. 202 students were selected from 9 Government Secondary Schools, 129 students were selected from 6 Aided Secondary Schools and 164 students were selected from 9 Private Schools. Out of the total 495 students in the sample, 202 were boys and the remaining 293 students were girls.

**TOOLS AND TECHNIQUES USED FOR THE STUDY:**

The investigator developed a tool to measure the level of achievement in mathematics among the selected students. This tool likely consists of questions or tasks that assess the students' mathematical skills and knowledge. The test consists of 50 items with multiple choice questions. The total reliability of the test is 0.93. The investigator constructed another tool to measure students' attitudes towards Self-Confidence in learning mathematics. The tool consists of 28 items with 5-point rating. The total reliability of the tool is 0.81.

**ANALYSIS AND INTERPRETATION OF THE STUDY:**

Objective-1: To study the Levels of Self-Confidence in Learning Mathematics with respect to Mean score of Achievement in Mathematics among Secondary School Students.

	Levels of Self-Confidence in Learning Mathematics (Affect)		
	High	Moderate	Low
N	123	146	226
%	24.8%	29.5%	45.7%
Mean score of Achievement in Mathematics	41.07	34.93	26.90

**Findings:** The data shows that almost half (45.7%) of the students have low confidence in learning mathematics. This could indicate a significant issue in the education system, where a large portion of students lacks confidence in their math abilities. There is a substantial difference in achievement scores between students with high confidence (41.07) and low confidence (26.90). This highlights the positive impact between confidence and achievement in mathematics. Students with moderate confidence and their mean score (34.93) suggests that moderate confidence leads to intermediate levels of achievement.

Objective-2: To study the relationship between Achievement in Mathematics with Attitude towards Learning Mathematics such as Self-Confidence of Secondary School Students.

		Attitude towards Self-Confidence in learning Mathematics
Achievement in Mathematics	Pearson Correlation	0.748**
	Sig. (2-tailed)	0.000
**. Correlation is significant at the 0.01 level (2-tailed).		
b. List wise N=495		

**Findings:** The strong positive correlation ( $r = 0.748$ ) suggests that there is a robust relationship between students' attitude towards self-confidence in learning mathematics and their actual achievement in the subject. This implies that students who have a positive attitude towards their self-confidence in learning mathematics tend to perform better academically.

**IMPLICATIONS FOR EDUCATION:**

- **Boosting Confidence:** Addressing low confidence should be a priority in educational strategies. Building confidence can positively impact students' academic performance.
- **Targeted Interventions:** Students with low confidence might require additional support, such as personalized teaching methods, counseling, or mentorship programs, to enhance their confidence levels and, consequently, their math scores.

- **Maintaining Moderate Confidence:** While high confidence is beneficial, the data suggests that moderate confidence is also associated with reasonably good academic performance. Striking a balance between fostering confidence and maintaining realistic expectations could be a key strategy.
- **Intervention Strategies:** Schools and educators can focus on programs and interventions that enhance students' self-confidence in learning mathematics. Building a positive attitude can directly contribute to improved academic performance.
- **Targeted Support:** Students with low self-confidence might need targeted support, such as counseling, motivational workshops, or peer mentoring programs, to boost their confidence levels and subsequently improve their math scores

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## WOMEN ECONOMIC, SOCIAL AND CULTURAL RIGHTS

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### **Abstract**

*Women Economic, social and cultural rights are empowering and transformative because they provide women with control and economic independence over the course of their lives, facilitating the enjoyment of other rights, including civil and political. A large part of the transformative aspect of ESCR is being able to challenge stereotypical roles, characteristics and capabilities ascribed to women and men, which determine the scope of activities they are allowed to undertake in a given society. Once seen as being peripheral to human rights concerns, the indivisibility of all women's human rights (civil, political, economic, social and cultural) has received growing recognition. Issues such as violence against WHRDs, denial of women's equal rights to property and inheritance, discrimination against women and girls in the field of health, education, employment and political.*

**Keywords:** Women Economic, Civil and Political, social and cultural

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### **INTRODUCTION**

The international human rights system provides a common framework of universally recognized values, norms and jurisprudence, both to hold States, and increasingly non-State actors, accountable for violations; and to mobilize collective efforts for economic and social justice, political participation and equality. ESCR are embodied in international treaty law at the universal and regional level. The Universal Declaration of Human Rights (UDHR) recognizes the interdependence and indivisibility of all human rights.

The International Covenant on Economic, Social and Cultural Rights is the primary mechanism within the United Nations human rights system that protects ESCR. The ICESCR creates legally binding international obligations on those States that have ratified or acceded to it.

### **HISTORY OF WOMAN'S OPPRESSION**

In primitive society, before the advent of civilisation as we know it, people lived together in tribes. There was no such thing as monogamy but a form of group marriage instead in which it was impossible to identify the fathers of children. Ancestry was therefore traced through the women and thus gave them a prized position in their society. Men and women were considered as equal though this is not to deny that they performed different tasks. It was the man that went out hunting; the women stayed around the camp engaged in primitive agriculture and breeding domestic animals as well as bearing children.

### **ROLE AND THE NEED FOR PROTECTION**

Ongoing and increasing violence and intimidation of WHRDs serve to underscore the important role they play in the defense, protection and enjoyment of women's ESCR and recent developments a clear message that WHRDs should be supported and protected. Committee of the Status of Women (CSW 57) was a major achievement for WHRDs who were, for the first time ever, formally recognized in the language of the CSW Agreed Conclusions, specifically requiring States to "Support and protect those who are committed to eliminating violence against women, including women human rights defenders in this regard, who face particular risks of violence.

Awareness of the specific violence WHRDs face, and are important steps forward to recognising the work and risks for WHRDs', there is much to be done to turn these commitments into actions and to implement concrete protection measures for enabling a safe environment for WHRDs to work without fear of persecution, criminalization, stigmatization, death threats, assassinations and sexual violence.

women's economic, social and cultural rights have increasingly garnered the attention of the international community. The increasing recognition of women's essential contribution to the global

economy through their productive and reproductive labour as well as recognition of their continued social marginalisation including through new trends in social and cultural life that seek to limit women's access to decision-making processes, has brought women's economic, social and cultural rights to the fore. Once seen as being issues merely peripheral to human rights concerns, the indivisibility of women's rights (civil, political, economic, social and cultural) has become ever clearer – recognition that in order for women to realise the full range of their human rights, fulfilment of women's economic, social and cultural rights is essential.

### **IMPORTANT ECONOMIC, SOCIAL AND CULTURAL RIGHTS**

The articulation of ESCR in international law followed long-term demands for these basic rights by people worldwide, and reflects concern for the life of every individual, particularly the most vulnerable, as expressed in many philosophical, religious and other traditions.

**Availability** States must ensure the existence of tailored services to help people to identify employment opportunities and find work.

**Accessibility** Access to work involves three key elements: non-discrimination, physical accessibility, and information accessibility. Discrimination in access to and continuation of employment is prohibited. States must ensure that reasonable accommodation is made so that work places are physically accessible, particularly for persons with physical disabilities. Everyone has the right to seek, obtain and impart information on employment opportunities.

**Acceptability and quality** The right to work comprises several interrelated components, including the right to choose and accept work freely, just and favourable conditions of work, safe working conditions, and the right to form trade unions.

In an era of increasing economic globalisation and growing inequality within and between states, there is an urgent need for grassroots groups, NGOs, academics, and other organisations and individuals to unite to recognise connections between continuing, localised struggles and to realise the human rights of all persons in practice. In understanding instances and patterns of poverty and deprivation as violations of ESCR – rather than mere misfortune, events outside human control, or the result of individual shortcomings – an obligation is placed on states and, increasingly, on corporations and other non-state actors, to prevent and address such situations. Around the world, the ESCR framework is used to bolster actions for justice and against oppression, and amplify progressive alternatives to enhance the enjoyment of ESCR. Developed legislation, analysed domestic budgets and international trade agreements to ensure compliance with human rights, and built solidarity and networks between communities locally and across the globe. ESCR unite women and men, migrants and indigenous people, youth and elders, of all races, religions, political orientations, and economic and social backgrounds, in a common realisation of universal human freedom and dignity.

### **RIGHTS AND RESPECT FOR HUMAN DIGNITY**

Rights and respect for human dignity, is an obstacle to the participation of women, on equal terms with men, in the political, social, economic and cultural life of their countries, hampers the growth of the prosperity of society and the family and makes more difficult the full development of the potentialities of women in the service of their countries and of humanity” CEDAW holistically addresses civil and political rights as well as economic, social and cultural rights and recognises that enjoyment of all these rights are inextricably linked to one another. It recognises that discrimination against women in one field of life can cause and perpetuate discrimination in other fields of life. For example, Article 5 of this Convention recognises that it is necessary to eliminate discriminatory gender stereotypes to ensure that women's access and enjoyment of all their rights is met including their economic, social and cultural rights. CEDAW rests on the principle that the State is obligated to eliminate all forms of discrimination against women without delay and using all

appropriate measures. This Convention also provides specific standards related to gender equality in the spheres of education, employment, health care, and other areas of economic and social life of women's.

Continue to articulate clearly and comprehensively the content of substantive equality in relation to women's full enjoyment of their economic, social and cultural rights in all General Comments/Recommendations and Concluding Observations. In other words, provide a gender-sensitive analysis of substantive economic, social and cultural rights and their relationship to the fulfilment of women's right to equality.

## CONCLUSION

Emphasise the centrality of the realisation of the economic, social and cultural rights of women in addressing gender-based discrimination and realising gender equality within General Comments/Recommendations and Concluding Observations, as well as in questions to State Parties during review processes. This includes identification of what the right means for women in terms of respect, protect and fulfilment of rights and what kinds of specific measures need to be considered by States for the implementation of the right for women including women facing intersectional discrimination. Continue to consult and refer to the Concluding Observations of other relevant treaty bodies as well as the Outcome Document of the UPR and reports of Special Procedures on the State Parties performance in ensuring women's economic, social and cultural rights and addressing gender-based discrimination and inequality. Continue to consult and refer to relevant General Comments/Recommendations of all treaty bodies to which the State is a Party when analysing the scope the State Parties obligations to ensure women's economic, social and cultural rights and eliminate gender-based discrimination and inequality.

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## ENHANCING SECONDARY EDUCATION WITH LIFE SKILLS

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### Abstract

*Adolescence, a vital stage of growth and development, marks the period of transition from childhood to adulthood. It is characterized by rapid physiological changes and psychosocial maturation. "Life skills education is being adopted as a means to empower young people to face challenging situations. It refers to an interactive process of teaching-learning which enables one to acquire knowledge and develop attitudes and skills that support the adoption of healthy behaviours. Children and young people regularly face many challenges, and require more than even the best numerical and literacy skills. The education system does not meet the expressed and perceived needs of the learners in respect of health education, (mental, physical, emotional and spiritual). Life skills are imparted in a supportive learning environment using the peer training approach involving a teacher and 3-4 students. Life skills are essentially those abilities which help promote the overall well-being and competence of students/children as they face the realities of life. In this paper concepts of Life skills, Life skills Education and Life skills development are discussed.*

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### INTRODUCTION:

All of us desire to live peacefully and comfortably. Life skills are essential to change our behavior. We have make use of the life skills in our daily life to face the difficulties and to keep our mental and physical health in good condition. "The life skills are the adjustment and definite behaviour of an individual to deal effectively with demands and challenges of his life situations" – WHO, 1997 Life skills, precisely defined, means problem-solving behaviours appropriately responsibly used in the management of personal affairs. As problem-solving behaviours, life skills liberate in a way, since they include a relatively small class of behaviours usable in many life situations. Appropriate use requires maturity, or accountability. And as behaviours used in the management personal affairs, the life skills are applied to 5 areas of life responsibility identified as : 1. Self 2. Family 3. Leisure 4. Community and 5. Job. Life skills include psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathize with others, and cope with managing their lives in a healthy and productive manner.

### MEANING AND CONCEPT OF LIFE SKILLS:

Education is the process of capacity building of children. The capacity can be categorized into two broad areas of abilities - Cognitive abilities and skills (numeracy and literacy) & Non – cognitive abilities and skills. Development of these non cognitive skills is necessary for good citizenship. It includes inculcation of certain behavioural traits attitudes, beliefs and values, which have societal/cultural sanctions. Unlike the cognitive skills these are local or culture specific and have relationship with the level of development of the society. These important skills are termed as "life skills".

**Life Skills are 'living skills' or abilities for adaptive and positive behaviour that enable individuals to deal effectively with demands & challenges of everyday life.** (WHO 1997) If one handles most of the situations successfully and confidently by using the appropriate strategy, one feels good and positive and is ready to face similar situations without anxiety. On the other hand, failure to handle the situation makes one feel inadequate, ineffective, anxious and reluctant to face similar future challenges. There are many Life Skills; however all of these skills fall under a set of core generic skills, which are needed for every individual. It is evident that the Life Skills are comprehensive including various areas like Thinking, Behaviour and Emotions. The final target being self awareness, esteem and accepting of others.

### WHO NEEDS LIFE SKILLS?



The Life Skills programme is a school based programme where Life Skills are imparted in a supportive learning environment. They are applicable for all ages of children and adolescents in school. However, the age group targeted is mainly 10-18, adolescent years, since young people of this age group seem to be most vulnerable to behaviour related health problems.

The programme is for the promotion of health and wellbeing and targeted group is all children.

#### **NEED AND IMPORTANCE OF LIFE SKILLS:**

- The Period of teenage is suitable to adopt these skills. If they follow these life skills their life will become meaningful, otherwise they will spoil their life forever.
- All human beings can inculcate these skills, which are necessary for the welfare of the humanity.
- In the modern period, the human beings are busy in accumulating wealth. So they spoil their health without getting rest and free time for entertainments.
- They should take keen interest in improving their physical activities and exercises. Our body consists of innumerable physical organs which are working every time without our consciousness. We have to provide them required work forever.
- During the teenage period, most of the youths find occasion to misuse their physical parts. Drug addiction, unsafe sexual contact, drinking and smoking make them prone to some kind of deceases. The Life skills at present are needed to all. It helps us to lead a peaceful life. The life will become meaningful. So there is a call of WHO specially to the youths. “ You are the promoter of your life. Study and inculcate the ten principles of life skills, you will shine in your life forever”

#### **VARIOUS LIFE SKILLS:**

Described in this way, skills that can be said to be life skills are innumerable, and the nature and definition of life skills is likely to differ across cultures and settings. However, analysis of the life skills field suggests that there is a core set of skills that are at the heart of skills-based initiatives for the promotion of the health and well-being of children and adolescents. These are listed below:

- **Decision making:**

Decision making helps us to deal constructively with decisions about our lives. This can have consequences for health if young people actively make decisions about their actions in relation to health by assessing the different options, and what effects different decisions may have.

- **Problem solving:**

Problem solving enables us to deal constructively with problems in our lives. Significant problems that are left unresolved can cause mental stress and give rise to accompanying physical strain.

- **Creative thinking:**

This contributes to both decision making and problem solving by enabling us to explore the available alternatives and various consequences of our actions or no action. It helps us to look beyond our direct experience, and even if no problem is identified, or no decision is to be made, creative thinking can help us to respond adaptively and with flexibility to the situations of our daily lives.

- **Critical thinking:**

It is an ability to analyse information and experiences in an objective manner. Critical thinking can contribute to health by helping us to recognise and assess the factors that influence attitudes and behaviour, such as values, peer pressure, and the media.

- **Effective communication:**

It means that we are able to express ourselves, both verbally and non-verbally, in ways that are appropriate to our cultures and situations. This means being able to express opinions and desires, but also needs and fears. And it may mean being able to ask for advice and help in a time of need.

- **Interpersonal relationship skills:**

It helps us to relate in positive ways with the people we interact with. This may mean being able to make and keep friendly relationships, which can be of great importance to our mental and social well-being. It may mean keeping good relations with family members, which are an important source of social support. It may also mean being able to end relationships constructively.

- **Self-awareness:**

It includes our recognition of ourselves, character, strengths and weaknesses, desires and dislikes. Developing self-awareness can help us to recognize when we are stressed or feel under pressure. It is also often a prerequisite for effective communication and interpersonal relations, as well as for developing empathy further.

- **Empathy:**

It is the ability to imagine what life is like for another person, even in a situation that we may not be familiar with. Empathy can help us to understand and accept others who may be very different from ourselves, which can improve social interactions, for example, in situations of ethnic or cultural diversity. Empathy can also help to encourage nurturing behaviour towards people in need of care and assistance, or tolerance, as is the case with AIDS sufferers, or people with mental disorders, who may be stigmatized and ostracized by the very people they depend upon for support.

- **Coping with emotions:**

It involves recognising emotions in ourselves and others, being aware of how emotions influence behaviour, and being able to respond to emotions appropriately. Intense emotions, like anger or sorrow can have negative effects on our health if we do not react appropriately.

- **Coping with stress:**

Coping with stress is about recognising the sources of stress in our lives, recognizing how this affects us, and acting in ways that help to control our levels of stress. This may mean that we take action to reduce the sources of stress, for example, by making changes to our physical environment or lifestyle. Or it may mean learning how to relax, so that tensions created by unavoidable stress do not give rise to health problems.

## **DEVELOPING LIFE SKILLS PROGRAMMES IN CLASS ROOM**

- Teachers, parents, elders should make the mark of their life as exemplary. Their life must mirror among the students and the children.
- Through anecdotes, epigrams, and panchatantra stories, because students love stories.
- Rewarding and Awarding students for their good achievements. For their honesty, for truth, Gandhi's autobiography, Harichandra Drama can be taken as model to teach truthfulness.
- Values of "Sathyam Shivam Sundaram", Thyaga, Karma, Prema, Loka Sangraha, can be taught through lives of great men. Secular values through socializing children of different caste and religious practices.
- Teachers must be role models – Books on moral stories must be provided.
- We can promote life skills among secondary school students. There are various modalities in promoting life skills among the students.
- Class discussions
- Role plays.
- Audio and Visual activities
- Educational games and simulations. Ex: Music, arts, dance etc.
- Story telling
- Guided practice
- Debates.

- Small group discussions.

**CONCLUSION:**

Life skills are essentially those abilities which help promote overall well being and competence in students as they face the realities of life. Life skills are beginning of wisdom which focuses on behaviour change. Developmental approach is designed to a balance of knowledge, attitude and skills. Life skills are psychosocial competencies which are needed to be distinguished from other important skills that students will acquire as they grow up such as reading, numbers, technical and livelihood skills. Life skill education involves a dynamic teaching process. Children learn life skills from parents, teachers and significant others as their role model. They gradually learn to use particular skills effectively in diverse situation to cope with challenges of life.

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## GENDER-SEGREGATED EDUCATION

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### **Abstract**

*As the saying goes, "If the girl child is educated, the future of the country is bright" Education is the most important tool for empowering the girl child to promote the weaker sections of the society. The Government of India has launched various schemes to achieve gender equality and promote women's education. This paper discusses the advantages, disadvantages, need and importance of gender segregated education and the objectives of the study etc.*

**Key words:** Gender, Education, Equality, Segregated

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### **Introduction:**

India is a male dominated nation which has been a social fact since ancient times till present. Savitri Bapule and Jyoti Bapule opened separate schools to educate women who had been deprived of education since ancient times. Many social reformers and British viceroys tried in the same way. Dr. B. R Ambedkar has given many acts, laws and rights for women education in Indian constitution. Gender discrimination has existed since ancient times and is very common in most countries of the world. Even in India including the world, we see gender orientation, gender discrimination, gender segregation in the fields of religion, caste, race, sect, clan and political, social, economic, educational etc. Especially in Indian society, women do not have as much priority as men. From Vedic times to modern times we see gender inequality. Smritikara Manu said in his Smriti, "Woman does not deserve freedom, she is limited only to marriage and bearing children and cooking food on the stove." It is unmistakably the foundation for the existence of male society.

Gender segregation is a standard of the early educational system where male and female students study in separate learning environments. Gender segregation in education is common not only in India but also in most countries of the world.

Sex segregation or gender segregation is the physical, legal or cultural segregation of people according to their sex.

"Sex segregation in education is the practice of educating male and female students in separate classrooms, separate buildings or schools."

### **Need and Significance of the study:**

- This study is helpful to know about gender equality in education.
- This study is helpful to know the effect of gender segregation in education sector.
- This study is helpful in understanding the schemes undertaken by the government towards gender equality.

### **Objective:**

- To know about educational gender equality.
- To know the effect of gender segregation in education.
- To know about the measures or plans taken by the government regarding gender equality.

### **Review of the literature**

- **Harshitha Jeena (2022)** - Gender Segregated Education: In this article the researcher What is Gender Segregated Education? Its benefits and its pros and cons have been explained.
- **Ministry of Education (2021)** - Government Welfare Schemes to Promote Girl Child Education: In this article School Education and Literacy Ministry of Education Establishment of Kasturba Gandhi Balika Vidyalayas under Comprehensive Punishment including SC, ST, OBC, Minority and Below Poverty Line Backward Classes, Scholarship, distribution of free

uniforms, life skills, provision of free text books, implementation of NMMSS for this W S category and so on.

- **Sakshi Padiyar (2021)** - Gender Segregated Education and How It Helps the Student: In this article, the researchers analyzed the academic quality, academic behavior, discipline, teacher awareness in schools, differences between males and females in classrooms, curriculum designed to meet students' needs and interests, etc.

### **Methodology**

The paper uses the doctrinal method of study. The secondary sources are given important in this paper. The secondary sources of information used are the article of research, journals, news papers, working papers and thesis.

### **Advantages or uses of Gender - Segregation Education:**

- ❖ In This Education Students who attend single-sex or segregated schools are more confident.
- ❖ Sexual assault is preventable.
- ❖ Eliminates fear in parents.
- ❖ Eliminates competition between girls and boys.
- ❖ Assist in the implementation of teaching methods.

### **Disadvantages of Gender - Segregation Education:**

- ✓ Promotes gender inequality.
- ✓ Lack of diversity.
- ✓ Creates gender stereotypes.
- ✓ Same-sex interactions are difficult.

### **Welfare Schemes Undertaken by the Government to Promote Girl Child Education:**

Department of School Education and Literacy (DoSEL) Ministry of Education has implemented various welfare schemes to encourage girl child education.

1. **Kasturiba Gandhi Balika Vidyalaya:** Kasturiba Gandhi Balika Vidyalayas have been established under comprehensive education for SC ST OBC minorities and above poverty line. Residential schools are established for girls belonging to the Below (BPL) Backward Classes from class six to class 12. About 5726 Kasturiba Gandhi Balika Vidyalayas have been sanctioned in the country out of which 5010 Kasturiba Gandhi Balika Vidyalayas have enrolled about 6.54 lakh girls and are doing well.
  - Provision of free uniform textbooks.
  - Establishment of student hostels
  - Special state specific schemes like life skills, awareness programs, incinerators, sanitary pad vending machines are provided for class I to 12 children.
2. **Establishment of separate residential schools**
3. **Establishment of separate Toilets:** About 13.58 crore children in about 11.08 lakh government schools in India have gender separate toilets.
4. **National - Means - Merit Scholarship Scheme (NMMSS):** is a central sector scheme implemented since 2008 to provide scholarships to economically weaker section (EWS) girls and meritorious students. Under this scheme, every year 1 lakh new scholarship of 12 thousand is given to selected students of class 9th.
5. Ministry of Education has been providing scholarships to college and university students since 2008. Out of which 50% scholarship is earmarked for girls.
6. Free bicycle delivery.

### **Conclusion:**

In present day gender segregation in India has a lot of influence in education. Different types of government, aided and private residential and non-residential schools, colleges and universities are

providing separate education to girls. Although this is a good development, it is not very social towards achieving gender equality. But this one view is a better concept in the interest of women's educational development.

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## ROLE OF TEACHERS IN IMPARTING VALUE EDUCATION

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### INTRODUCTION:

Values are essential for positive human behaviour. Education from time immemorial has focused on values. Values form the core of educational goals and objectives. Almost every education policy document has emphasized the role of education in fostering values. Education Commission (1966) recommended introduction of social, moral and spiritual values in the school curricula. The National Policy of Education (1986) also highlighted the need of education for values in removing intolerance, violence, superstition and upholding social, cultural and scientific principles to make India a secular, democratic and progressive nation taking pride in its cultural heritage. The National Curriculum Framework for School Education (2000) brought to focus the erosion of ethical, social and spiritual values and suggested the integration of values in the curriculum.

The National Curriculum Framework (NCF), 2005 strongly advocates values like cooperation, respect for human rights, tolerance, justice, responsible citizenship, diversity, reverence towards democracy and peaceful conflict resolution. It also delineates education for peace as a significant national and global issue. The position paper on Education for Peace has also addressed the issue of equipping students with the values, attitudes and skills required to live in harmony as responsible citizens with the goal of education for peace. Education for values will further equip students to make sensible choices on situations based on values of equality, integrity, democracy, freedom, and human rights. Education is inherently values oriented and must develop in learners caring, co-operation and respect for others. In addition to equipping them with life skills and attitudes, it must prepare them to lead a full life.

As a society, the concern with Values Education is not unique to our times but the erosion of values has forced introspection and reflection in education. Values Education is integral to education of any kind and has been focused upon in many educational committee reports in India. Most recently the National Curriculum Framework and the Framework on Values in Schools has been brought out by NCERT. The idea of imparting Values Education is also closely linked with the educational reforms that have been introduced under the scheme of Continuous and Comprehensive Evaluation (CCE).

It is apparent that Values Education is an area that needs to be highlighted as it holds the key to real and meaningful education – that engages students in addressing real world challenges, issues important to humanity, and questions that affect them as individuals.

### PRESENT EDUCATION SYSTEM: DEARTH OF VALUE EDUCATION:

Present education system deals with imparting knowledge of “Apara Vidya” i.e. study of Physics, Chemistry, History, Biology etc. The knowledge which we possess through the present education system is Apara Vidya which means that although we have knowledge of the world we do not have knowledge of our own self, of the supreme reality which is beyond time and space. We get knowledge of the external world. Today’s education system is designed in such a way that a human being will achieve materialistic Success and superficial achievements but he will lack virtues like kindness, honesty, compassion, righteousness, peace, love, non-violence etc. Human beings have become individualistic and self-centred. This infuses in them jealousy, hatred and rivalry. Stability of

society is threatened by the breakdown of ethics. The basic aim of education should be to produce men of knowledge and culture. Values such as Patriotism, anti-untouchability, dignity of individuals, endurance, social service, justice, national integration find no place in today's world of corruption, violence, intolerance and money-making.

### **NEED OF VALUE EDUCATION:**

Values are standards or principles considered important in life. They come from within (Love, Kindness, Compassion, Mercy, Sympathy, Empathy, etc.,) and also by Practicing (Punctuality, Discipline, Obedience, Behaviour, Conduct, Character.,). They are the foundation of human existence. Without the knowledge of values society cannot sustain. Values tell a man to differentiate between good and bad, what one should do and what one should abstain from. They bring quality and meaning to our life. Value gives a person his identity and character. Value act as guidelines - they tell him what he should and should not do.

### **ROLE OF TEACHERS IN IMPARTING VALUE EDUCATION:**

The 'Learned teachers' are like sign posts in the road, to tell you where the road leads to.

- The Teacher should help the students achieve their full potential and bring out the best in them.
- Be able to lead them towards a better tomorrow.
- Most important of all must be loving and sincere.

Isn't imparting values the responsibility of parents? Yes, it is. But teachers and schools play a big role too.

1. Students spend more time in campus.
2. Campus forms the Bridge between Home and the Society.
3. It is in Schools and later in the Colleges that students learn how to behave in the society.
4. It is in schools and colleges that a good value system can be nurtured.

"A teacher's purpose is not to create students in his own image, but to develop students who can create their own image"

Teachers are a role-model for the students. Their actions convey more than their words. Students learn values from what the teachers are rather than from what they say. Teacher makes a maximum impact on the personality of a student in the formative years. Students imbibe virtues and vices knowingly and unknowingly from these role models. Teachers demonstrate the appropriate behaviour of their students by their actions.

Teachers must have healthy attitude and should possess rich values. Teaching is all about attitude positive / negative towards their job of imparting quality education. Teacher should act as a friend, philosopher and guide. A teacher is not only a source of information but is also a mentor and guardian. Forth is teacher must respect the teaching profession, love their subjects and students, Students will seek inspiration from teachers who have high self-esteem.

A decade back or so the role of a teacher was limited to being a source of information. But today this place is shared by books, coaching classes, multimedia technology etc. So the role of a teacher is marginalized. Role of a teacher has increased manifold. In modern times we are experiencing transition. A teacher can maintain values and nurture them. A teacher has an immense potential of bringing about a sea change in the society by demonstrating essential values of head and heart. Teacher can impart values in students by giving them instructions through discussion, experimentation and lectures and by the following mentioned ways:

- Teachers can maintain a case-study register to closely observe the students and note down the positive and negative traits of their personality.
- By organizing cultural and sports events values like team spirit, sharing, spirit of cooperation, patience, courtesy etc can be imparted.

- National and religious festivals must be celebrated to foster a feeling of homogeneity.
- “Thought for the Day” should be employed in assemblies. Moral thoughts trigger in them moral thinking.
- Teachers should give importance to cooperative learning.
- Skits, role plays propagating moral values can be performed by students under the guidance of teacher.
- Teacher must tell the students to go to the libraries- the treasure house of knowledge.
- Teacher must explain the students the importance of meditation & yoga practices.
- Impart knowledge of foreign languages to make them know different cultures.
- Organize games, excursions, visits to places of historical importance. Club activities like nature club, literary club, wildlife prevention club, social service camps, blood donation etc.
- Suicidal tendencies in students should be cured. They must be prepared by the teacher to face the challenges of life fearlessly and with courage.

### VALUE ORIENTATION OF TEACHER EDUCATION CURRICULA IN INDIA

The value orientation of teacher education curricula in India refers to the integration of values and ethics into the training of teachers. In India, the National Council for Teacher Education (NCTE) is responsible for setting standards for teacher education and ensuring that these standards are met by teacher education institutions across the country.

**The value orientation of teacher education curricula in India is based on the following principles:**

- **Promoting social justice:** The teacher education curriculum in India is designed to promote social justice by addressing issues of inequality and discrimination in the classroom. Teachers are trained to be sensitive to the needs of diverse learners and to create an inclusive classroom environment.
- **Inculcating democratic values:** The teacher education curriculum in India emphasizes the importance of democratic values such as equality, freedom, and justice. Teachers are trained to promote these values in the classroom and to encourage students to become responsible and active citizens.
- **Developing ethical behaviour:** The teacher education curriculum in India focuses on developing ethical behaviour among teachers. Teachers are trained to be honest, fair, and responsible in their interactions with students, parents, and colleagues.
- **Fostering creativity and innovation:** The teacher education curriculum in India emphasizes the importance of fostering creativity and innovation among students. Teachers are trained to use a variety of teaching strategies and techniques to engage students and to promote learning.
- **Promoting Environmental Consciousness:** The teacher education curriculum in India promotes environmental consciousness and encourages teachers to integrate environmental issues into their teaching. Teachers are trained to promote sustainable practices and to develop an appreciation for the natural world among students.
- **Encouraging Research and Inquiry:** The curriculum in India encourages teachers to engage in research and inquiry to improve their teaching practices. Teachers are trained to use data and evidence to inform their decision-making and to continually improve their teaching.
- **Developing a global perspective:** The teacher education curriculum in India promotes a global perspective and encourages teachers to develop an understanding of different cultures and perspectives. Teachers are trained to create a classroom environment that is respectful and inclusive of diverse cultures and perspectives.

**CONCLUSION:**

The value orientation of teacher education curricula in India is designed to promote social justice, democratic values, ethical behaviour, creativity and innovation, environmental consciousness, research and inquiry, and a global perspective. These values are integrated into the training of teachers to ensure that they are equipped with the knowledge, skills, and attitudes necessary to promote the holistic development of their students and to contribute to the development of a more just and equitable society.

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## **THEME - 5**





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## KARATE PARTICIPATION IN SCHOOL AND COLLEGES – A DESCRIPTIVE STUDY

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### Abstract

*The goal of this study was to find out how to get more kids and teens to take part in karate at school and in colleges. Getting good at karate will help you live a healthy life. Along with combat strategies, it focuses on physical fitness and helps you get stronger, more flexible, and able to last longer. Participating in karate sports has been shown to improve a person's physical health. Regular exercise has also been linked to improvements in mental health, self-confidence, cognitive performance, and depression. Lots of people all over the world like to do karate, and training in it is a good way for kids to get a dose of the activity that is good for their health. This article talks about some of the benefits of learning and doing karate, especially for high school and college students.*

**Key Words:** *Karate, Mental health, Self-confidence, Cognitive performance, and Depression.*

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### Introduction

The concept of "martial arts" is a collective term for combat styles that originated in Eastern civilizations and are based on the ideas of self-improvement and self-discovery. Armed and unarmed martial arts can be separated. The first form involved swordsmanship and archery; the second involved pressing or grasping with the hands and feet. Numerous martial techniques, both armed and unarmed, are used as means of advancing the divine. Karate is an unarmed martial art that is growing more and more well-liked among girls, children, and adults now a days. The karate of today is always changing. Karate has several health advantages, including those relating to mental toughness, inner quiet and peace, and self-defence.

Aim to quick by a set of fundamental principles and morals, such as bravery, reliability, respect, self-discipline, and honesty. This is the ultimate goal of traditional karate training. The practise of karate has been changed for modern sports and exercise, although some place a strong focus on its fundamental principles. Sadly, despite the fact that violence seems to be a growing part of modern society, some people still view karate as dangerous and violent, which encourages kids to be needlessly aggressive. This implies that many of the advantages of kids learning karate may yet be unknown. Though it has been said that the media has twisted the image of the martial art of karate for commercial and entertainment purposes, furthering the spread of a bad perception of them, karate membership is rising, especially among young people.

Karate practise will set you up for a healthy life. Along with combat, it focuses physical conditioning and enhances your strength, stamina, flexibility, and endurance. Learning martial arts will help you tone your body and boost your muscle strength, which can drastically affect your pace of life.

### Karate in schools

Karate provide kids and teenagers a worthwhile pastime, gives their life structure, teaches them self-control and opens up social chances, and helps them develop social skills and respect for authoritative figures and norms. Many of these topics appear to be taught in similar ways to what is taught in traditional classrooms; in fact, the growing popularity of karate among teachers and youth welfare professionals serves as further evidence of the good effects of karate training with children. In most nations, martial arts like karate, judo, and taekwondo are employed in physical education (PE) lessons in secondary schools because they offer beneficial educational opportunities for students,

according to a study among member states of the European Physical Education Association (EUPIM). It has been demonstrated that traditional martial arts-based programs used in school settings can assist schools manage bullying while fulfilling the requirements of the physical education curriculum. These programs are built on the principles of self-control, respect, and nonviolence.

Martial arts have been shown to enhance PE curriculum by motivating kids to exercise in a variety of enjoyable and energizing ways, increase the standard of PE lessons, and assist schools in meeting physical activity recommendations. One such school program, which emphasized self-protective techniques like prevention, avoidance, defensive positioning, and balance, led to improvements in self-esteem and self-confidence, self-regulation, pro-social behaviour, classroom behaviour, and psychological well-being in addition to decreased aggression and altered bystander behaviour that was helpful.

In fact, a program used school-age children to perform karate kata (movements involving blocking, punching, grappling, and kicking techniques in specific set sequences) to students with various autism spectrum disorders for 14 weeks to assess the effects. This shows that the benefits of karate in-school programs simply do not apply to the general population. Regular karate kata practice has been demonstrated to dramatically lessen social dysfunction, which persisted after the intervention for one month.

### **Exercise and School kids**

Physical activity on a daily basis is essential for young children's healthy growth as well as for preventing chronic disorders in later life. Children who regularly participate in physical activity and sports are less likely to develop cardiovascular risk factors such type 2 diabetes, obesity, and high blood pressure. To combat these issues, efficient physical activity programs should be implemented, and kids should have a variety of enjoyable and stimulating activities to choose from. It remains challenging to reduce these risk factors.

Sports participation is being shown to improve one's physical condition, but consistent physical activity has also been linked to improvements in mental health, self-confidence, cognitive performance, and depression. Exercise must be done at least three times a week for 60 minutes at a moderate to strenuous intensity while involving continuous, rhythmic, and aerobic motions of major muscle groups in order to receive the above-mentioned positive health benefits. Kids can choose from a variety of sports and extracurricular activities as martial arts become more and more popular. Millions of people throughout the world enjoy practicing karate, and karate training offers a means for kids to get a useful and health-improving dose of the aforementioned activity. This article seeks to describe a few advantages of karate training, particularly for high school and college students.

### **The advantages of karate learning:**

#### **1. Increase mental toughness**

The practising karate increases mental toughness. Karate training will teach you a lot about who you are. From a spiritual standpoint, it fosters resilience and spiritual fortitude in the face of difficulty. With karate, you succeed because it gives you the mental courage to overcome any difficulty.

#### **2. Increase peacefulness and inner peace.**

It promotes tranquillity and inner peace. In both China and Japan, the development of martial arts was greatly influenced by Buddhism (Chan). Karateka is all about maintaining calm and inner serenity. You will learn to concentrate on your own motions whether training with a partner or while performing karateka hitting, blocking, and dynamic kicks. Dealing with physical issues and self-defence scenarios is made easier by mental clarity and tranquillity. They feel more harmony and peace.

### **3. Self defence**

These days, the main factor influencing people's decision to practice karate is self-defence. You learn self-defence skills and how to avoid dangers in karate. This information can both save your life and the lives of others. If you are ever in a dangerous scenario, learning karate will be helpful. It will also give you the self-assurance to defend yourself and use force if necessary. After recognizing a potential conflict, both boys and girls are specifically taught how to stay out of a confrontation.

### **4. Self confidence**

Karate training boosts self-confidence. Your confidence will rise and you'll get more motivated as you practice katha (imaginary combat) and karate more. Karate is built on a variety of other methods that encourage perseverance and achievement. Your confidence will rise if you accomplish this.

### **5. Physical fitness and health**

Karate training on a regular basis is a great way to build muscle and tone your body. Training in karate increases agility and flexibility. Your health will benefit from having good posture, which also makes you feel and look your best. Strength and stamina are enhanced with karate. Karate works out the entire body. Karate enhances mental and emotional health in addition to physical fitness. Karate teaches you self-defence skills, which calms you down.

A great deal of research on martial arts practice has revealed benefits in the physical health of non-practitioners. This holds true for a wide variety of martial arts techniques. It is superior to dancing in terms of establishing balance control, according to certain studies, and it also improves flexibility, posture, coordination, mental reaction speed, and balance. Improvements in balance, reduced blood pressure, and improved postural stability.

The majority of research demonstrates that those who engage in any kind of karate instruction feel more psychologically healthy and well-adjusted than the general population. A growing body of study is looking into how karate instruction affects people, especially children and teenagers. According to the research, practicing karate can decrease the likelihood that one will engage in violent behaviours, boost pro-social behaviour, increase commitment and emotional control, lessen anxiety, and increase independence and kind-heartedness. Character development is a major focus in traditional martial arts, which inspires trainees to actively pursue it by regularly questioning their beliefs and actions.

### **6. Impacts on behaviour and aggression**

Even though there is proof that karate training has favourable psychological and physical effects, some people still believe that martial arts instruction encourages anger and violence. This way of thinking is in line with the principles of the majority of martial arts; however research shows that practicing karate actually makes people less aggressive. Traditional karate training is aimed on avoiding rather than engaging in violent encounters because it emphasizes the capacity to not emotionally react to forms of Aggression as well as comprehension of when and why fighting is necessary for self-protection. In reality, as time spent practicing regular karate grows, aggression tends to decline, and karate training as a whole is now a well-liked technique for modifying pupils' aggressive attitudes and attitudes towards aggression. Children who regularly practice traditional karate report less aggressive behaviour and less risky, inappropriate behaviour, and their anxieties and violent tendencies change into more adaptable strengths. Karate training with a partner aids in fostering a stronger sense of respect and brotherhood.

### **Injury**

Karate training can put participants at risk for injury, and there is a common misconception that including children in karate training increases the injury rate. It would be stupid to ignore this fact. Any physical activity can result in injuries, especially those involving contact. The most important

finding from the study is that injuries sustained during karate training are viewed as mild in compared to those sustained during other sports and karate training.

**Conclusion:**

Karate is a proven excellent type of exercise for kids and aids in teaching them respect, control and discipline. While the aforementioned benefits of traditional martial arts for children and teenagers are highlighted, numerous studies indicate that regular karate training can boost children's physical and mental health. Karate's intrinsically beneficial lessons and results are further supported by the implementation of its programs in educational settings.

The conclusion drawn from reading the literature is that kids and teens that regularly practice karate can have better physical and mental health. Martial arts also offer kids a relatively safe, stimulating, and fun environment in which to engage in the physical activity that is necessary for good health.

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## DETERMINATION AND DEDICATION OF YOUTH SUBCULTURE AMONG UNDERGRADUATE STUDENTS-A SOCIOLOGICAL STUDY

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### Abstract

*The Present study aimed at to Study the Positive Aspect in Youth Subculture of Determination and dedication among undergraduates. Main Objectives of the study is, to study the youth subculture of Determination and dedication among undergraduate students with respect to different professional degrees (Medical, Engineering, Law and Teacher Education) and To study the impact on opinion towards youth subculture of general and social attitude with respect to gender. The Descriptive Survey Method will be applied in the present study and researcher was used Convince Sampling Technique for selecting Youth students. 150 students from Engineering, Medical, Law and Teacher Education Colleges respectively. Finally, 600 Undergraduate Students were selected from different Professional Degree Colleges in Mysore City. Major Findings are Respondents of Medical, Technical, Law and Teacher Education (B.Ed.) Colleges differs significantly with respect to Positive aspect in Youth Culture of Determination and Dedication Scores and Cultural and societal factors can influence how determination and dedication are perceived. These factors might impact the way students in each field prioritize these qualities. For instance, cultural attitudes towards work-life balance could play a role in how determination is viewed*

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### Introduction:

Determination and dedication are key characteristics often associated with various youth subcultures. Youth subcultures are groups of young people who share distinct values, behaviors, and interests that set them apart from the mainstream culture. These subcultures often form as a response to societal norms, offering young individuals a sense of belonging and identity. It's important to note that determination and dedication within youth subcultures can have both positive and negative aspects. While these qualities can empower individuals to create positive change, they can also lead to exclusivity, resistance to change, and even extremism in certain cases. Understanding the motivations and dynamics behind youth subcultures is crucial for society to engage constructively with their members.

### Need and Importance of the Study:

The study on the determination and dedication of youth subculture among undergraduate students is important for several reasons:

Understanding social dynamics: Studying youth subcultures helps us understand the social dynamics and interactions among young people. It provides insights into how they form identities, express themselves, and navigate their social environments (Shildrick and Tracy, 2006). Research on youth subcultures can help identify risk factors for negative behaviors, such as violence or excessive internet use. By understanding the influence of subcultural values, protective factors, and peer crowds, interventions and prevention strategies can be developed to address these risks (Hughes et.al., 2022), (Moran MB, et.al, 2017)

Youth subcultures often serve as a form of resistance to dominant cultures or systems of control. Studying subcultures can shed light on how young people use subcultural practices, such as substance consumption or style choices, to assert their identities and challenge societal norms (Evangeline L. Semark, 2014) (Placido, Matteo Di, 2019). Incorporating youth subcultures and values in education and health campaigns can make them more effective and relatable to young people. Understanding the shared culture and values within different subcultures can help tailor interventions and messages to resonate with specific youth populations (Moran MB, et.al, 2017) Overall, the present research article studying the determination and dedication of youth subculture among undergraduate

students provides valuable insights into social dynamics, risk factors, resistance, and identity formation among young people. This knowledge can inform interventions, policies, and campaigns aimed at promoting positive youth development and well-being.

### **Statement of the Problem:**

Determination and Dedication of Youth Subculture among Undergraduate Students-A Sociological study

### **Objective of the Study:**

- To Study the Mean Significant difference in Youth Subculture of Determination and Dedication with respect to their courses.

### **Hypotheses of the Study:**

- There is no Mean Significant difference in Youth Subculture of Determination and Dedication with respect to their courses.
- There is no Mean Significant difference in Youth Subculture of Determination and Dedication with respect to their Gender.

### **Methodology of the Study:**

The descriptive survey method was applied in the present study. It identifies the current status of the research study. The plan adopted in the study is casual comparative method.

### **Sample of the Study:**

As the locale of the study was Mysore city. Universe of the study includes 06 engineering colleges, 04 medical colleges, 03 law colleges and 09 teacher education colleges in Mysore city. Out of total universe researcher were selected 02 engineering colleges, 02 medical colleges, 02 law colleges and 03 teacher education colleges using simple random sampling technique.

### **Tools for data collection**

Both primary and secondary data was collected for the present study. Questionnaires were used to collect the primary data. The investigator constructs his own tool for youth sub-culture scale.

### **Data processing and analysis**

After the field work, the collected data is processed thoroughly by way of scrutiny of the tools. The scrutinized tools have been properly edited. The information is then summarized and tabulated. The statistical package of the social sciences (SPSS) version 21.0 was utilized to examine the information. Both descriptive and inferential statistics were utilized to identify and summarize results. The hypotheses were tested by analysing data by applying appropriate descriptive and inferential statistics viz., t test and ANOVA was used for analyzing the research data.

### **Analysis of the Study:**

**Hypothesis-1: There is no Mean Significant difference in Youth Subculture of Determination and Dedication with respect to their courses.**

To achieve this Hypothesis, Mean, Standard Deviation, one-way ANOVA and Post-hoc LSD Test was applied and the results are presented in the following tables1.

**Table-1: Table shows ANOVA results of positive aspect in youth subculture of determination and dedication with respect to their course**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4,023.165	3	1,341.055	4.837	Sig. at 0.05 Level
Within Groups	165,244.100	596	277.255		
<b>Total</b>	<b>169,267.265</b>	<b>599</b>			

The results of the above table-2 clearly depicted that;

The youths of Medical, Technical, Law and Teacher Education (B.Ed.) differs significantly with respect to Positive aspect in Youth Subculture of Determination and Dedication Scores ( $F=4.837$ ,  $p<0.05$ ) at 0.05 level of Significant. Hence, the null hypothesis is rejected and alternative hypothesis is formulated. It means that, the Respondents of Medical, Technical, Law and Teacher Education (B.Ed.) Colleges differs significantly with respect to Positive aspect in Youth Culture of Determination and Dedication Scores.

Further, to observe the pair wise comparisons of the Respondents of the youths of Medical, Technical, Law and Teacher Education (B.Ed.) differs significantly with respect to Positive aspect in Youth Culture of Determination and Dedication Scores by applying the LSD POSTHOC procedures and the results are presented in the following table.

**Table-2: Table Shows Multiple Comparisons of Positive aspect in Youth Subculture of Determination and Dedication with respect to their course scores by LSD POSTHOC procedures.**

Multiple Comparisons LSD				
(I) Course	(J) Course	Mean Difference (I-J)	Std. Error	Sig.
Medical	Technical	-6.93333*	1.92269	0.000
	Law	-2.54000	1.92269	0.187
	Teacher Education (B.Ed.)	-1.44000	1.92269	0.454
Technical	Medical	6.93333*	1.92269	0.000
	Law	4.39333*	1.92269	0.023
	Teacher Education (B.Ed.)	5.49333*	1.92269	0.004
Law	Medical	2.54000	1.92269	0.187
	Technical	-4.39333*	1.92269	0.023
	Teacher Education (B.Ed.)	1.10000	1.92269	0.567
Teacher Education (B.Ed.)	Medical	1.44000	1.92269	0.454
	Technical	-5.49333*	1.92269	0.004
	Law	-1.10000	1.92269	0.567

\*The mean difference is significant at the 0.05 level.

The results of the above table clearly depicted that,

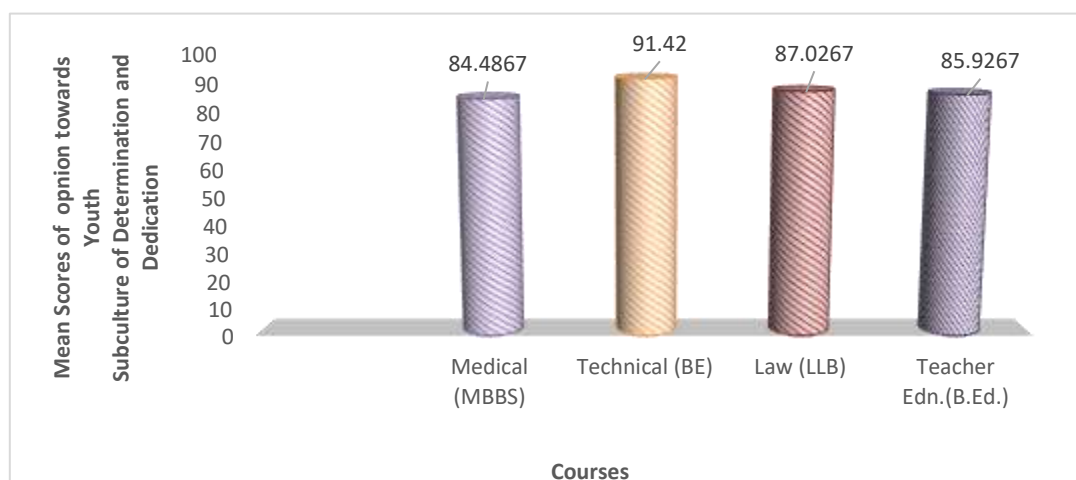
Mean scores of Positive aspects in Youth Subculture of Determination and Dedication between Youth Respondents of Medical and Technical Courses differs significantly at 0.05 level. The Mean Score of Medical College respondents ( $M=91.42$ ) is higher than Technical College respondents ( $M=84.48$ ) and the mean difference is 6.93.

Mean scores of Positive aspects in Youth Subculture of Determination and Dedication between Youth Respondents of Technical and Law Courses differs significantly at 0.05 level. Mean Score of Technical College respondents ( $M=91.42$ ) is higher than the Law College respondents ( $M=87.02$ ) and the mean difference is 4.39.

Mean scores of Positive aspects in Youth Subculture of Determination and Dedication between Youth Respondents of Technical and Teacher Education Courses differs significantly at 0.05 level. Mean Score of Technical College respondents ( $M=91.42$ ) is higher than the Teacher Education College respondents ( $M=85.92$ ) and the mean difference is 5.49.

Mean scores of Positive aspects in Youth Subculture of Determination and Dedication between Youth Respondents of Medical and Teacher Education (B.Ed.) Courses, Medical and Law Courses and Law and Teacher Education Courses differs Not Significantly at 0.05 level.

Comparison of mean scores towards youth subculture of determination and dedication with respect to courses is shown in the below graph



**Hypothesis-2: There is no Mean Significant difference in Youth Subculture of Determination and Dedication with respect to gender.**

To achieve this hypothesis, Mean, Standard Deviation and t-test was applied and the results are presented in the following table.

**Table-3: Table Shows N, Mean, Standard Deviation and t-value of positive aspect in youth culture of determination and dedication with respect to their gender**

Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value	Sig.
Male	221	87.9231	17.41312	1.17133	0.776	Not Sig. at 0.05 level
Female	379	86.8021	16.45775	0.84538		

The results of the above table-3 clearly depicted that; the Positive aspect in Youth Culture of Determination and Dedication Scores with respect to Gender ( $t=0.776$ ,  $p<0.05$ ) at 0.05 level is not Significant. Hence, the null hypothesis is accepted i.e., there is no Mean Significant difference in Youth Subculture of Determination and Dedication among undergraduates with respect to gender. It means that, Male and Female have similar opinion towards Positive aspect in Youth Culture of Determination and Dedication mean scores.

#### Major Findings of the Study:

- Respondents of Medical, Technical, Law and Teacher Education (B.Ed.) Colleges differs significantly with respect to Positive aspect in Youth Culture of Determination and Dedication Scores.
- There is no Mean Significant difference in Youth Subculture of Determination and Dedication among undergraduates with respect to gender. It means that, Male and Female have similar opinion towards Positive aspect in Youth Culture of Determination and Dedication mean scores.

#### Suggestions:

- Educational Emphasis: The differences in scores might reflect the varying educational emphases and cultures within these different fields. For instance, medical and technical fields might prioritize determination and dedication in different ways compared to law or teaching. This could be due to the nature of the professions and the skills required.
- Career Demands: Different fields have distinct demands in terms of dedication and determination. Medical and law students may face rigorous academic and professional demands, while technical fields might require persistence in problem-solving. Teacher education, on the other hand, could involve commitment to nurturing students. The differences in scores could highlight how each field values these traits.

- **Cultural and Social Factors:** Cultural and societal factors can influence how determination and dedication are perceived. These factors might impact the way students in each field prioritize these qualities. For instance, cultural attitudes towards work-life balance could play a role in how determination is viewed.
- **Role Models:** Role models within each field could shape perceptions of determination and dedication. Students may look up to individuals who embody these qualities. Differences in scores could be influenced by the availability of prominent figures who exemplify these traits in each field.
- **Curriculum and Training:** The curriculum and training methods in different fields may promote determination and dedication in distinct ways. Medical and technical education might stress perseverance in problem-solving, while law education could emphasize dedication to justice. These differences could contribute to varying scores.
- **Perceived Impact:** Respondents' perceptions of how determination and dedication impact success in their respective fields could vary. Medical students might believe that determination is crucial for patient care, while teaching students might view dedication as essential for student growth. These perceived impacts could influence their scoring.
- **Future Goals:** The future goals of students in each field could influence their scoring. Those aspiring to high-stress professions might emphasize determination more, while others with different career paths might weigh dedication differently.
- **Research and Insights:** The result could spark further research to delve deeper into why these differences exist and how they affect individuals within each field. Understanding these variations can lead to better tailored educational approaches and support systems.
- **Collaboration Opportunities:** Recognizing the differences in how determination and dedication are valued could create opportunities for cross-disciplinary collaboration. Sharing insights between fields could lead to a more comprehensive understanding of these qualities.
- **Skill Development:** Understanding the unique perspectives of determination and dedication across fields could inform skill development programs. Each field could learn from the strategies and approaches that other fields use to cultivate these qualities.

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## RESEARCH METHODOLOGIES

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### Abstract

*Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods/techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests, how to calculate the mean, the mode, the median or the standard deviation or chi-square, how to apply particular research techniques, but they also need to know which of these methods or techniques, are relevant and which are not, and what would they mean and indicate and why. Researchers also need to understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and others will not. All this means that it is necessary for the researcher to design his methodology for his problem as the same may differ from problem to problem.*

**Key words:** Research, Methodology, Research Methodology, Research Techniques, Qualitative research, Quantitative Research

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### Introduction

Research Methodology is science of studying how research is done scientifically. A way to systematically solve the research problem by logically adopting various steps. Methodology helps to understand not only the products of scientific inquiry but the process itself. Research Methodology aims to describe and analyze methods, throw light on their limitations and resources, clarify their limitations and resources, clarify their presuppositions and consequences, relating their potentialities to the twilight zone at the “frontiers of knowledge”.

### Definition

In Research, the word ‘research’ means – the repetitive and in-depth findings of the objects. In other words, searching for the core of the items, making some conclusions, discovering new theories, and clarifying those contributions fall under the process of “research”. According to American sociologist Earl Robert Babbie, “Research is a systematic inquiry to describe, explain, predict, and control the observed phenomenon. Research involves inductive and deductive methods.”

### Steps for preparing research methodology

#### Step 1: Focus on your aims and objectives

First, while writing the research methodology chapter, ensure that your research choices needs to be linked with the study aims and objectives. Methodology section should specifically demonstrate why your approaches are appropriate for your goals and persuade the reader that you choose the right solution to solving your research problem and addressing your study questions.

#### Step 2: Identify research methods that suits your research problem

A good research method includes all of the elements necessary to persuade the reader that the research in question is both practical and useful. Generally, quantitative and qualitative research methods are the two types of research methods chosen for conducting a study. Quantitative study will be chosen when your study aims to examine the relationship between the variables whereas qualitative study will be chosen when your study aims to examine real-world awareness about a particular group of people's attitudes, social dynamics, and common values.

#### Step 3: Rationale for selecting the particular research methods

Once you decided to select a research method, then you need to provide the justification for choosing the particular method and how it links with achieving your study objectives.

**Step 4: Consider your audience and think how you will collect data for the study**

Consider the target audience who will be reading it while writing the methodology. Think what type of data you can collect and think how it can be feasible.

**Step 5: Analyze the different types of data collection methods available and identify data collection method that is feasible**

The data collection is recognized as the process of collecting information from the relevant sources to answer the research problems, test the hypotheses, and evaluate the outcomes. They are generally of two types - Primary and Secondary data. Basically primary data is collected with the help of survey and interview and secondary data with the help of previously published papers, reports, case studies etc. You can choose either primary or secondary data collection technique based on the research method you have chosen

**Step 6: Analyze the different data analysis techniques that suits to analyze the collected data**

Once the data collection technique is fixed, you need to analyze what are the tools that can be used to analyze the collected data. If your research is of quantitative nature, then you have to carry statistical analysis where statistical tests like two-tailed t-test, simple linear regression, correlation analysis etc. will be performed using statistical software's such as SPSS or R etc. On the other hand, in qualitative research, Words, photographs, and conclusions (often including some kind of textual interpretation) will be included in the analysis. The type of analysis includes, thematic analysis, Content analysis and Discourse analysis

**Importance of research methodology in research**

To solve the difficulties coming in the way of Research is the main work of designing a methodology. It is necessary not just to identify the problem for Research but to determine the best method to solve that problem as well.

For instance to understand: the person who is researching need not just to know how to calculate mean etc. for a set of data, or how to find a solution of a physical system, or how to find the roots of algebraic equations but also need to know-

- (i) A suitable method for the decision problem.
- (ii) The order of accuracy of the outcome of a way for the problem.
- (iii) The efficiency of the way.

**The role of methodology in solving the problems in the way of research are:**

- It helps in deciding the best method to resolve the difficulties for Research.
- Research describes how efficient the method is in solving the problem
- It aids to know the accuracy of the way decided to apply in Research for a suitable outcome.

The detailed study of Methodology of Research teaches to select the best method, data or information, scientific ways and teaches the techniques to solve the problem.

### **Types of report in research methodology**

Reports from the analysis differ vastly in duration and form. That the concerns at hand essentially determine both time and the shape in each particular case. Business organizations, for example, prefer reports in letter format, in range of only one or two sheets.

For their financial statements to their clients and investors, banks, insurance organizations, and banking firms are usually fascinated by the short income statement style tabulation. Mathematicians prefer to write the findings of their observations by algebraic expressions. Through symbols and equations, pharmacists publish their outcomes.

The above narrative sheds highlighting the fact that the findings of a research study can be interpreted in a variety of ways, i.e., a technical report, a famous report, an essay, a manuscript or sometimes even in the form of verbal presentation. The presenting method(s) to be utilized in a specific study relies on the situation under which Research occurred and the quality of the findings.

A technical report shall be used if a complete written study report, whether for bookkeeping purposes or for publishing information, is needed. A popular account can be used when the findings of the analysis have consequences for the plan.

Types of report

There are six different types of reports.



#### **1. Formal or Informal Submissions:**

They emphasize impartiality and coordination, include a lot more detail, and are published in a format that seeks to avoid aspects such as pronouns. Formal reports are highly organized. Informal words are typically brief messages that have regular, everyday language usage. In particular, internal documentation can be defined as a casual paper.

#### **2. Quick Reports or Long Reports:**

It is a classification that is complicated. A one-page summary is short, and a twenty-page report indeed is lengthy. And where's the boundary which separates? Keep in mind that it requires more features of formal reports as a paper gets long (or what you decide as long as).

#### **3. Analytical or Informative Reports:**

Information reports (audit report, monthly financial statements, and staff absences reports) bring reliable information from one part of an organization to the next. Technical info (scientific studies, project reports, and real-estate assessments) represent efforts at solving the problem.

#### **4. Report on a Proposal:**

The suggestion is a difference in papers relating to solving problems. A request is a memorandum which is planned to explain how one company should satisfy the other's needs.

Many government departments highlight their demands by submitting **“Proposal requests” or expense reports**. The Document defines a requirement, and a proposal report is prepared by different suppliers explaining how they can fulfill the necessity.

**5. Vertical Reports or Lateral Reports:**

This identification points to the path a report is going in. Documents that the structure is alluded to as hierarchical reports more upwards than downwards; those reports tend to the regulation of the management. On the other hand, lateral reports help organize in the organization.

**6. Internal Reports or Outside Reports:**

Internal reports circulate throughout the business. Outside reports, like annual business reports, are designed for dissemination outside the organization.

Reports play a significant role in business development in the modern business world. Documents are the pillar of the establishment's thought process and are primarily liable for the evolution of a productive or ineffective work setting.

**Types of data in research methodology**

Raw and unorganized facts or a set of values of subjects that need to be processed is called Data. Without a proper organization, the Data is of no use and just some random things. After the collection of data, there will be a need to process it, organize it, make the structure of it and then finally present it in a useful way which is termed as information. In short, after the process, data becomes information. Not data but processed data, i.e., the story is essential to conduct Research. That Data can be acquired in various forms and from multiple means. Research papers, journal articles, web sites, books and blogs are used to collect data. A qualitative research methodology is the best Methodology to analyze the data contained in textual form.

The Researcher assigns a specific value to every Data, and each Data describes things of unique quality. Organization, process, and presentation of these values are essential for analysis to get the best result of Research.

***The different types of data in research methodology are described below:***

Qualitative data:

Qualitative data are those data which contains words and description and are in textual form. This type of Data is not easy to analyze in Research as it is of the subjective kind, especially when it comes to comparing it with other information.

For example, Researcher collects quality data from personal interviews, open-ended questions, and focus groups. This type of data describes taste, experience, texture, or opinion.

Quantitative data: Quantitative Research data are those data which are expressed in numbers or numerical figures. This type of data can be measured, ranked, calculated or grouped.

Example: This type of data contains questions like age, scores, rank, cost, length, weight, etc. In short, every Data is in the form of numbers. Also, such numerical data can be presented in graphical format, charts, or can be applied in statistical analysis methods.

Categorical data: | Quantitative Research: When Data is available in groups but does not belong to more than the belonged group is called Categorical data. The data grouped into a category is Categorical data.

Example: If there were a survey which asks people to tell their marital status, age, smoking habit, and drinking habit, this information collected from people are categorical data. In simple words, the data of categorical type represents discrete numbers which belong to a specific category or class.

Based on the methods of data collection, data can be divided into four types: observational, experimental, Simulation, and derived.

**Observational Data:** A researcher observes things or people and their behavior or activity to collect data which comes under observational data. Methods used to collect observational data are human observation, open-ended surveys, or interviews. The collection of this type of data depends on real-time. The re-creation of observational Data is not accessible if lost.

**Experimental Data:** The data collected by tests, experiments, measurements, and quasi-experimental designs is called Experimental data. When a researcher intervenes to produce, alter or measure any change in the investigation to collect data, he collects Experimental data. This method of collecting data can be applied based on the need of researchers where it is qualitative or quantitative. Experimental Data is comparatively easier to analyze and interpret.

**Simulation Data:** To imitate the operation of a system or a process which describes the procedure over time is Simulation. And by using computer test models to imitate the operation of a real-world system or method generates simulation data. Simulation data helps to find what could or what would take place under a specific condition. Experimenting through the computer are often used to collect simulation data. For example: weather conditions are predicted by simulating data.

**Derived / Compiled Data:** This type of data use other base data, and it involves the process of creating new data from existing data through some transformation. It is entirely new data constructed from one or more existing data. Derived data are new data or information, and it provides new ways of presenting old or raw attributes. Example: Population density data can be obtained by a combination of data of area and population. If lost, researchers can replace this type of data. However, it will be expensive and time-consuming.

**Conclusion:** Research is a voyage of discovery; a journey; an attitude; an experience; a method of critical thinking; an activity caused by instinct of inquisitiveness to gain fresh insight/find answers to question/acquire knowledge. After a detailed study of what Research is, what Qualitative research methodology is, and what are the steps of research methodology, importance of research methodology, types of report in research methodology, types of data in research methodology it is clear that for any research there are specific methods to be followed for good or say accurate results. Also, Research Methodology should justify that the selected type of research methodology is the fittest for the best outcome.

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## YOGIC EXERCISES AND FLEXIBILITY

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### Abstract

*The aim of this study was to ascertain why students at the Rajiv Gandhi Campus of Central Sanskrit University become more flexible through yoga exercises. For this study, 60 randomly selected students, ages 18 to 25, from the Central Sanskrit University's Rajiv Gandhi Campus in Sringeri were used as subjects. The subjects were divided into two equal groups of thirty each, one of which was the experimental group and the other the control group. While the experimental group performed yogic activities, the control group got no instruction. The experimental group practiced yoga for eight weeks. Before and after the four- and eight-week training sessions, data were collected. The gathered data was processed using the 't' test statistical technique. A significance level of 0.05 was established. The yoga exercises increased the flexibility of the Rajiv Gandhi Campus students of Central Sanskrit University.*

**Keywords:** *Yogasanas, flexibility, Sanskrit students, T-test*

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## INTRODUCTION

Yoga poses are psycho-physical exercises that influence psycho-physio-sociological concepts as well as fitness. Yoga's Sanskrit terms are asana, which means "posture" or "pose," and yoga, which means "union." While certain yogasanas are performed for their physical benefits, the majority are linked to the physical workouts of Hatha Yoga.

Mountain pose (Tadasana), tree pose (Vrikshasana), downward-facing dog pose (AdhoMukhoSvanasana), triangle pose (Trikonasana), chair pose (Kursiasana), boat pose (Naukasana), cobra stance (Bhujangasana), child's pose (Paschimottanasana), and sukhasana are the ten basic yoga poses.

The secret to a longer, better, and more satisfying life was once disclosed to enlightened individuals who were wise. Furthermore, asanas in yoga are psycho-physical workouts that influence psycho-physiological-psychological concepts as well as fitness. This precious and hidden knowledge was called "yoga" by the sages.

## METHODOLOGY

For the present study, sixty students were selected from the Central Sanskrit University (formerly Known as Rashtriya Sanskrit Sansthan), Rajiv Gandhi Campus students and the two kilometers surrounding area of the campus were considered as subjects. Thirty subjects were allotted for each group. One is called control group and another one is called experimental group to know the effect of yogic exercise on flexibility of the students.

The following Yogasana training was given for eight weeks. The yoga training was comprised Surya Namaskara, Standing Postures Asanas, Sitting Postures Asanas, Prone Position Asanas, Supine Position Asanas, Pranayama and Shavasana. Training was given in the following manner.

The experimental group was undergone with a yoga training program as per the schedule. Yogasana practices were done only three days per week, alternatively (Monday, Wednesday and Friday from 6.00 am to 7.00 am). The training program was designed as per the sources composed from periodicals, books, e- materials and deliberations with the expert. The duration of experimental designed was 60 minutes per day. All participants considered in this study were cautiously observed all through the training period.



## RESULTS

**Table: 1 shows the pre-test flexibility mean, standard deviation and t value of control and experimental groups**

		N	Mean	SD	df	't' value
Pre Test	Control Group	30	4.8380	1.94883	29	1.362
	Experimental Group	30	4.3087	1.31146		

The above table shows the t value of pre-test of control and experimental groups, the t value shows no significant difference in flexibility of control and experimental groups.

**Table:2 shows the four weeks descriptive statistics of flexibility and t value of control and experimental groups**

		N	Mean	SD	df	't' value
Pre Test	Control Group	30	4.9067	1.84641	29	0.533
	Experimental Group	30	5.0927	1.29523		

The above table shows the t value of after four weeks of control and experimental groups, the t value shows that there is a significance difference in flexibility between control and experimental groups.

**Table: 3 shows the eight weeks flexibility mean, standard deviation and t value of control and experimental groups**

		N	Mean	SD	df	't' value
Pre Test	Control Group	30	4.9127	1.84278	29	2.053
	Experimental Group	30	5.7483	1.10990		

The above table shows the t value of over eight weeks of control and experimental groups, the t value shows that there is a significance difference in flexibility between control and experimental groups.

**Table: 4 shows the twelve weeks flexibility mean, standard deviation and t value of control and experimental groups**

		N	Mean	SD	df	't' value
Pre Test	Control Group	30	5.0083	1.83806	29	3.362
	Experimental Group	30	6.3217	1.04541		

The above table shows the t value of over twelve weeks of control and experimental groups, the t value shows that there is a significance difference in flexibility between control and experimental groups.

**Table: 5 shows the sixteen weeks flexibility mean, standard deviation and t value of control and experimental groups**

		N	Mean	SD	df	't' value
Pre Test	Control Group	30	5.0157	1.83518	29	4.527
	Experimental Group	30	6.7870	1.13397		

The t value in the above table, which represents the flexibility between the control and experimental groups after sixteen weeks, indicates that there is a significant difference between the two groups.

Using df 29, The resulting 't' value, which was less than the theoretical table value of 2.045, was 1.362, which is significant at a 0.05 level of significance. As a result, the hypothesis that there is no discernible difference between the control and experimental groups in terms of flexibility was rejected. When group means are compared, experimental groups have higher group means.

After four weeks of training, the calculated 't' value is 0.533, which was less than the theoretical table value of 2.045 with df 29 and a significance level of 0.05. As a result, the hypothesis that there is no discernible difference between the control and experimental groups in terms of flexibility was rejected. When group means are compared, experimental groups have higher group means.

After eight weeks of training, the calculated 't' value is 2.053, which is higher than the theoretical table value of 2.045 with df 29 and a significance level of 0.05. As a result, the idea that there is a sizable difference in flexibility between the control and experimental groups was accepted.

After twelve weeks of training, the calculated 't' value was 3.362, which was greater than the theoretical table value of 2.045 with df 29 and a significance level of 0.05. As a result, the idea that there is a sizable difference in flexibility between the control and experimental groups was accepted.

After sixteen weeks of training, the calculated 't' value was 4.527, exceeding the theoretical table value of 2.045 with df 29 and a significance level of 0.05. As a consequence, the hypothesis that there is a notable difference in flexibility between the control and experimental groups was accepted.

## CONCLUSION

The results of the current investigation showed that there is no discernible difference between the control and experimental groups' flexibility pre-test scores.

Following four weeks of yoga training, there is a discernible difference in the experimental and control groups' levels of flexibility.

Following eight weeks of yoga training, the experimental and control groups' levels of flexibility varied noticeably.

Following a twelve-week yoga training programme, a discernible shift in flexibility is observed between the experimental and control groups.

After sixteen weeks of yoga training, there is a substantial difference in the flexibility of the experimental group compared to the control group.

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## A STUDY ON RELATIONSHIP BETWEEN GENDER AND EMOTIONAL INTELLIGENCE OF B.Ed., TRAINEES

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### Abstract

*Emotional intelligence is the ability to perceive emotions, integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote personal growth. Emotional intelligence and gender refers to the relationship of emotional intelligence of male and female. In the present study the relationship of emotional intelligence and gender is seen. A sample of 600 B.Ed., trainees was taken, results reveals that there is no significant difference in the emotional intelligence of male and female B.Ed., trainees.*

**Keywords:** Emotional Intelligence, Gender, B.Ed., Trainees.

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### INTRODUCTION

Emotional intelligence is the ability to monitor one's own and other people's emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behavior. This was later broken down and refined into four proposed abilities perceiving, using, understanding and managing emotions. These abilities are distinct yet related. Emotional intelligence also reflects abilities to join intelligence, empathy and emotions to enhance thoughts and understand of interpersonal dynamics. This is also related to emotional reasoning and understanding in response to the student's environment and circumstances one encounters in day-to-day life. The emotional intelligence facilitation factor is to also know how to include or exclude emotions from thought depending on context and situation.

### IMPORTANCE OF THE STUDY

Emotional intelligence is the ability to understand, use and manage our own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflict. Emotional intelligence is so important that it is the ability to identify and regulate ones emotions and understand the emotions of others. A high Emotional intelligence helps us to build relationship, reduce team stress, defuse conflict and improve job satisfaction. Emotional intelligence is the ability to perceive, understand and influence our own and others emotions. Teachers with emotional intelligence will be easy for them to work alongside a variety of students and respond effectively to changing conditions in classroom.

### OBJECTIVES OF THE STUDY

To compare the Emotional intelligence of B.Ed., trainees when they are classified into gender

### VARIABLES OF THE STUDY

- Independent Variable: Emotional Intelligence
- Moderate Variable: Gender

### HYPOTHESIS OF THE STUDY

- Male and Female B.Ed., trainees differ in their emotional intelligence

### METHODOLOGY

The descriptive method of research was employed which was intended to describe the relationship which exists between independent and moderate variable.ie, the relationship exists between Emotional intelligence of male and female B.Ed., trainees.

Descriptive research describes recording analyzing and interpreting conditions that exists .It involves some type of comparison or contrast and attempt to discover relationship between existing non manipulated variable.

### SAMPLING

In the present study the researcher adopted random sampling technique. The population consists B.Ed trainees. The sample selected were 600 trainees studying in B.Ed., colleges.

## DATA GATHERING TOOLS

The tools used for the collection of data in order to verify the hypothesis in the present study is as follows.

- Emotional intelligence inventory scale is devised by shailendrasingh

## STATISTICAL TECHNIQUES USED FOR THE ANALYSIS OF DATA

- The statistical techniques used for the analysis of data were mean, standard deviation, one way ANOVA, Pearson product moment coefficient correlation and Z value.

## DATA ANALYSIS AND INTERPRETATION

**Table 1: Mean Standard deviation and Z value of male and female trainees on Emotional intelligence**

N=600

Gender	Number of Students	EI(%)
		Mean $\pm$ SD
1.Male	187	79.1 $\pm$ 8.7
2.Female	413	79.6 $\pm$ 9.5
M v/s F	Z	0.63
	P	>0.53ns

## INTERPRETATION

The obtained Zvalue of 0.63 is lesser than the tabled value 1.96 at 0.01 level of significance. Therefore the null hypothesis that male and female B.Ed., trainees do not differ significantly in emotional intelligence is accepted and research hypothesis is rejected.

## FINDINGS

- There is no significant difference in the emotional intelligence of male and female B.Ed., trainees

## CONCLUSION

The present study attempts to study the relationship between Emotional intelligence and gender which is considered to be very important predictor of secondary school teachers. It is assumed that a competent teachers should possess good emotional intelligence to teach all the secondary school subjects. However the results of the present study revealed that there is no significant difference in the Emotional intelligence of male and female B.Ed., trainees.

## EDUCATIONAL IMPLICATION

- The present study helps the secondary school teachers to understand the contribution of independent variable i.e, Emotional intelligence of male and female secondary school teachers
- Tools used in the present study is useful to assess the Emotional intelligence of male and female secondary school teachers
- The present study helps to understand the relationship between Emotional intelligence of male and female B .Ed trainees.

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## RELATIONSHIP BETWEEN MENTAL HEALTH AND SELF-CONFIDENCE OF PROSPECTIVE TEACHERS

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### Abstract

*The prospective teachers of present day are not knowing their role. In general, Prospective teachers are lack of mental health and self-confidence and poor attitude towards teaching profession. So, the investigator try to attempt in this present research study to inculcate mental health and self-confidence of prospective teachers. For this study, the Normative-survey method was followed. Mental Health Inventory and Self-confidence Inventory were used as the tools to collect the data for this study. The researcher used Simple Random Sampling Technique for the selection of the sample. The sample consisted of 798 prospective teachers in Tirunelveli District. The appropriate statistical techniques were employed to analyze the data. The main findings are: (i) The Prospective Teachers have a high level of mental health. (ii) The prospective teachers have a high level of Self-confidence. (iii) The mental health and self-confidence of prospective teachers have moderate positive relationship with one another. Based on the findings, the recommendations are further discussed by the investigator.*

**Keywords:** mental health, self-confidence, prospective teachers, high level and inventory.

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### Introduction

Self-confidence plays a vital role in self-development of the individual. It develops positive and productive self-feeling and evaluation. However, a person with lack of self-confidence is having negative self-feeling and evaluation. Mental health belong to cognitive or emotional well-being. Mental health is a state of well-being in which a person realizes his or her own capabilities and cope up with stresses of life. Today's curriculum trains the students with high self-confidence and good mental health. Therefore, there is a need to the mental health in relation to their self-confidence of prospective Teachers.

### Objectives of the study

1. To assess the mental health and self-confidence of prospective teachers.
2. To find out whether there exists any significant difference in the mean score of mental health and self-confidence of prospective teachers on the basis of family type, locale of college and subject discipline.
3. To find out whether there exists any relationship between mental health and self-confidence of prospective teachers.

### Hypotheses of the study

1. The prospective teachers don't have a high level of mental health.
2. The prospective teachers don't have a high level of self-confidence.
3. There exists no significant difference between the mental health and self-confidence of nuclear family and joint family prospective teachers.
4. There exists no significant difference between the mental health and self-confidence of rural and urban college prospective teachers.
5. There exists no significant difference between the mental health and self-confidence of arts and science discipline prospective teachers.
6. There exists no relationship between the mental health and self-confidence of prospective teachers.

### Method

The Normative-survey method has employed in the investigation.

## Variables

Mental health and self-confidence have adopted as the main variables and family type, locale of college and subject discipline are adopted as the sub-variables of the study.

## Sample

A total number of 798 prospective teachers from Colleges of Education were selected as sample by using Simple Random Sampling technique in Tirunelveli District, Tamil Nadu.

## Tools

### 1. Mental Health Inventory

The Inventory has constructed and standardized by Jagadish and Srivastava, A.K. (1998). It is modified in the year 2011 by Mandavaneelima. The inventory consists of 44 items in which 16 are positive and 28 are negative statements. The reliability of the inventory is established by Split-half method. The construct validity of the inventory has established.

### 2. Self-confidence Inventory

This Self-confidence inventory was constructed and standardized in the year 1998 by Basavanna, M. It is modified in the year 2011 by Mandavaneelima. . The inventory consists of 25 items in which 15 are positive and 10 are negative statements. The reliability of the inventory is established by Cronbach's Alpha method. The content validity of the inventory has established.

## Statistical techniques

The data obtained were analyzed by using appropriate statistical techniques such as mean, standard deviation, 't'-test and Correlation.

## Results and Interpretation

The hypotheses were formulated for the present study, and applied statistical techniques with the help of SPSS (Statistical Package for Social Sciences) Computer Software.

**Table 1**

Score	No. of samples	Mean value	S.D value
<b>Mental Health</b>	798	118.6771	12.8642

According to the above table, the mean score of students is found to be 118.6771 which is more than 50% and therefore it is concluded that the prospective teachers have a high level of mental health and therefore the hypothesis is rejected.

**Table 2**

Score	No. of samples	Mean value	S.D value
<b>Self-confidence</b>	798	40.3447	3.7695

According to the above table, the mean score of students is found to be 40.3447 which is more than 50% and therefore it is concluded that the prospective teachers have a high level of Self-confidence and therefore the hypothesis is rejected.

**Table 3**

Variable	Family type	No. of samples	Mean value	S.D value	df	t	Significant level
<b>Mental Health</b>	<b>Nuclear</b>	577	118.4528	15.1243	796	0.9137	Not Significant
	<b>Joint</b>	221	119.4512	13.2761			
<b>Self-confidence</b>	<b>Nuclear</b>	577	40.2314	3.75378	796	0.5923	Not Significant
	<b>Joint</b>	221	40.4123	3.9012			

The value (t) which is calculated in the above-mentioned table (0.9137) is not greater than the value 1.96 (table value) at 5% significant level. It is hence, not significant. Thus, the hypothesis is not to be rejected and it can be stated that the mean score of Mental Health of prospective teachers does not significantly differ based on Family type.



The value (t) which is calculated in the above-mentioned table (0.5923) is not greater than the value 1.96 (table value) at 5% significant level. It is hence, not significant. Thus, the hypothesis is not to be rejected and it can be stated that the mean score of Self-confidence of prospective teachers does not significantly differ based on Family type.

**Table 4**

Variable	Locale of college	No. of samples	Mean value	S.D value	df	t	Significant level
<b>Mental Health</b>	<b>Rural</b>	399	120.0321	13.3927	796	1.4841	Not Significant
	<b>Urban</b>	399	118.5723	14.3764			
<b>Self-confidence</b>	<b>Rural</b>	399	40.5128	3.7101	796	1.5962	Not Significant
	<b>Urban</b>	399	40.1003	3.5891			

The value (t) which is calculated in the above-mentioned table (1.4841) is not greater than the value 1.96 (table value) at 5% significant level. It is hence, not significant. Thus, the hypothesis is not to be rejected and it can be stated that the mean score of Mental Health of prospective teachers does not significantly differ based on Locale of college.

The value (t) which is calculated in the above-mentioned table (1.5962) is not greater than the value 1.96 (table value) at 5% significant level. It is hence, not significant. Thus, the hypothesis is not to be rejected and it can be stated that the mean score of Self-confidence of prospective teachers does not significantly differ based on Locale of college.

**Table 5**

Variable	Subject Discipline	No. of samples	Mean value	S.D value	df	t	Significant level
<b>Mental Health</b>	<b>Arts</b>	383	119.2271	3.8809	796	2.6646	Significant (5% level)
	<b>Science</b>	415	118.4882	3.9486			
<b>Self-confidence</b>	<b>Arts</b>	383	40.1162	3.5703	796	0.0511	Not Significant
	<b>Science</b>	415	40.1034	3.4912			

The value (t) which is calculated in the above-mentioned table (2.6646) is not less than the value 1.96 (table value) at 5% significant level. It is hence, significant. Thus, the hypothesis is to be rejected and it can be stated that the mean score of Mental Health of prospective teachers differs significantly based on Subject Discipline. It is also inferred that the prospective teachers who belongs to arts discipline have more mental health than the prospective teachers who belongs to science discipline. The value (t) which is calculated in the above-mentioned table (0.0511) is not greater than the value 1.96 (table value) at 5% significant level. It is hence, not significant. Thus, the hypothesis is not to be rejected and it can be stated that the mean score of Self-confidence of prospective teachers does not significantly differ based on Subject Discipline.

**Table 6**

<b>Correlations</b>			
		<b>Mental health</b>	<b>Self-confidence</b>
<b>Mental health</b>	Pearson Correlation	1	0.459*
	Sig. (2-tailed)		0.000
	N	798	798
<b>Self-confidence</b>	Pearson Correlation	0.459*	1
	Sig. (2-tailed)	0.000	
	N	798	798

\* - Significant (5% level)

The value (r) which is calculated in the above-mentioned table (0.459) is not less than the value 0.062 (table value) at 5% significant level. It is hence, significant. Thus, the hypothesis is to be rejected.

rejected and it can be said that, the mental health and self-confidence of prospective teachers have moderate positive relationship with one another.

### **Recommendations of the study**

1. The findings shows that the prospective teachers who belongs to arts discipline have more mental health than the prospective teachers who belongs to science discipline. Therefore, the teacher educators have to communicate with the prospective teachers that they should be available to listen their concerns and issues. They may communicate openly, honestly and even friendly with the prospective teachers belong to science discipline to improve their mental health.
2. On noticing the result, the prospective teachers have a high level of Self-confidence. Positive minds will enhance good confidence levels. Therefore, the teacher educators should strive to create a positive environment in the classroom and avoid negative impressions and examples, educate with positive thoughts.

### **Conclusion**

The today's prospective teachers are the architects who shape the destiny of the nation with a good mental health and self-confidence. Mental health and self-confidence of prospective teachers are a necessity for a developing country. This piece of research is a humble effort in testing the application of concepts mental health and self-confidence in the field of education.

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## A STUDY ON IMPACT OF TEACHER VALUES ON TEACHER SELF-EFFICACY: INSIGHTS FROM TEACHER EDUCATORS

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### Abstract

*The present study aims to examine the teacher values and teacher self-efficacy among teacher educators. The investigator has adopted correlation cum causal comparative method under descriptive method of research. The sample consists of 300 teacher educators from different colleges affiliated to Davangere University, Kuvempu University and Vijayanagara Sri Krishnadevaraya University through stratified random sampling technique. The investigator used the standardized tool to measure the teacher values and teacher self-efficacy among teacher educators. To interpret the raw scores, data were analyzed using mean, standard deviation, t-test and correlation. The finding shows that significant and positive relationship was observed between teacher values and teacher self-efficacy among teacher educators. It is observed that, the female teacher educators are having more self-efficacy and higher teacher values scores compare male teacher educators. The unaided teacher educators have higher self-efficacy scores and higher teacher value scores compared to aided teacher educators. Further, the teaching experience does not have a significant impact on teacher self-efficacy and teacher values scores among the teacher educators.*

**Key words:** *Teacher Values, Teacher Self-Efficacy, Teacher Educators*

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### INTRODUCTION

Education is a vital, multifaceted process that shapes individuals socially, mentally, intellectually, and morally. It's an on-going effort that aims to foster creative and productive contributors to society. Achieving this requires dedicated teacher educators with generous attitudes, knowledge, self-motivation, and active involvement, contributing to genuine educational objectives that aid in nation-building.

**D S Kothari** stated that “**Destiny of the nation is shaped in four walls of the class room**”. Therefore, achieving genuine educational objectives hinges on teacher educators delivering high-quality education to student teachers. These educators often face challenges such as lack of motivation, insufficient thought-oriented activities, knowledge stagnation, and a commercial mind set. In this context, our study aims to explore teacher educators' value-based behaviours, conduct a comprehensive analysis of self-efficacy, and examine related factors.

Teacher educators' value-based behaviours reflect their actions and the underlying values in specific situations. These behaviours are instrumental in fostering the personality and values development of student teachers. Effective teacher educators create diverse teaching scenarios that impart knowledge to their students. Teacher educators' self-efficacy encompasses motivational techniques, adaptability to different situations, and the ability to confront challenges, serving as a gauge of their professional growth. Therefore, developing self-efficacy is crucial.

This study holds significance for the career advancement of teacher educators, as it investigates value-based behaviours and self-efficacy within the educational context.

### NEED OF THE STUDY

Education is an integral part of life, where values play a vital role in shaping individuals. Teachers, as the cornerstone of the education system, guide students toward the right path. Therefore, teachers should possess a strong set of values. Without good teachers, even the best educational systems, facilities, and administration can collapse. To address this need, this study explores teacher

values, and self-efficacy. Teacher education should aim to mould students into professionals with desirable values. Understanding current and emerging value patterns is essential for this purpose. In the modern educational system, teachers face the challenge of meeting diverse student needs, including those with challenging behaviours. This study addresses these issues.

Previous research has focused on individual aspects like teacher values and self-efficacy, with limited exploration of their interrelationships. This study aims to bridge this gap by examining teacher self-efficacy and values comprehensively.

### STATEMENT OF THE PROBLEM

“A Study on Impact of Teacher Values on Teacher Self-Efficacy: Insights from Teacher Educators”.

### OBJECTIVES OF THE STUDY

1. To study the relationship between Teacher values and Teacher Self-efficacy among Teacher Educators.
2. To Study the difference in Teacher self-efficacy among teacher educators with respect to their Gender.
3. To Study the difference in Teacher Values among teacher educators with respect to their Gender.
4. To Study the difference in Teacher self-efficacy among teacher educators with respect to Aided and Unaided colleges.
5. To Study the difference in Teacher Values among teacher educators with respect to Aided and Unaided colleges.
6. To Study the difference in Teacher self-efficacy among teacher educators with respect to their Teaching Experience.
7. To Study the difference in Teacher Values among teacher educators with respect to their Teaching Experience.

### VARIABLES OF THE STUDY

#### 1. Independent Variables;

- ✓ Teacher values

#### 2. Dependent Variables:

- ✓ Teacher self-efficacy

#### 3. Moderator Variables:

- ✓ *Gender*: Male, Female
- ✓ *Types of college*: Aided and Unaided
- ✓ *Teaching experience*: Below 05 years, 5 to 10 years, 11 years and above

### TECHNICAL TERMS USED FOR THE STUDY:

#### • Teacher Values:

The deeply-held beliefs and principles that influence a teacher educator's decisions, actions, and priorities in their role as an educator. These values can include concepts such as student-cantered learning, equity, professionalism, and social justice. In the present study the teacher values refer to the scores obtained a teacher value inventory developed and validated by S.P Ahluwalia and Harban Singh.

#### • Teacher Self-Efficacy:

A teacher educator's belief in their own capability to effectively teach and positively impact their students' learning outcomes. It reflects their confidence in their instructional skills and their ability to overcome challenges in teaching. In the present study teacher's Self-efficacy refers to the ability of teachers to secured at a specific task that is the scores obtained by administering and validated by Sushma Talesara and Farzana Irfan.

- **Teacher Educators:**

Educators who specialize in preparing and mentoring future teachers. They are responsible for imparting pedagogical knowledge, teaching strategies, and guiding aspiring teachers through their training and development.

### **TOOLS USED FOR THE COLLECTION OF DATA**

The following tools were used for the collection of data in the present study

1. S.P. Ahluwalia and Harbans singh's teacher values inventory
2. Sushma Talesara and Farzana Irfan's Self-efficacy scale for teachers.

### **METHODOLOGY:**

The investigator has used correlation cum casual-Comparative Method under Descriptive Method of Research.

### **SAMPLE:**

A sample consists of 300 teacher educators elected by using stratified random sampling technique.

### **STATISTICAL TECHNIQUES USED FOR THE ANALYSIS:**

- ❖ Mean, Standard Deviation, t-Test
- ❖ Correlation analysis

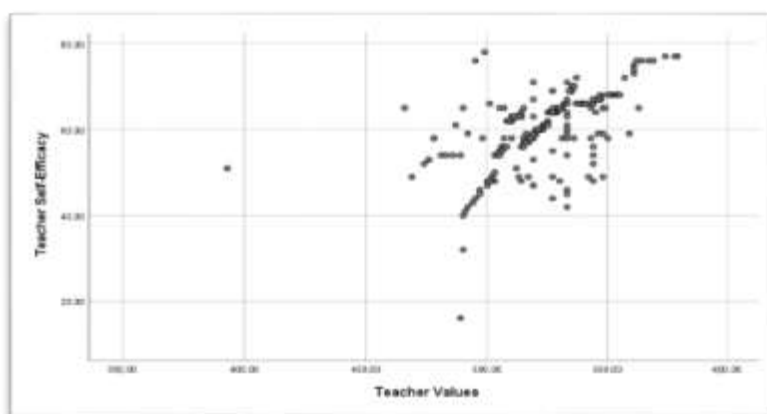
### **ANALYSIS OF THE DATA:**

**Hypothesis-1: There is no correlation between Teachers Values and Teachers Self-Efficacy among Teacher Educators.**

**Table 1: Coefficient of Correlation between Teachers Self-Efficacy and Teachers Values Among Teacher Educators.**

		Teachers Values
<b>Teachers Self Efficacy</b>	Pearson Correlation	0.589**
	Sig. )2-Tailed(	<b>0.000</b>
	N	<b>300</b>
**. Correlation Is Significant at the 0.01 Level )2-Tailed(.		

Table 1: shows that the obtained Pearson correlation coefficient (r) is 0.589. This indicates a moderate to strong positive correlation between teachers' values and their self-efficacy. This means that the correlation is statistically significant at the 0.01 level (2-tailed), indicating that the relationship between teachers' values and self-efficacy is unlikely to have occurred by chance. The positive sign of the correlation coefficient (0.589) indicates that as teachers' values increase, their self-efficacy tends to increase as well. In other words, there is a positive association between higher values and higher self-efficacy among the teachers in your study. This suggests that as teachers' values become more aligned with their teaching principles and beliefs, their belief in their ability to perform effectively in their role as educators (self-efficacy) tends to increase. This finding supports the idea that values play a role in enhancing teachers' confidence and belief in their teaching capabilities.



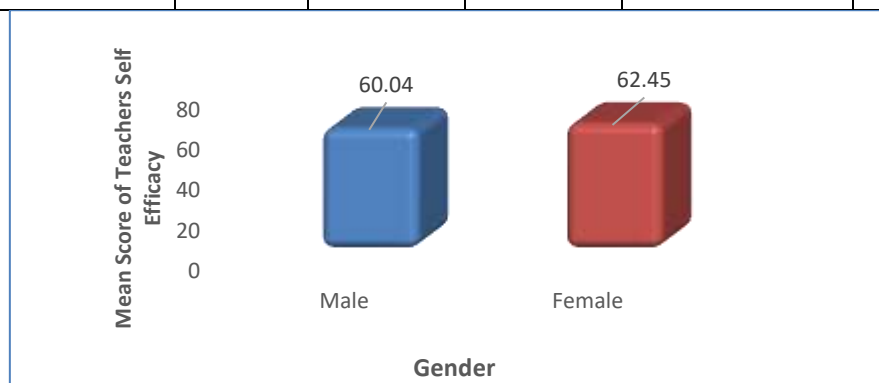
**Graph 1: Scatter plot on Teachers Self-Efficacy and Teachers Values among Teacher Educators.**

The significance level (p-value of 0.589) indicates that this relationship is highly unlikely to have occurred by chance. In the scatter plot, this would be represented by the points closely adhering to the upward-sloping line, with minimal scattering away from the trend line. The scatter plot would visually demonstrate the directional relationship between teacher's values (x-axis) and their self-efficacy (y-axis). As data move along the x-axis (values), on average, the corresponding points on the y-axis (self-efficacy) tend to move upward, indicating that higher values are associated with higher self-efficacy scores.

**Hypothesis-2: There Is No Mean Significant Difference in The Teachers Self Efficacy Scores Among Teacher Educators with Respect to Their Gender.**

**Table 2: Table Shows Levels of Teachers Self Efficacy, N, Mean, Standard Deviation And 't' Of Teachers Self Efficacy of Teacher Educators with Respect to Their Gender.**

Teachers Self Efficacy	Gender	N	Mean	Std. Deviation	t
	Male	200	60.0400	8.15542	2.486
	Female	100	62.4500	7.40512	



**Graph 2: Graph Shows comparison in mean Score of The Teachers Self Efficacy Among Teacher Educators with Respect to Their Gender.**

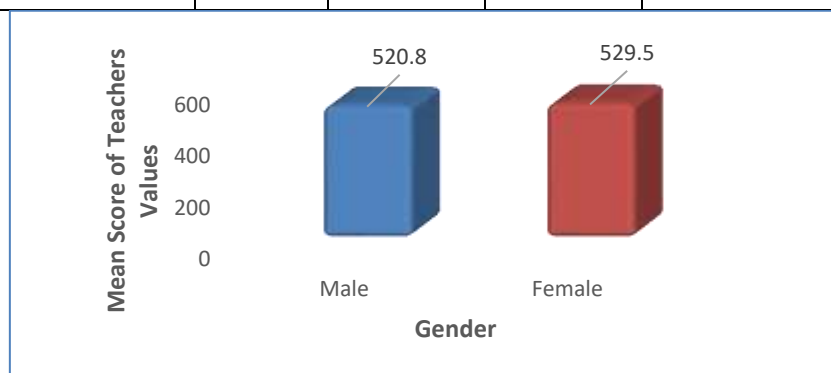
The above table 2 and graph 2, shows that the obtained t-value is 2.486, it is higher than the theoretical table value 1.96 with degrees of freedom 298 at 0.05 level of significance. Hence, the null hypothesis is rejected and formulated the alternative hypothesis, i.e., "There is a significant difference in the mean scores in teacher's self-efficacy between male and female teacher educators". Gender may influence on teacher's self-efficacy among teacher educators. It can be concluded that the mean score of male is 60.0400 and female is 62.4500, the result shows Female teacher educators are more self-efficacy compare to male teacher educators.



**Hypothesis-3: To Study the Difference in The Mean Scores of Teacher Values Among Teacher Educators with Respect to Their Gender.**

**Table 3: Table Shows Levels of Teacher Values, N, Mean, Standard Deviation and 't' of Teacher Values of Teacher Educators with Respect to their Gender.**

Teacher Values	Gender	N	Mean	Std. Deviation	t
	Male	200	520.8000	20.85388	3.431
	Female	100	529.5000	20.39930	



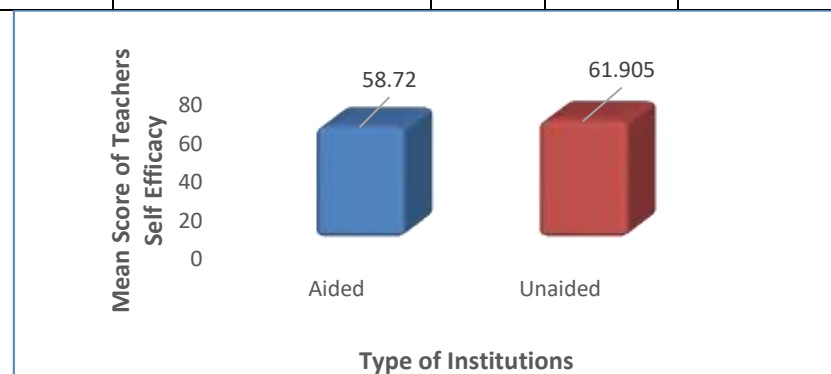
**Graph 3: Graph Shows comparison in mean Score of The Teacher Values Among Teacher Educators with Respect to Their Gender.**

From the above table 3 and Graph 3, shows that the obtained t-value of 3.431, which is higher than the theoretical table value of 1.96 at a 0.05 significance level, researcher concluded that there is a significant difference in the mean scores in teacher's values between male and female teacher educators. In other words, gender may influence teacher's values among teacher educators. Furthermore, provided the mean scores for both male and female teacher educators, with a mean difference of 8.7. This indicates that, on average, male teacher educators have higher values scores (520.8000) compared to female teacher educators (529.5000).

**Hypothesis-4: There Is No Significant Difference in The Mean Scores of Teachers Self Efficacy Among Teacher Educators with Respect to Type of Institution.**

**Table 4: Table Shows Levels of Teachers Self Efficacy, N, Mean, Standard Deviation and 't' of Teachers Self Efficacy of Teacher Educators with Respect to their Type of Institutions.**

Teachers Self Efficacy	Type of Institutions	N	Mean	Std. Deviation	t
	Aided	100	58.7200	9.90264	3.312
	Unaided	200	61.9050	6.59953	



**Graph 4: Graph Shows comparison in mean Score of The Teachers Self Efficacy Among Teacher Educators with Respect to Type of Institution.**

From the above table 4 and Graph 4, shows that the obtained t-value of 3.312, which is higher than the theoretical table value of 1.96 at a 0.05 significance level, you have concluded that there is a significant difference in the mean scores in teacher's self-efficacy between Aided and Unaided

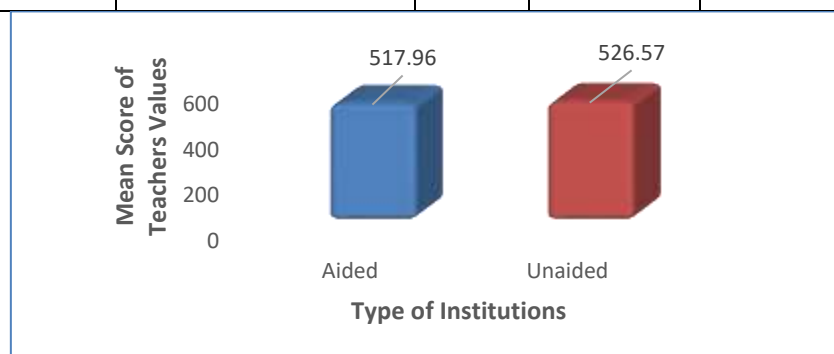
teacher educators. In other words, the type of college (Aided or Unaided) may influence teacher's self-efficacy among teacher educators.

Furthermore, the mean scores for both Aided and Unaided teacher educators, with a mean difference of 3.185. This indicates that, on average, Unaided teacher educators have higher self-efficacy scores (61.9050) compared to Aided teacher educators (58.7200). This finding implies that the type of college (Aided or Unaided) may play a role in shaping the self-efficacy levels of teacher educators. It's important to consider potential factors or reasons behind this difference. The nature of the college, resources available, teaching environment, or support systems could be contributing to variations in self-efficacy between these two groups.

**Hypothesis-5: There is no significant difference in the mean scores of Teacher Values Among Teacher Educators with respect to Type of Institution**

**Table 5: Table Shows Levels of Teachers Values, N, Mean, Standard Deviation and 't' of Teachers Values of Teacher Educators with Respect to their Type of Institutions.**

Teachers Values	Type of Institutions	N	Mean	Std. Deviation	t
	Aided	100	517.9600	24.78959	3.395
	Unaided	200	526.5700	18.34962	



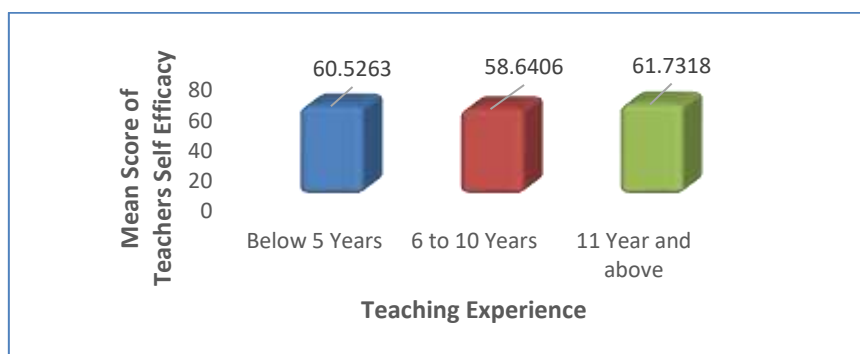
**Graph 5: Graph Shows comparison in mean Score of The Teacher Values Among Teacher Educators with respect to Type of Institution.**

From the above table 5 and Graph 5, the obtained t-value of 3.395, which is higher than the theoretical table value of 1.96 at a 0.05 significance level, you have concluded that there is a significant difference in the mean scores in Teachers Values between Aided and Unaided teacher educators. In other words, type of college (Aided or Unaided) may influence Teachers Values among teacher educators. Furthermore, the mean scores for both Aided and Unaided teacher educators, with a mean difference of 8.61. This indicates that, on average, Unaided teacher educators have higher values scores (526.5700) compared to Aided teacher educators (517.9600).

**Hypothesis-6: To Study the Difference in The Mean Scores of Teachers Self Efficacy Among Teacher Educators with Respect to Teaching Experience.**

**Table 6: Table Shows Levels of Teachers Self Efficacy, N, Mean and Standard Deviation of Teachers Self Efficacy of Teacher Educators with Respect to their Teaching Experience.**

Teachers Self Efficacy	Teaching Experience	N	Mean	Std. Deviation
	Below 5 Years	57	60.5263	9.43607
	6 to 10 Years	64	58.6406	8.53632
	11 Year and above	179	61.7318	7.11745
	<b>Total</b>	<b>300</b>	<b>60.8433</b>	<b>7.98235</b>



**Graph 6: Graph Shows comparison in mean Score of The Teachers Self Efficacy Among Teacher Educators with Respect to Teaching Experience.**

The above table 6 and Graph 6, shows that Teacher educators with more than 10 years of teaching experience tend to have higher self-efficacy scores compared to those with 6 to 10 years of experience. Interestingly, teacher educators with less than 5 years of experience also have relatively high self-efficacy scores, indicating that novice educators may have confidence in their teaching abilities. Teacher educators with 6 to 10 years of experience have the lowest self-efficacy scores among the groups. This could be due to various factors, such as mid-career challenges or changing roles and responsibilities.

**Table 6.1: Table Shows F Value of Teachers Self Efficacy Among Teacher Educators with Respect to Teaching Experience.**

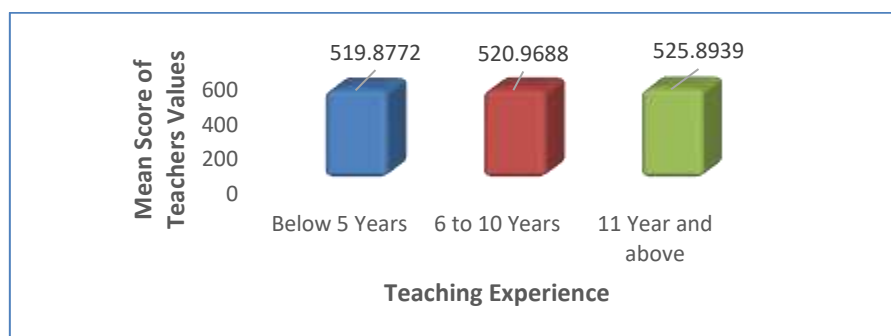
		Sum Squares	Of Df	Mean Square	F	Sig.
Teachers Self Efficacy	Between Groups	457.563	2	228.782	3.654	0.027
	Within Groups	18594.073	297	62.606		
	Total	19051.637	299			

The above table 6.1, shows that the reveals that obtained F-value of 3.654, which is less than the theoretical table value of 2.996 at a 0.05 significance level, you have concluded that there is no significant difference in the mean scores of Teachers Self-Efficacy among teacher educators with respect to teaching experience. In other words, teaching experience does not have a significant impact on teacher self-efficacy scores among the teacher educators. Teaching experience does not appear to be a significant factor influencing teacher self-efficacy. This means that the number of years of teaching experience does not lead to significant variations in self-efficacy scores among the teacher educators in the present study.

**Hypothesis-7: To Study the Difference in The Mean Scores of Teacher Values Among Teacher Educators with Respect to Teaching Experience.**

**Table 7: Table Shows Levels of Teacher Values, N, Mean and Standard Deviation of Teacher Values of Teacher Educators with Respect to their Teaching Experience.**

Teacher Values	Teaching Experience	N	Mean	Std. Deviation
	Below 5 Year	57	519.8772	19.87287
	6 to 10	64	520.9688	18.13877
	11 and above	179	525.8939	22.20550
	Total	300	523.7000	21.07361



**Graph 7: Graph Shows comparison in mean Score of The Teacher Values Among Teacher Educators with Respect to Teaching Experience.**

The above table 7 and Graph 7, shows that Teacher educators with 11 or more years of teaching experience (11 and above) have the highest mean values score (525.8939) among the three experience groups. Teacher educators with less than 5 years of teaching experience (Below 5 Years) have the lowest mean values score (519.8772). Teacher educators with 6 to 10 years of teaching experience (6 to 10 Years) have a mean values score (520.9688) that falls between the other two groups. The overall mean values score for all teacher educators (Total) is 523.7000, with a standard deviation of 21.07361.

**Table 7.1: Table Shows F Value of Teacher Values Among Teacher Educators with Respect to Teaching Experience.**

		Sum Of Squares	Df	Mean Square	F	Sig.
Teachers Values	Between Groups	2171.939	2	1085.969	2.469	0.086
	Within Groups	130613.061	297	439.775		
	Total	132785.000	299			

The above table 7.1, show that the reveals that the obtained F-value from your analysis is 2.469 and it is less than the theoretical value with degrees of freedom 2,297 and that it is not significant at the 0.05 level, concluded that there is no significant difference in the mean scores of Teachers Values among teacher educators with respect to teaching experience. In other words, teaching experience does not have a significant impact on teacher values scores among the teacher educators you studied.

## FINDINGS

- A significant and positive relationship was observed between teacher self-efficacy and teacher values among teacher educators ( $r=0.589$ ) at 0.01% level of significance.
- The teacher self-efficacy and teacher values of teacher educators are dependent on each other.
- The female teacher educators are more self-efficacy compare to male teacher educators.
- The female teacher educators have higher values scores compared to male teacher educators.
- The unaided teacher educators have higher self-efficacy scores compared to aided teacher educators.
- The unaided teacher educators have higher values scores compared to aided teacher educators.
- Teaching experience does not have a significant impact on teacher self-efficacy scores among the teacher educators.
- Teaching experience does not have a significant impact on teacher values scores among the teacher educators.

## CONCLUSION

The present study clearly indicates that, a significant and positive relationship was observed between teacher self-efficacy and teacher values among teacher educators. It is observed that, the female teacher educators are having more self-efficacy and higher teacher values scores compare male

teacher educators. The unaided teacher educators have higher self-efficacy scores and higher teacher value scores compared to aided teacher educators. Further, the teaching experience does not have a significant impact on teacher self-efficacy and teacher values scores among the teacher educators.

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## RESEARCH IN EDUCATION

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### Abstract

*Education research is the scientific field of study that examines education and learning processes and the human attributes, interactions, organizations, and institutions that shape educational outcomes. Scholarship in the field seeks to describe, understand, and explain how learning takes place through a person's life and how formal and informal contexts of education affect all forms of learning. Education research embraces the full spectrum of rigorous methods appropriate to the questions being asked and also drives the development of new tools and methods.*

**Keywords:** Introduction, meaning and definitions of research in education, characteristics, importance, Stages of research in education, conclusion.

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#### ➤ Introduction:-

Research is a scientific and systematic investigation or inquiry especially through search for new facts in any branch of Knowledge. On the other hand education is regarded as the aggregate of all the processes by which a person develops abilities, attitudes, and other forms of behavior of practical values in the society in which she or he lives. The core purpose of this paper is to understand the research in education; research is widely regarded as providing benefits to individuals and to local, regional, national, and international community's involved in the education system. The thrust areas of this paper characteristics, importance, and Steps of research in education.

#### ➤ Meaning:-

Educational research refers to a systematic attempt to gain a better understanding of the educational process, generally with a view in improving its efficiency. It is an application of scientific method to the study of educational problems.

#### ➤ Definitions:-

Munroe says –‘The final purpose of educational research is to ascertain principles and develop procedures for use in the field of education’.

Goode says:-“Educational research is the study and investigation in the field of education’

Munroe says: - The purpose of educational research is to ascertain principles and develop procedures for use in the field of education.

#### ➤ Characteristics of research in education:-

- ✚ Educational research is based on insight and imagination. It needs the service of man who looks beyond the present.
- ✚ Educational research involves the quest for answers to unsolved problems. Pushing back the frontiers of ignorance is its goal and originality is frequently the quality of a good research project.
- ✚ Research requires expertise. The researcher knows what is already known about the problem and how others have investigated.
- ✚ Research strives to be objective and logical applying every possible test to validate the Procedures employed the data collected and the conclusions reached. The researcher Attempts to eliminate personal bias.
- ✚ Research activity may at times be somewhat random and unsystematic. It is more often characterized by carefully designed procedures, always applying rigorous analysis. Although trial and error are often involved, research is rarely a blind, shotgun investigation.
- ✚ Educational research accepts only what can be verified by observation certain interesting Questions do not tend themselves to research procedures.



- ✚ Research involves getting new data from primary or firsthand sources or using existing data for a new purpose.
- ✚ Educational research usually goes beyond the specific objects, groups or situations investigated and infer characteristics of a target population from the sample observed.
- ✚ It emphasizes the development of generalization, principles or theories that will be hel full in predicting future occurrences.
- ✚ Educational research is directed towards the solution of a problem in the field of education. It may attempt to answer a question or to determine the relation between two or more variables.

➤ **Importance of educational research:-**

- ✚ Education is considered Science and arts As a science it has a corpus of knowledge. Since education depends on a corpus of knowledge there is need to add scientific knowledge to it for enrichment and improvement. As an art education seeks to impart knowledge effectively.
- ✚ Education has strong roots in the field like philosophy, history, economics, sociology It is through an intensive process of scientific inquiry about the philosophical, historical, economics, psychological and sociological impact on various aspects of education that sound theories can be established.
- ✚ The slogan of democratization of education resulted in the expansion of education. it has given rise to numerous problems like the problem of individual differences, expansion, buildings, discipline and so on. Solutions of such problems by trial and error or by experience from tradition and authority often yielded erroneous result. we need solutions based on research so that the coming generation is not left to the mercy of errors of outright sins of tradition ignorance and prejudice.
- ✚ Report of 'Learning to Be "UNESCO-1972. Education from now on canon longer be defined in relation to a fixed content which has to be assimilated, but must be conceived of as a process in the human beings. Who thereby learns to express himself, to communicate and to question the world, through his various experiences and increasingly all the time to fulfill himself. it has strong roots not only in economics, and sociology but also in the findings from psychological research which indicate that man is an unfinished being and can only fulfill himself through constant learning. If this is so, then education takes place at all ages of life, in all situations and circumstances of existence. it returns to its true nature. Which is to ne total and lifelong and transcends the limits of institutions, programmes and methods imposed on it down the centuries 'in the context of above nature of education, the limits of educational research have to be extended from the formal and conventional modes of education to the non formal and innovative systems based on ecological and cybernetic models.
- ✚ Scientific and technological Development Education has to play an important role so that we can accept the change in a smooth way. It can do so by bringing improvements in the existing curriculum, textbooks, methods of teaching and evaluation.

➤ **Stages in Educational Research:-**

- ✚ Educational research is the application to the study of educational problems. The stages in educational research therefore are more or less identical to those of scientific method. Following are the stages generally found in educational research.

❖ **The problem of research.**

Educational research starts with the selection of problems are

- The classroom, school.home community and other agencies are the obvious sources.
- Classroom discussions, seminar and exchange of ideas with the faculty members and fellow scholars and students will suggest many stimulating problems to be solved.
- Consultation with an expert researcher supervisor, researcher guider a senior scholar will also be helpful.
- Social developments and techoonological changes are constantly bringing forth new opportunities for research.
- Records of previous research should also be consulted. This includes encyclopedia of educational research dissertations and similar publications.

❖ **Use of method.**

- Selection of research method to be used is of utmost importance in the research process. It refers to the general strategy followed in collecting and followed in collecting and analyzing the data necessary for solving the problem. The research methods are generally classified in to 3 categories are,

- Historical
- Descriptive
- Experimental

The methods used in the study are decided by the nature of the problem and the type of data required for answering the questions relating to the problem.

#### ❖ **Data collection.**

- Whereas the research method describes the overall approach to the problem this stage is concerned with the procedures and techniques to be adopted for data collection. It refers to the nature of the sample to be chosen for study and selection and development of data gathering devices such as tests, questionnaires, rating scales, interviews, observations checklists are important.

#### ❖ **Making of hypothesis.**

- Educational research should make the use of hypothesis. This may be formally stated or implied Hypothesis. Hypothesis is the pre assumptive statement of a proposition or a reasonable guess based upon the available evidences which the researcher seeks to prove through his study.

#### ❖ **Data Analysis.**

- Good research is characterized by the care taken in the analysis and interpretation of data. It includes the selection of appropriate quantitative techniques to be used for processing the data collected for the study.

#### ❖ **Reporting.**

- This is the last and important stage of the research process. it is characterized by carefully formulated inferences, conclusions or generalizations. The researcher must be able report his procedures, findings, and conclusions with utmost objectivity to others who may be interested in his study and its result.

#### ➤ **conclusion:-**

Educational research is crucial to the overall advancement fields of study and learning as is whole. Data in educational research can be gathered via surveys and questionnaires, observation methods, or interviews, structured, unstructured and semi structured.

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## DIFFERENCES IN PERIPHERAL VISION AND REACTION TIME BETWEEN SPORTS PERSONS AND NON-SPORTSPERSONS

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### Abstract

Peripheral vision and reaction time are fundamental components of sports vision. Despite coming from quite different backgrounds, both of these characteristics have a substantial impact on an athlete's perceptual skills. Reaction time is a measure of the response to a stimulus. Peripheral vision refers to what is seen to each side or up and down without moving the head of a person, or everything that is seen that isn't in the central vision. Coaches and trainers recognize the importance of peripheral vision and reaction time in sports and often incorporate drills and exercises specifically designed to enhance these skills. The purpose of the study was to determine the differences in peripheral vision and reaction time between sports persons and non-sports persons. Eighty male college students (40 sports persons, 40 non-sports persons) were selected randomly for this study, whose age range from 24 to 27 years. Reaction time is measured by performing a simple reaction time test using a tool reaction timer. Peripheral vision was measured with a perimeter device in the right and left eye. The 't' test was applied to investigate the existence of significant difference between sports persons and non-sports persons in their reaction time and peripheral vision. On the basis of the findings of the present study, it is concluded that the peripheral vision and reaction time of sportspersons is significantly better than non-sportspersons.

**Key words:** Peripheral vision, reaction time, sportspersons, sports performance.

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### 1. Introduction

Peripheral vision and reaction time are fundamental components of sports vision. Despite coming from quite different backgrounds, both of these characteristics have a substantial impact on an athlete's perceptual skills. The typical operations of the human visual system affect peripheral vision. The central nervous system's operations and the impacts of muscles have an impact on reaction time, which is related to movement control, information regulation, and cognitive processes. The appearance of the peripheral target, the saccadic eye movement is typically initiated first and the hand movement second. Reaction time and peripheral vision are among the most important and vital human abilities and are an important aspect of everyday life, including school, daily life activities, and social interaction. Reaction time is the use of vision to guide movements of the hand for many human activities, like sports, using tools, etc. To aim at a target location or reach and perform a task, each sequence of events requires a complex, integrated coordination of reaction time and peripheral vision.

#### Reaction time

Reaction time is a measure of the response to a stimulus. Reaction time plays a very important role in our lives as its practical implications may be of great consequences. Factors that can affect the average human Reaction time include age, sex, left or right hand, central versus peripheral vision, practice, fatigue, fasting, breathing cycle, personality types, exercise, and intelligence of the subject (Jain, et. al., 2015).

Reaction time requires us to combine our visual and motor skills, enabling our eyes to lead the hand based on the visual information it receives. This requires us to have a complicated level of cognitive capacity. Eye-hand coordination is a skill that is necessary for the majority of daily tasks. This cognitive ability is crucial since, typically, we employ visual information to rectify situationally inappropriate behavior. The capacity of an athlete to react swiftly and efficiently to different stimuli on the field or court is significantly influenced by reaction time, which is a crucial and fundamental

component of sports performance. It describes the amount of time needed for a person to gather sensory data, make a choice, and start a physical reaction. Reaction time is a key factor in sports, whether it be basketball, volleyball, handball, soccer, tennis, or any other activity.

**Peripheral vision:** Peripheral vision refers to what is seen to each side or up and down without moving the head of a person, or everything that is seen that isn't in the central vision. The central vision is what is seen that's directly in front of a person. Peripheral vision plays a crucial role in various sports and athletic activities. It refers to the ability to perceive objects, movement, and details outside the direct line of sight or central focus. This broad perspective allows athletes to gather information from their surroundings, anticipate actions, and respond quickly to changing situations. Visual performances were found to be significantly better in the athletic population compared to non-athletes for some visual skills. Effectively incorporating peripheral vision into sports can lead to improved performance, better situational awareness, and enhanced decision-making. Coaches and trainers recognize the importance of peripheral vision and reaction time in sports and often incorporate drills and exercises specifically designed to enhance these skills. These may include visual and auditory cues, rapid decision-making situations, and simulated game situations. By improving reaction time and peripheral vision, athletes can gain a competitive edge, respond more effectively to opponents, and seize opportunities during matches or events.

**2. Objective of the study:** The purpose of the study was to determine the differences in peripheral vision and reaction time between sports persons and non-sports persons.

### 3. Method and Materials

**Subjects :** Eighty male college students (40 sports persons, 40 non-sports persons) were selected randomly for this study, whose age range from 24 to 27 years. These subjects were selected from different department in Kuvempu university, Shivamogga District, Karnataka.

#### Criterion measure

- *Reaction time test:* Reaction time was measured by performing a simple reaction time test using a tool reaction timer. In this test, subjects are asked to sit comfortably in front of a reaction timer apparatus and are briefed on a simple reaction time test. In this test subjects are given 3 attempts out of which the best 1 attempt is taken into result (result is collected in milliseconds).
- *Peripheral vision test (Perimetry):* Peripheral vision was measured with a perimetry device in the right and left eye. In this test, ask the subjects to sit comfortably in front of the perimeter apparatus and give an explanation about the perimetry test. Peripheral vision ability of the left and right eye (in angle<sup>0</sup>) will be collected.

**Statistical procedure:** The 't' test was applied to investigate the existence of significant difference between sports persons and non-sports persons in their reaction time and peripheral vision.

**Findings of the study:** The raw data on right and left eye peripheral vision as well as reaction time were subjected to descriptive statistics and the results are provided in table 1

**Table 1. Descriptive results on peripheral vision and reaction time of sportspersons and non-sportspersons**

	Groups	Mean	Std. Deviation
<b>Peripheral vision (in angles)</b>	Right Eye Sportspersons	54.05	10.34
	Right Eye Non-Sportspersons	41.55	9.18
	Left Eye Sportspersons	53.83	10.52
	Left Eye Non-Sportspersons	40.71	10.30
<b>Reaction time ability (in milliseconds)</b>	Sportspersons	.22	.03
	Non-Sportspersons	.26	.03

From above table 1 normality of data is established and the homogeneity of sample is acceptable in terms of standard deviation. It is found that the right eye peripheral vision of sports persons was  $54.05 \pm 10.34$  and non-sportspersons was  $41.55 \pm 9.18$ ; the left eye peripheral vision of

sports persons was  $53.83 \pm 10.52$  and non-sportspersons was  $40.71 \pm 10.30$ ; the reaction time of sports persons was  $0.22 \pm 0.03$  and non-sportspersons was  $0.26 \pm 0.03$ . The data was further subjected to comparative statistics and the results are provided in table 2 as below.

**Table 2. Summary of 't' test for differences in peripheral vision and reaction time between sportspersons and non-sportspersons**

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
<b>Peripheral vision-Right</b>	5.860	82	.000	12.50000	2.13297
<b>Peripheral vision-Left</b>	5.773	82	.000	13.11905	2.27244
<b>Reaction time ability</b>	-6.307	82	.000	-.04310	.00683

From table 2 it is clear that there is significant difference in Peripheral vision of both right ( $t=5.860$ ) and left ( $t=5.73$ ) eye as well as reaction time ( $t=-6.307$ ) between sportspersons and non-sportspersons in the present investigation.

**Discussion on findings:** The results of the present study make it clear that the Peripheral vision of both right and left eyes of sports persons was significantly better than non-sportspersons. The sportspersons often use their peripheral vision during training and competitions. Sportspersons keep trying to spot the ball, team mates and opponent for success in sports Example, The goal keeper has to watch the movement of opponent as well as keep focus on the ball. This practice leads to improvement of peripheral vision. Further, sportspersons often face situations wherein they have to react quickly to the stimulations they receive in the sports set up. They will have to react too quickly for better sports performance. Example, During a rally in volleyball or a shoot in handball, the ball travels with high speed and the players have to inevitably react to the ball. This goes on during practice as well as competitions.

**Conclusion:** On the basis of the findings of the present study, it is concluded that the peripheral vision and reaction time of sportspersons is significantly better than non-sportspersons.

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## STANDARDIZATION OF ACADEMIC PROCRASTINATION SCALE FOR TEACHER EDUCATION STUDENTS

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### Abstract

Academic procrastination among students in teacher education programs is a critical and often overlooked issue. Academic procrastination is the practice of delaying or postponing academic responsibilities, such as studying for tests, writing papers, or working on projects, that must be fulfilled. It entails postponing or avoiding academic work, frequently as a result of a lack of enthusiasm, problems with time management, anxiety, or a preference for immediate reward over long-term academic success. Academic procrastination can have a negative impact on a student's performance and overall educational experience because it can result in hurried, poor work and increased stress. It is a common challenge for many students and is often a focus of research and interventions in the field of education and psychology.

So this study outlines the development and validation of Academic Procrastination Scale (APS) for assessing academic procrastination in students pursuing teacher education. The Academic Procrastination Scale for Teacher Education Students was developed and validated using data gathered from a varied sample of teacher education students, a study of pertinent literature, and an expert panel evaluation. The scale's structural validity and internal consistency were confirmed through reliability measures (Cronbach's Alpha method). By addressing procrastination in this specific context, the Academic Procrastination Scale offers a valuable tool for educators, researchers, and institutions to understand and mitigate Academic Procrastination, ultimately enhancing the academic and professional preparation of future educators.

**Key words:** Academic Procrastination, Teacher Education, Student Teachers

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## INTRODUCTION

"The act of delaying tasks in an academic setting without a valid reason."

**Solomon and Rothblum (1984)**

"A self-regulatory failure characterized by the inability to make a timely decision to act."

**Ferrari (1992)**

Academic Procrastination, or the tendency to put off doing academic work, is a problem that frequently arises and is widely regarded as impeding academic success and student progress. The negative effects of procrastination take on an especially major dimension in the field of teacher education, where the development of future educators is of fundamental importance. Understanding, evaluating, and reducing academic laziness in this particular academic cohort is crucial since teacher education students are charged with guiding the next generation of learners.

This study is a response to the growing understanding that teacher education students, who are positioned to serve as role models for future educators, must deal with procrastination tendencies that may impede their own academic progress and, as a result, their capacity to motivate and instruct the next generation. Although there is a thriving body of research on Academic Procrastination, a customized assessment method is required due to the unique difficulties that teacher education students encounter in their academic careers.

Researchers and educators can better understand the special difficulties teacher education students encounter by developing a specialized scale. These difficulties include balancing coursework, lesson planning, and classroom obligations. This tailored assessment technique makes it possible to quickly identify people who could struggle with Academic Procrastination, enabling the development of personalized support systems and interventions that might promote improved time management and teaching preparation practices.

The information from this scale can also be used to help build curricula for programs that prepare teachers. It can point out areas where students frequently put off work and offer important data for creating a more organized, interesting, and successful teacher training curriculum. The



ensuing insights may eventually result in educators who are better prepared and more productive, raising the standard of education as a whole.

In conclusion, a standardized Academic Procrastination Scale for students enrolled in teacher education programs is essential for improving future teachers' preparation and competence, which will ultimately improve the standard of instruction they provide.

**LITERATURE REVIEW:** Academic Procrastination, or the persistent postponement of academic assignments, has historically aroused the curiosity of educational and psychological researchers. It is a phenomenon that cuts across age, gender, and academic specialization lines. While there are many different definitions and conceptualizations of procrastination, there is general agreement that academic procrastination refers to the unreasonable delaying of assignments in spite of knowing that doing so will have negative effects (Steel, 2007; Tuckman, 1991). The complex interplay between human motivation, self-regulation, and affective states is explored in the theoretical and empirical underpinnings of this phenomenon.

The Temporal Motivation Theory (Steel, 2007) explains that tasks deemed less rewarding explain academic procrastination. Task aversion, self-control, and delay discounting are all covered under the procrastinating-decision paradigm (Tuckman, 1991). Self-Determination Theory and the Failure of Self-Regulation (Deci & Ryan, 1985) Procrastination is motivated by unpleasant emotions, according to the negative affect theory (Sirois & Pychyl, 2013). The complicated nature of procrastination is studied using these theories.

Academic Procrastination is common among many different groups and is linked to task aversion, perfectionism, low self-efficacy, and low self-esteem (Steel, 2007). It has an impact on academic success, mental health, and life pleasure. According to research, there are methods for overcoming procrastination, including goal-setting, time management, and cognitive-behavioral therapy (Rozental et al., 2018; Rozental et al., 2021).

Research and knowledge of academic procrastination have greatly benefited from the use of existing scales, including Lay's Procrastination Scale, Tuckman's Academic Procrastination Scale, and the General Procrastination Scale. They evaluate many facets of procrastination in academic and non-academic settings, which helps us comprehend this complicated habit.

**SCALE DEVELOPMENT:** Researcher created initial pools of 60 test items. The researcher himself looked through these things. The test's pool of items was then given to specialists for evaluation in terms of its validity, the degree of ambiguity in the language used, the length of the statement, and the suitability of the settings chosen. The researcher updated all of the things that needed revisions in response to their comments and recommendations. 43 items in all were kept from the test for the tryout. An English editor was tasked with modifying and finalizing the 43-item test.

**Format of Statements and Response Pattern:** The Academic Procrastination Scale (APS) for Teacher Education uses statements specific to teacher education in a Likert scale style. It allows for a thorough investigation of students' propensities for academic procrastination in this setting and offers an accurate and pertinent assessment. Participants are asked to rate each statement's degree of agreement or disagreement on a five-point Likert scale using the responses "Strongly Agree," "Agree," "Not Decided," "Disagree," and "Strongly Disagree."

**Scoring Pattern:** To measure academic procrastination tendencies, the "Analysis of Academic Procrastination Scale for Teacher Education Students" was being scored. Responses on the Likert scale are given numerical values, with "Strongly Agree" being assigned a score of 5, "Agree" being given a score of 4, "Not Decided" being given a score of 3, "Disagree" being given a score of 2, and "Strongly Disagree" being given a score of 1 for negative items and vice-versa for positive items. As a result, the maximum score of the test was 215 and the minimum score was 43. With the above guidelines evolved for scoring, the responses were scored and the total score of each respondent was arrived at.

**ESTABLISHING VALIDITY:** Each statement on the scale separately focuses on what it purports to assess and is connected to the study area. This supports the scale's apparent validity. Through 10 specialists, including a research guide, educational psychology experts, and senior teacher educator's recommendations researcher developed the content validity of the 'Academic Procrastination Scale for Teacher Education Students'. The experts concurred that the statements in the "Academic Procrastination Scale for Teacher Education Students" are pertinent and beneficial for gathering the

data, and some of the items and responses were amended and rewritten in light of their recommendations. The experts approved of the test items' and the scoring methods' relevancy. As a result, the tool's content validity was proven. This suggests that the 'Academic Procrastination Scale for Teacher Education Students' is thorough and pertinent.

### ESTABLISHING RELIABILITY

**Sampling:** The researcher used a random selection method to choose students for the current study from a variety of Teacher Education Institutions. 121 students were chosen at random from the Kuvempu University-affiliated Teacher Education Institutions.

**Try-out of the Tool:** A selection from a pool of 43 items was made following the tryout. B.Ed. program student-teachers were required for this. In order to conduct the tryouts, student teachers of Mythri College of Education and Kuvempu Shatamanothsava Shikshana Mahavidyalaya in Shivamogga, Karnataka, were chosen. The sample for the tryout comprises 121 B.Ed. program student teachers. The goal of the test was explained to student-teachers during the try-out period. During the tryout, student-teachers were placed in a relaxed setting. The student-teachers were permitted to reply to the items at their own pace.

**Cronbach's Alpha method:** The most popular indicator of internal consistency (reliability) is Cronbach's alpha. It is most frequently used to check the reliability of a scale created from a number of Likert items in a survey or questionnaire. For this, the researcher used Cronbach's Alpha reliability calculation to determine the reliability of the 'Academic Procrastination Scale for Teacher Education Students'.

**Table 1 showing item-wise Cronbach's Alpha value**

SI No	Items	Corrected Item-Total Correlation	Remark
1.	I complete and submit the assignments within the stipulated time.	-.004	Rejected
2.	I always finish my academic work given by the lecturers at the last minute.	.316	Accepted
3.	Sometimes I give up my practicum work in the middle.	.346	Accepted
4.	Preparing Teaching-Learning aids by me only delayed to preparation for the teaching lesson during the Internship.	.198	Rejected
5.	I am interested to attend Tutorial Classes to clarify my doubts.	-.004	Rejected
6.	I always attend every class on time.	.298	Rejected
7.	I participating in co-curricular activities make all my academics fall behind.	.413	Accepted
8.	Sometimes if I engaged in non-academic works, I keep aside the academic works.	.486	Accepted
9.	Any delaying I always attend the test/exams conducted by the college.	.107	Rejected
10.	I always delay the process of writing lesson plans.	.508	Accepted
11.	Delays in planning Micro Teaching Skills sometimes cause me to fall behind in skills practice.	.348	Accepted
12.	I do not understand the Micro Teaching concept well, so I slow up in writing Micro Teaching Plan.	.371	Accepted
13.	I am not completing other academic tasks due to the compulsory of attending the long termed Micro Teaching Skills session.	.534	Accepted
14.	Sometimes postponing encourages me to explore alternative methods or strategies for completing my practicum tasks.	.162	Rejected
15.	I believe that beginning lesson planning well in advance is essential for effective classroom instruction.	.236	Rejected

16.	Non-uniformity in doing practicum works of all the subjects will hinder the completion of my other academic activities.	.317	Accepted
17.	Sometimes I find myself holding up the planning and preparation phase of my internship tasks.	.572	Accepted
18.	I tend to delay in completing theory assignments when I focus on my internship responsibilities.	.630	Accepted
19.	Balancing the demands of theory classes and preparing for the internship program leads me to delays.	.524	Accepted
20.	I consistently start preparing for exams well in advance of the exam date.	.363	Accepted
21.	I delay the preparation for my internship program due to the short period available.	.616	Accepted
22.	I believe that the multiple tasks in the internship program negatively impact the quality of my performance and leads to postponement.	.633	Accepted
23.	I make late to complete tasks of the internship program due to the multiple tasks involved in that.	.662	Accepted
24.	The task of creating teaching and learning materials sometimes leads to delays in my lesson planning.	.579	Accepted
25.	I wait until the last moment to seek guidance on preparation of teaching and learning materials.	.317	Accepted
26.	I never postpone or delay my field work tasks.	.044	Accepted
27.	I postpone my reading and study tasks due to the demands of other curricular assignments.	.516	Accepted
28.	I tend to delay using technology in my teaching due to concerns about technical difficulties.	.495	Accepted
29.	I feel overwhelmed by the workload, causing me to delay in observing the lessons of pupil teacher during internship.	.610	Accepted
30.	I make late participating in collaborative projects due to non cooperation with the friends.	.474	Accepted
31.	I always start preparing for lesson teaching well in advance of the scheduled time.	.247	Rejected
32.	I tend to slow up studying for exams due to concerns about the difficulty of the study materials.	.617	Accepted
33.	I delay participating in the simulated teaching session due to problems with getting my lesson plans approved.	.666	Accepted
34.	I tend to hold up my academic responsibilities when I prioritize socially useful productive tasks.	.628	Accepted
35.	Attending CTC/NSS camps leads to delays in completing my other academic tasks.	.522	Accepted
36.	I make late to meet academic deadlines when I am attending for an educational tour.	.462	Accepted
37.	Balancing sports and other tasks can be challenging, leading to delays in meeting deadlines.	.475	Accepted
38.	I consistently manage my time well to participate in co-curricular activities without delaying my academic tasks.	.311	Accepted
39.	I detain other activities due to my participation in yoga and drama sessions.	.447	Accepted

40.	I tend to postpone writing content analysis of textbooks because; I do not understand the writing procedure.	.575	Accepted
41.	I tend to slow up academic activities due to the long preparation time taken for the seminar presentation.	.561	Accepted
42.	Balancing between theory and practical examinations sometimes results in delays in completing my other academic tasks.	.578	Accepted
43.	The guidance provided by my teaching staffs helps me stay organized and focused on my academic tasks without any delay.	.237	Rejected

**Selection of Items:** The task value had been calculated after determining the level of internal consistency among all sets of items using Cronbach's Alpha. Items with 'r' values below 0.30 were discarded. Anything less than 0.30 is considered a weak correlation for item analysis, according to DeVaus (2004). Out of the 43 items, 34 items with 'r' values larger than 0.30 were selected to create the final scale. 34 items in all were chosen for the test's final form as a result of the item analysis that was done for item selection. Scale reliability as a whole was **0.915**.

**CONCLUSION:** The verified Academic Procrastination Scale is crucial since it offers a valid and reliable method for determining one's propensity for academic procrastination. This tool is useful in academic and research settings because it makes it possible to identify people who are at risk of procrastinating, assess the effectiveness of interventions and management techniques, and gain a deeper comprehension of the causes of this behavior. Its validity and reliability make it a dependable tool for educators, counselors, and researchers, ultimately assisting in the creation of focused interventions and regulations to enhance academic achievement, time management, and overall student success.

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## A COMPARATIVE STUDY OF HEALTH PROBLEMS, EMOTIONAL PROBLEMS AND ACADEMIC ACHIEVEMENT OF ADOLESCENT GIRLS OF RESIDENTIAL AND NON-RESIDENTIAL SCHOOLS

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### Abstract

Adolescence as a period of rapid development employed with many problems and it is a distinctive cycle involved in the human life. The researcher is concerned in comparing the relationship between the health problems, and emotional problems and academic achievement of adolescent girls of residential and Non-residential schools. The secondary school adolescent girl of 9th standard studying in different residential and non-residential schools of Chickmagalur district represents the population of the study. The sample size for the present study will be about 500 students and Stratified Random Sampling design will be used for sampling. Descriptive Survey method will be envisaged for data collection from the schools using standardized questionnaire.

**Key Words** - Health Problems, Emotional Problems, Academic Achievement, Adolescent Girls, Residential Schools, Non-Residential Schools.

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**Introduction:** Adolescence is a process rather than a period, a process of achieving the attitudes and beliefs needed for effective participation in the society. The growth and prosperity of a nation depend heavily on the status and development of adolescent girls. The term residential school seems a school incorporating a residence for its students, more commonly known as a boarding school. To promote educational levels by increasing enrolment and retention and to bring down drop-out rate with greater focus on quality education Residential Schools are opened. Where residential school students will greatly differ in terms of their many problems when compared to non-residential schools. This research article delves a comparative study of health problems, emotional problems and academic achievement of adolescent girls of residential and non-residential schools.

#### 1. Health problems:

In the 5th century BC, Pindar defined health as "harmonious functioning of the organs", emphasizing the physical dimension of health, the physical body and the overall functionality, accompanied by the feeling of comfort and absence of pain. "A healthy mind in a healthy body" could be achieved if people established internal harmony and harmony with the physical and the social environment (Plato).

#### 2. Emotional problems

It is a very predominant aspect of every human being. It helps in making adjustment to his environment and lead satisfied life in the society. Every situation is influenced by the state of emotions in our daily life activities. In this way adolescent girls are more likely to be influenced by the different state of emotions which effects on their academic achievement.

#### 3. Academic achievement

Academic achievement is an educational outcome to extent to which the learning outcomes are achieved by the students. Achievement is measured through the result of the previous examination or continuous assessment.

**Review of related literature:** Patil S N (2009): Health problems amongst adolescent girls in rural area. Dr. Nidhi Shukla (2019): A Comparative study of Mental health of residential and non-residential school students. Azad Ahmad Andrabi (2015): A Study of Academic Achievement among Tribal and Non-Tribal Adolescents. All these reviews revealed that residential schools adolescent girls faces many problems than non-residential schools adolescent girls students. These reviews shows positive impact on this study.



**Significance of the study:** The researcher is concerned in comparing the relationship between the health problems, and emotional problems and academic achievement of adolescent girls of residential and Non- residential school. Chiefly adolescent girls face many problems in their daily life. Vocational education should be made integral part of the curriculum which can lead to autonomy and self-reliance among adolescent girls. So that it can excel their academic performance. In this context the present study assumes a greater significance.

**Objectives of the study:**

1. To find out the relationship between emotional problems and academic achievement of adolescent girls of residential and non-residential schools.
2. To find out the relationship between emotional problems and academic achievement of adolescent girls of residential and non-residential schools.
3. To compare the health problems, and emotional problems and academic achievement of adolescent girls of residential and non-residential schools.

**Hypothesis:**

1. There is no significant relationship between the health problems and academic achievement among adolescent girls of residential and non-residential schools.
2. There is no significant relationship between the emotional problems and academic achievement among adolescent girls of residential and non-residential schools.
3. There is no significant difference in the interaction effect of health problems, emotional problems and academic achievement of adolescent girls of residential and non-residential schools.

**Method and Sample:** The sample size for the present study will be about 500 students of secondary school adolescent girls studying in residential and non-residential school of Chickmagalur district. Stratified Random Sampling design will be used for sampling. Descriptive Survey method will be used for data collection from the schools using standardized questionnaire.

**Limitation of the study:**

- The present study is confined only to the secondary school adolescent girls studying in residential and non-residential school of chickmagalur district.

The qualitative research data were analysed through a thematic analysis and directly experienced the students life of residential and non-residential school and found that they differ significantly in their problems and this helps the researcher to look forward to take up the research quantitatively with positive attitude in bringing changes to the society.

**Conclusion:** A residential school is different from other schools in the sense that students here not only study but also live together. The act of residing together beyond classroom hours has significant implications for management, living environment, relationships and learning. Adolescent girls studying in residential school come acrosses many different problems than non-residential students.

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## TEACHER EDUCATORS JOB SATISFACTION IN RELATION TO THEIR DEMOGRAPHICAL VARIABLES

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### Abstract

*Job satisfaction is a complex and multifaceted phenomenon influenced by various factors, including the nature of the job itself, the work environment, and individual characteristics. The present study attempts to study Teacher Educators job satisfaction in Relation to their Demographical Variables. The objectives of the study are to assess the levels of job satisfaction among teacher educators with respect to gender, age, teaching experience, and locality. To study the difference in job satisfaction among teacher educators with respect to gender, age, teaching experience and locality. The study was a descriptive survey in order to know the job satisfaction of teacher educators working in colleges of teacher education. It is correlational and casual-comparative in nature. This study clearly showed that the majority of the teacher educators fall under average level of job satisfaction. This study is inferred that "there is no Mean significant differences between in Job Satisfaction among teacher educators with respect to their Gender, Age, Teaching experience and Locality" Organizations and institutions striving to increase member or employee job satisfaction. Strategies for fostering a more positive work environment can be informed by identifying the elements that are connected to increased job satisfaction.*

**Key words;-** Job satisfaction, Demographical variable, Teacher educators.

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### Introduction;-

Teacher educators play a vital role in the education system, shaping the skills and knowledge of future teachers. The job satisfaction of teacher educators is a matter of significant importance, as it directly impacts their effectiveness in preparing the next generation of educators. Job satisfaction is a complex and multifaceted phenomenon influenced by various factors, including the nature of the job itself, the work environment, and individual characteristics. Understanding the factors that contribute to or detract from teacher educators' job satisfaction is essential for fostering a positive and productive educational ecosystem.

This research aims to investigate the job satisfaction of teacher educators and the factors that influence it. Job satisfaction is a critical aspect of an educator's professional life, as it can influence their overall well-being, motivation, and commitment to their role. Furthermore, satisfied teacher educators are more likely to provide high-quality teacher training, which, in turn, can have a positive impact on the quality of education delivered in schools.

In this study, we will explore various dimensions of job satisfaction among teacher educators, considering both intrinsic and extrinsic factors. These factors may include the fulfillment derived from teaching and mentoring future educators, the level of institutional support, compensation, opportunities for professional development, workload, and the overall work environment. Additionally, we will examine how demographic variables, such as age, gender, years of experience, and educational background, interact with job satisfaction among teacher educators.

The field of teacher education is evolving rapidly, with increasing demands for innovation, diversity, and adaptability. As teacher educators face new challenges in a changing educational landscape, it becomes crucial to assess and understand their job satisfaction levels. This research seeks to contribute to the body of knowledge in this area, shedding light on the factors that can enhance or hinder teacher educators' job satisfaction.

Ultimately, the findings of this study can inform educational institutions, policymakers, and administrators about strategies to improve the job satisfaction of teacher educators. A satisfied teacher educator is more likely to be an effective educator, leading to better-prepared teachers and, ultimately,

improved educational outcomes for students. Thus, exploring the nuances of teacher educators' job satisfaction is not only beneficial for educators themselves but also for the entire education system.

#### **Review related literature;-**

**Malwang Marmet Ngaimong and Dr. Vijay Kumar Chechi (2019);** The study was investigated on teachers' job satisfaction and its demographic variables. The main purpose of this study was to investigate how the job satisfaction is being effected by its demographical variables. The study was conducted on 100 schools' teachers of Changlang district of Arunachal Pradesh and found that most of the teachers were having high job satisfaction level. The results showed that the female teachers were having high job satisfaction than male teachers, the teachers who are below thirty years of age are having high job satisfaction than the teachers of above thirty years of age, & private school teachers were having high job satisfaction than government school teachers, undergraduate teachers were having high job satisfaction than graduate teachers and unmarried or single teachers were having high job satisfaction than the married teachers.

**Alyaha Daniel Felix Ohidand Rosemary Wahu Mbogo(2017)** conducted study on Demographic Factors Affecting Teachers' Job Satisfaction and Performance in Private Primary Schools in Yei Town, South Sudan. Job satisfaction is an important construct to the field of organizational behavior and the practice of human resource management. Schools are no exception to the list of organizations ensuring teachers' job satisfaction therefore becomes inevitable if schools have to record good performances. This paper aims at examining some of the demographic factors affecting job satisfaction of teachers in private primary schools and their consequent performance. To attain this objective; the authors carried out a survey study in private schools in Yei town, South Sudan. Simple random sampling technique was used to select the respondents from ten private schools in the town. A total of 110 respondents were considered for the study constituting 10 head teachers and 100 teachers from each of the 10 schools. Questionnaires were used for data collection. Data was then analyzed by the use of Statistical Package for Social Science (SPSS) version 12.0 and presented in frequencies and percentages. The factors identified included gender, age bracket, educational level, pay and length of service of teachers. Based on the findings, it is apparent that certain demographic factors have a significant influence on the level of job satisfaction of teachers in private schools.

#### **Knowledge gap between research;-**

Job fulfillment is the essence of a career. The previously mentioned research reveals a discrepancy between the facilitators of education and the selected sample, but creating facilitators in the field of education is highly risky due to model constructions, so we chose teacher educators. Based on the results of the reviews showing how positively demographic variables influence single-marital and private sectors showing high job satisfaction, we chose teacher educators.

#### **Significance of the study;-**

Teacher educators play a pivotal role in shaping the future of education by preparing the next generation of teachers. Their job satisfaction is a critical factor that impacts the quality of teacher preparation programs, the retention of experienced educators, and ultimately, the educational outcomes of students. Job satisfaction is influenced by a complex interplay of factors, including demographic variables. Understanding how these demographics relate to teacher educators' job satisfaction can provide valuable insights for educational institutions, policymakers, and administrators.

This research aims to explore the relationship between teacher educators' job satisfaction and various demographic variables, including age, gender, education level, years of experience, by examining these relationships, we can gain a more nuanced understanding of the factors that contribute to or detract from job satisfaction among teacher educators.

This study is of particular importance in the context of evolving educational landscapes, where teacher educators are facing new challenges and demands. As the field of education undergoes transformations in response to technological advancements, changing student demographics, and evolving pedagogical approaches, it becomes crucial to assess how teacher educators' job satisfaction is affected by demographic variables. This knowledge can guide institutions and policymakers in implementing strategies to create a more conducive and satisfying work environment for teacher educators, ultimately benefiting both educators and the future educators they train.

The specific demographic variables and their potential impact on teacher educators' job satisfaction, drawing upon existing research and literature. This analysis aims to provide a comprehensive overview of the subject, helping to inform future research and policy initiatives aimed at enhancing job satisfaction and the overall quality of teacher education programs.

### **Objectives of the Study:-**

The objectives of the study are as follows: -

1. To assess the levels of Job Satisfaction among Teacher Educators with respect to their Gender, age, Teaching Experience and locality.
2. To study the difference in Job Satisfaction among Teacher Educators with respect to their Gender, Age, Teaching Experience and locality.

### **Hypothesis of the Study:-**

1. There is no significant difference in Job Satisfaction among teacher educators with respect to their gender.
2. There is no significant difference in Job Satisfaction among teacher educators with respect to their age.
3. There is no significant difference in Job Satisfaction among teacher educators with respect to their teaching experience
4. There is no significant difference in Job Satisfaction among teacher educators with respect to locality.

### **Methodology of the study:-**

The study will be designed of a descriptive survey in order to know The Job Satisfaction of teacher educators working in Colleges of Teacher Education.

### **Variables of the Study:-**

- Job Satisfaction
- Gender (Male and Female)
- Age (below 30 years, above 30 years)
- Teaching Experience (below 10 years, above 11 years)
- locality (urban and rural)

### **Population and Sample:-**

The population for the present study comprised of the teachers working in self-financed Teacher Education Colleges located at Shivamogga district of Karnataka. 79 Teacher educators working in Colleges of Teacher Education included in sample, out of which, there were 43 male and 36 female teachers selected randomly from 11 Self-Financed Teacher Education Colleges located at Shivamogga district of Karnataka state

### **Tools used for the Study:-**

- **Job satisfaction scale for Teachers by Miss. Meera Dixit.**

Job Satisfaction Scale Job Satisfaction Scale was constructed by Meer Dixit. It consisted 52 items all these items cover the eight aspects of job satisfaction of primary as well as secondary school teachers. It is a 5-Point rating scale measuring the job satisfaction of primary teachers. This test had a fairly high content validity and its reliability is found to be 0.92.

**Data analysis Techniques used for the study:-**

Statistical Techniques such as Quartile Deviation Percentage Analysis, mean, standard deviation was used. To find out the difference between of variables t- test was carried out.

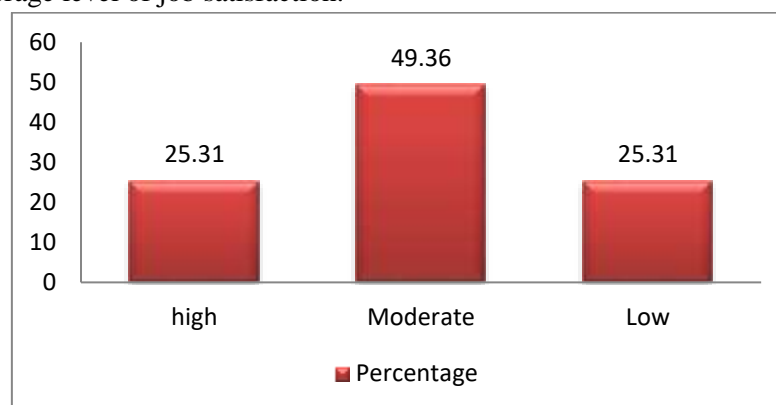
**Analysis of the data:-****Objective-1: To assess the levels of Job Satisfaction among Teacher Educators.**

To achieve this Objective, Quartile Deviation and Percentage Analysis was applied and the results are presented in the following

**Table-1: Table shows different levels job satisfaction among Teacher Educators**

Serial no.	levels	Class intervals(CI)	Frequency	percentage
1	high	242 and above	20	25.31
2	Moderate	91-241	39	49.36
3	Low	90 and below	20	25.31
			N=79	100

Above Table 2 reveals that, 25.31% of the teacher educators having high level job satisfaction, 49.36% of the teacher educators having moderate level of job satisfaction and remaining 25.31% of the teacher educators having low level of job satisfaction . it clearly showed that the majority of the teacher educators average level of job satisfaction.

**Graph-1 shows different levels job satisfaction among Teacher Educators.****Objective-2: To Study the Difference in Job Satisfaction among Teacher Educators with respect to their Gender, Age, Teaching experience, Locality.**

To full fill the above objective researcher formulated the following null hypothesis-1to4

**Hypothesis-1: There is no significant difference in Job Satisfaction among Teacher Educators with respect to their Gender.**

**Hypothesis-2: There is no significant difference in Job Satisfaction among Teacher Educators with respect to their Age.**

**Hypothesis-3: There is no significant difference in Job Satisfaction among Teacher Educators with respect to their Teaching experience.**

**Hypothesis-4: There is no significant difference in Job Satisfaction among Teacher Educators with respect to their Locality.**

**Table-2 : Table shows significant difference in Job satisfaction among teacher educators with respect to their Gender, age, teaching experience, locality**  
**JOB SATISFACTION**

Sl.No	DEMOGRAPHICAL VARIABLE	DISCRIPTION	N	MEAN	S.D	T-VALUE	SIGNIFICANCE
01	Gender	Male	36	191.0	72.67	0.491	Not sig. At 0.05 level
		Female	43	182.7	74.67		
02	Age	Below30 Year	16	181.0	80.85	0.305	Not sig. At 0.05 level
		Above30 year	63	187.8	72.02		
03	Teaching Experience	Below10 year	39	180.6	79.65	0.717	Not sig. At 0.05 level
		Above10 year	40	192.6	66.60		
04	Locality	Urban	48	178.7	77.52	1.227	Not sig. At 0.05 level
		Rural	31	199.0	65.46		

From the above table Sl. No. 1 shows that, obtained t-value 0.491 is less than the table t-value 1.96 at 0.05 level of significance with degrees of freedom 77. Hence, the null hypothesis was accepted. It is inferred that, “there is no Mean significant difference in Job satisfaction Scores of Teacher Educators with reference to their Gender”.

From the above table Sl. No. 2 shows that, obtained t-value 0.305 is less than the table t-value 1.96 at 0.05 level of significance with degrees of freedom 77. Hence, the null hypothesis was accepted. It is inferred that, “there is no Mean significant difference in Job satisfaction Scores of Teacher Educators with reference to their Age”.

From the above table Sl. No. 3 shows that, obtained t-value 0.717 is less than the table t-value 1.96 at 0.05 level of significance with degrees of freedom 77. Hence, the null hypothesis was accepted. It is inferred that, “there is no Mean significant difference in Job satisfaction Scores of Teacher Educators with reference to their Teaching Experience”.

From the above table Sl. No. 4 shows that, obtained t-value 1.227 is less than the table t-value 1.96 at 0.05 level of significance with degrees of freedom 77. Hence, the null hypothesis was accepted. It is inferred that, “there is no Mean significant difference in Job satisfaction Scores of Teacher Educators with reference to their Locality”.

#### **Findings of the study;-**

1. It clearly showed that the majority of the teacher educators possess average level of job satisfaction.
2. It is inferred that there is no significant difference in Job satisfaction of Teacher Educators with respect to their Gender.
3. It is inferred that there is no significant difference in Job satisfaction of Teacher Educators with respect to their Age.
4. It is inferred that there is no significant difference in Job satisfaction Scores of Teacher Educators with reference to their Teaching Experience.
5. It is inferred that there is no significant difference in Job satisfaction Scores of Teacher Educators with reference to their Locality.

#### **Educational implications;-**

Organizations and institutions striving to increase member or employee job satisfaction. Strategies for fostering a more positive work environment can be informed by identifying the elements that are connected to increased job satisfaction. Additional investigation or research could examine the elements influencing job satisfaction within each area to gain a better understanding. This can entail looking at factors like working conditions, job responsibilities, pay, or other elements that could explain why certain people express high or low job satisfaction. Diversity and Inclusion in while

gender may not be a significant factor in job satisfaction, institutions should still prioritize diversity and inclusion efforts. Promoting an inclusive and supportive workplace benefits everyone, and it can contribute to overall employee well-being and satisfaction.

Interventions aimed at improving teachers and educators' satisfaction with their jobs shouldn't be focused on age-related differences. Workplace, workload, and support factors may have a greater impact on job satisfaction and should be further investigated by educational institutions and policymakers. It implies that initiatives to increase job happiness among teacher educators might need to pay more attention to variables beyond location. To improve job satisfaction, organizations can look into additional factors, including workload, pay, chances for professional growth, or work-life balance. Institutions seeking to develop encouraging and fulfilling work environments for their teachers and educators may benefit from adopting a holistic approach to analyzing job satisfaction.

#### **Delimitation:-**

1. This study confined to job satisfaction variable of teacher educators
2. This study confined to demographical variables like Gender, Age, Teaching experience, and Locality.
3. This study confined only to Shivamoga district.
4. This study is limited to teacher educators of Kuvempu University

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## CONSTRUCTION AND VALIDATION OF TEACHERS SELF-DETERMINATION SCALE (TSDS)

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### Abstract

Teachers have a sense of self-determination when they believe they can decide how to conduct their professional lives, pursue lifelong learning, and actively participate in the educational community in this paper explores the procedure of developing and validating the scale to measure self-determination among teachers of upgraded school. Initially 55 items were formulated. The validity of the scale was established by the experts opined and suggestions stick on to 40 items and reliability of the scale was established with the help of Cronbach's alpha statistics as a result of item analysis 07 items were deleted and 33 items were selected to form final teachers self-determination scale (TSDS).

**Keywords:** -Teachers self -Determination, construction of teachers Self-Determination scale, Construction of Teachers Self Determination Scale

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**Introduction:** The construction of a “Teachers self-determination scale” is a critical process in educational and psychological research, as it involves creating a valid and reliable instrument to measure the concept of self-determination. Self-determination, in this context, refers to an individual's capacity to act autonomously, make choices, and regulate their behaviour based on their own values, interests, and goals. This scale is designed to assess the extent to which individuals possess and exhibit self-determination in various contexts. A well-constructed self-determination scale serves as a valuable tool for researchers, educators, and practitioners in assessing and understanding the concept of self-determination in various contexts, including education, psychology, and personal development. It allows for more informed decision-making, intervention planning, and research in areas related to autonomy, motivation, and self-regulation.

### Procedure followed for developing Teachers Self Determination Scale

**Step-1; Planning the Test.** The Investigator made a thorough consultation of a wide variety of sources both men and material to gather information related to self-determination scale. Based on this the investigator decided to construct the items for the scale in the following dimensions of self-determination scale namely; Self-Awareness, Self-Advocacy, Choice Making, Self-Management, Positive Attributes and Self-Observation, Goal Settings the construction of teachers self-determination scale is at the primary and high school level teachers. Further the investigator decided to construct statements of response are given with five modes such as follows:

**Table-1: Table shows responses procedure modes of the Teachers Self-Determination scale.**

Nature of Items	Always	Often	Sometimes	Rarely	Never
Positive	5	4	3	2	1
Negative	1	2	3	4	5

### Step 2: Preparation of the Test Items and Pooling:

Investigator altogether constructed 55 items on seven components of the teacher's self-determination scale as shown in the following:

**Table -2: Various dimensions wise Teachers Self-Determination scale preliminary items Constructed.**

Sl. No	Components	Part	No. of items Constructed
01	Self-Awareness	C1	10
02	Self-Advocacy	C2	04
03	Choice Making	C3	10
04	Self-Management	C4	09
05	Positive Attributes	C5	11
06	Self-Observation,	C6	11
07	Goal Settings	C7	04
<b>Total No of Item</b>			<b>55</b>

**Step 3: Preliminary Form of the Test:**

All these items were Pooled in an order and printed in the form of a 5-point response. This inventory was sent to fifteen (15) Research / Educational / Psychological Experts and requesting to opine about each item like its grammatical correctness, Structure of the statements, distracters, appropriateness of students. All the Experts working enough to scrutinize the inventory and returned back. Based on the approval of the Experts and Panels 40 statements were selected and remaining 15 were rejected. Thus 40 items considered in pilot study.

**Table -3: The Components of Teachers Self-Determination Items Retained.**

Sl. No	Components	Part	No. of Items Constructed
01	Self-Awareness	C1	07
02	Self-Advocacy	C2	03
03	Choice Making	C3	08
04	Self-Management	C4	04
05	Positive Attributes	C5	09
06	Self-Observation,	C6	05
07	Goal Settings	C7	04
<b>Total No of Item</b>			<b>40</b>

**Step – 4: Pilot Study****Try out of the scale:**

The purpose of the try-out of the scale was to

1. Determine the value of statements could be selected for the finale scale in order that it may constitute an effective measuring the scale
2. Determine the validity of the items for selection in the finale scale.

Upgraded school 65 teachers were selected from upgraded schools of Shivamogga taluk by adopting stratified random sampling procedure for try-out of the scale the sample included both male and female teachers who were selected for government upgraded schools of Shivamogga taluk.

**Item Analysis:**

Cronbach Alpha is a measure of squared correlation between observed scores and true scores. A good analysis of test items should take the whole test into consideration.

**Table -4: Item Analysis using Cronbach's Alpha method of Teachers' Self-Determination scale**

Sl. No	ITEAMS	Item correlation	Remark
01	I know the teaching skills that I need to enhance and develop professionally.	0.509	Accepted
02	I have a positive attitude toward myself as an individual.	0.187	Not Accepted
03	I can effectively carry out instructional practices with my students.	0.144	Not Accepted

04	I list out the strengths and activities can do well by students	0.340	Accepted
05	I'll take care of all my elements related to teaching profession.	0.464	Accepted
06	I have the ability of listing my challenges.	0.498	Accepted
07	I am capable of stating and describing apparent work circumstances.	0.619	Accepted
08	I'm capable of judging when to try something new independently.	0.520	Accepted
09	I am able to determine whether a suitable piece of learning equipment is not functioning correctly.	0.330	Accepted
10	I am ready to give my assistance to those who are impaired.	0.309	Accepted
11	I explain how my behavioural choices impact other people's activities.	0.386	Accepted
12	I figure out the ways to achieve my class room objectives.	0.378	Accepted
13	I set out my own objectives.	0.405	Accepted
14	I use many plans of action efficiently.	0.365	Accepted
15	I start and finish my part of work within the time assigned by the authority.	0.415	Accepted
16	I am better equipped to implement teaching practices Through the effectively managing of my emotions	0.473	Accepted
17	I create a positive, unbiased learning environment to my students.	0.417	Accepted
18	My behaviors help the students to learn how to regulate their emotions during teaching practices.	0.425	Accepted
19	I am effective in reviewing multiple forms of documents in my entire classroom while implementing teaching practices.	0.475	Accepted
20	I regularly involve my students and colleagues to resolve the issues related to teaching practices.	0.304	Accepted
21	I focused and cohesive when implementing pedagogical practices.	0.605	Accepted
22	I can't describe what decisions can be taken.	-0.093	Not accepted
23	When I involved teaching practices, I balance the emotional and school needs of students.	0.561	Accepted
24	I always work in advance for educational specialized knowledge and its related fields.	0.587	Accepted
25	I take the lead in seeking professional learning opportunities for myself and my colleagues.	0.646	Accepted
26	I conduct action research regularly in my class room and use its results in the day to day teaching- learning process for developing school and community.	0.604	Accepted
27	I organize professional development programme and all so participate effectively (conference, workshops and seminars, writing articles etc)	0.404	Accepted
28	I gave a significant contribution to School management committee	0.604	Accepted
29	I motivate my colleagues and other community members to participate in school development activities.	0.704	Accepted
30	I am always responsible for organizing school activities effectively.	0.469	Accepted
31	I perform school tasks in a very responsible way	0.567	Accepted
32	I am not ready to perform tasks beyond class hours.	0.153	Not accepted
33	I can't decide how one felt after completing the learning product.	-0.093	Not accepted
34	I give a personal attention to complete the work	0.367	Accepted
35	I demonstrate academic confidence in my profession.	0.159	Not

			accepted
36	I am proud of my work and achievements.	0.109	Not accepted
37	I describe the stages of the planning, decision-making and target-setting process.	0.417	Not accepted
38	I set reflective ideas for innovative activities in emerging of new approaches.	0.472	Accepted
39	. I set probabilities for energizes in work environment.	0.518	Accepted
40	I competently involve my surrounding changes for qualitative measures in profession.	0.355	Accepted

#### Selection of Items:

Cronbach's Alpha was used to assess the degree of internal consistency among all sets of items, and then the task value was calculated. Items with 'r' values less than 0.30 were rejected. According to De Vaus (2004) anything less than 0.30 is a weak correlation for item analysis. In order to form the final scale, out of 40 statements, as many as 33 statements having 'r' value greater than 0.30 were chosen. Higher the score in this item accepted for statements. As a result of the item analysis carried out for item selection, a total number of 40 items were selected for the final form of the test scale. There orderly sequential components carry c1-5 items, c2-3items, c3-07items, c4-4items, c5-5items, c6-5items, c7-4items.

**Table-5: Distribution of Items over seven components of Teacher's Self-Determination.**

Sl. No	Components	Part	No. of items Constructed
01	Self-Awareness	C1	05
02	Self-Advocacy	C2	03
03	Choice Making	C3	07
04	Self-Management	C4	04
05	Positive Attributes	C5	05
06	Self-Observation,	C6	05
07	Goal Settings	C7	04
<b>Total No of Item</b>			<b>33</b>

Table 4 shows that, finally 33 items were retained, in that 05 items of self-awareness, self-advocacy 03 items, choice making 07 items, Self-management 04 items, positive attributes 05 items, self-observation 05 items, goal settings 04 items had taken.

#### Establishing Reliability

##### Cronbach's Alpha reliability:

Cronbach's alpha is the most common measure of internal consistency (reliability). It is most commonly used when multiple Likert questions in a survey/questionnaire that form a scale and to determine if the scale is reliable. The Reliability test of 'teachers self-determination scale' was found to be 0.788 for the entire 40 items by the use of Cronbach's Alpha reliability formula.

**Establishing validity:** The statements on the scale are all related to the area of study and each on independently focuses on what it claims to measure, this confirms the face validity of the scale. Generally, content validity is established via expert analysis relevant to the target construct. Identified component of self-determination and defining them operationally, led the researcher to formulate 55 items for the draft. This draft has been given to the 15 experts in the field of education and psychology to obtain authenticity of each statement in its capacity to measures self-determination of upgraded school teachers. Based on the approval of the Experts and Panels 40 statements were selected and remaining 15 were rejected. The selected statements were also improved and validated by the experts. Thus, the content validity of the tool was established. This implies that it is comprehensive teacher's self-determination scale is comprehensive and relevant.

**Items validity:** The item to item correlation for that the Cronbach's alpha technique was employed. The item validity was computed to 40 items in each part of the test selected based on Cronbach's alpha Corrected Item-Total Correlation.

**Cronbach's Alpha Reliability:** Cronbach's alpha is the most common measure of internal consistency (reliability). It is most commonly used when multiple Likert questions in a survey/questionnaire that form a scale and to determine if the scale is reliable. The Reliability test of 'teachers self-determination scale' was found to be 0.78 for the entire 40 items by the use of Cronbach's Alpha reliability formula.

**Scoring Procedure:** It has already been pointed out previously that the five responses represented namely always, often, sometimes, rarely, never was given the weightage of 5,4,3,2,1 for positive items in the case of negative items for scoring procedure was reversed like 1,2,3,4,5 the total score of each respondent was the algebraic sum of the scores on the 40 items. Minimum scores 1 maximum scores are 200 The scoring procedure for the positively and negatively keyed Statements is shown in the table

**Table-6: Table shows the scoring procedure for the positively and negatively keyed Statements**

Nature of Items	Always	Often	Sometimes	Rarely	Never
Positive	5	4	3	2	1
negative	1	2	3	4	5

The scale of the total 40 statements, 37 are in positively keyed items and 03 statements are negatively keyed items.

**Discursion;-** The scale consists of 40 statements that are grouped into seven components or subscales, such as self-awareness, self-advocacy, choice making, self-management, positive attributes, self-observation, and goal settings. These components reflect different aspects of teacher self-determination. Cronbach's alpha is a measure of internal consistency, which assesses how closely related a set of items are as a group. An alpha value of 0.788 indicates that the items in your scale have relatively good internal consistency. This indicates that the statements on the scale appear to measure what they claim to measure. It seems that the items are related to the area of study, which confirms face validity. Content validity is established by expert analysis. 15 experts review the items, leading to the selection of 40 statements and rejecting 15. This process helps ensure that your scale comprehensively measures teacher self-determination. Mentioned that item validity was computed using the Cronbach's alpha technique. This suggests that you assessed the relationship between individual items and the overall scale to ensure that each item contributes meaningfully to measuring self-determination. The scoring procedure you've described seems reasonable, with positive items being scored inversely from negative items. However, it's essential to ensure that the negatively worded items are clear and unambiguous to respondents to avoid response bias. Initially developed 55 items but retained 33 after item selection. It's important to strike a balance between having enough items to capture the construct adequately and not burdening respondents with a lengthy scale. Consider conducting pilot testing to assess the scale's usability and respondents' ability to complete it.

**Applicability and usability of the scale in education field;-**

The Teacher's Self-Determination Scale described can be a valuable tool for researchers and educators interested in studying and understanding the self-determination of teachers. Here are some potential uses and applications of this Scale:

**Research on Teacher Self-Determination:** Researchers can use this scale to investigate the level of self-determination among teachers. They can examine how various factors, such as teaching methods, school environments, or professional development, impact teachers' sense of self-determination. This could lead to insights into improving teacher satisfaction and well-being.

**Teacher Training and Professional Development:** Educational institutions and policymakers can use the scale to assess the effectiveness of teacher training programs and professional development initiatives. By measuring changes in teachers' self-determination over time, they can identify which interventions are most beneficial.

**School Climate Assessment:** School administrators can administer the scale to teachers to gauge the overall climate within their schools. High levels of self-determination among teachers may indicate a positive and empowering school environment, while low levels may signal issues that need addressing.



**Teacher Evaluation and Feedback:** Principals and educational leaders can use the scale as part of the teacher evaluation process. It can provide valuable insights into teachers' perceptions of autonomy and self-direction in their work. Feedback based on these assessments can inform strategies for improving teaching practices.

**Program Evaluation:** Organizations that offer support or resources to teachers can use the scale to evaluate the impact of their programs on teacher self-determination. This can help refine program offerings and demonstrate their effectiveness to stakeholders.

**Comparative Studies:** Researchers can use the scale to compare levels of teacher self-determination across different regions, school types, or demographic groups. This can lead to a better understanding of how self-determination varies in different educational contexts.

**Longitudinal Studies:** The scale can be employed in longitudinal studies to track changes in teacher self-determination over time. This can be particularly useful for assessing the long-term impact of educational policies and reforms.

**Teacher Well-being and Burnout Prevention:** High levels of self-determination have been linked to increased job satisfaction and reduced burnout. School administrators can use the scale to monitor teacher well-being and implement interventions to support those struggling with low self-determination.

**Curriculum and Instructional Design:** Curriculum developers and instructional designers can use insights from the scale to create materials and teaching strategies that align with teachers' preferences for autonomy and self-directed learning.

**Educational Research and Publications:** Researchers can use the scale in their studies on teacher motivation, job satisfaction, and empowerment. The results can contribute to the broader field of educational research and may be published in academic journals.

**Conclusion:** Validation process of scale was given complete information regarding source of information and construction of statement, self-determination of teachers needs to confine the statements in daily needs of the teachers and enhancing teaching skills as the result of panel observation provide valid suggestion and try out of items confine the determinants with valued co-efficient.

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## A STUDY ON BODY MASS INDEX AMONG YOGA PRACTITIONERS AND NON-YOGA PRACTITIONERS IN SHIVAMOGGA DISTRICT

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### Abstract

*Yoga, a union of one's personal consciousness with the cosmic, is a spiritual way of life, practiced by many over millennia. Researchers and practitioners have observed other benefits of yoga on the physical and mental health (Gangadhar & Varambally 2005). In order to achieve the purpose of the study Female one hundred (N=100) yoga practitioners and fifty (N=100) non-yoga practitioners were selected. Their age range between 35 to 45 years. The Body Mass Index and body fat percent of retired male sportspersons is calculated by the Omron HBF 701 Karada Scan Machine. Descriptive statistics including Mean and Standard Deviation were employed for the present investigation. Percent analysis and 'T' test was employed to compare the Body Mass Index among yoga practitioners and non-yoga practitioners. There is significant difference was found in 'Body Mass Index' between yoga practitioners and non-yoga practitioners.*

**Keywords:** Yoga, Body Mass Index, yoga practitioners, non-yoga practitioners

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### Introduction

Yoga, a union of one's personal consciousness with the cosmic, is a spiritual way of life, practiced by many over millennia. Researchers and practitioners have observed other benefits of yoga on the physical and mental health (Gangadhar & Varambally 2005). Yoga is also beneficial for musculoskeletal functioning, cardiovascular health, diabetes, respiratory disorders, hypertension, hypotension, depression, and many other disorders. In essence, yoga is a process of creating a body and mind that are stepping stone not hurdles, to an exuberant and fulfilling life. A typical yoga program, usually consisting of Asana, Pranayama, Kriya, deep relaxation, and meditation, has a combined effect of relaxation of body, slowing of breath, and calming of mind. After attention to posture, deep breathing, and chanting, yoga practice often begins with a slow movement sequence to increase blood flow and warm muscles.

Yoga has been shown to be useful for addressing a wide range of health conditions (Khalsa, 2004; Lipton, 2004). Yoga is a mind-body practice integrating ethical principles, daily behaviors, physical postures, breathing techniques, self-awareness, deep relaxation techniques, and meditation into a system for personal growth, well-being, and self-realization (Iyengar 2008). Several studies of yoga among the middle-aged and the elderly have shown positive results (Chen et al. 2009).

The World Health Organization estimates that more than 1 billion people are overweight, with 300 million meeting the criteria for obesity (WHO). A growing trend of obesity epidemic has been observed in developing countries like India. National Family Health Survey (NFHS-3 (2005-2006)) of India reported that overweight and obesity are emerging problems in India, stating "13% of women and 9% of men are overweight or obese" (Arnold et al. 2008).

### Methodology

In order to achieve the purpose of the study Female one hundred (N=100) yoga practitioners and fifty (N=100) non-yoga practitioners were selected. Their age range between 35 to 45 years.

The physiological functioning of subjects assessed through Body Mass Index and Percent Body Fat. The Body Mass Index and body fat percent of retired male sportspersons is calculated by the Omron HBF 701 Karada Scan Machine.

The test was administered to the selected subjects at their residence or Yoga classes or workplace. The objectives of the test were made clear and honest responses were sought by the

researcher. Descriptive statistics including Mean and Standard Deviation were employed for the present investigation. Percent analysis and 'T' test was employed to compare the Body Mass Index among yoga practitioners and non-yoga practitioners.

### Findings of the study

Percent analyses were calculated for Body Mass Index of both women yoga practitioners and non-yoga practitioners. The results are given in table 1.

**Table 1 Summary of percent analysis on Body Mass Index of women Yoga Practitioners**

Normative Ranges	Normative Category (kg/m <sup>2</sup> )	Women	
		Frequency	%
<i>Underweight</i>	<i>Under 18.5</i>	3	3
<i>Normal</i>	<i>18.5 to 24.9</i>	63	<b>63</b>
<i>Overweight</i>	<i>25 to 29.9</i>	24	24
<i>Obesity</i>	<i>Above 30</i>	10	10
<b>Total</b>		100	100

From table 1 it is clear that in women section, 3% were Underweight; 63% were Normal; 24% were Overweight; and 10% were Obesity.

Mean and standard deviation were calculated for Body Mass Index of both women yoga practitioners and non-yoga practitioners. The results are given in table 2.

**Table 2. Results on Mean and Standard Deviation of Body Mass Index among Women yoga practitioners and non-yoga practitioners**

		Mean	Std. Deviation
Body Mass Index	Yoga Women (N=100)	24.37	3.86
	Non-Yoga Women (N=100)	24.94	2.61

From table 2 it is clear that the scores on Body Mass Index of yoga practitioners is  $24.37 \pm 3.86$  and non-yoga practitioners is  $24.94 \pm 2.61$ .

The raw data of yoga practitioners and non-yoga practitioners on selected Body Mass Index was subjected to descriptive statistics and 't' test. The results of men section is provided in table 3.

**Table 3 Summary of comparison Body Mass Index among Women yoga practitioners and non-yoga practitioners**

	Groups	Mean $\pm$ SD	't' score	Sig.
Body Mass Index	Yoga practitioners (N=100)	24.37 $\pm$ 3.86	-1.226	<b>.003</b>
	Non-yoga practitioners (N=100)	24.94 $\pm$ 2.61		

From table 3 it is clear that there is significant difference was found in '*Body Mass Index*' between yoga practitioners women ( $24.37 \pm 3.86$ ) and non-yoga women practitioners ( $24.94 \pm 2.61$ ).

### Discussion

Satyanarayana et al. (2013) evaluated the effect of yoga on heart rate, blood pressure, body mass index. Results revealed that there is a significant reduction in blood pressure, heart rate, and Body Mass Index in the total cohort with yoga. In this study There is significant difference in '*Body Mass Index*' between yoga practitioners ( $24.37 \pm 3.86$ ) and non-yoga practitioners ( $24.94 \pm 2.61$ ). There is significant difference was found in '*Body Mass Index*' between yoga practitioners and non-yoga practitioners.

### Conclusion

Chauhan (2016) explored the effect of yogic asana on body mass index and is situated yoga practice causes decreased body mass index ( $26.4 \pm 2.5$ – $25.22 \pm 2.4$ ), systolic blood pressure ( $136.9 \pm$

22.18 mmHg to  $133 \pm 21.38$  mmHg), and diastolic blood pressure ( $84.7 \pm 6.5$  mmHg to  $82.34 \pm 7.6$  mmHg). Gour *et al.* (2020) studied randomized control trial interventions to explore the experience of the elderly practicing yoga or light exercise in relation to sedentary behavior in the Ujjain district of Madhya Pradesh, India. Interventions should be encouraged in the community to use physical exercise as a method to better control the physical and social effects of aging. Yoga practitioners have Normal BMI as compared to non-yoga practitioners in present investigation.

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## ORAL PROBIOTICS IN ELDERLY PEOPLE

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### Abstract

*Oral health issues are the common problems viz., Periodontitis, gingivitis, oral cancer, bad breath, tooth loss, tooth decay etc are the common dental problems. The increasing knowledge on oral diseases which are preventable by alteration of the oral biofilm has made way for the use of probiotic bacteria in dentistry. The beneficial effects of probiotics on oral cavity related with the maintenance of oral health especially in elderly people and teaching professionals as these are the conventional option that can access easily. Probiotics work naturally against these colonising pathogens in the mouth through their mechanism of action. Probiotic strains like Lactobacilli, Bifidiobacterium, Lactococci, Streptococci, Enterococci etc are usually present in the oral cavity. Organism should possess several qualities to be a good probiotic strain. Probiotics deals with several oral disorders like dental caries, halitosis, periodontal diseases etc. There are many oral probiotic products that are currently available in the market, and also there is a large demand for the products similar to them and also newer ones. The oral probiotic study helps to understand the effect of oral probiotics on oral health, risk factors, safety, usage, occurrence as well as its future applications in particularly oral health of teaching professionals.*

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### 1. INTRODUCTION

Probiotics are living organisms, or food products containing live microbes, that are beneficial to the health of the host(1). The efficiency and safety of probiotics should be studied and proved efficiently. Probiotic effects are specific to the strains; hence each strain should be clinically tested separately for its effect on human health, and the effects exerted by one strain cannot be used to describe the other(2). Oral probiotics are the organisms that are usually obtained in or isolated from oral cavity(3). These organisms have various health benefits especially on oral health. Since probiotics are live strain of bacteria which are non-pathogenic and has minimum to no side effects , one can easily rely on the probiotic therapy on curing certain oral and health disorders(4) .

The mouth cavity is a large ecosystem with dynamic environmental changes and interactions between microorganisms that prevent the colonisation of pathogenic germs(5). The varied oral microbiota can cause significant oral disorders like periodontitis and dental caries to manifest because of its imbalance(6). Antimicrobial medication therapy and mechanical removal of the bacterial plaque are the mainstays of conventional treatment for these disorders, albeit drug resistance may restrict their efficacy(7). With the need of alternatives and adjuvants to regular therapies, probiotics may play an important. Probiotics are live microbes, which when consumed in proper quantity, benefits human health in a tremendous way (8). Due to the paucity of clinical data demonstrating the efficacy of probiotic-based therapy for oral disorders, they are currently not frequently employed for intestinal ailments (9). Probiotics may outgrow harmful bacteria and boost the number of healthy bacteria in the mouth, which helps prevent and treat oral disorders (10). Usually humans consume milk and other dairy products which contain numerous probiotic bacteria , hence there will be regular colonisation of probiotic species in the oral cavity .So far effect of oral probiotics on dental caries, halitosis , gingivitis, cavity , oral cancer and other periodontal disorders are observed and implemented clinically(11).

Probiotic therapy refers to the administration of live organisms which is intended to enhance or restore the normal microflora, aiming to cure several disorders specially related to digestion, gastritis, oral illness etc(12). Since probiotic organisms are also a part of normal human microbiota, there won't be any side effects on the health. Elderly population who undergo natural process of senescence and regular change in the microbial compositions of the body cannot usually adapt themselves for the constant change in their body, their metabolism differs from that of a normal young adult, for this situation probiotic therapy comes to the rescue(13). Commonly found probiotic strains in the oral cavity of an elderly person would be, strains like *Lactobacillus*, *Bifidobacterium* and *Streptococcus*, are likely to be able to occupy the oral cavity while the products are in active use. *Streptococcus salivaris*, *lactic acid bacteria*, *Enterococcus*, *Lactococcus*, *Lactobacillus acidophilus*, *Bifidobacterium bifidis*, etc(14). These are the major probiotic strain that colonise the oral cavity. Salivary and gingival crevicular fluid samples are usually used to know the microbial composition in oral cavity.

A microorganism to be an oral probiotic, it should be able to adhere to colonize the surface of oral cavity. Microorganisms generally considered as probiotics do not have oral cavity as their natural habitat, studies shows that Lactobacilli are the residential oral flora which might plays vital role in microbial balance in the oral cavity(15). The prevalence of Lactobacilli naturally in oral cavity is not proven since there is frequent consumption of milk products which in turn leads to short term establishment of colonies.

A probiotic strain should have positive effects on people's health. It need to be risk-free and non-toxic to people (16). They must exist as living cells. They must be able to live and function in the bodily environment. Under storage and field circumstances, they ought to be able to survive. Probiotics also have the capacity to colonise and stick to intestinal epithelia as well as survive passage through the digestive system. It ought to be able to sustain good viability (17). It ought to eat the nutrients and substrates included in a typical diet. It need to be non-pathogenic and non-toxic. It must be able to influence the host in a positive way. It must be non-carcinogenic, secure for the host, and capable of producing lactate acid. The host's immune system should be boosted by it (18).

These probiotic strains act naturally as a therapy in preventing the normal oral diseases. Probiotic food products like yakult, yogurt, probiotic gums, probiotic toothpastes, probiotic suspension etc are administered in order to enhance the probiotic population in the oral cavity(19). The mode of action of probiotics include production of bacteriocin and short chain fatty acid, decreasing the gut pH, competition for the nutrient for the stimulation of mucosal barrier function and immunomodulation(20). Probiotics usually function by competing with the pathogenic strains of bacteria in turn preventing the resulting oral disorders (21). This study aims at isolating the probiotic strains from the oral cavity to study the percentage of prevalence of oral probiotics in elderly people.

## **MATERIALS AND METHODS**

### **1 Screening and Isolation:**

Samples were collected from oral cavity by swabbing through the surface of mouth. Samples were collected in closed sterile swab sticks, swiped through cavity of elderly people. Older adults over the age of 50 make up the subjects for the collection of samples. These swab sticks were filled with LB broth to maintain the cells alive until plating was complete, after which the swab sticks were chilled. On De Man Rogosa & Sharpe (MRS) agar, plating is carried out. The samples were serially diluted and the plating is done for the dilution  $10^{-5}$  and  $10^{-6}$ .

### **2 Maintenance and preparation of bacterial isolates:**

Isolates (As-1, As-2, As-3, As-4, As-5, As-6, As-7, As-8, As-9, As-10, As-11, As-12, As-13, As-14, As-15, As-16, As-17, As-18, As-19, As-20, As-21, As-22, As-23, As-24, As-25.) from isolated culture plates were sub cultured in 2ml M17 broth and incubated at 37° C for 24hrs. Purity were

checked by streaking on MRS agar (HI media) & incubated for 24hrs at 37°C. Further single colonies of cultures were sub cultured in M17 broth for further tests.

### 3Phenotypic Identification:

Colony morphology, cell morphology, arrangements , gram staining was done for phenotypic characterisation. Colony shape, size, colour & consistency were observed.

#### i)Gram staining:

Gram staining was used to categorise the Gram reaction, and microscopy was used to examine the morphology. Whether the isolates are gramme positive or negative, and whether they are rods, cocci, or coccobacilli.

#### ii) Biochemical characterization

Biochemical tests were done to identify the unknown bacteria. Biochemical tests performed in this study were catalase test, citrate utilization test, methyl red test, Voges-Proskauer test, indole test, triple sugar iron test, glucose fermentation test by using standard protocols. Milk coagulation test was done to confirm whether the bacteria are probiotic stains.

### 4. Genomic DNA Isolation:

The DNA was isolated using standard protocols. Agarose is used to separate DNA fragments, and its concentration is 0.8 percent. To assess the DNA's purity, agarose gel electrophoresis was conducted.

## RESULTS

### Colony Morphology

The aim was to characterise all the 25 isolates, which were isolated from oral samples. The samples were collected from different healthy individuals aged above 50 ,then revived on fresh M17 broth tubes and incubated at 37°C for 24 hours and streaked on the MRS agar to check the purity of colonies. They were designated as (As-1, As-2, As-3, As-4, As-5, As-6, As-7, As-8, As-9, As-10, As-11, As-12, As-13, As-14, As-15, As-16, As-17, As-18, As-19, As-20, As-21, As-22, As-23, As-24, As-25).

For plating MRS agar is used , the samples were serially diluted and then spread on the agar. Here  $10^{-4}$  &  $10^{-5}$  dilutions were taken and then spread plate method is followed. Then these colonies were preserved by streaking quadrants on MRS agar.

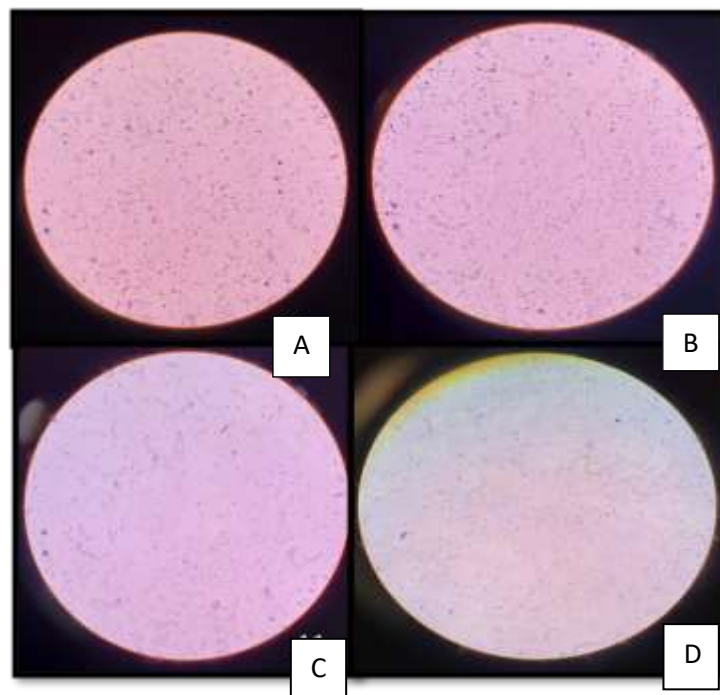


**Fig 1: serially diluted samples were Spread plated (A) and selected cultures were Quadrant streaked (B)**

### Microscopic characterization:

Microscopic characters of the isolates were found out to be gram positive cocci, gram positive rods, gram negative cocci, gram negative rods.





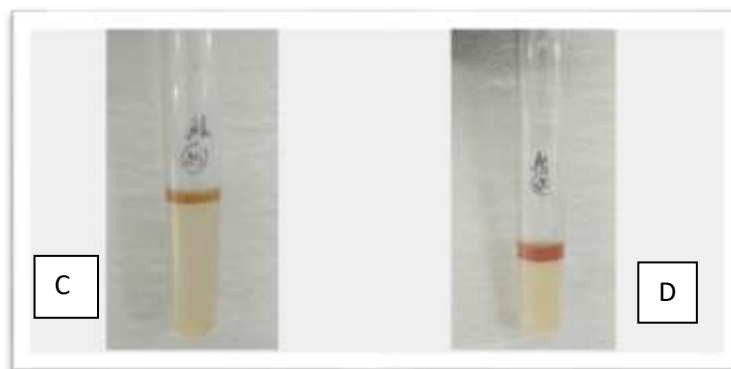
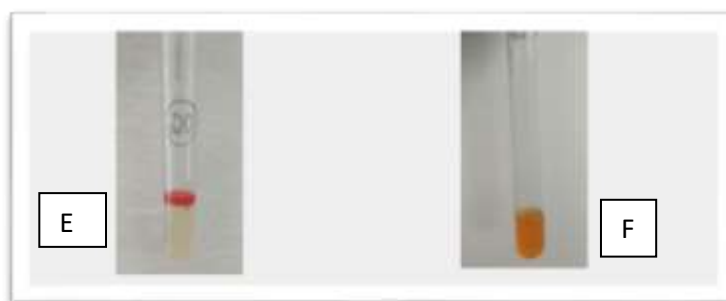
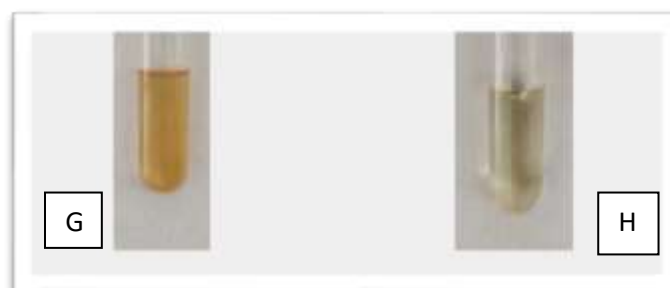
**Fig 2: Gram's stained cultures A: +ve Rod, B:-ve Rod, C:+ve cocci, D: -ve cocci under 100x magnification**

### **Biochemical characterization**

#### **1. Catalase test:**



**Fig 3 :A) Catalase +ve Result of As-18 B) Catalase -ve Result of As -1**

**2. Indole test:****Fig 4: C)Indole -ve Result of As-1 D)Indole -ve Result of As-9****3.MR test:****Fig 5: E) MR +ve Result of As-1 F) MR -ve Result of As-7****4.VP test:****Fig 6: G) VP +ve Result of As-1 H) VP -ve Result of As-2****5.Citrate utilization test:****Fig 6: I) Citrate -ve Result of As-12 J) Citrate +ve Result of As-22****6. Glucose fermentation test**



**Fig 7: K) Glucose fermentation +ve Result of As-1 L) Glucose fermentation -ve Result of As-10**  
**Microscopic characterization:**

Out of 25 isolates, 7 are gram negative, 18 are gram positive, 14 are cocci shape and 11 are rod shape strains.

Isolates	Gram stainin g	Shap e	Catalas e	Indole	MR	VP	Citr ate	Glucose fermentation
As-1	+	cocci	-	-	+	+	+	+
As-2	-	cocci	-	-	+	-	+	+
As-3	+	cocci	-	-	+	-	+	-
As-4	+	cocci	-	-	+	-	+	-
As-5	+	cocci	-	-	+	+	+	+
As-6	+	cocci	-	-	+	-	+	-
As-7	-	cocci	-	-	-	-	+	+
As-8	+	cocci	-	-	+	-	+	+
As-9	+	cocci	-	+	+	-	-	+
As-10	+	cocci	-	+	+	+	-	+
As-11	+	rod	-	+	+	+	-	+
As-12	-	cocci	-	+	+	+	-	+
As-13	+	rod	-	-	-	-	+	-
As-14	+	rod	-	-	+	+	+	+
As-15	+	rod	-	-	+	+	+	+
As-16	-	cocci	-	-	+	-	+	+
As-17	-	cocci	-	-	+	+	+	+
As-18	-	cocci	+	-	+	+	+	+
As-19	+	rod	-	+	+	-	-	-
As-20	-	rod	-	+	+	-	-	+
As-21	+	rod	-	+	-	-	+	+
As-22	+	rod	-	-	+	+	+	+
As-23	+	rod	-	-	+	+	+	+
As-24	+	rod	-	+	+	+	+	+
As-25	+	rod	-	-	+	+	+	+

**Table 5: Biochemical characterisation of isolates**

**Biochemical characterization:**

**Catalase** - Out of 25 isolates, 1 showed positive and 24 showed negative.

**Indole** - Out of 25 isolates, 8 showed positive and 17 shows negative.

**MR** - Out of 25 isolates, 22 isolates showed positive and 3 isolates showed negative.

**VP** - Out of 25 isolates, 13 shows positive and 12 showed negative.

**Citrate** - Out of 25 isolates, 20 showed positive and 5 showed negative.

**Glucose fermentation** – Out of 25 isolates, 24 showed positive and only one showed negative.

#### **Genomic DNA Extraction:**

DNA isolation was done according to conventional procedure . The nanodrop absorbance ratio was measured after the DNA was isolated using standard protocol . The extracted DNA was quantified for the qualitative analysis and 16S- rRNA. DNA bands were visible on 0.8% agarose gel.

**Table 6: DNA purity of samples.**

Samples	Concentration ng/μl	260/230
As-1	225.266	1.90
As-2	472.426	1.71
As-3	538.960	1.77
As-4	133.159	2.03
As-5	210.246	1.77

#### **16s rRNA sequencing :**

The genomic DNA was extracted from all the 25 isolates of oral samples and subjected for the molecular analysis of PCR . DNA was analysed both qualitatively and quantitatively . The DNA after the amplification it was subjected for the agarose gel electrophoresis with 0.8% of the agarose gel , which displayed sharp single band and confirmed the selected and isolated E.coli bacteria from the samples. The reaction conditions for the 16S r RNA for Universal primer pairs using the primers for the PCR and steps are annealing temperature was set to different condition of the gradient , and Pre-heating temperature was 95° C for 5 minutes , Denaturation was 95° C for 50 seconds , and annealing for 55° C with primer annealing was 1.30 seconds , Extension temperature were 72° C for 5 mins , Final Extension 72° C for the 5 minutes with run of 35 cycles.

#### **Primer used:**

<b>27F</b>	<b>AGA GTT TGA TCC TGG CTC AG</b>
<b>1492R</b>	<b>CGG TTA CCT TGT TAC GAC TT</b>

#### **Basic Local Alignment Search Tool (BLAST):**

The sequence of amplified PCR was obtained from Barcode Biosciences (Bangalore, India). These sequences were used as a query sequence for the identification of respective resistant gene. It was performed using Basic Local Alignment Search Tool (BLAST). For every sequence the most unique sequence against BLAST protein (blastp) of protein database were considered.

- FASTA sequence of As-23: The resulting hits of BLAST results viz., E-value were < 0.0, Query Coverage was found to be 61% for *Klebsiella varicola*, the Percentage of identity were found to be 88.47 % similarity with existing NCBI database.
- FASTA sequence of As-15 : The resulting hits of BLAST results viz., E-value were < 0.0, Query Coverage was found to be 55% for *Enterococcus faecium* , the Percentage of identity were found to be 97.44% similarity with existing NCBI database.
- FASTA sequence of As-09: The resulting hits of BLAST results viz., E-value were < 0.0, Query Coverage was found to be 95% for *Klebsiella pneumoniae*, the Percentage of identity were found to be 99.57 % similarity with existing NCBI database.

## DISCUSSION

A total of 25 isolates were obtained for this investigation from the oral cavities of aged healthy individuals. These isolates were subsequently processed, and the following microorganisms were discovered and validated using biochemical assay: *Klebsiella pneumoniae*, *Klebsiella variicola*, *Enterococcus faecium*, lactic acid bacteria, and streptococcus.

Similar to this, 36 streptococcus and 19 lactobacillus strains were developed from Terai et al 2015.'s collection of 896 isolates. The purpose of the study was to identify and isolate probiotic strains from healthy adults over the age of 50's oral cavity. Plaque patient samples were probably collected by Jiang et al 2018 similar research on probiotics in the oral cavity. Gram staining was carried out to determine the morphology and staining characteristics of the organisms. To determine the sort of organism, biochemical tests were conducted. Various tests were conducted, including those for catalase, indole, methyl red, voges Proskauer, citrate utilisation, etc.

Similarly the goal of Forhadaet al 2016.'s investigation was to find a probiotic strain of organism that was capable of producing lactic acid on MRS agar. Direct microscopy was used to look at the cultural and morphological traits of bacteria.

To validate the strain of organism present in a healthy oral cavity and determine the frequency of probiotic species in the geriatric oral profile, DNA isolation was used in this study. After PCR amplification, a gel electrophoresis is conducted to capture the band pictures.

## CONCLUSION

Probiotic organisms are the live strains of bacteria found in normal flora which have decreases or no pathogenicity. These organisms have positive effect on oral health. Probiotic therapy is a new conventional method used in the maintenance of oral health of human beings particularly teaching professionals. This is due to the capability of probiotic strain to compete with other disease causing organisms by colonizing in the oral cavity. These uses of probiotics are studied so as to implement it in the treatment of many oral diseases especially in geriatric population. Some exclusive probiotic strains found in normal microflora of mouth can be isolated in developing and designing a desired product. Many probiotic products have a high demand in the current market. Already many established probiotic products like chewing gums, mouthwash, toothpaste, tablets etc are available in the market. Similar products with increased quality or new probiotic products might have a large scope in this world where there is rapid change in food habits and lifestyle. However it required further scientific study and clinical trials to know more about the strain, their effect, usage, safety, potentials and applications as probiotics in oral health, which can conveniently be prescribed to elderly people as a probiotic therapy to cure the oral disorders despite of the presence of other systemic diseases like cardiovascular disorders, diabetes etc . Since oral health plays a vital role in the wellbeing of an individual, development of oral probiotic therapy can be a drastic investment in the field of oral health.

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## A STUDY ON EMOTIONAL STABILITY OF STUDENT-TEACHERS OF B.ED PROGRAMME

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### Abstract

*Emotional Stability deals with the traits of a person that does not allow him to behave extremely or given to sway in marked modify in any sensitive situation. Thus, examining the emotional stability of student-teachers can offer valuable insights into the challenges they may face and the support systems needed to enhance their emotional well-being. Descriptive survey was used for the study. 196 samples were selected randomly from the population of 400 B.Ed students in Shivamogga city. Emotional Maturity Scale by Singh & Bhargava was used for the collection of data. The study shows that there was a significant difference in emotional stability of arts and science student teachers. The study highlights the challenges faced by the student-teachers due to the lack of emotional stability. The study concludes that it is crucial for teacher education programs and institutions to consider the unique challenges faced by arts and science student-teachers and tailor support mechanisms and training to address these differences. By recognizing and addressing the specific needs and stressors of each group, institutions can work towards ensuring the emotional well-being and overall effectiveness of their future educators.*

**Key word:** Emotional Stability

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**Introduction:** The field of education has always been linked to challenges and requirements both in the process of learning and teaching. Aspiring educators who embark on the path to become teachers must navigate not the demands of their chosen profession but also the intricate socio emotional landscape found within classrooms. Maintaining stability, a crucial aspect of teaching plays a pivotal role, in helping aspiring teachers cope with the pressures that arise in this dynamic environment (Crosnoe & Johnson 2011; Davis, 2015). This research delves into examining the stability of students enrolled in the Bachelor of Education (B.Ed) program who're aspiring teachers. Emotional stability encompasses an individual's capacity to manage and regulate their emotions as their ability to respond appropriately to various situations encountered in classrooms. The emotional well-being of these students is closely intertwined with their ability to foster relationships, with their students (Belfield et al., 2018). These relationships have been proven to impact student learning outcomes (Hamre & Pianta 2001). According to Ingersoll (2011) and Hattie (2009), research in the field of education has mostly concentrated on teaching methods, curriculum design, and classroom administration (Ingersoll, 2011; Hattie, 2009). However, one area that needs attention is the emotional stability and health of people who support learning, notably student-teachers in programmes for future teachers (Ingersoll, 2012; Reyes, Brackett, Rivers, White, & Salovey, 2012). It is critical to comprehend how student instructors' emotional stability might affect their efficacy as teachers and, as a result, the educational experiences and results of their pupils. As educational settings become increasingly diverse and complex, student-teachers must be equipped not only with pedagogical skills but also with emotional resilience (Brackett et al., 2011). The emotional stability of educators has been linked to their job satisfaction, retention rates, and overall well-being (Ingersoll, 2001; Sutton & Wheatley, 2003). Emotional Stability deals with the traits of a person that does not allow him to behave extremely or given to sway in marked modify in any sensitive situation. Thus, examining the emotional stability of student-teachers can offer valuable insights into the challenges they may face and the support systems needed to enhance their emotional well-being. In order to shed light on the variables that affect student teachers' emotional well-being and the possible effects on their future careers as educators, this study aims to investigate the emotional stability of student teachers within the context of the B.Ed

programme. The study contributes to the creation of useful ways to aid student-teachers as they develop into emotionally healthy and capable educators by better understanding these dynamics.

**Literature review** The emotional stability of student-teachers and emotional intelligence have been linked in numerous studies. Effective teaching is seen to need emotional intelligence, which involves the capacity to comprehend and control one's own emotions as well as those of others (Brackett, et al., 2016). The mental stability of student instructors may be impacted by a number of frequent stressors in B.Ed programmes, according to several research. Workload, difficulties with classroom management, and the stress of studying for tests are some of these stressors (Kyriacou, 2015). The coping mechanisms used by student teachers to reduce stress and improve emotional stability have been studied in research. Emotional well-being has been linked to effective coping strategies such seeking social support and engaging in mindfulness practises (Luo, et al., 2019). Some studies have highlighted the prevalence of emotional distress and burnout among student-teachers. Burnout, in particular, is a significant concern as it can lead to emotional instability and reduced teaching effectiveness (Skaalvik & Skaalvik, 2017). For student teachers, the teaching practicum is sometimes a time of great stress. Research has looked at how events during this stage, such as student interactions and classroom management, affect emotional stability (Ingersoll & Strong, 2011). Interest in gender disparities in coping mechanisms and emotional expression has also grown. According to certain studies (Nylund et al., 2013), it has been investigated if these distinctions affect the emotional stability of male and female student-teachers. The research highlights the significance of assistance and education initiatives intended to improve the emotional stability of student teachers. These programmes frequently involve mentorship, stress management, and emotional intelligence training (Sutton & Wheatley, 2003). According to research, emotional stability is a predictor of successful classroom management and instruction. Higher emotional stability is associated with greater teaching performance in student-teachers (Chang, et al., 2020). Cultural and contextual factors play a significant role in the emotional stability of student-teachers. Societal norms, cultural expectations, and the specific educational context can influence emotional well-being (Zembylas & Papanastasiou, 2004).

### **Objective and hypothesis of the study**

**Objective 1:** To study the difference in emotional stability of arts and science student-teachers of B.Ed. programme.

**Hypothesis 1:** There is no significant difference in emotional stability of arts and science student-teachers of B.Ed. programme.

**Methodology** Descriptive survey was used for the study. It is a research method used to gather information about a population, group, or phenomenon by collecting data from a sample through surveys or questionnaires. The primary aim of descriptive survey research is to describe and summarize the characteristics, behaviors, attitudes, opinions, or other attributes of the study's subjects. It does not involve manipulating variables or testing hypotheses but rather focuses on providing a comprehensive and accurate account of the surveyed population.

**Sampling technique** Simple random sampling technique was used for the study. Simple random sampling is a technique in statistics and research methodology used to select a subset (sample) of individuals or items from a larger population in a completely random and unbiased manner. For this study 196 samples were selected randomly from the population of 400 B.Ed students in Shivamogga city. The sample size was selected based Krejcie and Morgan (1970) sample size determination technique.

**Instrumentation** Instrumentation in research refers to the tools, devices, measures, or techniques that researchers use to collect data and gather information in a systematic and

standardized manner. Emotional Maturity Scale (EMS) by Singh & Bhargava (1983) was used for the collection of data.

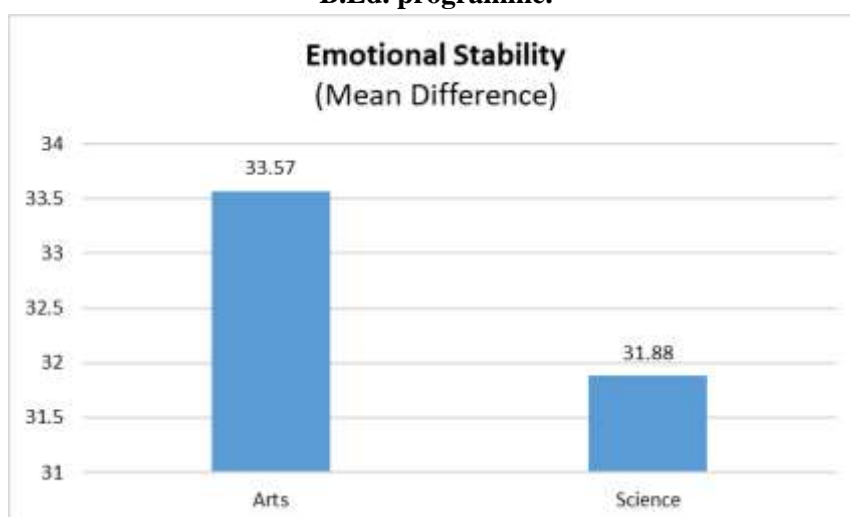
**Statistical techniques used in the study** Independent Samples T-Test was used for the analysis of data. This test is used to compare the means of two independent groups to determine if they are significantly different from each other. The null hypothesis ( $H_0$ ) typically states that there is no significant difference between the means of the two groups. The alternative hypothesis suggests that there is a significant difference between the means.

Analysis and interpretation of data Objective: To study the difference in emotional stability of arts and science student-teachers of B.Ed. programme. Hypothesis: There is no significant difference in emotional stability of arts and science student-teachers of B.Ed. programme. Table shows mean, standard deviation and t-value of emotional stability of arts and science B.Ed. students.

Emotional stability					
Faculty	N	Mean	Std. Deviation	t-value	Significance (0.05 level)
Arts	143	33.57	2.46	3.60	Significant
Science	53	31.88	3.87		

The analysis presented in table indicates that the obtained t-value is 3.60, and it is compared to the table (critical) t-value of 1.96 at a significance level of 0.05. Based on this comparison, the obtained t-value of 3.60 is greater than the critical t-value of 1.96 at the 0.05 level of significance. Therefore, the data suggests that there is a statistically significant difference in the emotional stability of arts and science B.Ed. students. In other words, the results of the statistical analysis indicate that the null hypothesis, which stated that there is no significant difference in emotional stability between arts and science B.Ed. students, is rejected. The data provides evidence to suggest that there is indeed a significant difference in emotional maturity between these two groups of students. Hence, the null hypothesis was rejected and an alternative hypothesis “there is no significant difference in emotional stability of arts and science B.Ed. students” was formulated. This finding implies that emotional stability levels vary significantly between arts and science B.Ed. students, and further investigation or analysis may be needed to understand the nature and potential causes of this difference.

**Graph shows mean difference of emotional stability of arts and science student-teachers of B.Ed. programme.**



The graph shows that the mean score of emotional stability for arts B.Ed. students is 33.57, whereas the mean score for science B.Ed. students is 31.88. Based on these mean scores, it appears that, on average, arts B.Ed. students have a slightly higher score in emotional stability compared to their counterparts in the science B.Ed. program. The difference in mean scores suggests that, as a

group, arts B.Ed. students may exhibit a slightly higher level of emotional stability, which could include better emotional regulation and resilience in handling stressors. Differences in emotional stability levels between arts and science student-teachers in a B.Ed programme can be attributed to various factors. It's important to recognize that individual variation exists within each group, and these differences may not apply universally. However, the following are some potential reasons for variations in emotional stability: subject matter complexity, pedagogical approaches, classroom management, teacher self-efficacy, societal expectations, gender differences, mentorship and support, assessment methods, educational culture, interactions with students, personal background and motivation, workload and time demands: it's important to remember that these factors can interact and influence one another. While differences between arts and science student-teachers may exist, individual experiences vary widely, and emotional stability is the result of a complex interplay of personal, academic, and contextual factors.

### **Challenges faced by student-teachers due to the lack of emotional stability**

Student-teachers, like any individual, can face significant challenges when they lack emotional stability. Emotional stability is essential for effective teaching and learning, and a lack of emotional stability can affect both teachers and their students. Here are some challenges student teachers face when they lack emotional stability:

- a) Ineffective Classroom Management
- b) Difficulty in Building Relationships
- c) Stress
- d) Impact on Decision-Making
- e) Lack of Resilience
- f) Ineffective Communication
- g) Decreased Self-Confidence
- h) Mood Swings and Inconsistency
- i) Impact on Well-being
- j) Limited Coping Strategies

To address these challenges, student-teachers may benefit from mentorship, professional development, and self-care strategies aimed at enhancing emotional stability, such as mindfulness, stress management techniques, and seeking support from mentors and colleagues. Additionally, teacher education programs can include training on emotional intelligence and self-regulation to help future educators navigate the emotional demands of teaching.

**Conclusion:** The study has shown a considerable difference between the emotional stability levels of B.Ed. programme student-teachers in the arts and sciences. This discrepancy might be linked to a variety of elements that have an impact on the emotional health of each group. The following important observations stand out notwithstanding the possibility that not all arts and science student-teachers will be affected by these results. Firstly, the complexity of subject matter and the associated academic pressures in science education can lead to increased stress and emotional strain for science student-teachers. The demands of teaching intricate scientific concepts, conducting experiments, and ensuring student comprehension can be challenging, potentially affecting emotional stability. Additionally, pedagogical approaches and classroom management strategies can vary between arts and science teaching, leading to differences in the emotional experiences of student-teachers. Effective classroom management and teaching methods are critical for maintaining emotional stability, and these requirements may differ significantly between the two subject areas. Furthermore, the level of teacher self-efficacy plays a crucial role. Arts student-teachers may have higher self-efficacy in teaching their subjects, leading to increased emotional stability. Conversely, science student-teachers may experience lower self-efficacy due to the perception of their subjects as more

demanding or complex. Societal expectations and cultural norms can also be influential factors. In some regions, greater expectations or pressures may be placed on science student-teachers, adding to their emotional stress. Gender imbalances in arts and science teaching, as well as differing support systems, can also impact emotional stability. Mentorship and support systems within the academic institution can further exacerbate these disparities. The availability of mentors and support networks may vary, and this can significantly affect the emotional well-being of student-teachers. Assessment methods, educational culture, interactions with students, personal background, workload, and time demands are additional factors that contribute to the observed differences in emotional stability between arts and science student-teachers. In light of these findings, it is crucial for teacher education programs and institutions to consider the unique challenges faced by arts and science student-teachers and tailor support mechanisms and training to address these differences. By recognizing and addressing the specific needs and stressors of each group, institutions can work towards ensuring the emotional well-being and overall effectiveness of their future educators. This understanding can lead to more balanced, emotionally stable, and ultimately successful student-teachers, regardless of their subject area of specialization.

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## AN EMPIRICAL EVALUATION OF THE IMPACT OF PRANAYAMA ON PHYSICAL AND MENTAL HEALTH

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### Abstract

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*Pranayama aims to bring harmony and build a connection between the breath, mind and body. This practice removes toxins, supplies the body with oxygen, improves the quality of breath, increases lung capacity, minimizes stress and anxiety, and strengthens mental capacity and coping skills. Prana is the universal breath of life. It's common to refer to prana as "breath." Inhalation, retention, and expiration are all aspects of pranayama. Pranayama is one of Ashtanga Yoga's most significant limbs, soothing the mind and body and increasing one's ability to function. Practicing Pranayama involves consciously extending the inhale, retaining the breath, and exhaling it. There are numerous mental health issues that might cause physical and mental health challenges for kids as a result of these psychological issues. People with mental illness have an influence on their self-esteem, relationships and ability to function in everyday life, according to the World Health Organization's latest report. The importance of mental health in human life cannot be overstated because it has a direct impact on the lives of individuals, as well as on society as a whole. When it comes to being healthy, it's not just about being physically fit. People who are physically, emotionally, socially and morally well are deemed mentally well. One of India's greatest contributions to humanity is the practice of yoga. A person's physical, mental, emotional, moral, and spiritual well-being are all enhanced by the practice of yoga.*

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**Key words :-** Pranayama, Mind and Body Physical and Mental Physiological Health, Mental Health.

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### Introduction

The primary goal of mental health care is to keep people's minds healthy. Maintaining a healthy mental state is just as vital as maintaining a healthy body. In today's environment, maintaining one's mental health is a major concern for everyone. Individuals are frequently unable to maintain a sense of equilibrium between their own needs and those of their social environment as a result of the rapid rise in industry and modernization. It's the "complete and harmonious functioning of the whole personality" that constitutes mental health (Hadfield).



One of India's greatest contributions to humanity is the practice of yoga. A person's physical, mental, emotional, moral, and spiritual well-being is all enhanced by the practice of yoga.

Students and young people face an increasingly competitive world as a result of changes in society, such as globalization, urbanization, and industrialization, which affect the human being. As a result, today's students are not exempt from stress, overburden, anxiety, and despair. A student's life is more or less a tightrope act in which he tries to balance the enormous demands placed on him by his family, parents, and society at large.

There are numerous mental health issues that might cause physical and mental health challenges for kids as a result of these psychological issues. People with mental illness have an influence on their self-esteem, relationships and ability to function in everyday life, according to the World Health Organization's latest report. The importance of mental health in human life cannot be overstated because it has a direct impact on the lives of individuals, as well as on society as a whole. When it comes to being healthy, it's not just about being physically fit. People who are physically, emotionally, socially and morally well are deemed mentally well.

Students' physical and mental health and the advancement of society as a whole have received a great deal of attention in the last several years. The development of excellent physical health, intellectual development, emotional stability, social development, moral development, the development of adaptability, satisfaction, happiness, the achievement of goals, and the development of an integrated personality are all dependent on good mental health. An individual's mental well-being is greatly aided by practicing yoga.

As a way to deal with stress and enhance one's overall well-being, practising yoga is not just popular in India, but also across the globe. Yoga is more than just a workout; it's a means to cultivate a healthy body, mind, heart, and spirit.

Pranayama is one of Ashtanga Yoga's most significant limbs, soothing the mind and body and increasing one's ability to function. The words 'Prana' and 'Ayama' are the basis of the word 'Pranayama.' Ayama implies 'expansion,' while Prana means 'vital power.' As a result, the term "Pranayama" literally translates to "extension of vital force dimension." An active link between body and mind in humans, breathing is regarded as a modification of one's own breathing in Pranayama. In yoga, pranayama is a yogic practice that is used to control the flow of vital energy, which governs all of our bodily functions. The state of prana determines whether or not the mind is stable or unstable. A stable mind results directly from stable Prana, which can be achieved through Pranayama.

Purak (inhalation), Kumbhak (retention), and Rechak (exhalation) are the three stages of pranayama (exhalation). Pranayama can be practiced alone or in combination, depending on the type of Pranayama being practiced. Practicing Pranayama involves consciously extending the inhale, retaining the breath, and exhaling it. Khecari Shakti (lavation), treatment of disease (Shakti), tranquility of the mind, delicious mental force, happy mind and eternal happiness can be achieved with Pranayama, according to the Gherand Samhita. Controlling your breath through pranayama is a centuries-old discipline. Every inhalation and exhalation is under your complete control. It is the purpose of pranayama to bring your body and mind into one whole. In addition to clearing pollutants, it also provides your body with oxygen. This is designed to have a healing effect on the body's physiology.

Pranayama entails a variety of breathing exercises. The following are a few examples :-

- Alternating nostril breathing (NadiShodhana)
- Breath of victory (ujjayi)
- A honeybee buzzing her lungs out (Bhramari)
- Breathes out (Bhastrika)

There are various ways to perform these breathing exercises. For example, do them while doing yoga positions. They can also be practiced while meditating, or on their own, if you want.

Importance of Pranayama :-

- Pranayama helps you to learn the right technique of breathing which is rhythmic, uniform, slow and harmonious. By learning to control the breath, one can control the functioning of the body. Additionally, this helps in developing a connection between the body, mind and soul.
- Prana or breath is very closely connected with the mind and soul. Pranayama is not only a set of

breathing exercises that provides the lungs with extra oxygen, but it also affects the nervous system and body.

- The breathing exercises include inhalation, exhalation and holding the breath. In Yoga, asanas are practised with breath control and to reap benefits from this practice, you have to develop an understanding of when to inhale and exhale. When you begin to bring the focus to the breath and understand its impact on the mind and body, then you start to improve their physical, emotional, and mental well-being.
- Pranayama aims to bring harmony and build a connection between the breath, mind and body. This practice removes toxins, supplies the body with oxygen, improves the quality of breath, increases lung capacity, minimizes stress and anxiety, and strengthens mental capacity and coping skills.

Benefits of Pranayama :-

- **Decreases stress:** Trusted Source found that pranayama lowered perceived stress levels in healthy young adults, according to the study. Preliminary study suggests pranayama may reduce stress by calming the neurological system. Similar results were found in a 2013 study by Trusted Source. Preparing for a test was less stressful for those who practiced pranayama. The study's authors believe that pranayama's ability to improve oxygen uptake is responsible for this impact. Your brain and nerves, as well as all of your other critical organs, get their energy from oxygen.
- **Improves sleep quality Pranayama's stress-relieving properties may also aid with sleep:** Breathing and pulse rate were slowed down when Bhramari pranayama was practiced for five minutes in clinical investigations. This may help you get a good night's sleep. People with obstructive sleep apnea can also benefit from pranayama, according to a study published in the Journal of Clinical Sleep Medicine in 2019. Another finding in support of better sleep is that pranayama practice reduces snoring and excessive daytime tiredness.
- **Reduces high blood pressure:** Hypertension, or high blood pressure, occurs when your blood pressure is at an abnormally high level. Some potentially critical health issues, such as heart disease and stroke, can be exacerbated by it. High blood pressure can be caused by stress. Practicing pranayama can help reduce the likelihood of this by generating calmness. Antihypertensive medicines were given to individuals with moderate hypertension for six weeks in Trusted Source research in 2014. For six weeks, half of the participants were trained in pranayama. Blood pressure was lower in the second group than in the first at the conclusion of the trial. According to the study authors, the conscious breathing of pranayama is likely responsible for this impact. When you pay attention to your breathing, you can calm your nervous system down. Your stress reaction and risk of high blood pressure may be reduced as a result of this, as well.
- **Improves lung function:** Practicing pranayama, a sort of breathing exercise, can help strengthen your lungs. Lung function can be improved significantly after six weeks of pranayama practice, according to one study published in 2019. Lung function was improved in a number of ways by the practice, according to test results.
- **Enhances cognitive performance:** Pranayama can help your lungs as well as your brain, according to certain studies. It has been observed that pranayama can increase executive function, which includes working memory, cognitive flexibility and reasoning skills, after just 12 weeks of practice. Pranayama has also been shown to improve your perception of stress and reaction times. Researchers found that quick pranayama was linked to improved auditory memory and sensory-motor function. According to the researchers, the stress-reducing effects of pranayama are to blame for these benefits. Increased oxygen intake by brain cells, which gives them a boost of energy, is also likely to play a role.
- **Reduces cigarette cravings:** People who are trying to quit smoking may benefit from

pranayama, or yogic breathing. Even 10 minutes of yogic breathing reduced urges for cigarettes in 2012 research. In a recent study, researchers showed that mindfulness-based yoga breathing reduced the harmful consequences of smoking cessation.

Emotional Benefits of Pranayama :-

**1) Develops Concentration & Mindfulness :-** Today, people are struggling with maintaining focus, having a longer attention span and strong memory. Pranayama practice trains you to focus on the breath, its styles and patterns and be attentive in the present moment. This helps you to increase mindfulness and eventually, you learn to have better concentration.

Pranayama practice boosts the cerebral cortex and other parts of the brain which play an important role in awareness, thought, attention and consciousness. When you pay attention to the breath, you energize the brain portions of body awareness, emotion, and attention; increase parasympathetic activity and improve mental clarity.

Brahmari Pranayama minimizes the constant churning of thoughts and reduces stress. It calms the mind and helps in creating mindfulness and awareness. The humming vibrating sound created during this Pranayama practice stimulates the brain cells, resulting in higher concentration and improved memory power owing to the release of Theta waves in the brain.

**2) Relieves Stress :-** Have you ever noticed your breath pattern when you are stressed? Do you know, that your breath pattern can say a lot about your state of mind?

When you are stressed, your breaths are small, rapid and heavy. Pranayama practice enables more oxygen supply to flow into the body and brain which calms the nerves and improves the functioning of other vital organs. This oxygen clears the toxins and cleanses the carbon dioxide which makes one calm, less anxious and with better focus levels.

**3) Promotes Sleep :-** One of the reasons you face problems in getting sleep is that your mind is still active and is upthinking about various things and situations.

To get peaceful sleep, one needs to have a relaxed mind and body and Pranayama is the best practice to achieve this. When you practice slow breathing pranayamas before going to bed, the body and mind receive signals of relaxation and calmness, creating the perfect environment for sleep.

Pranayama practice lowers blood pressure and heart rate, removes emotional blockages, tension, and negativity and brings in more peace and calmness. Pranayama breathing exercises like Abdominal Breathing and Bhramari Pranayama calms the mind and body and reduces snoring and daytime sleepiness.

**4) Helps in practising positive thinking :-** Emotional problems increase when you start developing a negative mindset. The practice of Pranayama breathing exercises trains you to focus on the now. It helps you to develop a positive outlook towards everything in life.

Through mindfulness, you learn to become focused and be present in the moment. Such kind of approach lessens stress levels. Through Pranayama, you learn to create harmony between the breath, mind and body which makes you better equipped to deal with stressors.

Even in tense situations, you learn to shift the focus on the breath, be mindful and look for solutions with a positive approach.

**5) Brings in more balance :-** When you are agitated or stressed, you tend to become angry, have mood swings and are restless. You tend to lose the balance of your emotions and find it hard to maintain a certain control over your feelings. This is normal as a human but one needs to always strive to get over such situations and find equilibrium. Pranayama practice helps in balancing emotional turmoil.

Through regular practice of pranayama exercises, one slowly begins to create awareness and heal emotional wounds. The harmony between the breath, body and mind will help you to

achieve emotional, mental and physical balance.

Pranayama is a practice which helps you to regulate your prana or life. The pranayama breathing techniques are designed to help you achieve a balanced state of physical, emotional, mental and spiritual well-being. Regular practice of pranayama improves your quality and span of life.

**Discussion :-** A great yogic technique is to employ the breath to bring our consciousness back into alignment with the Divine Cosmic Breath. The cycle of life itself can be traced back to this cosmic breath. Yoga breathing, or pranayama, is the science of breath control. A variety of physiological effects can be induced in healthy individuals by the practice of yogic breathing practices known as pranayama (Upadhyay et al., 2008). Herring Bruere reflex activation of pulmonary stretch receptors during above tidal volume inhalation increases the frequency and duration of inhibitory neural impulses, resulting in the withdrawal of sympathetic tone in skeletal muscle blood vessels, which results in widespread vasodilatation, thus decreasing the diastolic blood pressure (Pramanik et al., 2009) Stress, according to Shebeer B. Basheer (2012), can cause unpleasant or unproductive feelings or endanger emotional well-being. Stressors are the triggers that lead to the alterations. As a result of their inherent limitations, these characters exhibit traits like self-preservation, adaptation, and vigilance. The general adaption syndrome is a part of it. Regular exercise, humor, nutrition, and food, as well as rest and relaxation techniques can help alleviate stress.

These reviews suggest a number of areas where yoga may be beneficial, but more research is required for virtually all of them to more definitively establish benefits. However, this is not surprising given that research studies on yoga as a therapeutic intervention have been conducted only over the past 4 decades and are relatively few in number. Typically, individual studies on yoga for various conditions are small, poor-quality trials with multiple instances for bias. In addition, there is substantial heterogeneity in the populations studied, yoga interventions, duration and frequency of yoga practice, comparison groups, and outcome measures for many conditions (e.g., depression and pain). Disentangling the effects of this heterogeneity to better understand the value of yoga interventions under various circumstances is challenging. For many conditions, heterogeneity and poor quality of the original trials indicated that meta-analyses could not be appropriately conducted. Nevertheless, some RCTs of better quality found beneficial effects of yoga on mental health (see Uebelacker et al.'s critical review [5]). Further investigations in this area are recommended, particularly because of the plausibility of the underlying psychophysiological rationale (including the efficacy of frequent physical exercises, deep breathing practices, mental and physical relaxation, healthy diet, etc.).

While it is not surprising that physical fitness can be improved by training, using either yoga or conventional exercises, it is of interest that in individuals with pain yoga may have beneficial effects with overall moderate effects sizes. However, these effects were strong particularly in healthy individuals, but much weaker in patients with chronic pain conditions. The beneficial effects might be explained by an increased physical flexibility, by calming and focusing the mind to develop greater awareness and diminish anxiety, reduction of distress, improvement of mood, and so forth. Because patients may recognize that they are able to be physically active, even despite of persisting pain symptoms, they may therefore experience higher self-competence and self-awareness, which contributes to higher quality of life.

Conceivably, *asanas* particularly have a positive effect on fitness and physical flexibility with a secondary effect on the mental state, while the *pranayama* practices and relaxation/meditation techniques may result in greater awareness, less stress, and higher well-being and quality of life. However, this remains to be shown in well-performed future studies.



## Conclusion

Anger, worry, stress, and fear can all be reduced by pranayama's ability to calm the mind and body. It has been shown to be effective in treating insomnia. It also has the ability to enhance and strengthen the quality of one's voice. The conclusion that Pranayama can assist prevent and cure disease has been drawn with the help of scientific evidence. Stress reduction can be as basic as pranayama, which is a series of inhalations and exhalations. Stress can be relieved and well-being promoted through pranayama. The practice of pranayama can help you cope better. Practice of pranayama has been shown to affect the structure of the brain and increase memory, which directly contributes to the development of cognitive performance skills and executive skill. The findings of this study need to be confirmed in larger randomized controlled trials.

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## RECENT TRENDS IN RESEARCH METHODOLOGIES

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### Abstract

*Scientific research is a precisely planned and methodical process that balances fundamental and applied research while advancing human knowledge via stages including observations, experimentation, and publishing. It relies on finance, cutting-edge technology, the scientific method, and multidisciplinary cooperation to succeed. Despite obstacles like financing restrictions, these initiatives often result in ground-breaking findings. Modern procedures have replaced traditional ways. In response to problems, developments in technology, and shifting attitudes, recent trends prioritise creativity and adaptation. To be relevant and successful in addressing society's changing requirements, researchers must be adaptable in the field's dynamic environment.*

**Keywords:** - Scientific research, Systematic process, Comprehensive analysis, Interdisciplinary collaboration, Advanced technology

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**Introduction:** - Beginning with early observations and hypothesis formation, scientific research is a systematic and methodical process that includes many crucial steps, including experimentation, data collection, in-depth analysis, and eventually publishing. Its primary goal is to further human understanding and shed light on how the natural world functions. The two main aspects of this research are basic research, which advances fundamental knowledge, and applied research, which deals with real-world problems and the creation of new technologies. Collaboration across disciplines is on the rise, and rigorous peer review is used to assure the validity and quality of research results. All research activities are supported by ethical norms, with an emphasis on informed consent, honesty, and openness. Research also largely depends on finance, cutting-edge equipment, and cutting-edge technology, all of which are governed by the principles of the scientific process and a dedication to reproducibility. Collaborations between organisations and researchers often result in important discoveries that eventually help society by advancing disciplines like medicine, technology, and environmental preservation. Despite this, research continues to confront obstacles, including limited financing and moral quandaries.

The traditional scientific research process includes the methods and procedures used in scientific investigation prior to the development of contemporary technology and the growth of research methodology. Among these conventional methods are observational studies, in which scientists carefully examine natural events using simple equipment and which often serve as the basis for ideas and hypotheses. Even though it was still a core strategy, experimentation was easier to plan and carry out since it just needed simple tools to examine results and manipulate variables. Instance studies, especially in the psychology and medical disciplines, include in-depth analyses of a single instance or a small set of cases, providing insightful information but with a constrained capacity to generalise. Paper forms were used to give surveys and questionnaires, and manual data input was often used, leading to time-consuming procedures. In order to gather information, researchers often spend a lot of time in libraries doing detailed reviews of books, journals, and manuscripts. To acquire first-person descriptions of events, which were often tape-recorded or documented in writing, in the social sciences and history, interviews and oral histories were used. Textual and qualitative data might be analysed thanks to qualitative research techniques including content analysis, topic analysis, and discourse analysis. Mail-in surveys often resulted in longer data gathering times. Because automated technologies were not yet available, human computations and counting were necessary for

bibliometrics, the examination of publishing and citation trends. The reconstruction of historical events and the analysis of their importance in historical research rely heavily on primary and secondary sources. Even though these old-school approaches to scientific study were useful when they were first developed, they have mostly been replaced by cutting-edge approaches made possible by technological advancements like high-performance computers, digital data capture, and cutting-edge laboratory apparatus. With a wider range of techniques and resources available, scientific research nowadays may involve more intricate and thorough examinations. The term "new trends in research methods" refers to novel strategies and methods that are developing and gaining traction in the area of research. These techniques are often a reaction to the changing demands of researchers and the environment for knowledge creation. Improved quality, efficacy, and efficiency are the goals of new research methodologies. They may include a variety of activities, including as data gathering and analysis, multidisciplinary cooperation, and the incorporation of cutting-edge technology, fresh theoretical frameworks, and developing ethical issues. These patterns demonstrate how research is dynamic and how it adjusts to the possibilities and difficulties of the modern day.

### **Recent Trends in Research Methodologies: Navigating the Technological Wave:**

The last few decades have seen a significant transition in the constantly changing field of research methodology, spurred by a quickening of technology development. In order to investigate complicated issues, push the frontiers of knowledge, and address contemporary problems, researchers from a variety of fields are embracing novel methodologies and technologies. In-depth discussions of the significant trends influencing research methodology are provided in this article, along with an analysis of how they are transforming the research environment.

**Artificial Intelligence and Machine Learning (AI/ML):** The fields of study that have been most heavily impacted by AI and machine learning include several. Researchers are now equipped with the tools necessary to evaluate big datasets, spot complex patterns, and draw conclusions that are prognostic. AI in healthcare is driving improvements in medical diagnostics, medication development, and individualised treatment plans. (Williams and Harris, 2023).

**Data Visualization and Visual Analytics:** Data visualisation and visual analytics have been of utmost significance in the age of big data. To better comprehend and effectively communicate their results, researchers utilise interactive visualisations to decipher complicated information. (Brown & Adams, 2020).

**Natural Language Processing (NLP):** The social sciences, humanities, and information sciences have all embraced NLP methodologies. NLP is used by researchers to translate languages, model themes, extract sentiment from text, and evaluate data. Primary data sources are written texts like books, news articles, and social media. (2002) (Clark & Taylor).

**Virtual Reality (VR) and Augmented Reality (AR):** Exploration and visualisation of data have been transformed by VR and AR technology. These immersive technologies enable researchers to explore geographical and historical landscapes, rebuild archaeological sites, and visualise architectural settings with accuracy and depth. (Jones and Smith 2002).

**Mobile Research Methods:** The use of mobile research techniques has been accelerated by the widespread use of smartphones. Researchers use mobile applications and sensors to gather real-time data in a variety of fields, including sociology, environmental science, and health. (2017 Taylor & Johnson).

**Block chain in Research:** Data security and integrity are crucial considerations in research. Block chain technology is being investigated by researchers to protect research data and provide transparent, unalterable records. This is especially important when checking study results and academic qualifications. (2018 Wilson & Miller).

**Citizen Science Platforms:** Online platforms that let the general public participate in research are what are driving the exponential expansion of citizen science. These platforms enable non-scientists to participate in data collecting, analysis, and collaborative projects. (2019 Brown & Anderson).

**Mixed-Methods and Triangulation:** The combination of qualitative and quantitative methodologies is being embraced by researchers more often in order to provide a more thorough grasp of research queries. The depth and reliability of research conclusions are enhanced by the triangulation of data from many sources. (2016 Smith & Clark).

**Open Science and Reproducibility:** In research, the open science movement promotes openness and data sharing. Journals place a strong emphasis on openness and reproducibility in research practises, while researchers actively share data, code, and methodology with the academic community. (Adams, 2019).

**Remote and Online Research:** The COVID-19 pandemic hastened the use of online and remote research techniques. Researchers increasingly use internet platforms and tools to conduct surveys, trials, and interviews remotely while maintaining the continuity of their study. (2020 Johnson & Harris).

**AI-Powered Literature Review:** Tools powered by artificial intelligence sped up the literature review procedure. To find relevant studies, highlight research trends, and glean important insights, researchers effectively filter through voluminous academic literature. (2000 Taylor & Anderson).

Recent research trends are hard to change because they often reflect the shifting demands and goals of both the scientific community and society at large. However, there are several circumstances and factors that may call for modifications or revisions to current study trends:

**Emerging Challenges:** If new and unforeseen challenges arise, such as global crises (e.g., pandemics, climate change), there may be a need to shift research priorities to address these pressing issues.

**Technological Advances:** Rapid advancements in technology can open up new possibilities for research or render existing methods outdate. Researchers may need to adapt to leverage these advancements effectively.

**Ethical and Societal Concerns:** As society evolves, ethical and societal considerations may change. Research trends should be responsive to these concerns, particularly in fields like AI, biotechnology, and privacy.

**Emerging Opportunities:** Sometimes, new opportunities for collaboration, funding, or innovative research approaches become available, prompting a shift in research trends.

**Global Collaboration:** In an increasingly interconnected world, the need for cross-border collaboration may encourage researchers to adapt their methods and focus to align with international priorities.

**Changing Demographics:** Demographic shifts, such as changes in population age or composition, can lead to new research trends focused on addressing the evolving needs of society.

**Resource Limitations:** Resource constraints, whether financial or logistical, can necessitate adjustments in research trends to optimize the use of available resources.

**Unintended Consequences:** Sometimes, trends lead to unintended negative consequences, which may require a re-evaluation of research priorities or methodologies.

**Obsolescence:** As research methods and tools become outdate, there may be a need to shift research trends to stay at the forefront of scientific inquiry.

**Diversity and Inclusion:** Efforts to promote diversity and inclusion in research may necessitate changes in trends to ensure that underrepresented voices and perspectives are included.

**Changing Societal Values:** As societal values evolve, so do research priorities. Research trends should reflect these changing values and address emerging issues related to social justice, sustainability, and equity.

**Public Engagement:** Increasing engagement with the public and policymakers may influence research trends to ensure that research is effectively communicated and applied to solve real-world problems.

**Scientific Misconduct:** Instances of scientific misconduct or fraud may lead to increased scrutiny and changes in research trends to bolster the integrity of the scientific community.

Research trends fluctuate in response to a variety of variables, including new possibilities, problems, ethical issues, technological developments, and social upheavals. For research to continue to be applicable, efficient, and in line with societal requirements, it must be flexible and sensitive to these criteria.

**Conclusion:** - Our comprehension of the natural world is the primary goal of scientific research, which is a meticulously planned and methodical procedure that is directed by a defined path from early observations to publication. It embraces both basic and practical research, promoting cross-disciplinary cooperation and upholding moral standards. Funding, cutting-edge equipment, and the scientific method are all essential to the success of modern research, and repeatability is stressed throughout. Ground-breaking discoveries with broad implications are often the result of collaborative efforts. But ongoing issues like financing restrictions and moral conundrums that need for careful navigating exist in the world of research. Modern research methodologies, made possible by technology advancement, have largely replaced traditional approaches, which were useful in their day. The current era's dynamic landscape of knowledge is characterised by new trends in research methodologies that represent creativity and flexibility, hence improving the calibre and efficacy of the study. These developments reflect the always changing character of scientific inquiry as they adapt to new problems, developing technologies, growing ethical issues, and altering social values. To guarantee that research is successful, pertinent, and in line with the shifting requirements of society in this dynamic environment, it is essential to be able to adapt and react to the many elements impacting research trends.

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## A STUDY ON AWARENESS ABOUT SWAYAM PROGRAM AMONG HIGHER SECONDARY SCHOOL TEACHERS

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### *Abstract*

*The "SWAYAM" (Study Webs of Active Learning for Young Aspiring Minds) program is a pioneering initiative in India's educational landscape, offering a vast repository of online courses and digital learning resources. This study investigates the level of awareness and engagement with the SWAYAM program among higher secondary school teachers. Through a comprehensive survey, data collection, and analysis, this research assesses awareness of the SWAYAM platform. The objective of the study was to find the awareness about SWAYAM among higher secondary school teachers with respect to gender and locality. The findings reveal a there is no as such significant difference in awareness and SWAYAM program among higher secondary school teachers, highlighting the need for targeted interventions and support. The study emphasizes the importance of tailored training programs designed to enhance teachers' understanding of the program's features and its potential benefits in the classroom.*

**Key words:** SWAYAM, Online learning platform

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### **Introduction**

In today's rapidly evolving educational landscape, the integration of technology and online learning platforms has become increasingly vital for educators and students alike. One such initiative in the field of online education in India is the SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) program. SWAYAM, an ambitious initiative by the Government of India, aims to provide high-quality online courses and resources to learners of all levels, from school students to higher education aspirants.

### **Need and Importance of the study**

Educators play a pivotal role in shaping the future of the students they instruct, and their awareness and utilization of modern educational tools can significantly impact the learning experiences of their pupils. Shedding light on the awareness and understanding of the SWAYAM program among a crucial stakeholder group in the Indian education system – the higher secondary school teachers is the need of the hour.

The study to gauge the readiness of educators to harness the benefits of online learning initiatives in India. Understanding their awareness levels is crucial for addressing potential barriers, optimizing resource utilization, enhancing teaching quality, and aligning educational policies with government initiatives. This study is pivotal in ensuring that teachers can effectively leverage SWAYAM, ultimately improving the educational experience of higher secondary students and enhancing the global competitiveness of Indian education.

### **Statement of the Problem**

“A Study on Awareness about SWAYAM Program Among Higher Secondary School Teachers”

### **Objectives of the study**

- To find out the significant mean difference among the higher secondary school teachers about SWAYAM program with respect to gender.
- To find out the significant mean difference among the higher secondary school teachers about SWAYAM program with respect to locality.

### **Hypothesis of the study**

- There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to gender.
- There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to gender.



**Variables of the study****Independent Variable:** SWAYAM program**Dependent Variable:** Awareness**Moderate Variable:** Gender, Locality**Method of the study**

The survey method was used for the present study.

**Sampling**

The higher secondary school teachers of Shivamogga district is the population for the present study. Stratified random sampling technique was employed to select the sample. The sample consists of 60 higher secondary school teachers.

**Instrumentation**

The investigator had selected the questionnaire form. The tool had 20 items. Each item was in the form of multiple choice. The correct response of every item carried one point score. The tool was prepared and developed by the investigator and it was used to collect the data in this study. The reliability and validity of the tool were established. Effectiveness of evaluation largely depends upon the accuracy of measurement. Accuracy of measurement in turn depends on the precision of the instrument. The investigator had selected the questionnaire form. The tool had 30 items. Each item was in the form of multiple choice. The correct response of every item carried one point score. The MOOCs -

SWAYAM Awareness Inventory was prepared and developed by the investigator and it was used to collect the data in this study. The reliability and validity of the tool were established. Effectiveness of evaluation largely depends upon the accuracy of measurement. Accuracy of measurement in turn depends on the precision of the instrument. The investigator had selected the questionnaire form. The tool had 30 items. Each item was in the form of multiple choice. The correct response of every item carried one point score.

The MOOCs - SWAYAM Awareness Inventory was prepared and developed by the investigator and it was used to collect the data in this study. The reliability and validity of the tool were established.

**Statistical Analysis and Interpretation of Data**

**Hypothesis 1:** There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to gender.

Significance of difference between means of Awareness of MOOCs - SWAYAM among Student - Teachers with respect to Gender

**Significance of difference between means of Awareness of MOOCs - SWAYAM among Student - Teachers with respect to Gender**

Gender	N	Mean	S.D	t	Level of significance at 0.01 level
Male	30	15.93	1.57	0.821	Not significant
Female	30	15.83	1.83		

Above table shows that the obtained t-value is 0.821 and it is found that it is not significant at 0.01 level of significance. Hence the null hypothesis is accepted that "There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to gender".

**Hypothesis 1:** There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to locality.

Significance of difference between means of Awareness of MOOCs - SWAYAM among Student - Teachers with respect to Gender



### Significance of difference between means of Awareness of MOOCs - SWAYAM among Student - Teachers with respect to Gender

Gender	N	Mean	S.D	t	Level of significance at 0.01 level
Rural	30	15.63	1.79	0.25	Not significant
Urban	30	16.13	1.59		

Above table shows that the obtained t-value is 0.25 and it is found that it is not significant at 0.01 level of significance. Hence the null hypothesis is accepted that "There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to locality".

#### Findings:

**From the present study , it has been found that,**

There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to locality.

There is no significant difference in the awareness about SWAYAM program among higher secondary school teachers with respect to locality.

#### Conclusion

In conclusion, the study on awareness about the SWAYAM program among higher secondary school teachers has shed valuable light on the current state of knowledge and engagement with this innovative platform. It is evident from the research findings that there is no as such significant gap in awareness and utilization of the SWAYAM program among higher secondary school teachers. The study emphasizes the importance of tailored training programs designed to enhance teachers' understanding of the program's features and its potential benefits in the classroom.

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## A STUDY OF PERSONAL ADJUSTMENT IN RELATION TO STUDY HABITS OF SECONDARY SCHOOL STUDENTS

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### Abstract

*This study intended to explore the study Personal Adjustment in Relation to Study Habits of Secondary School Students. The sample of the study selected through random sampling technique. The sample comprised of 200 higher secondary school students. The data collected were analyzed using appropriate statistical methods i.e., the person's product moment correlation was used to know the effect of personal adjustment and study habits of secondary students. The major findings of the study were: i) there is a positive significant relationship between boys and girls personal adjustment and Study Habits of secondary school students. ii) There is a positive significant relationship between rural and urban students personal adjustment and Study Habits of secondary school students. iii) There is a positive significant relationship between personal adjustment and Study Habits of private and government secondary school students.*

**Keywords:** Personal Adjustment, Study Habit, Higher Secondary School,

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### Introduction

Adjustment can be viewed from two angles. Firstly, adjustment may be viewed as an achievement or how well a person handles his conflicts and overcomes the resulting tension. Secondly, adjustment may be looked upon as a process as to how a person adjusts or compromises to his conflicts. A well-adjusted child enjoys his school environment in a positive manner and not by twisting his personality in an unhealthy way. But when we are unable to provide situations in the school, which can enable the students to satisfy their needs, both high and low achievers react differently and adjustment problems arise. Thus, the adjustment problems always result from creation of needs and their non-fulfillment.

### Definition and Meaning of Adjustment

L.S. Shaffer, "Adjustment is the process by which living organism maintains a balance between its need and the circumstances that influence the satisfaction of these needs". Gates, Jersli's and others, "Adjustment is a continual process by which a person varies his behaviour to produce a more harmonious relationship between himself and his environment". Vonhaller, "We can think of adjustment as psychological survival in much the same way as biologist uses the term adaptation to describe physiological survival.

Study habit is the pattern of behavior of students adopting during their studies which is mean of learning. Study habit also shows the degree to which the student involves in regular acts of studies and the acts of studies are characterized by regular studying schedule like frequency of studying sessions, reviews of material, etc. by taking place in an environment which is helpful to studying.

According to Crow & Crow (1992) the effective habits of study include place a definite time table and taking brief of well-organized notes. To study effectively a student should decide which fact is important and then from opinions concerning it. All these things must be done to the best of his ability in the shortest possible span of time. Because, knowledge is very important to every person, hence it is wise to learn how to study in the most effective way. Experts acknowledged that success in the field of knowledge is determined by good and consistent study habits. Like any other activity artistry and enthusiasm are the most important part for learning. Accordingly study habits are the acquired method and style, when a learner plans his study out of the classroom to gain proficiency of the subject. According to Azikiwe (1998) good study skills are good asset to learners because good study skills assist students to gain proficiency in areas of specialization and subsequent wonderful presentation while the opposite constitute restricts to learning. Sorenson (1991) stated about good study habits

stated that the primary intention of the study must be the understanding. For the requirement of this, the study should not be in hurry but the concentration without interruption is mandatory.

### **Statement of the Problem**

**"A Study of Personal Adjustment in Relation to Study Habits of Secondary School Students".**

### **Variables of the Study**

**Independent Variable:** Personal Adjustment

**Intervening Variables:** Sex: Boys and Girls were considered

Location: Rural and Urban

Type of Schools: Government, Aided

Categories: SC/ST and other General Merit Students have been selected.

**Dependent Variables:** Study Habits

### **Objectives of the Study**

1. To study the relationship between personal adjustment and study habits of boys.
2. To study the relationship between personal adjustment and study habits of girls.
3. To study the relationship between personal adjustment and study habits of rural students.
4. To study the relationship between personal adjustment and study habits of urban students
5. To study the relationship between personal adjustment and study habits of students studying in government schools.
6. To study the relationship between personal adjustment and study habits of students studying in private schools.
7. To study the relationship between personal adjustment and study habits of SC/ST students.
8. To study the relationship between personal adjustment and study habits of general merit students.

### **Hypotheses of the Study**

The following null hypotheses were set up for the present study.

1. There is no relationship between personal and study habits of boys.
2. There is no relationship between personal and study habits of girls.
3. There is no relationship between personal and study habits of rural students.
4. There is no relationship between personal and study habits of urban students.
5. There is no relationship between personal and study habits of students studying in government schools
6. There is no relationship between personal and study habits of students studying in private schools.
7. There is no relationship between personal and study habits of SC/ST students studying in secondary schools.
8. There is no relationship between personal and study habits of General merit category students.

### **Scope of the Study**

1. The present study was confined to secondary schools located in Gadag Cluster.
2. The study was limited to boys and girls of secondary schools.
3. The study was further restricted to Government and private schools.
4. The study was limited to urban and rural secondary school students.
5. The study was also limited to SC/ST and other general merit category students.
6. The study was restricted to IX standard students.
7. The study was makes limited to personal adjustment of students.
8. The study was limited to Study habits only.
9. The study was limited to using Pearson's correlation coefficient technique.

**Design of the Study:**

The present research study is a descriptive survey of secondary schools students of government, aided and unaided schools of Gadag cluster. For the present study, descriptive survey method was conducted on relationship between personal adjustment and study habits of secondary school students.

**Sample of the Study:**

In this study random sampling technique was used for the selection of sample, to find out the actual picture of secondary school students. The investigator listed the secondary schools from the office of Block Education Office (BEO), Dharwad. From entire population of these secondary schools students two hundred (200) students were selected as the sample for the study.

**Tools used for Data Collection**

For the present, study the following Inventories

1. Personal Adjustment Inventory developed by C. B. Asha (1991)
2. Study Habits Inventory constructed and standardized by M. Mukhopadhyaya and D.N Sansanwal (1893)

**Statistical Techniques used:**

In pursuance of the objectives of the study as well as to test the research hypothesis, the person's product moment correlation was used to know the effect of personal adjustment and study habits of secondary students.

**Data Analysis and Interpretation:**

**Table-1: Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of Boys**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	172.2500	14.6110	0.4286	4.6962	<0.01	S
Study Habits	317.5600	30.1301				

Significant at 0.01 level.

The above table shows that there is a positive significant effect of boys personal adjustment scores and Study Habits scores of secondary school students at 0.01 level of significance ( $r=0.4286$ ,  $t=3.4.6962$ ). This shows that the personal adjustment scores are closely related with achievement scores of students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

**Findings:**

There is a positive significant relationship between boys personal adjustment and Study Habits of secondary school students.

**Table-2: Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of Girls**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	169.4000	16.3931	0.4950	3.9468	<0.01	S
Study Habits	313.5800	28.3607				

Significant at 0.01 level.

The above table shows that there is a positive significant effect of girls personal adjustment scores and Study Habits scores of secondary school students at 0.01 level of significance ( $r=0.4950$ ,  $t=3.9468$ ). This shows that the personal adjustment scores are closely related with achievement scores of students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

#### Findings:

There is a positive significant relationship between girls personal adjustment and Study Habits of secondary school students

**Table 3: Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of Rural Students**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	175.1000	12.0835	0.3353	2.4654	<0.05	S
Study Habits	321.5400	31.5835				

#### Significant at 0.05 level.

The above table shows that there is a positive significant effect of rural students personal adjustment scores and Study Habits scores of secondary schools at 0.05 level of significance ( $r=0.3353$ ,  $t=2.4654$ ). This shows that the personal adjustment scores are closely related with achievement scores of students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

#### Findings

There is a positive significant relationship between rural students personal adjustment and Study Habits of secondary school students.

**Table 4: Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of Urban Students**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	172.8529	17.3067	0.6455	4.7808	<0.01	S
Study Habits	313.5000	29.0394				

#### Significant at 0.01 level.

The above table shows that there is a positive significant effect of urban students personal adjustment scores and Study Habits scores of secondary schools at 0.01 level of significance ( $r=0.6455$ ,  $t=4.7808$ ). This shows that the personal adjustment scores are closely related with achievement scores of students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

### Findings

There is a positive significant relationship between urban students personal adjustment and Study Habits of secondary school students

**Table 5 : Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of Students Studying in Private Secondary Schools**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	171.9394	13.1452	0.3090	2.5990	<0.05	S
Study Habits	319.6515	30.6837				

Significant at 0.05 level.

The above table shows that there is a positive significant effect of personal adjustment scores and Study Habits scores of private secondary school students at 0.05 level of significance ( $r=0.3090$ ,  $t=2.5990$ ). This shows that the personal adjustment scores are closely related with achievement scores of students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

### Findings

There is a positive significant relationship between personal adjustment and Study Habits of private secondary school students.

**Table 6: Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of Students Studying in Government Secondary Schools**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	172.8529	17.3067	0.6455	4.7808	<0.01	S
Study Habits	313.5000	20.0394				

Significant at 0.01 level.

The above table shows that there is a positive significant effect of personal adjustment scores and Study Habits scores of government secondary school students at 0.01 level of significance ( $r=0.6455$ ,  $t=4.7808$ ). This shows that the personal adjustment scores are closely related with achievement scores of students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

### Findings

There is a positive significant relationship between personal adjustment and Study Habits of government secondary school student.

**Table-7: Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of SC/ST**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	171.9394	13.1452	0.3090	2.5990	<0.05	S
Study Habits	319.6515	30.6837				

Significant at 0.05 level.



The above table shows that there is a positive significant effect of SC/ST students personal adjustment scores and Study Habits scores of secondary school SC/ST students at 0.05 level of significance ( $r=0.3090$ ,  $-2.5990$ ). This shows that the personal adjustment scores are closely related with achievement scores of SC/ST students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

### Findings

There is a positive significant relationship between SC/ST students personal adjustment and Study Habits of secondary school SC/ST students.

**Table 8 : Correlation of Mean, SD and 't' Value between Personal Adjustment and Study Habits Scores of General Merit Students.**

Variable	Mean	Std.Dv.	Correlation Coefficient	t-Value	p-Value	Signi.
Personal Adjustment	171.9800	15.9329	0.3881	2.9179	<0.01	S
Study Habits	314.3400	32.5987				

Significant at 0.01 level.

The above table shows that there is a positive significant effect of General Merit students personal adjustment scores and Study Habits scores of secondary school General Merit students at 0.01 level of significance ( $r=0.3881$ ,  $t=2.9179$ ). This shows that the personal adjustment scores are closely related with achievement scores of General Merit students. This further implies that as the personal adjustment increases, the Study Habits will be favorable.

### Findings

There is a positive significant relationship between General Merit students personal adjustment and Study Habits of secondary school General Merit students.

### Conclusion

According to smith, H.C. 'A good adjustment is one which is both realistic and satisfying. At least in a long run, it reduces to a minimum the frustrations, the tensions and anxieties which a person must endure'. So, if the students in the adolescence period have good adjustment, then there is a possibility for good academic performance. But if they have any adjustment problem then counseling and continuous assistance is necessary, which will play a vital role in providing adequate coping skill with the situation. Students should be given an opportunity to express their ideas and discuss their problems with school authorities. It develops self-confidence and mental satisfaction among the students. Play hobbies, excursions, discussions etc. provide excellent opportunities to explore and express their feelings. These should be organized for developing good mental health of students and their healthy adjustment. Healthy and sympathetic teacher's and student's relationship should be made to upgrade the level of academic self esteem of students. Emphasis should be given on social cognitive develop of the students to increase the level of self esteem. Self-study should be encouraged and emphasized. The teachers should ask the students to keep the record of their progress towards their set goals. The teachers should make an effort to develop a conducive social climate in the class so that every student should feel that he/she belongs to a group.

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## EDUCATION EQUALITY IN EDUCATION

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### Abstract

*It is a human right to get education. Nowadays Indians are taking more interest in educating their children. Many families in India believe that if we get education, all our hardships will be reduced. People who think that education is a solution to many problems are facing in this field. Presently this article discusses the problems in educational equity and their solutions.*

**Key words:** Education, Equity, Equality

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### Introduction:

Air, water, clothing, food, shelter are the most important basic requirements for human survival. This is true from ancient times to the present post-modern society. But, in today's society education is one of the most important basic needs along with these basic needs. Equally imparting equity and equality in all schools, colleges, universities, medical and technical educational institutes will help create a better value society. Education is a process of transfer of knowledge in one person to others. Education is an important tool for any nation to attain perfect development. The role of education is very important for the development of every person's life. India is a nation of diversity. people belonging to different religions, castes, races, languages etc live here. Education is therefore a valuable tool for bringing unity in diversity in India. Our constitution states that access to education is a universal right. But equal education is not available in all regions in India. Equitable education means providing equality in all educational opportunities without discrimination on the basis of caste, religion, gender, region, poverty etc.

### Need and Significance of the study:

- This study is helpful in understanding the importance of educational equity.
- This study is necessary to understand the issues in educational equity.
- This study is important to know the steps to be taken to provide equitable education.

### Objective:

- To identify issues in educational equality
- To know about steps to be taken to provide equal education.
- To know the importance of Equal Education.

### Review of the literature

- **John Parankimalil (2015)** "Equality of educational Opportunities", The main factors contributing to inequality in education have been identified in this article. In this article, the article has expressed about the important steps taken by the Indian Constitution and the government for equal education. The author has mentioned here the important roles of teachers to bring equality in education. Apart from this, the author discusses in this article that equal opportunities in education should be given to many communities including women, minorities, and children with special needs. The author opined that equality in education should be achieved and various problems overcome.
- **Afroze Eqbal (2022)** "Equality of educational Opportunities", In his article, the author states that maintaining equality in educational opportunities is necessary for the emergence of an egalitarian society. It is stated in this article that factors like poverty, home situation,

educational facilities, gender, religion, colour, geography etc. are mainly responsible for educational equality, the author suggests suggestions to remove the inequality in educational opportunities in India and discussed in this article. The author opined that the role of teacher and education plays a very important role in imparting equitable education..

### **Methodology**

The paper uses the doctrinal method of study. The secondary sources are given important in this paper. The secondary sources of information used are the article of research, journals, newspapers, working papers and thesis.

### **Importance of equal education**

- This education is important to build a better egalitarian society.
- This education makes a person a better citizen in the society.
- This education is helpful in preventing problems like communalism, terrorism, corruption.
- It is important to create a feeling of equality among all the citizens in the nation
- This education is helpful in getting equal employment opportunities for all persons.
- This education promises a better life for all individuals
- Education is an important tool for the development of a nation

### **Issues in Educational Equity**

- ✦ Discrimination on the basis of mental and physical.
- ✦ Discrimination in the economy.
- ✦ Discrimination on the basis of sex
- ✦ Regional inequality
- ✦ Lack of education among parents
- ✦ Discrimination on the basis of caste and religion
- ✦ Deprivation of opportunities
- ✦ Discrimination in provision of educational facilities
- ✦ Lack of valuable pedagogical training among teachers

### **Provisions in the Constitution for equality of education**

- ✦ **Article 26(1):** Education is a fundamental right. No person can be denied admission to educational institutions on the basis of caste, colour, religion, region
- ✦ **Article 21(A):** Directive Principle of State Policy. According to the 93rd Amendment, the state must provide free and compulsory education to all children up to the age of 14 years.
- ✦ **Article 46:** State to provide financial special facilities for education of SC and ST, weaker sections of the society.

### **Measures taken by the Government to for Equal Education.**

- ✓ Sarva Shiksha Abhiyan
- ✓ Kasturba Gandhi Boys' Vidyalayas.
- ✓ Hot lunch in the afternoon.
- ✓ Central Universities.
- ✓ National Institute of Open Schooling.
- ✓ Community Politics.
- ✓ Kitturani Chennamma Residential Schools
- ✓ Murarji Desai Residential Schools.
- ✓ Students with highest marks are given incentives.
- ✓ Establishment and provision of special schools for co-ordinated education and special education.

### **Steps to be taken to bring equality in education**

- ✦ To impart valuable educational training to teachers imparting education.

- ✦ To provide equal opportunity to all categories of students seeking admission in educational institutions.
- ✦ To provide equal educational infrastructure according to the needs and abilities of the students.
- ✦ Action should be taken to ensure that every person from all sections of India gets a minimum level of education.
- ✦ Proper provision of reservation for SC, ST, OBC, rural women, sportsmen, freedom fighters, soldiers to get equality in education.
- ✦ Giving more importance to Inclusive education.
- ✦ Grant of scholarship.
- ✦ Providing accommodation facility to backward class students.
- ✦ Providing special education and facilities to students with disabilities.

**Conclusion:**

Education is the transport from darkness to light. Every person should get education and feel it as our right to get education. Be aware of the benefits of education. The government has implemented adult education so that even uneducated adults can get education. It is better to take advantage of it. Every person should consider it their first duty to educate their children. Every educational institution should maintain equality in all educational matters without prejudice. It is the first duty of all of us to take India towards development by imparting equal education.

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## MULTICULTURAL EDUCATION: ISSUES, CHALLENGES AND STRATEGIES FOR FUTURE LEARNERS

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### Abstract

*Multicultural education is an approach to teaching that recognizes and celebrates diversity in the classroom. It seeks to create an inclusive environment that respects and values the differences among students, including their cultural backgrounds, languages, beliefs, and experiences. While multicultural education has gained widespread acceptance, it also faces numerous challenges and issues that must be addressed to be effective. One of the main challenges of multicultural education is the lack of teacher training in this area. Many teachers have not received adequate preparation to teach in a culturally diverse classroom, which can lead to misunderstandings and bias. Another issue is the lack of access to diverse materials and resources that reflect the experiences of different cultures. This can lead to a narrow curriculum that does not reflect the diversity of the student body. To overcome these challenges, educators must adopt strategies that promote multicultural education. These strategies include providing professional development opportunities for teachers to learn about cultural diversity and developing curricula that incorporate diverse perspectives. Teachers must also build relationships with their students and their families to understand their cultural backgrounds and create a supportive environment. In conclusion, multicultural education is essential in promoting an inclusive and respectful learning environment that recognizes and values the differences among students. However, it faces challenges and issues that must be addressed through teacher training, access to diverse materials, and the adoption of strategies that promote cultural diversity. By implementing these strategies, educators can create a more inclusive and equitable educational experience for all students.*

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### INTRODUCTION

Multicultural education is a complex and evolving field that has emerged as a response to the increasing diversity of student populations in schools across the world. This paper provides an overview of the issues and challenges that educators face in implementing multicultural education and offers strategies to address these challenges. The paper examines the importance of cultural diversity in education, the impact of cultural bias and stereotypes, and the role of teachers in promoting multiculturalism. Additionally, the paper explores the challenges of language barriers, different learning styles, and discrimination against minority students, and suggests ways to address these challenges. Finally, the paper offers a range of strategies for promoting multicultural education, including curriculum development, teacher training, and community involvement. The goal of this paper is to provide educators with a comprehensive understanding of the issues and challenges associated with multicultural education and to offer practical strategies for promoting diversity and cultural awareness in schools. Overall, multicultural education is essential for creating a more equitable and just society. It promotes understanding and appreciation for differences, which can lead to increased tolerance, reduced prejudice, and improved relationships across cultural lines.

### MEANING OF MULTICULTURE:

The word Multi-culture comes from two words, “**Multi**” which means **many** and the word “**Culture**” derives from a French term, which in turn derives from the Latin “**colere**,” which means **to tend to the earth and grow, or cultivation and nurture**. **Culture** is the characteristics and knowledge of a particular group of people, encompassing language, religion, cuisine, social habits, music and arts. Combination of two or more cultures called multicultural. Our society is based on different castes, creed, race and religions. Based on the caste, community, creed, religion they adopt their own culture. Thus, our society is a multicultural society.

Multicultural education refers to any form of education or teaching that incorporates the histories, texts, values, beliefs, and perspectives of people from different cultural backgrounds. Multicultural



education is a progressive approach which aims to provide students with knowledge about the histories, cultures and contributions of diverse groups towards the pluralistic society and attempts to promote the culture cohesiveness and unity in multicultural society. It promotes principles such as inclusion, diversity, democracy, skill acquisition, inquiry, critical thought, value of perspectives, and self-reflection.

**Meaning of Multicultural Education-** The definition of “multicultural” is something that incorporates ideas, beliefs or people from many different countries and cultural backgrounds. For example, when people of different cultures come together to celebrate and share their different traditions this is an example of a multicultural celebration.

**Mary M. Atwater & Joseph P. Riley (2006):** “Multicultural education is a construct, a process & an educational reform movement with the goal of providing equitable opportunities for students to achieve quality learning.”

**Paul Gorski (2000):** Multicultural education is a progressive approach for transforming education that holistically critiques and addresses current shortcomings, failings, and discriminatory practices in education. It is grounded in ideals of social justice, education equity, and a dedication to facilitating educational experiences in which all students reach their full potential as learners and as socially aware and active beings, locally, nationally, and globally. Multicultural education acknowledges that schools are essential to laying the foundation for the transformation of society and the elimination of oppression and injustice.

#### **IMPORTANCE OF MULTICULTURE EDUCATION:**

There are myriad of benefits of a multicultural classroom for students. Multicultural education assumes significance in secondary school owing to following reasons:

- Multicultural education helps the students to understand about different nations, cultures, languages, religions.
- It encourages students to bring aspects of their cultures into the classroom and thus, develops the child's intellectual and social/emotional growth.
- It helps the students to understand that all cultures have good elements.
- It helps the students to respect cultural diversity and brings cordiality among students from different backgrounds.
- It helps the students to understand the need of multicultural/pluralistic society for progress of the nation and survival of humanity.
- It removes low attitudes, bias and misconceptions about other cultures.
- It promotes liking and willingness among students to participate in multicultural activities.
- It promotes human values among students.
- It develops multicultural competence among students which includes ability to communicate with, understand and participate in a cultural context other than one's own, within the socio-political framework.
- It makes learning more interesting for students.

#### **ISSUES AND CHALLENGES OF MULTICULTURE EDUCATION:**

One of the greatest challenges that face the Indian Education System in education is preventing the great social divide from widening and creating a learning culture, which allows people of different faiths, creeds, religions, beliefs to live together by celebrating the differences, which makes each individual unique within him or herself. Unity in diversity of our country is the identity in the world. Diversity in the nation's schools is both an opportunity and a challenge. There are so many culture, religion, caste and ethnic group in my country. There is not possible to include every cultural ritual in the curriculum. This is big challenges in the construction of curriculum. However, some major cultural religious rituals must be included in the curriculum. As in a class there are different children

coming from different backgrounds, having different language, culture, food and traditions, they have to mix with each other and respect others as well. From early schooling when a child enters school, attitudes have to be moulded and nurtured towards a peace facilitating culture.

### **Challenges of multiculturalism**

**Language barrier:** the main thing that differs multicultural classrooms from ordinary ones is a language barrier. Coming from different states or countries and even city districts children can speak a different language or the same language but never understand each other. This might be the influence of parents, environment dialects etc.

However, the situations when students do not know the language of studying happen even more often. Young people get into the [environment](#) where a teacher speaks a foreign language they do not understand at all and their task is not only to understand what a teacher says but also gain new knowledge – twice harder than in customary classrooms.

### **Domination of different learning styles**

Despite the fact that students may differ in race, religion or family background, these young people can also absorb information in a variety of ways. They can be accustomed to other teaching approaches, [methods](#), ways of material presenting so it will take time to get used to everything new. A teacher should offer his students all the learning styles (auditory, visual, tactile etc.) for learners to grasp information better. Moreover, it is necessary to consider cognitive styles of particular concern like field-dependent and field-independent cognition, reflectivity and impulsivity, tolerance and intolerance for ambiguity.

### **The cultural difference can also be noticed in the poorly formed speaker-listener relationships and diverse patterns of cooperation and competition.**

As a result, students might not know how to behave when a teacher is speaking, have no idea of group or pair work, will not understand the rules of games introduced.

One more important aspect is a prevalence of visual learning materials. As students can hardly understand the language, images can be more effective in acquiring new knowledge.

### **Non-verbal behaviour**

Sometimes it is much easier to understand a foreign language than a body language of another ethnic group. If a teacher is not aware of the non-verbal behaviours characteristic of the society where his students are from, that might bring about a variety of troubles and difficulty of right interpretation. Such customary non-verbal behaviours as raised hands, eye contact, head nods can have a completely different meaning in another country let alone any other body signs.

### **Presenting one topic from different perspectives:**

Every teacher should present a topic from different prospective independent on the pupils' nationality in the classroom. Of course, it would be great but a restricted number of school lessons does not always provide this opportunity. In multicultural classes the situation is different. It especially concerns history lessons as some events can be defined by different populations as opposite ones. For example, some movements should be called not only an expansion of one country but also the displacement of another nation.

A teacher should be very careful in his formulations and expressions not to offend feelings of some students. Moreover, he should not try to persuade in the unquestioned truth of his words and views as it may result in

a struggle or disappointment among students. History should be presented as accurately as possible. There is no need to downplay any negative aspects but a task of the teacher is to avoid stereotypes and offer evidence from the primary sources to sound objective.

**Diversity of extracurricular activities:**

As children from other cultures have appeared in the classroom that differs from theirs it means that they should also get accustomed to new traditions, a way of life, and relationships in this new society. In most cases, it is teacher's job to show and tell about that. It is usually done in different extracurricular activities. Whether it is a holiday or some important date children should learn about it.

**Teaching communication skills:**

Apart from difficulties in using a foreign language students may feel shy or unable to express their viewpoint because of the horror not to be understood. In some countries, boys will avoid socializing with girls while in the new environment it is an absolutely normal experience. Teachers should encourage students to discuss different issues, speak up their mind on a variety of topics and promote a pleasant atmosphere in the classroom.

**STRATEGIES OF MULTICULTURE EDUCATION:**

Multicultural education is very important in Indian scenario because India is a multicultural country. Basically, in secondary level of education it is necessary. There are following goals of multicultural education in secondary education.

- 1) Develop and foster a democratic and just society where all groups experience cultural democracy and empowerment.
- 2) The main goal of multicultural education is to develop the peace and harmony in the society.
- 3) Improve academic achievement of all students and multicultural knowledge.
- 4) Help the student to develop the knowledge, attitudes and skills needed to function within their own and other micro cultures and within global community.
- 5) Provide opportunity to gain cultural competencies.
- 6) The multicultural education is removing the prejudice about other culture, religion and race.
- 7) To have every student achieve to his or her potential.
- 8) To encourage students to take an active role in their own education by bringing their stories and experiences into the learning scope or students should be encouraged to participate in the social and cultural activities organized in schools, colleges, apartments, streets, parks, malls and many other public places.
- 9) To appreciate the contributions of different groups who have contributed to our knowledge base.
- 10) To develop positive attitudes about groups of people who are different from ourselves.
- 11) To become good citizens of the school, the community, the country and the world community.
- 12) To provide decision-making skills and critical analysis skills so the students can make better choices in their everyday lives.
- 13) Education Commission(1948) lays emphasis on the use of regional language in the process of teaching and learning. NPE (1986) highlighted that in higher education in general and technical education in particular, steps will be taken to facilitate inter regional mobility by providing equal access to every Indian of requisite merit, regardless of origins.

**Role of school in promoting multiculturalism**

Multicultural education encompasses many important dimensions. Practicing educators can use the dimensions as a way to incorporate culture in their classrooms. The five dimensions listed below are:

1. Content Integration: Content integration deals with the extent to which teachers use examples and content from a variety of cultures in their teaching.
2. Knowledge construction: Teachers need to help students understand, investigate, and determine how the implicit cultural assumptions, frames of reference, perspectives, and biases within a discipline influence the ways in which knowledge is constructed.

3. **Prejudice Reduction:** This dimension focuses on the characteristics of students' racial attitudes and how they can be modified by teaching methods and materials.
4. **Empowering School Culture:** Grouping and labelling practices, sports participation, disproportionality in achievement, and the interaction of the staff and the students across ethnic and racial lines must be examined to create a school culture that empowers students from diverse racial, ethnic, and gender groups.
5. **Equity Pedagogy:** Equity pedagogy exists when teachers modify their teaching in ways that will facilitate the academic achievement of students from diverse racial, cultural, gender, and social-class groups.

Multicultural education is most effective as an integral part of the school programme. Following are some of the main roles to promote multiculturalism among secondary school students:

**Understand Your Students:**

The most fundamental step is to understand the cultural and ethnic backgrounds of all the students. It can be achieved by going through their personal records, by interviewing them on the first day of the lecture, and by asking their previous teacher about the student.

**Identifying Their Strengths and Weaknesses:**

It is an educator's responsibility to identify the strengths and weaknesses of the students to eliminate them, and improve their learning outcome. This can be achieved by checking previous academic records and regularly assessing the student's performance in the class.

**Organizing Open Discussions:**

Selecting a current social or cultural issue and organizing an open discussion on them allows the students to share their opinions, be better listeners, and know about the issues faced by other cultures and communities.

**Encouraging Students to Share Real-Life Experiences:**

Teachers can organize casual sessions where the students share their past experiences and stories that help them open up, build strong communication skills, and help in relating with each other.

**Cultural Food Swap:**

Teachers can occasionally ask students to bring their cultural dishes for lunch and swap it with each other and share, to help them embrace and know about different cuisines.

**Organizing Events & Seminars:**

By bringing in guest speakers from various cultural backgrounds and by organizing events & seminars, teachers can help in boosting multicultural education among the students.

**Promoting Cultural Storytelling:**

Every home in each culture has some traditional folktales which have been passed down from generation to generation and are told to the children. Teachers can ask students to share their cultural stories and draw moral lessons from each one of them.

**Celebrate Native Festivals and Schedule Monthly Culture Day**

By celebrating cultural festivals each student can help students feel respected & valued and thus make the classroom culturally open and responsive. Instructors can encourage students to wear their cultural outfits once a month to help them learn about other student's culture.

**Understand Different Learning Styles Of Students**

Teachers can encourage equitable learning by being aware of their student's varied learning styles that are influenced by their backgrounds. They can encourage students to learn from each other's experiences and ask questions which promote understanding.

**Incorporating Students Voice:** While teaching multicultural issues, the teacher should make an attempt to incorporate the voices of students from different cultures by motivating them to share their

own experiences. It brings a feeling among the students that they are also considered in discussion on multiculturalism.

**Dialogue Inquiry:** The teacher can organize dialogue inquire in classroom in regard to issues like communalism, social conflicts, racism, bias, etc. At the end, the consensus should be arrived in finding suitable answer or solutions.

**Promoting Critical Thinking:** The teacher needs to give situations or case studies about multicultural issues to students which call for them to think critically and develop appreciation for pluralistic society.

**Co-operative Learning:** The teacher is required to promote the co-operative learning among students for some of the topics. It helps students to work in heterogeneous groups, develop tolerance, help each other and develop inclusive perception.

**Integrating Cultural Diversity in the Curriculum:** The textbooks should integrate the main principles of different cultures. The teacher should use examples and content from a variety of cultures in their teaching and drive the point that good people are always found in all religious and any faults/blunders of individuals cannot be attributed to whole community.

**Student and Teacher Interaction:** The teacher should be inclusive and broadminded. The teacher should avoid bias in any manner towards students from different cultural backgrounds.

**Hidden Curriculum:** Hidden curriculum means it is the guiding principle which inherently guides the syllabus or curriculum in promotion of values among students. Our curriculum in general has our constitution as hidden agenda which calls for respecting of all cultures.

**Audio-visual presentation** on different cultures by making use of documentaries, films, bulletin board, exhibition etc. It bears a visual impact on students leading to better understanding of diverse cultures.

**The resources of Centre for Cultural and Resource Training (CCRT)** can be used to introduce students towards India's civilization, arts, music, dance, history, agriculture, languages, artifacts, vocations etc.

**Community Living Camp** can be organized to understand and foster cultural cohesiveness among students from different backgrounds.

**Visits and Excursion** can be arranged to forests, mountain regions to know and respect the diversity in cultures and also within each culture.

**Celebration and Observance of Days:** The school must make a point that it celebrates or observes the days which call for respecting and promoting of different cultures for progress of a nation.

**Competitions like singing, dance etc.** can be arranged so that students from different backgrounds can avail the opportunity to showcase their uniqueness of their cultures.

**Resource Persons** can be invited to give talk on the topics like need for unity, respecting and tolerating different perceptions etc.

**Quiz** on different cultures can be conducted which enables every student irrespective of their cultural background start knowing other cultures.

**Essay Writing Competition** helps the participating students to learn and express their views through written communication about multiculturalism.

**Drama and Street Play** can be organized which can give close to first experience of each culture by participating students. And students who are audience can also understand the importance of every culture.

## CONCLUSION:

Multicultural education is essential in promoting diversity, inclusion, and understanding among individuals of different backgrounds. However, it is not without its issues and challenges. One of the main challenges of multicultural education is overcoming the biases and stereotypes that individuals

may have towards different cultures. This can be done through education, exposure to different cultures, and open dialogue. Another challenge is the lack of resources and support for teachers in implementing multicultural education in their classrooms. Strategies such as professional development, curriculum design, and community partnerships can help address this issue. Ultimately, the success of multicultural education relies on the willingness of individuals and institutions to embrace diversity and work towards creating an inclusive environment. By recognizing and celebrating the differences among us, we can build a more just and equitable society.

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**KANNADA ARTICLES**



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## ಪರಿಣಾಮಕಾರಿ ಭಾಷಾ ಬೋಧನೆಯಲ್ಲಿ ಶಿಕ್ಷಕರ ಪಾತ್ರ

ಡಾ. ರವಿ ಹೆಚ್, ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಕುಮದ್ವತಿ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ,

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### ಸಾರಾಂಶ :

ಮಗುವಿನಲ್ಲಿ ಸುಪ್ತವಾಗಿ ಅಡಗಿರುವ ಪ್ರತಿಭೆಯನ್ನು ಹೊರಸೆಳೆಯುವಂತೆ ಮಾಡುವುದೇ ಶಿಕ್ಷಣ – ಸ್ವಾಮಿ ವಿವೇಕಾನಂದ.

ಭಾವನೆಗಳ, ವಿಚಾರಗಳ, ಅಭಿಪ್ರಾಯ, ಆಲೋಚನೆಗಳ ಮೂಲವೇ ಭಾಷೆ. ಮಗು ಶಿಕ್ಷಣದಲ್ಲಿ ನಿಷ್ಕ್ರಿಯ ಕೇಳುಗನಾಗದೆ, ಬೋಧನೆ ಮತ್ತು ಕಲಿಕೆಯು ಸುಗಮ ಹಾಗೂ ಸುಲಲಿತವಾಗಿ ನೆರವೇರುವಲ್ಲಿ ಮಾಧ್ಯಮವಾಗುವ ಭಾಷೆ ಸಾಕಷ್ಟು ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ. ಮಗು ಅರಿವಿನ ಗ್ರಾಹಕರಾಗದೆ ಅರಿವಿನ ಉತ್ಪಾದಕರಾಗಲು ಸ್ವಕಲಿಕೆ, ಸೃಜನಾತ್ಮಕ ಅಭಿವ್ಯಕ್ತಿಯನ್ನು ಪ್ರೋತ್ಸಾಹಿಸಿ, ಶಿಶು ಕೇಂದ್ರಿತ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಬೋಧಿಸಲು, ಮಾರ್ಗದರ್ಶಕರಾಗಿರುವ, ಶಿಕ್ಷಕರು ಎರಡನೆ ಪೋಷಕನಾಗಿ, ಸ್ನೇಹಿತನಾಗಿ, ಅನುಕೂಲಕಾರನಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸಲು ಇರುವ ಪ್ರಮುಖ ಸಾಧನವೇ ಭಾಷೆ. ಶಿಕ್ಷಣದ ಮೂಲ ಧ್ಯೇಯಗಳನ್ನು ಮಕ್ಕಳಲ್ಲಿ ಈಡೇರಿಸುವಲ್ಲಿ ಭಾಷೆಯು ಒಂದು ವಾಹಕವೆಂಬಂತೆ ಕಾರ್ಯವೆಸಗುತ್ತದೆ. ಈ ಭಾಷೆಯನ್ನು ಕಲಿಸುವ ಜವಾಬ್ದಾರಿ ಕೇವಲ ಭಾಷಾ ಶಿಕ್ಷಕರಲ್ಲದೆ ಎಲ್ಲಾ ವಿಷಯಗಳನ್ನು ಬೋಧಿಸುವ ಶಿಕ್ಷಕರ ಗುರುತರ ಜವಾಬ್ದಾರಿಯೂ ಕೂಡ ಆಗಿದೆ. ಭಾಷಾ ಪ್ರಭುತ್ವದಿಂದ ವಿಷಯ ಕಲಿಕೆ ಸುಲಭವಾಗುತ್ತದೆ. ಪಠ್ಯವಸ್ತುವನ್ನು ವರ್ಗಾಯಿಸಿದರೆ ಸಾಲದು, ಮಗುವಿನ ಅನ್ವಯಕ್ಕೆ ಹೆಚ್ಚಿನ ಆದ್ಯತೆ ನೀಡಬೇಕು. ಇದಕ್ಕಾಗಿ ಬೋಧನೆಯಲ್ಲಿ ಬಳಸುವ ಭಾಷೆ ಹಾಗೂ ಭಾಷಾ ಪ್ರಭುತ್ವಗಳಿಸಲು ನೀಡುವ ಕಲಿಕಾನುಭವಗಳು, ಅಭ್ಯಾಸಗಳು, ಶಿಕ್ಷಣದ ಮೂಲ ಧ್ಯೇಯಗಳನ್ನು ಭವಿಷ್ಯದ ನಾಗರಿಕರಲ್ಲಿ ಅಳವಡಿಸಲು ನೆರವಾಗುತ್ತವೆ. ಅಲ್ಲದೆ ಭಾಷೆಯು ಮಗುವಿನ ವ್ಯಕ್ತಿತ್ವ ವಿಕಾಸದಲ್ಲಿ ಕೂಡ ಪ್ರಮುಖ ಪಾತ್ರವಹಿಸಿದೆ. ಹಾಗಾಗಿ ಶಿಕ್ಷಣದಲ್ಲಿ ಬಳಸುವ ಭಾಷೆಯು ಮಗುವಿನ ಭಾಷಾ ಸಾಮರ್ಥ್ಯವನ್ನು ಹೆಚ್ಚಿಸುವಂತಿರಬೇಕು. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಪ್ರಸ್ತುತ ಲೇಖನದ ಮೂಲಕ ಪರಿಣಾಮಕಾರಿ ಬೋಧನೆಯಲ್ಲಿ ಶಿಕ್ಷಕರ ಪಾತ್ರದ ಕುರಿತು ಕೆಲವು ಸೈದ್ಧಾಂತಿಕ ಮಾಹಿತಿಗಳು, ಕೆಲವು ನಿದರ್ಶನಗಳು ಮತ್ತು ಉದಾಹರಣೆಗಳೊಂದಿಗೆ ವಿವರಿಸುವ ಪ್ರಯತ್ನ ಮಾಡಲಾಗಿದೆ.

### ಪೀಠಿಕೆ :

ಮನುಷ್ಯನಿಗೆ ಪ್ರಕಾಶತೆಯ ಕಳಸವನ್ನು ಇಟ್ಟು, ಅದನ್ನು ತನ್ನ ಸುತ್ತಲೂ ಬೆಳಗುವಂತೆ ಮಾಡಿದ ಮಾಧ್ಯಮವೆಂದರೆ ಭಾಷೆ. ಕಾವ್ಯ ಮಿಮಾಂಸಕಾರ ದಂಡಿ ಹೇಳುವಂತೆ “ಭಾಷೆ ಎಂಬ ಜ್ಯೋತಿ ಬೆಳಗದಿದ್ದರೆ ಇಡೀ ಲೋಕವೇ ಗಾಢಾಂದಕಾರದಲ್ಲಿ ಮುಳುಗಿರುತ್ತಿತ್ತು.” ಈ ಹೇಳಿಕೆ ಭಾಷೆಯ ಮಹತ್ವವನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತದೆ.

ಎಡ್‌ಮನ್ ರವರು “ಭಾಷೆಯೆಂಬುದು ಒಂದು ರೀತಿಯ ಸಾಧನ, ಅದು ಮನುಷ್ಯನ ವಿಶಿಷ್ಟ ಆಲೋಚನೆಗಳಿಗೆ ನೆರವಾಗುವ ಅಂಗ” ಎಂದು ಬಣ್ಣಿಸಿದ್ದಾರೆ. ಅಲ್ಲದೆ ಬ್ರಿಟಾನಿಕ ವಿಶ್ವಕೋಶದಲ್ಲಿ “ಒಂದು ಸಮಾಜದ ವ್ಯಕ್ತಿಗಳು ತಮ್ಮ ಪರಸ್ಪರ ವ್ಯವಹಾರಕ್ಕಾಗಿ ಅಥವಾ ವಿಚಾರ ವಿನಿಮಯಕ್ಕಾಗಿ ಬಳಸುವ ಯಾದೃಚ್ಛಿಕ ಉಚ್ಚರಿತ ಧ್ವನಿ ಸಂಕೇತಗಳ ವ್ಯವಸ್ಥೆಯ ಸ್ವರೂಪವೇ ಭಾಷೆ” ಎಂಬ ಮಾತಿದೆ. ಅಲ್ಲದೆ

“ಪೃಥ್ವಿಯ ಮೇಲೆ ಮನುಷ್ಯನ ಎಲ್ಲಾ ಸಾಹಸ ಸಿದ್ಧಿಯನ್ನು ಸಾರುವ ವಿಜಯ ವೈ ಜಯಂತಿಯೇ ಭಾಷೆ” ಎನ್ನಲಾಗಿದೆ. ಅಂದರೆ ಭಾವನೆಗಳು, ವಿಚಾರಗಳು, ಅನಿಸಿಕೆಗಳು, ಆಲೋಚನೆಗಳನ್ನು ಮತ್ತೊಬ್ಬರಿಗೆ ಧ್ವನಿ ಸಂಕೇತಗಳ ಮೂಲಕ ಅಭಿವ್ಯಕ್ತಗೊಳಿಸುವ ಸಾಧನವೇ ಭಾಷೆ. ಭಾಷೆಯು ಸಂವಹನ, ಅಭಿವ್ಯಕ್ತಿ, ಮಾಹಿತಿ ಸಂಗ್ರಹ, ಸಾಮಾಜಿಕರಣ ಸಾಂಸ್ಕೃತಿಕರಣ, ವ್ಯವಹಾರಿಕ, ಆಡಳಿತ, ಬೋಧನೆ ಸಂಗ್ರಹ ಮಾಧ್ಯಮವಾಗಿ ಕಾರ್ಯವನ್ನು ನಿರ್ವಹಿಸುತ್ತದೆ. ಭಾಷೆ ಭಾವ ವಾಹಕವೂ, ಪ್ರಚೋದಕವೂ ಹೌದು. ವ್ಯಕ್ತಿಯ ವ್ಯಕ್ತಿತ್ವ ವಿಕಾಸದಲ್ಲಿ ಭಾಷೆ ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ.

“ಶಿಕ್ಷಣ - ಮಗುವಿನಲ್ಲಿ ಸೂಕ್ತವಾಗಿ ಅಡಗಿರುವ ಪ್ರತಿಭೆಗಳನ್ನು ಹೊರ ತೆಗೆದು ಚಾರಿತ್ರ್ಯವುಳ್ಳ ವ್ಯಕ್ತಿಗಳನ್ನಾಗಿಸುವುದೇ ಶಿಕ್ಷಣ” ಮಕ್ಕಳನ್ನು ಸಬಲಗೊಳಿಸಿ ಕಲಿಕಾರ್ಥಿಯು ಸಮಾಜದ ಪರಿವರ್ತನೆಯಲ್ಲಿ ಸಕ್ರಿಯವಾಗಿ ಭಾಗವಹಿಸುವಂತೆ ಮಾಡುವುದೇ ಶಿಕ್ಷಣ. ಬಹು ಸಂಸ್ಕೃತಿ ಮತ್ತು ವೈವಿಧ್ಯತೆಯುಳ್ಳ ವಿಶ್ವದಲ್ಲಿ ಸಹಬಾಳ್ವೆಯಿಂದ ಜೀವಿಸುವುದನ್ನು ಕಲಿಸಿ, ಕಲಿಕಾರ್ಥಿಗಳಲ್ಲಿ ಮೌಲ್ಯಗಳು, ನಡವಳಿಕೆಗಳು ಮತ್ತು ವರ್ತನೆಗಳನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವುದನ್ನು ಕಲಿಕೆಯು ಪ್ರಮುಖವಾಗಿ ಗಮನಹರಿಸಬೇಕು. ಎನ್ನಲಾಗಿದೆ.

“ಸಾಕ್ಷರತೆ ಶಿಕ್ಷಣವಲ್ಲ, ಮಗುವಿನಲ್ಲಿ ಸರ್ವತೋಮುಖ ಬೆಳವಣಿಗೆಯನ್ನುಂಟುಮಾಡುವುದೇ ಶಿಕ್ಷಣ” ಎಂದು -ಮಹಾತ್ಮ ಗಾಂಧೀಜಿ ಹೇಳಿದ್ದಾರೆ. ಅದರಂತೆ ಜ್ಞಾನಾರ್ಜನೆ, ಕೌಶಲಗಳ ಅಭಿವೃದ್ಧಿ ಅಪೇಕ್ಷಿತ ವರ್ತನೆಗಳ ಅಭ್ಯಾಸದಿಂದ ಉತ್ತಮ ಜೀವನ ನಡೆಸುವಂತೆ ತರಬೇತಿ ನೀಡುವುದೇ ಶಿಕ್ಷಣ. ಶಿಕ್ಷಣವು ಮನುಷ್ಯನನ್ನು ಸುಸಂಸ್ಕೃತ ಮತ್ತು ನಾಗರಿಕನನ್ನಾಗಿಸುತ್ತದೆ. ಅಜ್ಞಾನದ ಅಂದಕಾರದಿಂದ ಬಿಡುಗಡೆಗೊಳಿಸಿ ಸಾಕ್ಷಾತ್ಕಾರದಡೆಗೆ ತರುತ್ತದೆ. ಹೀಗಾಗಿಯೇ ಶಿಕ್ಷಣವು ಸಾಮಾಜಿಕ ಬದಲಾವಣೆಯ ಪ್ರಮುಖ ಅಸ್ತವಾಗಿದೆ. ಆದ್ದರಿಂದ ಶಿಕ್ಷಣವು ಮೂಲಭೂತ ಹಕ್ಕಾಗಿದ್ದು, ರಾಷ್ಟ್ರದ ಪ್ರತಿಯೊಂದು ಮಗುವಿಗೆ ಅದರ ಭಾಷೆ, ಜನಾಂಗ, ಸಂಸ್ಕೃತಿ, ಲಿಂಗ, ದೈಹಿಕ, ಸಾಮಾಜಿಕ, ಆರ್ಥಿಕ, ನೈತಿಕ, ಬೌದ್ಧಿಕ ಮತ್ತು ವರ್ಣ ಇತ್ಯಾದಿ ಪರಿಗಣಿಸದೆ ಎಲ್ಲರಿಗೂ ಶಿಕ್ಷಣವನ್ನು ನೀಡುವುದು ರಾಷ್ಟ್ರದ ಮತ್ತು ರಾಜ್ಯದ ಬಹುಮುಖ್ಯ ಕರ್ತವ್ಯವಾಗಿದೆ. ಈ ಸಾಂವಿಧಾನಿಕ ಜವಾಬ್ದಾರಿಯನ್ನು ಈಡೇರಿಸುವುದಕ್ಕಾಗಿ ಹಲವಾರು ನೀತಿಗಳು, ಕಾರ್ಯಕ್ರಮಗಳು ಮತ್ತು ತರಬೇತಿಗಳನ್ನು ಜಾರಿಗೆ ತಂದಿದ್ದರೂ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣದ ಸಾರ್ವತ್ರಿಕರಾದ ಮೂಲ ಧ್ಯೇಯ ಇನ್ನೂ ಈಡೇರಲಿಲ್ಲ ಎಂಬುದು ಶೋಚನೀಯ. ಇದಕ್ಕೆ ಪುಷ್ಟಿಯೆಂಬಂತೆ

- ಮಕ್ಕಳ ಕಲಿಕೆಯು ನಿರೀಕ್ಷಿತ ಮಟ್ಟಕ್ಕಿಂತ ಕೆಳಗಿರುವುದೇಕೆ?
- ಹಲವು ಮಕ್ಕಳು ಶಾಲೆಯನ್ನು ಪೂರ್ಣಗೊಳಿಸದೆ ಅನುತ್ತೀರ್ಣವಾಗುತ್ತಿರುವುದೇಕೆ?
- ಶಿಕ್ಷಣದ ಬಹುಮುಖ ಗುರಿಗಳು ಭವಿಷ್ಯದ ಪ್ರಜೆಗಳಲ್ಲಿ ಈಡೇರುತ್ತಿಲ್ಲವೆಕೆ?
- ಶಿಕ್ಷಣವು ಪರೀಕ್ಷೆಯಲ್ಲಿ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ ಅಂಕ ಪಡೆದು ವೃತ್ತಿ ಪಡೆದುಕೊಳ್ಳುವುದಕ್ಕೆ ಮಾತ್ರ ಸೀಮಿತವಾಗಿರುವುದೇಕೆ?
- ಉನ್ನತ ಶಿಕ್ಷಣ ಪಡೆದು ಪದವೀಧರರಾಗಿರುವವರಲ್ಲಿಯೂ ಜೀವನ ಕೌಶಲಗಳು ಸೂಕ್ತರೀತಿಯಲ್ಲಿ ಅಳವಡಿಕೆಯಾಗದೇ ಕೇವಲ ಪಠ್ಯದಲ್ಲಿ ಉಳಿದುಕೊಂಡಿರುವುದೇಕೆ?

ಇತ್ಯಾದಿ ಪ್ರಶ್ನೆಗಳು ಉದ್ಭವಿಸಿವೆ. ಈ ಪ್ರಶ್ನೆಗಳಿಗೆ ಹಲವು ಶಿಕ್ಷಣ ತಜ್ಞರು, ಸಂಶೋಧಕರ ವಾದವೆಂದರೆ - “ಶಾಲೆಯಲ್ಲಿ ಪಠ್ಯಕ್ರಮವನ್ನು ವರ್ಗಾಯಿಸುವಲ್ಲಿ ಬಳಸುವ ಭಾಷೆ ವೈವಿಧ್ಯತೆಯಲ್ಲಿ ಇರುತ್ತದೆ” ಎಂದಿರುವುದು ಗಮನಿಸಬೇಕಾದ ಅಂಶವಾಗಿದೆ. ಶಿಕ್ಷಣದ ಬಹು ವ್ಯಾಪ್ತಿ ಗುರಿಗಳನ್ನು



ಈಡೇರಿಸುವಲ್ಲಿ ಭಾಷೆಯು ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ. ಶೈಕ್ಷಣಿಕವಾಗಿ ಯಶಸ್ಸು ಮತ್ತು ಅಪಯಶಸ್ಸುಗಳಿಸಲು ಭಾಷೆ ಪ್ರಮುಖ ಕಾರಣವಾಗುತ್ತದೆ ಎಂಬುದು ಹಲವು ಸಂಶೋಧನೆಗಳಿಂದ ರುಜುವಾಗಿದೆ.

ಶಾಲಾ ಪಠ್ಯಕ್ರಮವನ್ನು ವರ್ಗಾಯಿಸುವ ಭಾಷೆಯು ಮಗುವು ಮನೆಯಲ್ಲಿ ಬಳಸದ ಭಾಷೆಯಾಗಿದೆ. ಹಾಗೂ ಶಾಲೆಯ ಹೊರತಾದ ಪರಿಸರದಲ್ಲಿ ಬಳಸದ ಭಾಷೆಯಾಗಿರುವುದು ಪ್ರಮುಖ ಋಣಾತ್ಮಕ ಪ್ರಭಾವವನ್ನು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮೇಲೆ ಬೀರಿದೆ. ಬೋಧನೆ ಮತ್ತು ಕಲಿಕೆಯಲ್ಲಿ ಬಳಸುವ ಭಾಷೆಯು ಪ್ರಮುಖ ಅಡೆತಡೆಯಾಗಿದೆ. ಭಾಷಾ ಅಡ್ಡಿಯನ್ನು ತಡೆಗಟ್ಟಿ ಮಗು ಶಿಕ್ಷಣದ ಮೂಲಕ ಅಭಿವೃದ್ಧಿ ಹೊಂದುವಂತಾಗಬೇಕೆಂದು ಹಲವು ಆಯೋಗಗಳು, ಸಂಶೋಧನಾ ವರದಿಗಳು ತಿಳಿಸಿವೆ.

ಮಗುವಿನ ಮನೆ ಅಥವಾ ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯ ಹೊರತಾಗಿ ಬೇರೊಂದು ಭಾಷೆ ಶಿಕ್ಷಣದ ಮಾಧ್ಯಮವಾಗಿದ್ದಾಗ ಮಗುವಿಗೆ ಕಲಿಕೆ ಹೊರೆಯಾಗಿಯೂ ಪರಿಣಮಿಸುತ್ತದೆ. ಸೃಜನಶೀಲತೆ ಮತ್ತು ಧಾರಾಳ ಸಂತಸ ಬಾಲ್ಯದ ಕಿಲಿಕ್ಕಿ. ಮಗುವಿನ ಮನೆ ಭಾಷೆಯನ್ನು ಗೌರವಿಸುವುದು ಎಲ್ಲರ ಕರ್ತವ್ಯ. ಕನಿಷ್ಠ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನಾದರೂ ಮಗುವಿನ ಮಾತೃಭಾಷೆಯಲ್ಲಿ ನೀಡುವುದು ಪ್ರತಿ ರಾಜ್ಯಗಳ ಆದ್ಯ ಕರ್ತವ್ಯ. (ಎನ್.ಸಿ.ಎಫ್-2005) ಆದರೆ ಕೆಲವು ಶಾಲೆಗಳಲ್ಲಿ ಇವುಗಳನ್ನು ಗಾಳಿಗೆ ತೂರಿದಂತಾಗಿದೆ.

ಕಲಿಕೆಯಲ್ಲಿ ಮಗುವು ಸಕ್ರಿಯವಾಗಿ ಭಾಗವಹಿಸಿ ತನ್ನ ಚಿಂತನೆಗಳು, ಅನುಭವಗಳು, ವಿಚಾರಗಳನ್ನು ಹೊರಹಾಕಿ ಜ್ಞಾನವನ್ನು ಸೃಷ್ಟಿಸಲು ಭಾಷೆಯು ಪ್ರಮುಖ ಮಾಧ್ಯಮ. ಬೋಧನೆಯ ಸಮಯದಲ್ಲಿ ಏರ್ಪಡುವ ಸಂವಹನ, ಸಂಭಾಷಣೆ, ಚರ್ಚೆ, ಟಿಪ್ಪಣಿ, ಪ್ರಶ್ನಿಸುವಿಕೆ, ವಿವರಣೆ, ಉದಾಹರಣೆ, ಸಲಹೆ, ಹಿಮ್ಮಾಹಿತಿ ಇತ್ಯಾದಿ ಎಲ್ಲಾ ಕಲಿಕಾ ಚಟುವಟಿಕೆಯಲ್ಲಿ ಮಗುವು ಸಕ್ರಿಯವಾಗಿ ಭಾಗವಹಿಸಲು ಭಾಷೆಯ ಸ್ವಾಮಿತ್ವ ಬೇಕು. ಮನೆಯ ಭಾಷೆಯ ಹೊರತಾಗಿ ವಿದೇಶಿ ಭಾಷೆಯಲ್ಲಿ ಮಗುವಿಗೆ ಆ ಮಟ್ಟದ ಸ್ವಾಮಿತ್ವ ಸಿದ್ಧಿಸಿರುವುದಿಲ್ಲ. ಹಾಗಾಗಿ ಮಗು ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿ ನಿಷ್ಕ್ರಿಯ ಕೇಳುಗನಾಗಿ, ನಿರಾಸಕ್ತನಾಗಿ ಬಾಯಿ ಪಾಠಕ್ಕೆ ಜೊತು ಬೀಳುತ್ತದೆ. ಅನಿವಾರ್ಯವಾಗಿ ಮಗುವಿನಲ್ಲಿ ಬಾಯಿ ಪಾಠವನ್ನು ಪ್ರೋತ್ಸಾಹಿಸುವಂತಾಗುತ್ತದೆ. ಇದರಿಂದ ಸೃಜನಶೀಲತೆ ಪ್ರತಿಭೆಗಳನ್ನು ನಿರ್ಲಕ್ಷಿಸಿದಂತಾಗಿ, ಕಲಿಯುವ ಅವಧಾನ ಕುಂಠಿತವಾಗಿ, ನಿಲುಗಡೆ, ಕಡಿಮೆ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ದಾರಿ ಮಾಡಿಕೊಟ್ಟಂತಾಗುತ್ತದೆ. ಶಿಕ್ಷಣದ ಅಮೂಲ್ಯ ಧೈಯಗಳು ಪಠ್ಯದಲ್ಲಿ ಉಳಿದು ಮಗುವಿನಲ್ಲಿ ಕೌಶಲ್ಯ, ವಿಕಾಸ ಅನ್ವಯಿಕ ಜ್ಞಾನಗಳು ಕಡಿಮೆಯಾಗುತ್ತಿವೆ.

ತಾಯ್ನುಡಿಯಿಂದ ಕಲಿತ ವಿದ್ಯೆ ನಿಜವಾದ ವಿದ್ಯೆ, ಪರರ ಎಂಜಲು ಯಾವಾಗಲೂ ಸವಿಯಲ್ಲ ಎಂದು ಗೋವಿಂದ ಪೈ ರವರು ಹೇಳಿರುವುದನ್ನು ಇಲ್ಲಿ ಸ್ಮರಿಸಬೇಕು. ಮಗುವಿನ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣ ಮನೆಯ ಭಾಷೆಯಲ್ಲಿ ಇರಬೇಕೆಂದು ವುಡ್ ವರದಿಯಾದಿಯಾಗಿ ಕೊಠಾರಿ ಆಯೋಗ, 1986ರ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ, ರಾಷ್ಟ್ರೀಯ ಪಠ್ಯಕ್ರಮ ಚೌಕಟ್ಟುಗಳೂ ಕೂಡ ಅಭಿಪ್ರಾಯ ಪಟ್ಟಿವೆ.

ಶಿಕ್ಷಣ ಮತ್ತು ಭಾಷೆಯ ನಡುವೆ ಅವಿನಾಭಾವ ಸಂಬಂಧವಿದೆ. “ಮಗು ಅರಿವಿನ ಗ್ರಾಹಕರಾಗದೆ ಅರಿವಿನ ಉತ್ಪಾದಕರಾಗಬೇಕು” ಜ್ಞಾನವನ್ನು ಅರ್ಥೈಸಿಕೊಳ್ಳದೆ ಜ್ಞಾನವನ್ನು ಸಂರಚನೆ ಮಾಡಬೇಕು. ವ್ಯಕ್ತಿತ್ವ, ವಿಕಾಸ, ಸರ್ವತೋಮುಖ ವಿಕಾಸ, ವಿಮರ್ಶಾತ್ಮಕ ಚಿಂತನೆ, ಪರಿಶೋಧಿಸುವಿಕೆ, ಅಭಿವ್ಯಕ್ತಿ, ಸೃಜನಶೀಲತೆ, ಸಮಸ್ಯಾ ಪರಿಹಾರ, ಸ್ವಅರಿವು, ಪರಿಣಾಮಕಾರಿ ಸಂವಹನ, ಕೌಶಲ್ಯಗಳ ಗಳಿಕೆ, ಸ್ವಕಲಿಕೆ, ಫಲಿತಫಲನ, ಸಾಮಾಜಿಕರಣ ಮುಂತಾದವುಗಳ ವೃದ್ಧಿಯಲ್ಲಿ ಭಾಷಾ ಪ್ರಭುತ್ವ ಅತ್ಯಗತ್ಯ”.

ಶಿಕ್ಷಣದ ವಿಶಾಲ ಧೈಯಗಳು ಭವಿಷ್ಯದ ನಾಗರಿಕರಲ್ಲಿ ಈಡೇರಲು ಭಾಷೆ ಅತ್ಯಗತ್ಯ. ಶಿಕ್ಷಣದಲ್ಲಿನ ಪಠ್ಯಕ್ರಮ ರಚನೆ, ಬೋಧನೆ, ಕಲಿಕೆ, ಮೌಲ್ಯಮಾಪನ, ಹಿಮ್ಮಾಹಿತಿಗಳಲ್ಲಿ ಭಾಷೆ ಮಾಧ್ಯಮವಾಗಿ ಪ್ರಮುಖ

ಪಾತ್ರ ನಿರ್ವಹಿಸುತ್ತದೆ. ಕಲಿಕೆಯು ಯಾವಾಗಲೂ ಸಾಮಾಜಿಕ -ಸಾಂಸ್ಕೃತಿಕ ಸಂದರ್ಭದಲ್ಲಿ ಉಂಟಾಗುತ್ತದೆ. ವ್ಯಕ್ತಿಯ ಮಾತಿನಲ್ಲಿ ಬರವಣಿಗೆಯಲ್ಲಿ ಸ್ಪಷ್ಟತೆ ಇದ್ದರೆ ಆಲೋಚನೆಯಲ್ಲಿ ಮತ್ತು ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿಯೂ ಸ್ಪಷ್ಟತೆ ಇರುತ್ತದೆ. ಅದಕ್ಕಾಗಿ ಭಾಷೆ ಮತ್ತು ಶಿಕ್ಷಣದ ಸಂಬಂಧವನ್ನು ಮೂರು ರೀತಿಯಲ್ಲಿ ವಿಭಾಗಿಸಿ ಅಭ್ಯಾಸಿಸಬಹುದಾಗಿದೆ.

1. ಭಾಷಾ ಕಲಿಕೆ
2. ಭಾಷೆಯ ಮೂಲಕ ಕಲಿಕೆ
3. ಭಾಷೆಯ ಬಗ್ಗೆ ಕಲಿಕೆ

**ಭಾಷಾ ಕಲಿಕೆ :**

ಭಾಷಾ ಶಾಸ್ತ್ರಜ್ಞರ ಪ್ರಕಾರ ಮಾನವನು ಹುಟ್ಟಿನಿಂದಲೇ ತನ್ನ ವಯಸ್ಸಿಗನುಗುಣವಾಗಿ ಭಾಷಾ ಕೌಶಲಗಳನ್ನು ಪಡೆದೇ ಹುಟ್ಟಿರುತ್ತಾನೆ. ಭಾಷಾರ್ಜನೆಯ ಸಾಧನವು ಮಗುವಿನಲ್ಲಿ ಭಾಷಾ ಕಲಿಕೆಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಸೂಕ್ತ ಮತ್ತು ಸಾಕಷ್ಟು ಶ್ರೀಮಂತ ಭಾಷಾ ಪರಿಸರವನ್ನು ಶಿಕ್ಷಣದಿಂದ ಅಭಿವೃದ್ಧಿಗೊಳಿಸಬೇಕು.

ಶೈಕ್ಷಣಿಕ ನೀತಿ ನಿರೂಪಕರು, ಪಠ್ಯವಸ್ತು ರಚನಾಕಾರರಿಂದ ಪೂರ್ವಯೋಜಿತ ಕಟ್ಟಿನಿಂದ ಜ್ಞಾನ ಕೌಶಲಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವರ್ಗಾವಣೆಯಾಗುತ್ತಿವೆ. ಬೋಧನೆ ಮೂಲಕ ಕಲಿಕಾರ್ಥಿಗೆ ವರ್ಗಾವಣೆಯಾಗಿ ಪರೀಕ್ಷೆಯಲ್ಲಿ ಉತ್ತರಪತ್ರಿಕೆಯ ಮೂಲಕ ಮತ್ತೆ ಶಿಕ್ಷಕರಿಗೆ ವರ್ಗಾವಣೆಯಾಗುತ್ತಿವೆ.

ಭಾಷಾ ಕಲಿಕೆಯು ಭಾಷೆಯ ಮೂಲಕ ಕಲಿಕೆಗಿಂತ ಭಿನ್ನವಾಗಿರಬೇಕು. ಭಾಷಾ ಕಲಿಕೆಯಲ್ಲಿ ಶಿಕ್ಷಕರು ಪಠ್ಯವಸ್ತುವಿಗೆ ಅವಲಂಬಿತರಾಗದೆ ಭಾಷಾ ಕೌಶಲಗಳ ಅಭಿವೃದ್ಧಿಗೆ ಗಮನ ಹರಿಸಬೇಕು. ಶಿಶು ಕೇಂದ್ರಿತ ವ್ಯವಸ್ಥೆಯನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿ ಮಗುವಿನ ಸಕ್ರಿಯ ಭಾಗವಹಿಸುವಿಕೆಗೆ ಅವಕಾಶ ಕಲ್ಪಿಸಬೇಕು. ಭಾಷಾ ಬೋಧನಾ ಸಾಮಾನ್ಯ ಉದ್ದೇಶಗಳಾದ ಶಬ್ದ ಭಂಡಾರ, ಸ್ಪಷ್ಟ ಉಚ್ಚಾರಣೆ, ವಾಕ್ಯಾರ್ಥ, ಸೃಜನಶೀಲ ಅಭಿವ್ಯಕ್ತಿ, ಹಾಡುಗಾರಿಕೆ, ಅಭಿನಯ, ರಸಸ್ವಾದನೆ, ಕಲ್ಪನಾ ಶಕ್ತಿ, ವಿಮರ್ಶಾತ್ಮಕ ಮನೋಭಾವ, ತಾರ್ಕಿಕ ಚಿಂತನೆ, ಜೀವನ ಮೌಲ್ಯಗಳು, ಸಾಹಿತ್ಯ ಅಭಿರುಚಿ, ಸಂಸ್ಕೃತಿ, ನಾಡು ನುಡಿಯ ಅಭಿಮಾನ ಮುಂತಾದವುಗಳನ್ನು ವೃದ್ಧಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಬೋಧನೆ ಸಾಗಬೇಕು.

ಬೋಧನೆಯಲ್ಲಿ ಹೆಚ್ಚಿನ ನಿಯಂತ್ರಣ ಮತ್ತು ಶಿಸ್ತಿಗೆ ಪ್ರಾಶಸ್ತ್ಯ ಕೊಡದೆ, ಭಾಷಾ ಬಳಕೆಗೆ ಅವಕಾಶ ಕಲ್ಪಿಸಬೇಕು. ವಿದ್ಯಾರ್ಥಿಗಳೇ ವಿಷಯ ವಸ್ತುವನ್ನು ಪರಿಶೋಧಿಸಲು ಸಹಾಯಕವಾಗುವಂತೆ ಕಲಿಕಾ ಅನುಭವಗಳನ್ನು ಸೃಷ್ಟಿಸಬೇಕು. ಚರ್ಚೆ, ಸಂಭಾಷಣೆ, ಸಂವಹನ, ಪಾತ್ರಾಭಿನಯ, ನಾಟಕಾಭಿನಯ, ಸಂದರ್ಶನ, ಪ್ರತಿಫಲನಾತ್ಮಕ ಚಿಂತನೆ, ವಿಮರ್ಶಾತ್ಮಕ ವಿಶ್ಲೇಷಣೆ, ಪ್ರಶೋತ್ತರ ಸಂಭಾಷಣೆ, ಗುಂಪು ಚಟುವಟಿಕೆ, ಸೃಜನಾತ್ಮಕ ಅಭಿವ್ಯಕ್ತಿ ಮುಂತಾದವುಗಳ ಮೂಲಕ ಬೋಧನೆಯಲ್ಲಿ ಮಗುವಿನ ಭಾಷಾ ಬಳಕೆಗೆ ಅನುವು ಮಾಡಿಕೊಡಬೇಕು. ಶಬ್ದ ಭಂಡಾರ, ಪದಗಳ ಸಂದರ್ಭಾನುಸಾರ ಬಳಕೆಯ ಬಗ್ಗೆ ನಿದರ್ಶನ ಸಹಿತ ಅರ್ಥೈಸಬೇಕು. ಪಠ್ಯ ವಸ್ತುವನ್ನು ಆಧಾರವಾಗಿಟ್ಟುಕೊಂಡು ಭಾಷಾ ಕೌಶಲಗಳ ಅಭಿವೃದ್ಧಿಗೆ ಪುಷ್ಟಿಕೊಡುವ ನಿಟ್ಟಿನಲ್ಲಿ ಸಾಹಿತ್ಯಾಭಿರುಚಿ, ಸೃಜನಾತ್ಮಕ ಅಭಿವ್ಯಕ್ತಿಗೆ ವೇದಿಕೆ ಕಲ್ಪಿಸಬೇಕು. ಹೆಚ್ಚಿನ ಮಾಹಿತಿ ಸಂಗ್ರಹಣೆಗೆ, ಆತ್ಮ ಸಂತೋಷದ ಓದಿಗೆ ಪ್ರೋತ್ಸಾಹ ನೀಡಬೇಕು. ಭಾಷಾ ಶಿಕ್ಷಕರು ಮಾದರಿಯಾಗಿ ಕಲಿಕಾರ್ಥಿಗೆ ಸ್ಪೂರ್ತಿಯಾಗಬೇಕು. ವಿವಿಧ, ನವ-ನವೀನ, ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನದ

ಕಲಿಕೋಪಕರಣಗಳನ್ನು ಬಳಸಿ, ವಿದ್ಯಾರ್ಥಿಗಳೇ ವಿಷಯ ವಸ್ತುವನ್ನು ಅರ್ಥೈಸುವಂತೆ ಪ್ರೇರೇಪಿಸಬೇಕು. ಕಲಿಕೆಯು ಹೊರೆ, ನಿಷ್ಕ್ರಿಯವಾಗದೆ ಅವಧಾನ ಕೇಂದ್ರೀಕರಿಸಿ ಸಂತಸದ ಪರಿಸರ ಸೃಷ್ಟಿಸಬೇಕು.

ಭಾಷಾ ಮೌಲ್ಯಮಾಪನವು ಸಾಧನಗೆ ಬೆಸೆದುಕೊಂಡಿರಬಾರದು. ಭಾಷಾ ಪ್ರಭುತ್ವವನ್ನು ಅಳೆದು ತಪ್ಪುಗಳನ್ನು ತಿದ್ದುವ ಮತ್ತು ಸರಿಪಡಿಸಿಕೊಳ್ಳುವಿಕೆಯ ಅವಕಾಶವನ್ನು ನೀಡಬೇಕು. ಯಾವ ಕೌಶಲದ ಗಳಿಕೆಯನ್ನು ಪರೀಕ್ಷಿಸುತ್ತಿದ್ದೇವೆಯೋ ಅದಕ್ಕೆ ಸೂಕ್ತವಾದ ಪರೀಕ್ಷಾಂಶಗಳನ್ನು ನಿರ್ದಿಷ್ಟಗೊಳಿಸಿಕೊಳ್ಳಬೇಕು. ಭಾಷಾ ಮೌಲ್ಯಮಾಪನ ಮತ್ತು ಕಲಿಕೆ ಜೊತೆ ಜೊತೆಯಾಗಿ ಸಾಗಬೇಕು. ಉತ್ತರಿಸಲು ಸ್ವಾತಂತ್ರ್ಯ, ಸ್ವತಂತ್ರ ಅಭಿವ್ಯಕ್ತಿಗೆ ಹೆಚ್ಚಿನ ಆದ್ಯತೆ ನೀಡುವುದು ಭಾಷಾ ಗಳಿಕೆಯ ದೃಷ್ಟಿಯಿಂದ ಪ್ರಮುಖವಾದದ್ದಾಗಿದೆ. ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷಾಂಶಗಳು ಪಠ್ಯ ವಸ್ತುವಿನ ವಿಷಯದ ಜೊತೆಗೆ ನಾಲ್ಕು ಭಾಷಾ ಕೌಶಲಗಳ (ಆಲಿಸುವುದು, ಮಾತನಾಡುವುದು, ಓದುವುದು ಮತ್ತು ಬರೆಯುವುದು) ಗಳಿಕೆಯನ್ನು ಪರೀಕ್ಷಿಸಲು ವೈವಿಧ್ಯತೆ ಇರುವಂತೆ ನೋಡಿಕೊಳ್ಳಬೇಕು.

ಭಾಷಾ ಬೋಧನೆಯಲ್ಲಿ ಜ್ಞಾನ, ಅರ್ಥಗ್ರಹಿಕೆ ಉದ್ದೇಶಗಳಿಗಿಂತ ಅಭಿವ್ಯಕ್ತಿ ಮತ್ತು ಪ್ರಶಂಸೆಗೆ ಹೆಚ್ಚಿನ ಮಾನ್ಯತೆ ನೀಡಬೇಕು. ಭಾಷಾ ಪಠ್ಯ ವಸ್ತುವಿನಲ್ಲಿರುವ ವಿಷಯ ವಸ್ತುಗಳು ಮಗುವಿನ ಸಂಸ್ಕೃತಿ, ಸಮಾಜ, ಜೀವನಾನುಭವಗಳಾಗಿರುವುದರಿಂದ ಹೆಚ್ಚಿನ ಶ್ರಮವಿಲ್ಲದೆ ಅರ್ಥಗ್ರಹಿಕೆ ಉಂಟಾಗುತ್ತದೆ. ಕಲಿಕಾರ್ಥಿಗಳಲ್ಲಿ ಸ್ವತಂತ್ರ ಆಲೋಚನೆ, ವೈಚಾರಿಕತೆ, ಕಲ್ಪನಾ ಶಕ್ತಿ, ಸೃಜನಾತ್ಮಕತೆಗಳನ್ನೊಳಗೊಂಡ ಉನ್ನತ ಆಲೋಚನೆ ಸಾಮರ್ಥ್ಯ, ಶುದ್ಧ, ಗ್ರಾಂಥಿಕ ಭಾಷಾ ಬಳಕೆಗೆ ಹೆಚ್ಚಿನ ಅವಕಾಶ ಒದಗಿಸಿ ಸ್ವತಂತ್ರ ಅಭಿವ್ಯಕ್ತಿಗೆ ಪ್ರೋತ್ಸಾಹ ನೀಡಬೇಕು.

**ಪ್ರಶಂಸೆ ;** ಭಾಷಾ ಬೋಧನೆಯಲ್ಲಿ ಪ್ರಶಂಸೆ ಪ್ರಮುಖವಾದದ್ದು. ಮೆಚ್ಚುಗೆ, ಗೌರವ, ಅಭಿಮಾನ ಹೊಂದುವುದೇ ಪ್ರಶಂಸೆ. ಭಾಷೆಯಲ್ಲಿರುವ ಆಕರಗಳು, ಸಂತೋಷ, ಸೌಂದರ್ಯ, ಹೊಸತನ, ಮೌಲ್ಯಗಳನ್ನು ಒಳಗೊಂಡಿರುತ್ತವೆ. ಈ ಎಲ್ಲಾ ಅಂಶಗಳನ್ನು ಮೆಚ್ಚಿಕೊಳ್ಳುವುದನ್ನು, ಆಸ್ವಾಧಿಸುವುದನ್ನು ಮಕ್ಕಳಲ್ಲಿ ಬೆಳೆಸಬೇಕು. ಮೆಚ್ಚುಗೆಯಾದ ವಿಷಯಗಳನ್ನು ಜೀವನದಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳುವುದಕ್ಕೆ, ಗೌರವಿಸುವುದಕ್ಕೆ, ಪ್ರೀತಿಸುವುದಕ್ಕೆ ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಪರಸ್ಪರ ಸಂಸ್ಕೃತಿ, ವ್ಯಕ್ತಿಗಳು, ರಾಷ್ಟ್ರ, ಭಾಷೆಗಳ ನಡುವೆ ಗೌರವ ಸೌಹಾರ್ದತೆಯ ಭಾವನೆ ಬೆಳೆಯುತ್ತದೆ. ಶಿಕ್ಷಕರು ಗಮನವಿಟ್ಟು ಈ ಉದ್ದೇಶವನ್ನು ಈಡೇರಿಸಲು ಸಾಧ್ಯವಾಗುವಂತೆ ಬೋಧನೆಯನ್ನು ಸೂಕ್ತ ರೀತಿಯಲ್ಲಿ ಯೋಜಿಸಬೇಕು.

ಭಾಷಾ ಶಿಕ್ಷಕರಲ್ಲಿ ಕಲ್ಪನಾಶೀಲತೆ, ನಾವಿನ್ಯತೆ, ಸಹೃದಯತೆ, ಸ್ವಚಿಂತನೆಗಳಿರಬೇಕು. ಬೋಧನೆಯಲ್ಲಿ ಉಪನ್ಯಾಸ ವಿಧಾನಕ್ಕೆ ಅಂಟಿಕೊಳ್ಳದೆ ನಾವಿನ್ಯಧಾರಿತ ವೈವಿಧ್ಯಮಯ ಬೋಧನಾ ವಿಧಾನ, ಉಪಕ್ರಮ ಮತ್ತು ವಿವಿಧ ಮಾದರಿಗಳ ಮೂಲಕ ಶಿಶುಕೇಂದ್ರಿತ ಬೋಧನೆಗೆ ಮುಂದಾಗಬೇಕು. ಭಾಷಾ ಸಂಘ, ಸಹಪಠ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ, ಭಾಷಾ ಗಳಿಕೆ ಮತ್ತು ಬಳಕೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಚಟುವಟಿಕೆಗಳನ್ನು ಆಯೋಜಿಸಬೇಕು, ಅಲ್ಲದೇ ಭಾಷಾ ಕಲಿಕೆಗೆ ಹೆಚ್ಚಿನ ಅಭ್ಯಾಸವನ್ನು ನೀಡಬೇಕು.

ಭಾಷಾ ಪಠ್ಯಪುಸ್ತಕದಲ್ಲಿನ ಸಾಹಿತ್ಯ, ಪದ್ಯ, ಗದ್ಯ, ನಾಟಕ ಮತ್ತು ವ್ಯಾಕರಣ ಬೋಧನೆಗಳನ್ನು ವಿಷಯಾನುಸಾರ ಸೂಕ್ತ ವಿಧಾನ, ತಂತ್ರ, ಕಲಿಕೋಪಕರಣಗಳನ್ನು ಬಳಸಿಕೊಂಡು ವಿವಿಧತೆಯಿಂದ ಕೂಡಿರುವಂತೆ ನೋಡಿಕೊಳ್ಳುವುದು ಭಾಷಾ ಶಿಕ್ಷಕನ ಆದ್ಯ ಕರ್ತವ್ಯ. ಭಾಷೆಯ ಶುದ್ಧ ಪ್ರಯೋಗದ ದೃಷ್ಟಿಯಿಂದ ವ್ಯಾಕರಣ ಬೋಧನೆಯನ್ನು ರಸವತ್ತಾಗಿಸುವುದು ಮತ್ತು ಹೆಚ್ಚು ಆಕರ್ಷಕ ಉದಾಹರಣೆಗಳನ್ನು ನೀಡುವುದು ಶಿಕ್ಷಕನ ಕೌಶಲವನ್ನು ಅವಲಂಬಿಸಿರುತ್ತದೆ.

### ಭಾಷೆಯ ಮೂಲಕ ಕಲಿಕೆ :

ಕಲಿಕೆ ಸಾಗುವುದೇ ಭಾಷೆಯ ಮೂಲಕ ವಿಷಯ ಪರಿಕಲ್ಪನೆ ಅರ್ಥೈಸಿಕೊಳ್ಳುವುದು. ಸಮಸ್ಯೆ ಪರಿಹಾರ, ಹೇಳಿಕೆ ವಿಸ್ತರಿಸುವುದು, ಚರ್ಚೆ, ಸಂಭಾಷಣೆ, ಅಂತರಜಾಲ ಮಾಹಿತಿ ಸಂಗ್ರಹಣೆ, ನಿಯೋಜಿತ ಕಾರ್ಯನಿರ್ವಹಣೆ, ಪ್ರಶೋತ್ತರ ಚಟುವಟಿಕೆ, ಓದುವುದು, ಬರೆಯುವುದು, ಪ್ರಸ್ತುತ ಪಡಿಸುವುದು, ಪ್ರತಿಫಲನ ಚಿಂತನೆ, ಆಲೋಚನೆಯಂತಹ ಅನೇಕ ಚಟುವಟಿಕೆಗಳಿಗೆ ಭಾಷೆಯೇ ಜೀವಾಳ. ಭಾಷೆಯ ಪ್ರಭುತ್ವವಿದ್ದಾಗ ಮಾತ್ರ ವಿಷಯ ಕಲಿಕೆ ಸರಾಗವಾಗುತ್ತದೆ. ವೇಗವಾಗಿ ಅರ್ಥಗ್ರಹಿಕೆ ಉಂಟಾಗುತ್ತದೆ. ಪ್ರಶ್ನೆಗಳಿಗೆ, ಗೊಂದಲಗಳಿಗೆ ಪರಿಹಾರ ಕಂಡುಕೊಳ್ಳಬಹುದು. ಬೋಧನೆಯಲ್ಲಿ ನೆರವೇರುವ ಈ ಚಟುವಟಿಕೆಯಲ್ಲಿ ಸಕ್ರಿಯವಾಗಿ ಭಾಗವಹಿಸಲು ಮಗುವಿಗೆ ಭಾಷೆಯ ಹಿಡಿತ ಅತಿ ಅವಶ್ಯಕವಿದೆ.

“ಕಲಿಕೆಯ ಸಾದನವಾಗಿ ಭಾಷೆ ಅರ್ಥೈಸಿಕೊಳ್ಳುವಲ್ಲಿ ಸಲಕರಣೆಯಾಗುತ್ತದೆ. ಮಕ್ಕಳು ತಮ್ಮ ಸಮಸ್ಯೆಯನ್ನು ಪರಿಹರಿಸಿಕೊಳ್ಳುವುದು ಮಾತಿನಿಂದ, ಭಾಷೆಯ ಬಳಕೆ ಮಾಡುವ ಸಾಮರ್ಥ್ಯದಿಂದ ಸಮಸ್ಯೆಗಳನ್ನು ಪರಿಹರಿಸಿಕೊಳ್ಳುವ ಸಾದನವಾಗುತ್ತದೆ. ವಿಶ್ವವನ್ನು ವ್ಯಕ್ತಿ ಏಕಾಂಗಿಯಾಗಿ ಅರ್ಥೈಸಿಕೊಳ್ಳಲು ಪ್ರಯತ್ನಿಸಲು ಭಾಷೆಯು ವಾಹಕವಾಗಿ ಕಾರ್ಯ ನಿರ್ವಹಿಸುತ್ತದೆ. ಕಲ್ಪನೆ ಮತ್ತು ಜ್ಞಾನಾರ್ಜನೆಯಲ್ಲಿ ಭಾಷೆ ಪ್ರಮುಖವಾಗಿದೆ. ಮುಂದುವರಿದು ಸಮವಯಸ್ಕರ ಸಂಭಾಷಣೆ ಮತ್ತು ಸಹಕಾರದಿಂದ ಜ್ಞಾನವು ರಚನೆಯಾಗುತ್ತದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಶಿಕ್ಷಕರು ಎಲ್ಲಾ ಕಲಿಕೆಯ ಸನ್ನಿವೇಶದಲ್ಲಿ ಸಹಭಾಗಿರಾಗಿ, ತರಬೇತುಗಾರರಾಗಿ ಕಾರ್ಯ ನಿರ್ವಹಿಸಬೇಕು. ಕಲಿಕಾರ್ಥಿಯ ಅರ್ಥಗ್ರಹಿಕೆಯನ್ನು ಹೆಚ್ಚಿಸಲು ತಳಪಾಯ ಅಥವಾ ವೇದಿಕೆಯನ್ನು ನಿರ್ಮಾಣ ಮಾಡಿಕೊಡಬೇಕು.” ಎಂದು ಭಾಷಾತಜ್ಞ ವಾಯ್‌ಗೋಟ್ಸ್ ಮನ್‌ನು ಹೇಳಿದ್ದಾರೆ.

ಶಾಲೆಯಲ್ಲಿ ಗ್ರಹಿಕೆಯನ್ನು ಖಾತರಿ ಪಡಿಸುವುದರ ಹೊರತಾಗಿ ಹೆಚ್ಚು ಸಮಯ ಮಾಹಿತಿಯನ್ನು ರವಾನಿಸುವುದೇ ಆಗಿದೆ. ಸಂವಹನಕ್ಕೆ ಮಾತುಗಾರಿಕೆಯನ್ನು ಪ್ರೋತ್ಸಾಹಿಸಲು, ಪರಿಶೋಧನೆ, ತಾತ್ಕಾಲಿಕ ಚಿಂತನೆ, ನಿಯೋಜಿತ ಕಾರ್ಯಗಳಲ್ಲಿ ಚರ್ಚಿಸುವುದು. ಮತ್ತು ಗೊಂದಲಗಳನ್ನು ಪರಿಹರಿಸುವುದಕ್ಕೆ ಶಿಕ್ಷಕರು ತರಗತಿಯಲ್ಲಿ ಮಾತನಾಡುವುದನ್ನು ಪ್ರೋತ್ಸಾಹಿಸುವುದರ ಅವಶ್ಯಕತೆ ಇದೆ. ಅದಕ್ಕೆ ಪೂರಕವಾಗಿ ಭಾಷೆಯನ್ನು ಕಲಿಸುವುದು ಪ್ರತಿಯೊಬ್ಬ ಶಿಕ್ಷಕರ ಜವಾಬ್ದಾರಿಯಾಗಿದೆ ಎಂದು ಎನ್.ಸಿ.ಎಫ್ -2005 ರಲ್ಲಿ ಹೇಳಲಾಗಿದೆ.

ಭಾಷೆಯನ್ನು ವಿಷಯವಾಗಿ ಕಲಿಯುವುದಕ್ಕೂ, ಮಾಧ್ಯಮವಾಗಿ ಕಲಿಯುವುದಕ್ಕೂ ಬಹಳಷ್ಟು ಅಂತರವಿದೆ. ದಿನನಿತ್ಯ ಜೀವನದಲ್ಲಿ ಸ್ಥಳೀಯ ಸಮುದಾಯಗಳು ಬಳಸುವ ಭಾಷೆಯು ಬಾಲವಿಹಾರ ಮತ್ತು ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣ ಬೋಧನಾ ಮಾಧ್ಯಮವಾಗಿರಬೇಕು. ಸಾಕ್ಷರತೆ ಹಾಗೂ ಗರಿಷ್ಠ ತಿಳುವಳಿಕೆಗಾಗಿ ಈ ಕೆಳಗಿನ ಅಂಶಗಳನ್ನು ಅನುಸರಿಸಿದರೆ ಒಳಿತೆನಿಸುತ್ತದೆ.

- ಪರಿಚಿತ ಭಾಷೆಯಲ್ಲಿ ಓದುವುದು ಮತ್ತು ಬರೆಯುವುದನ್ನು ಕಲಿಸುವುದು.
- ಸಂಜ್ಞಾನಾತ್ಮಕ ವಿಕಾಸದೊಂದಿಗೆ ಮಗುವಿನ ಮಾತೃಭಾಷೆಯೂ ಕೂಡಾ ವಿಕಾಸವಾಗುವಂತೆ ಮಾಡುವುದು.
- ಮಗುವಿನ ಭಾಷೆ ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಹಿನ್ನೆಲೆಯನ್ನು ಅರ್ಥೈಸುವುದು. ಮುಂತಾದವು.

ಬೋಧನೆಯು ಪರಿಣಾಮಕಾರಿಯಾಗಿದ್ದರೆ ಕಲಿಕೆಯು ಕೂಡ ಪರಿಣಾಮಕಾರಿಯಾಗುತ್ತದೆ. ಬೋಧನೆಯಲ್ಲಿ ಬಳಸುವ ಭಾಷೆ ಕಲಿಕೆಯ ಮೇಲೆ ಹಿಚ್ಚಿನ ಪ್ರಭಾವವನ್ನು ಬೀರುತ್ತದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಶಿಕ್ಷಕರು ಬೋಧನೆಯಲ್ಲಿ ಮೂರು ರೀತಿಯ ಭಾಷೆಯನ್ನು ಬಳಸಬಹುದಾಗಿದೆ.

**1. ಮೌಖಿಕ ಭಾಷೆ :** ಸರಳ, ಸ್ಪಷ್ಟ ಉಚ್ಚಾರಣೆ, ನಿರರ್ಗಳತೆ, ನಿರಂತರತೆ, ಸೂಕ್ತ ಪದಗಳ ಬಳಕೆ, ಧ್ವನಿಯ ಎರಿಳಿತ, ವೇಗ, ಸೂಕ್ತ ನಿಲುಗಡೆ, ಸಂಭಾಷಣೆಯ ಬದಲಾವಣೆ ಮುಂತಾದವುಗಳನ್ನು ಸಂದರ್ಭೋಚಿತವಾಗಿ ಬಳಸಿ ಮಗುವಿನಲ್ಲಿ ಕಲಿಕೆ ಉಂಟಾಗಲು ಸಹಾಯಕವಾಗುವಂತೆ ಯೋಜಿಸಬೇಕು.

**2. ಶಾರೀರಿಕ ಭಾಷೆ :** ಹಾವಾಭಾವ, ಚಲನೆ, ನಿಲುವು, ದೃಷ್ಟಿ ಸಂವಹನ, ಆಂಗಿಕ ಚಲನೆಯಂತಹವುಗಳನ್ನು ವಿಷಯದ ಅರ್ಥಗ್ರಹಿಕೆಗೆ ಬೋಧನೆಯಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಅವಧಾನ ಕೇಂದ್ರೀಕರಿಸಲು, ತರಗತಿ ನಿಯಂತ್ರಣಕ್ಕೆ ಮತ್ತು ಕಲಿಕೆಯಡಕ್ಕೆ ಆಸಕ್ತಿ ಹೊಂದಲು ಸಹಾಯಕವಾಗಿದೆ. ಆ ಮೂಲಕ ಶಾರೀರಿಕ ಭಾಷೆಯು ಬೋಧನೆಯಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ.

**3. ಲಿಖಿತ ಭಾಷೆ :** ಕೈ ಬರವಣಿಗೆ ಸ್ಪಷ್ಟವಾಗಿರಬೇಕು. ಅಕ್ಷರಗಳ ಗಾತ್ರ, ಆಕಾರ, ಅಂತರ, ನೇರವಾಗಿ ಬರೆಯುವುದು, ವಿವಿಧ ಬಣ್ಣಗಳ ಬಳಕೆ ಮಾಡುವುದು, ಕಪ್ಪು ಹಲಗೆಯಲ್ಲಿನ ವಿಷಯಾಂಶಗಳು, ಚಿತ್ರಗಳು, ಅಂಕಿ ಸಂಖ್ಯೆಗಳು ಮತ್ತು ನಕ್ಷೆಗಳನ್ನು ಸ್ಪಷ್ಟವಾಗಿ ರಚಿಸಬೇಕು. ಈ ಎಲ್ಲಾ ರೀತಿಯ ಭಾಷೆಗಳನ್ನು ಅನುಸರಿಸುತ್ತಾ, ತರಗತಿಯಲ್ಲಿ ಮಕ್ಕಳಿಗೆ ಉತ್ತಮ ಅವಕಾಶ ನೀಡುವ ಮೂಲಕ ಭಾಷೆಯನ್ನು ಸರಳವಾಗಿ ಕಲಿಸಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

**ಉಪಸಂಹಾರ :**

ಒಟ್ಟಾರೆಯಾಗಿ ಶಿಕ್ಷಣದಲ್ಲಿ ಭಾಷೆಯು ಪ್ರಮುಖವಾದ ಪಾತ್ರ ನಿರ್ವಹಿಸುತ್ತದೆ. ಮಗುವಿಗೆ ಈಗಾಗಲೇ ತಿಳಿದಿರುವ ಭಾಷೆಯಲ್ಲಿ ಶಿಕ್ಷಣ ನೀಡಿದಾಗ ಕಲಿಕೆಯು ಸ್ಪಷ್ಟ, ಸರಾಗ, ಹಾಗೂ ಸುಲಲಿತವಾಗಿ ಸಾಗುತ್ತದೆ. ಗ್ರಾಮೀಣ ಪ್ರದೇಶದಲ್ಲಿ ವಾಸಿಸುವ ಜನರು ವಿದೇಶಿ ಅಥವಾ ರಾಷ್ಟ್ರಭಾಷೆಗೆ ಅಷ್ಟು ಒಗ್ಗಿಕೊಂಡಿರುವುದಿಲ್ಲ. ಬಾಲ್ಯವು ಭಾಷಾ ವಿಕಾಸದಲ್ಲಿ ಪ್ರಮುಖವಾದ ಹಂತ. ಮಗುವಿಗೆ ಬಹುಭಾಷೆಯನ್ನು ಕಲಿಯುವ ಸಾಮರ್ಥ್ಯವಿದೆ ಎಂದು ಸಂಶೋಧನೆಗಳಲ್ಲಿ ಪ್ರತಿಪಾದಿಸಲ್ಪಟ್ಟರೂ ಕಲಿಕಾ ಪರಿಸರದಲ್ಲಿ ಅದನ್ನು ಕಲಿಯಲು ಹೆಚ್ಚು ಸಮಯ ಬೇಕಾಗುತ್ತದೆ. ಆದ್ದರಿಂದ ಮಾತೃಭಾಷೆಯ ಶಿಕ್ಷಣ ಮಾಧ್ಯಮವಿದ್ದಾಗ ಕಲಿಕೆ ಸುಲಭ ಮತ್ತು ಸುಲಲಿತವಾಗುತ್ತದೆ. ಕಲಿಕೆ ಪರಿಣಾಮಕಾರಿಯಾಗುವುದು ಕೇವಲ ಗೊತ್ತಿರುವ ಭಾಷೆಯಲ್ಲಿ ಮಾತ್ರ. ಅಲ್ಲದೆ ಶಿಕ್ಷಕ, ಶಾಲಾ ಪರಿಸರ, ಕಲಿಕೋಪಕರಣಗಳು, ಸುರಕ್ಷಿತ ವಾತಾವರಣ ಮುಂತಾದವುಗಳೂ ಕೂಡ ಕಲಿಕೆಯನ್ನು ಅವಲಂಬಿಸಿವೆ. ಶಿಕ್ಷಣದ ಅಮೂಲ್ಯ ಧೈಯಗಳ ಈಡೇರಿಕೆಗಾಗಿ ಮಗುವಿನ ಸರ್ವತೋಮುಖ ಬೆಳವಣಿಗೆಯಾಗಿ ಸಮಾಜಕ್ಕೆ, ರಾಷ್ಟ್ರಕ್ಕೆ, ಕೊಡುಗೆಯಾಗಲು ಶಿಕ್ಷಣದಲ್ಲಿ ಬಳಸುವ ಭಾಷೆ ಪ್ರಮುಖ ಪಾತ್ರವಹಿಸುತ್ತದೆ. ಮಹಾತ್ಮ ಗಾಂಧೀಜಿಯವರು ಈ ಮುಂಚೆಯೇ ಅಭಿಪ್ರಾಯ ಪಟ್ಟಿರುವಂತೆ “ಸಮಾಜದ ಕನಸು ನನಸಾಗಲು ಮಾತೃಭಾಷೆ ಮತ್ತು ಶ್ರಮ ಆಧಾರಿತ ಶಿಕ್ಷಣ ಅತಿ ಅಗತ್ಯ” ಎಂಬುದು ಸರ್ವವಿಧಿತವಾಗಿದೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ನೀತಿ ನಿರೂಪಕರು, ಶಿಕ್ಷಣ ತಜ್ಞರು, ಶಿಕ್ಷಕರು, ಪೋಷಕರು, ವಿದ್ಯಾರ್ಥಿಗಳು ಸಹಕಾರಯುತವಾಗಿ ಒಗ್ಗೂಡಿ ಚರ್ಚಿಸಿ ಉತ್ತಮ ತೀರ್ಮಾನದೊಂದಿಗೆ ಶಿಕ್ಷಣವನ್ನು ಪ್ರಬಲ ಅಸ್ತವಾಗಿಸಿಕೊಂಡು ಸುಶಿಕ್ಷಿತ ಸಮಾಜದ ನಿರ್ಮಾಣ ಮಾಡಬೇಕಾದ ಅನಿವಾರ್ಯತೆ ಇದೆ.



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## ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿನ ಶಿಕ್ಷಣ ವಿಧಾನ ಮತ್ತು ನಾವೀನ್ಯತೆ – ಒಂದು ಅನ್ವೇಷಣಾತ್ಮಕ ಅಧ್ಯಯನ

ಕೋಟೋಜಿರಾವ್ ಆರ್. ಸಂಶೋಧನಾರ್ಥಿ, ಶಿಕ್ಷಣ ವಿಭಾಗ, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಂಕರಘಟ್ಟ,  
ಡಾ. ಎಸ್.ಎಸ್.ಪಾಟೀಲ್, ಪ್ರಾಧ್ಯಾಪಕರು, ಶಿಕ್ಷಣ ವಿಭಾಗ, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಂಕರಘಟ್ಟ.

### ಲೇಖನ ಸಾರ ಸಂಗ್ರಹ

ಈ ಅಧ್ಯಯನ ಉದ್ದೇಶವು ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕಿನ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತು ಅನ್ವೇಷಣಾತ್ಮಕ ಅಧ್ಯಯನ ಮಾಡುವುದಾಗಿದ್ದು (ಕ್ರಿ.ಶ.450 ರಿಂದ ಕ್ರಿ.ಶ.1565 ವರೆಗೆ), ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಒಂದು ಭಾಗವಾದ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿನ ಶಿಕ್ಷಣವಿಧಾನ ಮತ್ತು ನಾವೀನ್ಯತೆಯ ಕುರಿತು ಸಂಶೋಧನೆಯನ್ನು ಕೈಗೊಳ್ಳಲಾಗಿದೆ. ಪ್ರಾಚೀನ ಭಾರತದ ಶಿಕ್ಷಣ ಪದ್ಧತಿ ಆಧುನಿಕ ಜಗತ್ತಿಗೂ ಮೀರಿದಿತ್ತು. ವಿಶ್ವವೇ ಅಚ್ಚರಿಪಡುವಂತಹ ಶ್ರೇಷ್ಠಮಟ್ಟದ ಪರಂಪರೆಯನ್ನು ಹೊಂದಿತ್ತು. ಪ್ರಾಚೀನ ಭಾರತದಲ್ಲಿ ಅದರಲ್ಲೂ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶಗಳಲ್ಲಿದ್ದ ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಉತ್ಕೃಷ್ಟವಾದ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆ ಇತ್ತು. ನಮ್ಮ ಪ್ರಾಚೀನ ಶಿಕ್ಷಣದ ಮೌಲ್ಯಗಳು, ಶಿಕ್ಷಣ ವಿಧಾನ ಮತ್ತು ನಾವೀನ್ಯತೆಗಳು ಪ್ರಸ್ತುತ ಶಿಕ್ಷಣಕ್ಕೆ ಮಾದರಿಯಾಗಿದೆ.

ನಮ್ಮ ಪ್ರಾಚೀನ ಭಾರತದ ವಿಶ್ವಪ್ರಸಿದ್ಧ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳಾದ ನಳಂದ, ತಕ್ಷಶಿಲಾ, ವಿಕ್ರಮಶಿಲಾ, ವಲ್ಲಭಿ, ತೆಲ್ಲೂರ, ಶಾರದಾ, ಪುಷ್ಪಗಿರಿ, ಸೋಮಪುರ, ರತ್ನಗಿರಿ, ಜಗದ್ವಾಳ, ಓದಂತಪುರಿ, ನಾಗಾರ್ಜುನ ಇತ್ಯಾದಿ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ವಿಧಾನ ಮತ್ತು ನಾವೀನ್ಯತೆ ಉನ್ನತ ಗುಣಮಟ್ಟವನ್ನು ಹೊಂದಿ ಪ್ರಪಂಚದಾದ್ಯಂತದ ಅತ್ಯಂತ ಶ್ರೇಷ್ಠ ವಿದ್ವಾಂಸರನ್ನು ಆಕರ್ಷಿಸಿದ್ದವು.

ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕಿನ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರವಾದ ತಾಳಗುಂದವು ವಿದ್ಯಾಕೇಂದ್ರದ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ, ಶಿಕ್ಷಣ ವಿಧಾನ ಮತ್ತು ನಾವೀನ್ಯತೆ, ಶೈಕ್ಷಣಿಕ ಪ್ರಕ್ರಿಯೆ ಹಾಗೂ ಸಾಂಸ್ಕೃತಿಕ ವಿನ್ಯಾಸಗಳಲ್ಲಿ ಹೊಸತನವನ್ನು ರೂಢಿಸಿಕೊಂಡಿತ್ತು. ಅಲ್ಲಿನ ಬೋಧನಾ ವಿಧಾನ, ಪಠ್ಯಕ್ರಮ, ಕಲಿಕೆಯ ವಿಧಾನಗಳು, ಶೈಕ್ಷಣಿಕ ಗುಣಮಟ್ಟದ ಉನ್ನತೀಕರಣ, ಹೊಸಹೊಸ ನಾವೀನ್ಯತೆ ಹಾಗೂ ನಿರ್ವಹಣೆಯ ಪ್ರಭುತ್ವ ಇವೆಲ್ಲವೂ ನಮ್ಮ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯ ಭಾಗಗಳಾಗಿದ್ದವು. ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯ ಮೂಲಭೂತ ಅಂಶಗಳು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮುಂದುವರಿಯೇ ಆಗಿದ್ದು ಈ ಅಧ್ಯಯನವು ಭವಿಷ್ಯದ ದಿನಗಳಿಗೆ ಮಹತ್ವಪೂರ್ಣವಾದ ದಾಖಲೆಯಾಗಲಿದ್ದು, ಭವಿಷ್ಯತ್ತಿನ ಶೈಕ್ಷಣಿಕ ವಿಚಾರಧಾರೆಗಳನ್ನು ರೂಪಿಸುವಿಕೆಯಲ್ಲಿ ಮಹತ್ವದ ದಿಕ್ಕೂಚಿಯಾಗಲಿದೆ.

ಕೀನೋಟ್: ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ, ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರ, ತಾಳಗುಂದ, ಶಿಕ್ಷಣ ವಿಧಾನಗಳು ಮತ್ತು ನಾವೀನ್ಯತೆ.

### ಪ್ರಸ್ತಾವನೆ :

ಭಾರತದ ಪ್ರಾಚೀನ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು ಉನ್ನತ ಶಿಕ್ಷಣ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ವಿನಿಮಯ ಕೇಂದ್ರಗಳಾಗಿದ್ದು, ಅವುಗಳ ಪರಂಪರೆ ನಿಜವಾಗಿಯೂ ಶ್ಲಾಘನೀಯವಾಗಿದೆ. ಈ ವಿದ್ಯಾಕೇಂದ್ರಗಳು ಜ್ಞಾನ ಮತ್ತು ಬುದ್ಧಿವಂತಿಕೆಯನ್ನು ಹುಡುಕುವ ಅದರ ಅಂತ್ಯವಿಲ್ಲದ ಚಾಲನೆಯಾಗಿದೆ. ಸತ್ಯಗಳನ್ನು ತಲುಪಲು ಪ್ರಶ್ನಿಸುವ ಮತ್ತು ಚರ್ಚೆ ಮಾಡುವ ಅವುಗಳ ಸಾಮರ್ಥ್ಯವು ಅತ್ಯುನ್ನತವಾಗಿದೆ. ವಿಶ್ವದ ಅತ್ಯಂತ ಹಳೆಯ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳಿಗೆ ನೆಲೆಯಾಗಿರುವ ಪ್ರಾಚೀನ ಭಾರತದಲ್ಲಿ ಕಲೆ ಮತ್ತು ಕಲಿಕೆಯ ಸುಸ್ಥಾಪಿತ ಸಂಸ್ಥೆಗಳಿದ್ದವು ಎಂಬುದು ಹೆಮ್ಮೆಯ ಸಂಗತಿ. ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಎಲ್ಲ ಫಲಿತಗಳಿಗೆ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಪರಿಕಲ್ಪನೆಗಳೇ ಮೂಲಾಧಾರವೆಂಬುದು ಅಚ್ಚರಿಯ ಹಾಗೂ ಅಧ್ಯಯನದ ವಸ್ತುವಾಗಿದೆ. ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯ ಮೂಲಭೂತ ಅಂಶಗಳು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಗೆ ದಿಕ್ಕೂಚಿಯಾಗಿದೆ.

ನಮ್ಮ ಪ್ರಾಚೀನ ಭಾರತದ ವಿಶ್ವಪ್ರಸಿದ್ಧ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳಾದ ನಳಂದ, ತಕ್ಷಶಿಲಾ, ವಿಕ್ರಮಶಿಲಾ, ವಲ್ಲಭಿ, ತೆಲ್ಲೂರ, ಶಾರದಾ, ಪುಷ್ಪಗಿರಿ, ಸೋಮಪುರ, ರತ್ನಗಿರಿ, ಜಗದ್ವಾಳ, ಓದಂತಪುರಿ, ನಾಗಾರ್ಜುನ ಇತ್ಯಾದಿ ವಿದ್ಯಾಲಯದ ಶಿಕ್ಷಣ

ಪದ್ಧತಿ ಆಧುನಿಕ ಜಗತ್ತಿಗೂ ಮೀರಿದಿತ್ತು. ಜಗತ್ತಿನ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ತನ್ನೆಡೆಗೆ ಆಕರ್ಷಿಸಿದ್ದವು. ಅವುಗಳಂತೆಯೇ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ವಿದ್ಯಾಕೇಂದ್ರದಲೊಂದಾದ ತಾಳಗುಂದ ವಿದ್ಯಾಕೇಂದ್ರವು ಶಿಕ್ಷಣ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ವಿನಿಮಯ ಕೇಂದ್ರವಾಗಿದ್ದು, ಉನ್ನತ ಮಟ್ಟದ ಜ್ಞಾನ ವಿಕಾಸದ ವಿದ್ಯಾಲಯವಾಗಿ ಕಂಡುಬರುತ್ತದೆ. ಸದಾ ಸುಶಿಕ್ಷಿತ ಜ್ಞಾನವಲಯವನ್ನು ರಚಿಸಿ, ವೇದ, ಕಾವ್ಯ, ನಾಟಕ, ವ್ಯಾಕರಣ, ವೀಮಾಂಸೆ ಹಾಗೂ ವಿವಿಧ ಪ್ರಾಯೋಗಿಕ ವಿಷಯಗಳು ಅಂದಿನ ಶಿಕ್ಷಣದ ಪಠ್ಯಕ್ರಮಗಳಾಗಿದ್ದವು ಎಂಬುದರ ಮೂಲಕ ಈ ತಾಳಗುಂದದ ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರದ ಶ್ರೇಷ್ಠತೆಯನ್ನು ಮನಗಾಣಬಹುದಾಗಿದೆ.

“ಆಧುನಿಕ ಶಿಕ್ಷಣದೊಂದಿಗೆ ಪ್ರಾಚೀನ ಜ್ಞಾನದ ಮನಸ್ಸುಗಳನ್ನು ಸಂಯೋಜಿಸಬೇಕು” ಎಂದು ಆಧ್ಯಾತ್ಮಿಕ ನಾಯಕ ದಲೈಲಾಮಾರವರ ಅಭಿಮತದಂತೆ ಪ್ರಾಚೀನ ಶಿಕ್ಷಣದ ಮೌಲ್ಯಗಳನ್ನು ಸಮಕಾಲೀನ ಶಿಕ್ಷಣದೊಂದಿಗೆ ಸಂಯೋಜಿಸುವ ಕರ್ತವ್ಯ ಇಮ್ಮದಾಗಿದೆ. ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿ ಮಾನವೀಯತೆಯ ಕಲಿಕೆ, ಸಜ್ಜಾರಿತ್ವದ ಬೆಳವಣಿಗೆ, ದೈಹಿಕ, ಮಾನಸಿಕ ಹಾಗೂ ಆಧ್ಯಾತ್ಮಿಕ ಪ್ರಗತಿಗೆ ಇಂಬು ಕೊಡುವ ಶಿಕ್ಷಣ ರೂಪಗೊಂಡಿತ್ತು. ಬದಲಾಗುತ್ತಿರುವ ಸಮಾಜದಲ್ಲಿನ ಸವಾಲುಗಳಿಗೆ ಸ್ಪಂದಿಸುತ್ತ ಉತ್ಕೃಷ್ಟ ಗುಣಮಟ್ಟದ ಕಡೆಗೆ ಅಂದಿನ ಶಿಕ್ಷಣ ಸಾಗುತ್ತಿದೆ. ಇಂದಿನ ಜ್ಞಾನವೆಂಬ ಬೆಳಕನ್ನು ಹೊರ ಜಗತ್ತಿಗೆ ತೋರುವ ಕೆಲಸ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣದ ಮೂಲಕ ಸಾಗಬೇಕಿದೆ. ಶ್ರೇಷ್ಠ ಶಿಕ್ಷಣದ ಮೂಲಕ ಯೋಗ್ಯ ಸಮಾಜ ನಿರ್ಮಾಣವಾಗಬೇಕೆಂಬುದು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ವಿದ್ಯಾಕೇಂದ್ರಗಳ ಆಶಯವಾಗಿತ್ತು.

ವಿದ್ಯೆ, ಸಂಸ್ಕೃತಿ, ಸಾಹಿತ್ಯ, ಆಚಾರ, ವಿಚಾರಗಳು ಶಿಕ್ಷಣದ ಪಂಚೇಂದ್ರಿಯಗಳಿದ್ದಂತೆ. ಇವು ನಾಡಿನ ಸಂವರ್ಧನೆಯ ಪ್ರೇರಕಗಳಾಗಿದ್ದು, ಶಿಕ್ಷಣ ಸದೃಢ ಮಾನವ ಶಕ್ತಿಯನ್ನು ಸೃಷ್ಟಿಸುವಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರವಹಿಸುತ್ತದೆ. ಪ್ರಸ್ತುತ ಭಾರತದಲ್ಲಿ ಮೌಲ್ಯಾಧಾರಿತ ಶಿಕ್ಷಣ ಕಳೆಗುಂದುತ್ತಿದೆ. ಶಿಕ್ಷಣದ ಗುಣಮಟ್ಟ, ಇಂದು ಕಡಿಮೆಯಾಗುತ್ತಿವೆ. ಇಂದಿನ ಶಿಕ್ಷಣ ಆನ್ಲೈನ್ ಶಿಕ್ಷಣ, ದೂರಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ ಪ್ರಚಲಿತವಾಗಿ ಶಿಕ್ಷಣ ಅರ್ಥಕಳೆದುಕೊಳ್ಳುತ್ತಿದೆ. ಇಂದಿನ ಆಧುನಿಕ ಸ್ಪರ್ಧಾತ್ಮಕ ಯುಗದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮನ್ನು ತಾವು ಸದಾ ಸ್ಪರ್ಧೆಗೆ ಸಿದ್ಧಗೊಳಿಸಿಕೊಳ್ಳಬೇಕಿದ್ದು, ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದ ಶಿಕ್ಷಣದ ನೀಡಿಕೆ ಶ್ರೇಷ್ಠ ಮಟ್ಟದಲ್ಲಿ ಇದ್ದು, ಇದು ನಮಗೆ ಇಂದಿಗೂ ಅಚ್ಚರಿ ನೀಡುವಂತಿದ್ದು, ಅಧ್ಯಯನ ಯೋಗ್ಯ ಅಂಶವಾಗಿದೆ.

### ಅಧ್ಯಯನದ ಪ್ರಾಮುಖ್ಯತೆ :

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತ ಅಧ್ಯಯನವಾಗಿದ್ದು, ಅರೆಮಲೆನಾಡು ಭಾಗದ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಗುರುಕುಲ ಶಿಕ್ಷಣ ಪದ್ಧತಿಯು ಶ್ರೇಷ್ಠಮಟ್ಟದ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆಯ ಭಾಗವಾಗಿತ್ತು. ಅರೆಮಲೆನಾಡು ಭಾಗದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತು ನಿರ್ದಿಷ್ಟವಾದ ಅಧ್ಯಯನಗಳು ಇವರೆಗೂ ನಡೆಯದಿರುವುದು ಆಶ್ಚರ್ಯದಾಯಕವಾಗಿದೆ.

ಶಿಕಾರಿಪುರ ಅರೆಮಲೆನಾಡು ಭಾಗವು ಕರ್ನಾಟಕದ ಜೊತೆಗೆ ಭಾರತದ ಸಂಸ್ಕೃತಿಯನ್ನು ರೂಪಿಸುವಲ್ಲಿ ಮಹತ್ವಪೂರ್ಣವಾದ ಕೊಡುಗೆಯನ್ನು ನೀಡಿದೆ. ಉತ್ತರ ಭಾರತದ ನಳಂದ, ತಕ್ಷಶಿಲಾ, ವಿಕ್ರಮಶಿಲಾ ಹಾಗೂ ವಲ್ಲಭಿ ವಿದ್ಯಾಕೇಂದ್ರಗಳಂತೆ ದಕ್ಷಿಣ ಭಾರತದ ತಾಳಗುಂದ, ಬಳ್ಳಿಗಾವಿ ವಿದ್ಯಾಕೇಂದ್ರದ ಇತಿಹಾಸವೂ ಗಮನಾರ್ಹವಾಗಿದೆ.

**ಕ್ರಿ.ಶ. 450 ರಿಂದ ಕ್ರಿ.ಶ. 1565** ವರೆಗೆ ಕದಂಬ ರಾಜವಂಶದ ಆರಂಭ ಕಾಲದಿಂದ ವಿಜಯನಗರ ಸಾಮ್ರಾಜ್ಯದ ಪತನದವರೆಗಿನ ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆಯ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶವನ್ನು ನಿರ್ದಿಷ್ಟಪಡಿಸಿ, ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತು ಪ್ರತ್ಯೇಕ ಅಧ್ಯಯನಗಳು ಇದುವರೆಗೂ ನಡೆದಿರುವುದಿಲ್ಲ. ಇಂತಹ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಲಾಶಾಸನಗಳ ಮೂಲಕ ಸಮಗ್ರ ಮಾಹಿತಿಯನ್ನು ಸಂಗ್ರಹಿಸಿ, ವಿಶ್ಲೇಷಿಸುವ ಸದುದ್ದೇಶವನ್ನು ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ಹೊಂದಿದೆ.

ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆಯ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರಗಳಾದ ತಾಳಗುಂದ, ಬಳ್ಳಿಗಾವಿ, ಬಂದಳಿಕೆ, ಬೇಗೂರು, ಜಂಬೂರು, ಚಿಕ್ಕಮಾಗಡಿ, ಅಗ್ರಹಾರ ಮುಚಡಿ, ಸಂಡ ಮೊದಲಾದ ಸ್ಥಳಗಳು ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಾಗಿದ್ದವು. ಈ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತ ಅಧ್ಯಯನಗಳು, ಸಂಶೋಧನೆಗಳು ನಡೆಯಬೇಕಿದೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ತುಂಬಾ ಅವಶ್ಯವೆನಿಸಿದೆ.

ಪ್ರಸ್ತುತ ಲೇಖನವು ತಾಳಗುಂದದ ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಾಥಮಿಕ ಹಾಗೂ ದ್ವಿತೀಯ ಸಂಪನ್ಮೂಲಗಳನ್ನು ಆಧಾರಿಸಿ ಪ್ರಾಚೀನ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆ, ಪಠ್ಯಕ್ರಮ, ಬೋಧನಾ ವಿಧಾನ, ಕಲಿಕೆಯ ಮಾಧ್ಯಮ,

ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆಗಳು, ನೇಮಕಾತಿ ಮಾನದಂಡಗಳು, ಉಪಾಧ್ಯಾಯ ವೇತನ, ವಸತಿ ನಿಲಯಗಳು, ಕಲಿಕೆಯ ವಿಷಯಗಳು ಹೀಗೆ ಪ್ರಾಚೀನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಸಮಗ್ರ ಮಾಹಿತಿಗಳನ್ನು ಕಲೆಹಾಕಿ, ಸತ್ಯವನ್ನು ಹುಡುಕುವ ಉದ್ದೇಶವನ್ನು ಇಟ್ಟುಕೊಂಡು ಸಂಶೋಧನೆಯನ್ನು ಕೈಕೊಳ್ಳಲಾಗಿದೆ.

ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಗೆ ನಮ್ಮ ಭಾರತದ ಪ್ರಾಚೀನ ಶಿಕ್ಷಣ ಪರಂಪರೆ ಮಾರ್ಗದರ್ಶಿಯಾಗಿದೆ. ಸಮಗ್ರ ಹಾಗೂ ಗುಣಮಟ್ಟ ಶಿಕ್ಷಣ, ವೈವಿಧ್ಯಮಯ ಪಠ್ಯಕ್ರಮ, ಸಂಪೂರ್ಣ ಸಮತೋಲನ ಮತ್ತು ಅಂತರ್ಗತ ಶಿಕ್ಷಣ, ಸೃಜನಶೀಲತೆಗೆ ಉತ್ತೇಜನ, ಮಾನವೀಯ ಮೌಲ್ಯಗಳ ವಿಕಾಸ ಇವೆಲ್ಲವು ನೂತನ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲ ತತ್ವಗಳಾಗಿದ್ದು ಇವು ಪ್ರಾಚೀನ ಶಿಕ್ಷಣದ ಪ್ರಮುಖ ಸಾರವಾಗಿದ್ದವು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ತುಂಬ ಮಹತ್ವದ್ದಾಗಿದೆ.

### ಅಧ್ಯಯನದ ಉದ್ದೇಶಗಳು :

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆ, ಪಠ್ಯಕ್ರಮ, ಭಾಷಾ ಮಾಧ್ಯಮ, ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆಗಳು ಹಾಗೂ ನೇಮಕಾತಿ ವಿಧಾನ, ಉಪಾಧ್ಯಾಯರಿಗೆ ದೊರೆಯುತ್ತಿದ್ದ ವೇತನ, ಭತ್ಯೆ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನೀಡುತ್ತಿದ್ದ ವಸತಿ ಮತ್ತು ಆಹಾರ ಸೌಲಭ್ಯಗಳ ಕುರಿತು ಅಧ್ಯಯನ ಮಾಡುವುದು.

### ಅಧ್ಯಯನದ ವ್ಯಾಪ್ತಿ

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ಕ್ರಿ.ಶ. 450 ರಿಂದ ಕ್ರಿ.ಶ. 1565 ರವರೆಗೆ ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತು ಅಧ್ಯಯನ ಮಾಡುವುದಕ್ಕೆ ಮಾತ್ರ ಸೀಮಿತವಾಗಿದೆ. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿನ ಶಿಲಾಶಾಸನಗಳಲ್ಲಿ ಉಲ್ಲೇಖಿತವಾಗಿರುವ ಹಾಗೂ ಪ್ರಾಥಮಿಕ ಮತ್ತು ದ್ವಿತೀಯ ಮೂಲಧಾರಗಳನ್ನು ಪರಿಗಣಿಸಿ ಅಧ್ಯಯನ ಮಾಡಲಾಗಿದೆ.

### ಅಧ್ಯಯನದಲ್ಲಿ ಬಳಸಲಾದ ಚಲಕಗಳು

ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆ, ಪಠ್ಯಕ್ರಮ, ಭಾಷಾ ಮಾಧ್ಯಮ, ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆ ಮತ್ತು ನೇಮಕಾತಿ ವಿಧಾನ, ವೇತನ ಸೌಲಭ್ಯ, ವಸತಿ ಮತ್ತು ಆಹಾರ ಸೌಲಭ್ಯ.

### ಅಧ್ಯಯನದ ವಿಧಾನ

ಅರೆಮಲೆನಾಡು ಭಾಗದ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ಶೋಧ ಮಾಡುವುದಾಗಿದ್ದು “ಐತಿಹಾಸಿಕ ವಿಧಾನ”ವನ್ನು ಅಳವಡಿಸಿಕೊಂಡು ಅಧ್ಯಯನ ಮಾಡಲಾಗಿದೆ.

### ಅಧ್ಯಯನದ ವಿನ್ಯಾಸ

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಅನ್ವೇಷಣಾತ್ಮಕ ಅಧ್ಯಯನಕ್ಕೆ (ಕ್ರಿ.ಶ. 450 ರಿಂದ ಕ್ರಿ.ಶ. 1565) ಸಂಬಂಧಿಸಿದಂತೆ “ಐತಿಹಾಸಿಕ ವಿಧಾನ”ವನ್ನು ಬಳಸಿಕೊಂಡು, ಪ್ರಾಥಮಿಕ ಹಾಗೂ ದ್ವಿತೀಯ ಮೂಲಧಾರಗಳನ್ನಾದರಿಸಿ ಅಧ್ಯಯನವನ್ನು ಕೈಕೊಳ್ಳಲಾಗಿದೆ.

### ಸಂಶೋಧನೆಯ ನಮೂನೆ

ಪ್ರಸ್ತುತ ಸಂಶೋಧನೆಗೆ ಸಂಭವೀಯ ಪ್ರತಿದರ್ಶ ವಿಧಾನದ ತಂತ್ರಗಳಲ್ಲಿ ಒಂದಾದ “ಉದ್ದೇಶಿತ ಪ್ರತಿದರ್ಶ ವಿಧಾನ” ವನ್ನು(Purposive Sampling Method) ಬಳಸಿಕೊಂಡಿದೆ.

### ದತ್ತಾಂಶಗಳ ಸಂಗ್ರಹಣೆಗಾಗಿ ಬಳಸಿದ ಸಾಧನಗಳು

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಅನ್ವೇಷಣಾತ್ಮಕ ಅಧ್ಯಯನಕ್ಕೆ (ಕ್ರಿ.ಶ. 450 ರಿಂದ ಕ್ರಿ.ಶ. 1565) ಸಂಬಂಧಿಸಿದಂತೆ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ವಿವಿಧ ಅಂಶಗಳ ಕುರಿತ ಶೋಧ ಮಾಡಲಾಗಿದ್ದು, ಐತಿಹಾಸಿಕ ವಿಧಾನದ ಮೂಲಕ ಪ್ರಾಥಮಿಕ ಹಾಗೂ ದ್ವಿತೀಯ ಮೂಲಧಾರಗಳನ್ನು ಗುರುತಿಸಿ, ಶಾಸನಗಳ ಅಧ್ಯಯನ, ದತ್ತಾಂಶಗಳ ಸಂಗ್ರಹಣೆ ಹಾಗೂ ವಿಶ್ಲೇಷಣೆಗೆ ಅವಲೋಕನ, ಸ್ಥಳಭೇಟಿ ಸಾಧನಗಳನ್ನು ಬಳಸಿ ಅಧ್ಯಯನವನ್ನು ಕೈಕೊಳ್ಳಲಾಗಿದೆ.

## ದತ್ತಾಂಶಗಳ ವಿಶ್ಲೇಷಣೆ

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನಕ್ಕಾಗಿ “ವಿವರಣಾತ್ಮಕ ವಿಶ್ಲೇಷಣಾ ವಿಧಾನ” ವನ್ನು ಬಳಸಿಕೊಂಡು, ದತ್ತಾಂಶಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಲಾಗಿದೆ.

## ದತ್ತಾಂಶಗಳ ವಿಶ್ಲೇಷಣೆ ಮತ್ತು ಫಲಿತಾಂಶದ ಅರ್ಥೈಸುವಿಕೆ :

### ೦೧. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆ :

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1092 ರ 178ನೇ ಶಾಸನದಲ್ಲಿ

“ಶ್ರೀಮತ್ತೈಳ್ಳೋಕ್ಕನಾಥ ಪ್ರಣವೇಶ್ವರದೇವಾಧಿಪತಿಸಿಷ್ಯಾಗ್ರಹಾರಾಧೀಶ್ವರರ್..” ಇಲ್ಲಿ ತಾಳಗುಂದದ ಬಗ್ಗೆ “ವಿಶಿಷ್ಟ ಅಗ್ರಹಾರ” ಎಂದು ಉಲ್ಲೇಖವಿರುವುದರಿಂದ ತಾಳಗುಂದವು ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರವಾದ ಪ್ರಮುಖ ಅಗ್ರಹಾರವಾಗಿತ್ತು ಎಂದು ತೀರ್ಮಾನಿಸಬಹುದು.

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1158 ರ 185ನೇ ಶಾಸನದಲ್ಲಿ “ಅಗ್ರಹಾರಂಸ್ಥಾಣಗೂಢ ಗ್ರಾಮವದ ..”

ಎಂಬ ಉಲ್ಲೇಖವಿರುವುದರಿಂದ ತಾಳಗುಂದವು ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರವಾದ ಅಗ್ರಹಾರವಾಗಿತ್ತು ಎಂದು ತೀರ್ಮಾನಿಸಬಹುದು.

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1261 ರ 186ನೇ ಶಾಸನದಲ್ಲಿ “ಮಹಾಗ್ರಹಾರಂ ಸ್ಥಾಣಗೂಢ ಗ್ರಾಮಗೂಢಪುರದ..” ಎಂಬ ಉಲ್ಲೇಖವಿರುವುದರಿಂದ ತಾಳಗುಂದವು ಒಂದು ಪ್ರಾಚೀನ ಅಗ್ರಹಾರವಾಗಿತ್ತು ಎಂದು ತೀರ್ಮಾನಿಸಬಹುದು.

ತಾಳಗುಂದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿ ಅನುಸರಿಸುತ್ತಿದ್ದ ಪಠ್ಯಕ್ರಮ :

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1092 ರ 178ನೇ ಶಾಸನದಲ್ಲಿ “ವೇದ ವೇದಾಂಗೋಪಾಂಗ ಮೀಮಾಂಸಾದಿ ಶಾಸ್ತ್ರ ಷಟ್ಪರ್ಕ್ ಸ್ಮೃತಿ ಪುರಾಣ ಕಾವ್ಯ ನಾಟಕ ವಿಷಯ ಸರೋಜಿನೀ ಭಾಸ್ಕರರ್ ಬುಧ ಹೃದಯ ಕುಮುದ ವನಮುಕುಳನಿಕರ ವಿಕಸಿತ ಸುಧಾಕರರು.. ಶ್ರೀಮನ್ಮಹಾವಡ್ಡಗ್ರಾಮ ತಾಣಗುಂದರ..”

“ವೇದ ಮೀಮಾಂಸೆ ಶಾಸ್ತ್ರ ಷಟ್ಪರ್ಕ್ ಸ್ಮೃತಿ ಪುರಾಣಕಾವ್ಯ ನಾಟಕ ಶಾಸ್ತ್ರ ವಿಷಯ ಕಮಲಗಳಿಗೆ ಸೂರ್ಯನಂತೆಯೂವಿದ್ವಾಂಸರೆಂಬ ಕುಮುದ ವನಕ್ಕೆ ಚಂದ್ರನಂತೆಯೂ ನಯ ವಿನಯಾದಿಗುಣಗಳಿಗೆ ಹಿಮಾಲಯದಂತೆಯೂ ಶರಣಾಗತರಿಗೆ ವಜ್ರ ಪಂಜರರಾಗಿಯೂ..” ತಾಣಗುಂದರರು ಎಂದು ಈ ಶಾಸನ ಅಲ್ಲಿನ ಅಧ್ಯಯನದ ವಿವಿಧ ಪಠ್ಯ ವಿಷಯಗಳ ಮೇಲೆ ಬೆಳಕು ಚೆಲ್ಲುತ್ತದೆ.

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1158 ರ 185ನೇ ಶಾಸನದಲ್ಲಿ ಬಿಜ್ಜಳ ಚಕ್ರವರ್ತಿಯ ದಂಡನಾಯಕನಾದ ಕೇಶವನು ರೇಚರಸನ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ ತಾಳಗುಂದದಲ್ಲಿ ಮೂರು ವಿಧವಾದ ದಾನ ಶಾಸನದಲ್ಲಿ ನಾಲ್ಕು ವೇದಗಳ ಖಂಡಿಕದ ಉಪಾಧ್ಯಾಯರಿದ್ದು, ಕ್ರಮವಾಗಿ ಋಗ್ವೇದ, ಯಜುರ್ವೇದ, ಸಾಮವೇದ ಮತ್ತು ಅಥರ್ವಣ ವೇದದ ಉಪನ್ಯಾಸಕರು ಕಾರ್ಯ ನಿರ್ವಹಿಸುತ್ತಿದ್ದರು. ಶಬ್ದಶಾಸ್ತ್ರ, ರೂಪಾವತಾರ ಶಾಸ್ತ್ರಗಳು ಇಲ್ಲಿ ಕಲಿಕೆಯ ವಿಷಯವಾಗಿದ್ದವು. ಪ್ರಭಾಕರ ವೇದಾಂತ, ಕನ್ನಡ ಭಾಷೆ ಮತ್ತು ಬಾಲಶಿಕ್ಷೆಯ ಶಾಸ್ತ್ರವೂ ಇಲ್ಲಿ ಬೋಧಿಸಲ್ಪಡುತ್ತಿತ್ತು ಎಂದು ತಿಳಿದು ಬರುತ್ತದೆ.

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1261 ರ 186ನೇ ಶಾಸನದಲ್ಲಿ “ವೇದಂ ನಾಲ್ಕುವರಂಗಮಾರುಕುರುಪಿಂ ಮೀಮಾಸೆ ಕಾಂಡತ್ರಯಂರುಬಾದಿಂಗೋದುವತರ್ಕ್ಕಮಾರು ಪದಿನೆಂಟುದ್ಯತುಪುರಾಣ ಸ್ಮೃತಿಪ್ರಾದುರ್ಭಾವ ವಿಶೇಷವಾಸ್ತುಭರತಾದ್ಯಂ ಚತುಕಲಾಕೌಶಲಂಮಾದೇವಂಗ ತಾದಾಗ್ನಿಯಿಂ ದ್ವಿಜಗ್ಗಾಶ್ರೀತಾಣಗುಂದೂರಿನ”

- ನಾಲ್ಕು ವೇದ
- ಆರು ವೇದಾಂಗ
- ಆರು ದರ್ಶನಗಳು
- ಮೀಮಾಂಸೆ
- ಹದಿನೆಂಟು ಪುರಾಣ

- ಸ್ಮೃತಿ, ವಾಸ್ತು, ಕಲೆ ಮೊದಲಾದ ಅಭ್ಯಾಸ ಮಾಡುವ ವಿದ್ವಾಂಸರು ಕಲಾಕೌಶಲವನ್ನು ಹೊಂದಿದ್ದರು ಎಂದು ವರ್ಣಿಸುತ್ತದೆ.

### ೦೨. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಭಾಷಾ ಮಾಧ್ಯಮ :

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 450 ರ 176ನೇ ಸ್ಥಂಭಶಾಸನವು ಸಂಸ್ಕೃತ ಭಾಷೆಯ ಪ್ರಭುದ್ಧ ಸಾಹಿತ್ಯದ ಆಕರವಾಗಿದ್ದು, ಅದಕ್ಕೂ ಪೂರ್ವದಲ್ಲಿ ಇದೇ ನೆಲದಲ್ಲಿ ಕನ್ನಡ ಭಾಷೆಯ ಬೆಳವಣಿಗೆಯೂ ಆಗಿರುವುದಕ್ಕೆ ಈಗ ದೊರಕಿರುವ ಸಿಂಹಕಟಾಂಜನ ಶಾಸನ ಸಾಕ್ಷಿಯಾಗಿದ್ದು,

ಸಂಸ್ಕೃತ ಮತ್ತು ಕನ್ನಡ ಭಾಷೆಗಳ ಸಾಹಿತ್ಯ ವಿಕಾಸದ ಮೂಲ ನೆಲೆಯಾಗಿ ಮತ್ತು ಕನ್ನಡ ಭಾಷೆಯ ಲಿಪಿ ಉಗಮದ ಕೇಂದ್ರವಾಗಿಯೂ ತಾಳಗುಂದ ಗೋಚರಿಸುತ್ತದೆ. ಸ್ಥಂಭಶಾಸನದ ಭಾಷೆ ಸಂಸ್ಕೃತವಾಗಿದ್ದರೂ ಕನ್ನಡ ಲಿಪಿಯ ಗರ್ಭವಾಗಿ ಕಂಡುಬರುತ್ತದೆ.

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1158 ರ 185ನೇ ಶಾಸನದಲ್ಲಿ ಕನ್ನಡದ ಶಿಕ್ಷಣದ ಬಗ್ಗೆ ಮಹತ್ವಪೂರ್ಣ ಅಂಶಗಳು ಕಾಣಿಸುತ್ತವೆ. “ಕನ್ನಡಕ್ಷರಸಿಕ್ಷೆ” ಹಾಗೂ “ಕನ್ನಡದುಪಾಧ್ಯಾಯಿಗೆ ಗದ್ಯಾಣ 5” ಎಂಬ ಮಾತುಗಳು ಕನ್ನಡದ ಅಕ್ಷರಗಳು ಕಲಿಸುತ್ತಿದ್ದ ಹಾಗೂ ಕನ್ನಡದ ಉಪಾಧ್ಯಾಯರಿಗೆ 5 ಗದ್ಯಾಣ ಹಣವನ್ನು ನೀಡುತ್ತಿದ್ದ ಬಗ್ಗೆ ಉಲ್ಲೇಖವಿದ್ದು, ತಾಳಗುಂದ ವಿದ್ಯಾಕೇಂದ್ರದಲ್ಲಿ ‘ಸಂಸ್ಕೃತ ಮಾಹಾಪಾಠಶಾಲೆ’ ಮಾತ್ರವಲ್ಲ ಅಲ್ಲಿ “ಕನ್ನಡದ ಅಧ್ಯಯನವೂ ನಡೆಯುತ್ತಿತ್ತು” ಎಂದು ಅಭಿಪ್ರಾಯಿಸಬಹುದಾಗಿದೆ.

### ೦೩. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದ ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆಗಳು ಹಾಗೂ ನೇಮಕಾತಿ ವಿಧಾನಗಳ ಮಾನದಂಡಗಳು :

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ.1158 ರ 185ನೇ ಶಾಸನದಲ್ಲಿ “ಸ್ಥಾನುಗೂಢಾಗ್ರಮದ ಮೂವತ್ತಿಚ್ಛಾಸಿರ್ವಮ್ಹಾಜನಂಗಳ ವೇದಾಂತಿ ಸ್ವಯಂಪಾಕಿ ದೇವರ..” ಗಳೆಂದು ವರ್ಣಿಸಲಾಗಿದೆ ಅಂದರೆ ತಾಳಗುಂದ ವಿದ್ಯಾಕೇಂದ್ರದಲ್ಲಿ ಮೂವತ್ತೆರಡು ಸಾವಿರ ವಿದ್ವಾಂಸರಿದ್ದುದಾಗಿ ಉಲ್ಲೇಖಿತವಾಗಿದ್ದು ಆ ಎಲ್ಲ ವಿದ್ವಾಂಸ ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆಗಳು ಹಾಗೂ ನೇಮಕಾತಿ ವಿಧಾನಗಳ ಮಾನದಂಡಗಳು ಶಾಸನದಲ್ಲಿ ಉಲ್ಲೇಖಿತವಾಗಿದ್ದು, ನಮಗೆ ಅಚ್ಚರಿಯ ಹಾಗೂ ಅಭಿಮಾನವನ್ನು ಹುಟ್ಟಿಸುತ್ತದೆ. ಪ್ರಸ್ತುತ ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆ ಹಾಗೂ ನೇಮಕಾತಿ ಮಾನದಂಡಗಳನ್ನು ನೆನಪಿಸುತ್ತದೆ.

ಭಟ್ಟ ವೃತ್ತಿಯನ್ನು ಸ್ವೀಕರಿಸುವವನ ಅರ್ಹತೆಗಳನ್ನು ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1158 ರ 185ನೇ ಶಾಸನ ಹೀಗೆ ಉಲ್ಲೇಖಿಸಿದೆ.

- ಭಟ್ಟ ವೃತ್ತಿ ಸ್ವೀಕರಿಸುವವರು ಸಾಮವೇದಿಯ ಮಗನಾಗಿರಬೇಕು.
- ಅದೇ ಊರಿನವನಾಗಿರಕೂಡದು.
- ಎರಡು ವೇದಗಳನ್ನೂ ಸರಾಗವಾಗಿ ಬೋಧಿಸಲು ಶಕ್ತನಾಗಿರಬೇಕು.
- ಅಷ್ಟಾಧ್ಯಾಯಿಯನ್ನೂ, ಅಲಂಕಾರ ಶಾಸ್ತ್ರಗಳನ್ನೂ ಬೋಧಿಸಲು ಸಮರ್ಥನಿರಬೇಕು.
- ಇಪ್ಪತ್ತು ಅಧ್ಯಾಯಗಳ ಮೀಮಾಂಸಶಾಸ್ತ್ರವನ್ನು ಬೋಧಿಸುವ ಸಾಮರ್ಥ್ಯಹೊಂದಿದವನಾಗಿರಬೇಕು.
- ನಾಲ್ವರು ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಆರಿಸಿಕೊಂಡು ಅವರಿಗೆ ದಿನಕ್ಕೆ ಒಂದು ಹೊತ್ತು ಊಟವನ್ನು ಕೊಟ್ಟು ಮೇಲಿನ ವಿಷಯಗಳನ್ನು ಬೋಧಿಸಿ, ಅವುಗಳಲ್ಲಿ ಪರಿಣತರನ್ನಾಗಿ ಮಾಡಿ ಕಳುಹಬೇಕು ಎಂದು ಉಲ್ಲೇಖಿಸಿದೆ.

### ೦೪. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನೀಡುತ್ತಿದ್ದ ವಸತಿ, ಆಹಾರ, ಇತ್ಯಾದಿ ಸೌಲಭ್ಯಗಳು:

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1158 ರ 185ನೇ ಶಾಸನದಲ್ಲಿ ಅಲ್ಲಿನ 48 ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ 50 ಬಟ್ಟೆಗಳಿಗಾಗಿ ಒಂದಕ್ಕೆ 02 ಪಣದ ಲೆಕ್ಕದಲ್ಲಿ 10 ಗದ್ಯಾಣವನ್ನು ನಿಗದಿ ಪಡಿಸಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನೀಡುತ್ತಿದ್ದ ವಸತಿ, ಆಹಾರ, ಇತ್ಯಾದಿ ಸೌಲಭ್ಯಗಳ ಕುರಿತು ಉಲ್ಲೇಖಗಳು ದೊರೆಯುತ್ತದೆ.



## ೦೫. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿ ಉಪಾಧ್ಯಾಯರಿಗೆ ದೊರೆಯುತ್ತಿದ್ದ ವೇತನ ಹಾಗೂ ಇತರೇ ಸೌಲಭ್ಯಗಳು :

ತಾಳಗುಂದದ ಕ್ರಿ.ಶ. 1158 ರ 185ನೇ ಶಾಸನದಲ್ಲಿ ಉಪಾಧ್ಯಾಯರಿಗೆ ದೊರೆಯಬಹುದಾದ ವೇತನ ಹಾಗೂ ಇತರೇ ಸೌಲಭ್ಯಗಳ ಬಗ್ಗೆ ಮಹತ್ವದ ಅಂಶಗಳನ್ನು ಉಲ್ಲೇಖಿಸಿದೆ.

“ನಾಲ್ಕು ವೇದ ಖಂಡಿಕ, ಎರಡು ಭಟ್ಟವೃತ್ತಿ, ಕಂನಡಕ್ಕರಶಿಕ್ಷಣಾರ್ಥಿಯಾರವಾರುಂ ಖಂಡಿಕದುಪಾಧ್ಯಾಯ ಚಾತ್ರಕಗ್ರಾಸ ವಸ್ತ್ರಕಂ ಸತ್ತಕ್ಕವೆಂದು”

“ಕಂನಡಕ್ಕರಶಿಕ್ಷಣ” ಹಾಗೂ “ಕಂನಡದುಪಾಧ್ಯಾಯಗೆ ಗದ್ಯಾಣ 5” ಎಂಬ ಮಾತುಗಳು ಕನ್ನಡದ ಅಕ್ಷಗಳು ಕಲಿಸುತ್ತಿದ್ದ ಹಾಗೂ ಕನ್ನಡದ ಉಪಾಧ್ಯಾಯರಿಗೆ 5 ಗದ್ಯಾಣ ಹಣವನ್ನು ನೀಡುತ್ತಿದ್ದ ವಿವರಗಳ ಉಲ್ಲೇಖವಿದೆ.

ಈ ಮೇಲಿನ ಶಾಸ್ತ್ರಗಳನ್ನು ಅಭ್ಯಸಿಸುವ ನಲವತ್ತೆಂಟು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಇಲ್ಲಿ ವಸತಿಯುತ ಸೌಲಭ್ಯವಿತ್ತು. ಇಲ್ಲಿನ ಸತ್ತದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮತ್ತು ಉಪಾಧ್ಯಾಯರಿಗೆ ಉಚಿತ ಊಟದ ವ್ಯವಸ್ಥೆಯೂ ಇತ್ತು. ಅಡುಗೆ ಮಾಡಲು ಬಾಣಸಿಗರೂ ಇದ್ದರು. ಇಲ್ಲಿನ ಉಪಾಧ್ಯಾಯರ ಕೈರಕ್ಕಾಗಿ ವಿಶೇಷ ವ್ಯವಸ್ಥೆಯಿತ್ತು. ಅವರ ಭೋಜನವಾದ ನಂತರ ಅವರಿಗೆ ತಾಂಬೂಲ ತಿನಿಸಲು ಮತ್ತು ಉಪಾಧ್ಯಾಯರ ಉಗುರುಗಳನ್ನು ಕತ್ತರಿಸಲು ಪ್ರತ್ಯೇಕ ಸೇವಕರಿದ್ದರು. ಈ ಮೇಲಿನ ವ್ಯವಸ್ಥೆಗಳನ್ನು ಗಮನಿಸಿದರೆ ತಾಳಗುಂದವು ಬೃಹತ್ ಅಧ್ಯಯನದ ವಿದ್ಯಾಕ್ಷೇತ್ರವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತಿತ್ತು ಎಂದು ತಿಳಿಯುತ್ತದೆ.

## ಪ್ರಸ್ತುತ ಅಧ್ಯಯನದ ಫಲಿತಾಂಶ :

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದಲ್ಲಿನ ಶಿಕ್ಷಣ ವಿಧಾನ ಮತ್ತು ನಾವೀನ್ಯತೆಗಳು ಶ್ರೇಷ್ಠಮಟ್ಟದ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆಯ ಭಾಗವಾಗಿದ್ದು, ತಾಳಗುಂದದ ಪ್ರಣವೇಶ್ವರದೇವಾಲಯವು ಅಂಥ ಶ್ರೇಷ್ಠ ಶಿಕ್ಷಣ ಕೇಂದ್ರ ಅಗ್ರಹಾರವಾಗಿ ಕೆಲಸ ಮಾಡುತ್ತಿತ್ತು. ತಾಳಗುಂದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರದ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆ, ಪಠ್ಯಕ್ರಮ, ಭಾಷಾ ಮಾಧ್ಯಮ, ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆ ಮತ್ತು ನೇಮಕಾತಿ ವಿಧಾನ, ವೇತನ ಸೌಲಭ್ಯ, ವಸತಿ, ಆಹಾರ ಸೌಲಭ್ಯ ಹಾಗೂ ಶಿಕ್ಷಣದ ನಾವೀನ್ಯತೆಗಳು ಪ್ರಾಚೀನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ ಶ್ರೇಷ್ಠಮಟ್ಟದ ಪರಂಪರೆಯನ್ನು ಪ್ರತಿನಿಧಿಸುತ್ತದೆ.

ತಾಳಗುಂದ ಪ್ರಾಚೀನ ವಿದ್ಯಾಕೇಂದ್ರವು ಉತ್ಕೃಷ್ಟವಾದ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ಹೊಂದಿದ್ದು, ಇಂದೊಂದು ಶ್ರೇಷ್ಠ ಅಗ್ರಹಾರವಾಗಿದ್ದು, ಇಲ್ಲಿನ ವಿದ್ವಾಂಸರು ಹಲವು ವಿದ್ಯೆಗಳಲ್ಲಿ ಪಾರಂಗತರಾಗಿದ್ದು, ವೇದ, ದರ್ಶನ, ಮೀಮಾಂಸೆ, ಪುರಾಣ, ಶಾಸ್ತ್ರ ಷಟ್ಕರ್ಕ, ಸ್ಮೃತಿ, ವಾಸ್ತು, ಕಲೆ, ನಾಟಕಶಾಸ್ತ್ರ, ಇತ್ಯಾದಿ ವಿಷಯಗಳನ್ನು ಇಲ್ಲಿಯ ಅಗ್ರಹಾರದಲ್ಲಿ ಬೋಧಿಸಲಾಗುತ್ತಿದ್ದು, ಜ್ಞಾನಕ್ಷೇತ್ರಗಳಲ್ಲಿ ದೊಡ್ಡ ಪಂಡಿತರೆನಿಸಿದ್ದ ಪ್ರಾಧ್ಯಾಪಕ ವರ್ಗವಿತ್ತು. ಇಲ್ಲಿ ನೂರಾರು ವಿದ್ಯಾರ್ಥಿಗಳು ಅಧ್ಯಯನ ಗೈಯುತ್ತಿದ್ದು, ಅವರಿಗೆಲ್ಲ ಉಚಿತ ಆಹಾರ ಮತ್ತು ವಸತಿ ಇತ್ಯಾದಿ ಸೌಲಭ್ಯಗಳನ್ನು ಏರ್ಪಡಿಸಲಾಗಿತ್ತು.

## ಉಪಸಂಹಾರ

ಆಧುನಿಕ ಶಿಕ್ಷಣದಲ್ಲಿ ಬೋಧಿಸಲಾಗುವ ಎಲ್ಲಾ ಶಿಕ್ಷಣವನ್ನು ಗುರುಕುಲ ಶಿಕ್ಷಣದಲ್ಲೂ ನೀಡಲಾಗುತ್ತಿತ್ತು. ಭಾರತೀಯ ಗುರುಕುಲಗಳು ಮೌಲ್ಯಾಧಾರಿತ ಶಿಕ್ಷಣದ ಬಗ್ಗೆ ವಿಲಿಯಂ ಆಡಮ್ ಲಂಡನ್ನಿನ ಸಂಸತ್ತಿನಲ್ಲಿ ವರದಿಯನ್ನು ಮಂಡಿಸಿದ್ದರು. ಪ್ರಾಚೀನ ಕಾಲದಲ್ಲಿ ಸ್ಥಾಪಿತವಾಗಿ ಪ್ರಸಿದ್ಧವಾಗಿದ್ದ ಭಾರತದ ದಕ್ಷಿಣ ಪ್ರಾಂತ್ಯದ ಗುರುಕುಲವೊಂದರ ಉಲ್ಲೇಖ ಅದರಲ್ಲಿತ್ತು. ದಕ್ಷಿಣ ಭಾರತದಲ್ಲಿನ ಗುರುಕುಲವೊಂದು ದೇಶದಲ್ಲಿ ಪ್ರಸಿದ್ಧವಾಗಲು ಕಾರಣ ಅಲ್ಲಿನ ಶಿಕ್ಷಣ ಎಂಬುವುದನ್ನು ವರದಿಯಲ್ಲಿ ಉಲ್ಲೇಖಿಸಲಾಗಿದೆ.

ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕುರಿತು ಅಧ್ಯಯನ ಮಾಡುವುದು. ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಬೆಳವಣಿಯ ಕುರಿತು, ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯಲ್ಲಿನ ಒಳ್ಳೆಯ ಅಲೋಚನೆಗಳನ್ನು ಹೊರಸೆಳೆಯುವುದು ಹಾಗೂ ಸಾಮಾನ್ಯ ಜನರಿಗೆ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಬಗ್ಗೆ ಅರಿವು ಮೂಡಿಸಿ, ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಶೈಕ್ಷಣಿಕ ಅಲೋಚನಾ ಕ್ರಮಗಳಲ್ಲಿ ಒಂದು ಉತ್ಕೃಷ್ಟವಾದ ಚಿಂತನೆಗಳನ್ನು ಅಳವಡಿಕೊಳ್ಳಲು ಈ ಅಧ್ಯಯನದಿಂದ ಸಹಾಯವಾಗುತ್ತದೆ.

ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆ ಶಿಕಾರಿಪುರ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಾದ ತಾಳಗುಂದ, ಬಳ್ಳಿಗಾವಿ, ಬಂದಳಿಕೆ, ಬೇಗೂರು, ಜಂಬೂರು, ಚಿಕ್ಕಮಾಗಡಿ, ಅಗ್ರಹಾರ ಮುಚಡಿ, ಸಂಡ ಮೊದಲಾದ ಅನೇಕ ಸ್ಥಳಗಳಲ್ಲಿ ಪ್ರಜ್ಞಾಶೀಲವಾದ ಜ್ಞಾನದ ಆಂದೋಲನ ಸತತ ಒಂದೊಂದರ ಸಾವಿರ ವರ್ಷಗಳಿಗಿಂತಲೂ ಮಿಗಿಲಾಗಿ ನಡೆಯುತ್ತಾ



ಬಂದಿದೆ. ಇಲ್ಲಿನ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ವಿಶಿಷ್ಟವಾದ ಶಿಕ್ಷಣದ ಚಿಂತನೆಗಳನ್ನು ಅರಿತು, ಇಂದಿನ ಶೈಕ್ಷಣಿಕ ಕ್ರಮದಲ್ಲಿ ಅಳವಡಿಸಿಕೊಂಡು ಮುಂದೆ ಸಾಗಿದಾಗ ಒಂದು ಪ್ರಬುದ್ಧವಾದ ಅರಿವಿನ ಸಂವೇದನಾಶೀಲ ಜನಾಂಗವನ್ನು ನಿರ್ಮಿಸಬಹುದು ಎಂಬುದು ನನ್ನ ಈ ಅಧ್ಯಯನದ ಸದಾಶಯವಾಗಿದೆ.

ಒಟ್ಟಿನಲ್ಲಿ ಆಧುನಿಕ ಶಿಕ್ಷಣದೊಂದಿಗೆ ಭಾರತದ ಪ್ರಾಚೀನ ಜ್ಞಾನದ ಮನಸ್ಸುಗಳನ್ನು ಸಂಯೋಜಿಸಬೇಕಿದೆ. ಭಾರತದ ಹಾಗೂ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯ ಮೂಲಭೂತ ಅಂಶಗಳು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮುಂದುವರಿಕೆಯಾಗಿಯೇ ಕಾಣುತ್ತಿದ್ದು, ಈ ನೆಲದ ಭವ್ಯ ಜ್ಞಾನದ ಪರಂಪರೆಯನ್ನು ಮುಂದಿನ ಜಗತ್ತಿಗೆ ಮುಟ್ಟಿಸುವ ಹೊಣೆಗಾರಿಕೆ ನಮ್ಮದಾಗಿದೆ.

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## ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಬೋಧನೆಯಲ್ಲಿ ಭಾಷಾ ಶಿಕ್ಷಕರು ಎದುರಿಸುವ ಸವಾಲುಗಳು ಮತ್ತು ನಾವಿನ್ಯತೆಗಳು

ಶ್ರೀಮತಿ. ಆಶಾ ಎಂ.ವಿ ಎಂ.ಎ, ಎಂ.ಇಡಿ ಹಿರಿಯ ವಿದ್ಯಾರ್ಥಿನಿ, ಕುಮದ್ವತಿ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ, ಶಿಕಾರಿಪುರ

### ಲೇಖನ ಸಾರ ಸಂಗ್ರಹ

ಈ ಅಧ್ಯಯನವು ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಬೋಧನೆಯಲ್ಲಿ ಭಾಷಾ ಶಿಕ್ಷಕರು ಎದುರಿಸಬಹುದಾದ ಸವಾಲುಗಳು ಹಾಗೂ ನಾವಿನ್ಯತೆಗಳನ್ನು ಅಧ್ಯಯನ ಮಾಡುವುದಾಗಿದೆ. ಆಧುನಿಕ ಜೀವನ ಶೈಲಿ ಮತ್ತು ಶೈಕ್ಷಣಿಕ ಕ್ಷೇತ್ರದಲ್ಲಿ ಇವುಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಹೊಸ ಮನ್ವಂತರವನ್ನು ಬರೆಯಲು ದಾಪುಗಾಲು ಇಟ್ಟವೆ.

ಪ್ರಾಚೀನ ಭಾರತದ ಶಿಕ್ಷಣ ಪದ್ಧತಿಯನ್ನು ಮೀರಿ ಆಧುನಿಕ ಜಗತ್ತಿನ ಶೈಕ್ಷಣಿಕ ಪದ್ಧತಿಗಳನ್ನು ಶಿಕ್ಷಕ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿ ಕಲಿಯಬೇಕಾದ ಅನಿವಾರ್ಯತೆ ಸೃಷ್ಟಿಯಾಗಿದೆ. ಇವುಗಳ ಜ್ಞಾನವನ್ನು ಇಂದಿನ ಶಿಕ್ಷಕ ತಮ್ಮ ಬೋಧನಾ ಕಲಿಕಾ ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿ ನವೀಕರಣವನ್ನು ಮಾಡಿಕೊಂಡರೆ ಮಾತ್ರ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಮುಟ್ಟಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಇಲ್ಲಿ ಭಾಷಾ ಶಿಕ್ಷಕರು ಶಿಕ್ಷಣದ ಮೌಲ್ಯಗಳು, ಶಿಕ್ಷಣ ವಿಧಾನ ಮತ್ತು ನಾವಿನ್ಯತೆಗಳನ್ನು ಕಲಿಸುವುದರ ಮೂಲಕ ಪ್ರಸ್ತುತ ಶಿಕ್ಷಣಕ್ಕೆ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ತಯಾರಿಸಬೇಕಾಗಿದೆ.

ಪ್ರಾಚೀನ ಕಾಲಕ ಶೈಕ್ಷಣಿಕ ಪರಂಪರೆಗಳಾದ ಶಿಕ್ಷಕ, ವಿದ್ಯಾರ್ಥಿ, ಭಾವನೆಗಳು, ಶಿಕ್ಷಕ ವಿದ್ಯಾರ್ಥಿಗಳ ಸಂಬಂಧಗಳು ಮಾಯವಾಗಿ ವಿವಿಧ ರೀತಿಯ ಅಪ್ಲಿಕೇಷನ್‌ಗಳು, ಮೋಬೈಲ್‌ಗಳು, ಇಂಟರ್‌ನೆಟ್, ಡಾಟಾ ಬ್ರೌಸಿಂಗ್, ಫೇಸ್‌ಬುಕ್, ವಾಟ್ಸ್‌ಪ್, ಯೂಟ್ಯೂಬ್ ಇತ್ಯಾದಿ ಮಾಧ್ಯಮಗಳು ಶೈಕ್ಷಣಿಕ ಕ್ಷೇತ್ರದಲ್ಲಿ ಬರುತ್ತಿರುವುದರಿಂದ ಸಂಬಂಧಗಳನ್ನು ಕೇವಲ ವಸ್ತುಗಳಲ್ಲಿ ಕಾಣುವಂತಾಗಿದೆ. ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣದಿಂದ ಹಿಡಿದು ವಿಶ್ವವಿದ್ಯಾಲಯಗಳವರೆಗೆ ಶಿಕ್ಷಣದ ವಿಧಾನ ಮತ್ತು ನಾವಿನ್ಯತೆಯ ಉನ್ನತ ಗುಣಮಟ್ಟವನ್ನು ಹೊಂದಿ ಪ್ರಪಂಚದಾದ್ಯಂತದ ಶಿಕ್ಷಕರನ್ನು ಸೇರಿದಂತೆ ಅತ್ಯಂತ ಶ್ರೇಷ್ಠ ವಿದ್ವಾಂಸರನ್ನು ಆಕರ್ಷಿಸುತ್ತಿವೆ.

ಶೈಕ್ಷಣಿಕ ಕ್ರಾಂತಿಯಲ್ಲಿ ಬದಲಾಗುತ್ತಿರುವ ಬೋಧನಾ ವಿಧಾನ, ಪಠ್ಯಕ್ರಮ, ಮಾದರಿಗಳು, ಗುಣಮಟ್ಟದ ಬೋಧನೆ, ಹೊಸ ಹೊಸ ನಾವಿನ್ಯತೆಯನ್ನು ಹಾಗೂ ಅವುಗಳನ್ನು ಶಾಲಾ ಹಂತದಿಂದ ಹಿಡಿದು ಉನ್ನತ ಹಂತದವರೆಗೂ ಉನ್ನತೀಕರಿಸುವುದು ಹಾಗೂ ಬೋಧನೆಯಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳುವುದು ಅವಶ್ಯಕವಾಗಿದೆ. ಇಲ್ಲಿ ಶಿಕ್ಷಕ ಹಾಗೂ ವಿದ್ಯಾರ್ಥಿಗಳಿಬ್ಬರೂ ತಮ್ಮನ್ನು ತಾವು ನವೀಕರಿಸಿಕೊಂಡು ಆಧುನಿಕ ಕಲಿಕಾ ಸನ್ನಿವೇಶಕ್ಕೆ ಸನ್ನದ್ಧಗೊಂಡು ಶೈಕ್ಷಣಿಕ ವಿಚಾರಧಾರೆಗಳನ್ನು ಮುಂದಿನ ಪೀಳಿಗೆಗೆ ಮಾರ್ಗದರ್ಶನ ನೀಡುವ ಮಾರ್ಗದರ್ಶಿ ದಿಕ್ಕುಚಿಯಾಗುತ್ತದೆ.

**ಕೀನೋಟ್:** ಆನ್‌ಲೈನ್, ಇಂಟರ್‌ನೆಟ್, ಶಿಕ್ಷಕ ವಿದ್ಯಾರ್ಥಿಯ ಸವಾಲುಗಳು ಹಾಗೂ ನಾವಿನ್ಯತೆಗಳು.

### ಪೀಠಿಕೆ

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣ ಎಂಬುದು ಇಂದಿನ ಶೈಕ್ಷಣಿಕ ಕಲಿಕೆಯಲ್ಲಿ ಹಾಸುಹೊಕ್ಕಾಗಿದೆ. ಇದು ಗುರುಕುಲ ವ್ಯವಸ್ಥೆಯನ್ನು ಮೀರಿ ವಿದ್ಯಾರ್ಥಿ ಹಾಗೂ ಶಿಕ್ಷಕರನ್ನು ಸಂಪರ್ಕಿಸುವ ಪ್ರಕ್ರಿಯೆಯಾಗಿದೆ. ಪ್ರಾಚೀನ ಕಾಲಕ ಶಿಕ್ಷಣದ ಪದ್ಧತಿ ಹಾಗೂ ಪರಂಪರೆಯನ್ನು ಮರೆಮಾಚುತ್ತಿದೆ. ಮಕ್ಕಳಿಗೆ ಮನೆಗೆಲಸವನ್ನು ಶೈಕ್ಷಣಿಕವಾಗಿ ನೀಡುವ, ಅವಲೋಕಿಸುವ ಹಾಗೂ ಮೌಲ್ಯಮಾಪನ ಮಾಡುವ ಪ್ರಕ್ರಿಯೆಯಾಗಿದೆ. ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಿಂದ ಹಿಡಿದು ವಿದ್ಯಾರ್ಥಿ ಕಲಿಯಲ್ಪಡುವ ಪ್ರತಿ ಹಂತದಲ್ಲಿಯೂ ಅತ್ಯಂತ ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಮುಂದುವರೆಯುತ್ತಾ ಬರುತ್ತಿದೆ.

ಶೈಕ್ಷಣಿಕ ಕಲಿಕೆಯ ಸಂದರ್ಭಗಳಲ್ಲಿ ಆಧುನಿಕ ತಂತ್ರಜ್ಞಾನಗಳ ಬಳಕೆಯು ಗಣನೀಯವಾಗಿ ಹೆಚ್ಚುತ್ತಿರುವುದು ಸ್ಪಷ್ಟವಾದುದು. ರಚನಾತ್ಮಕ ಕಲಿಕೆಯ ಸಾಮಾಜಿಕ-ಸಾಂಸ್ಕೃತಿಕ ಸಿದ್ಧಾಂತಗಳೊಂದಿಗೆ ಹೊಂದಿಕೊಂಡ ಶಿಕ್ಷಕರು ಆಧುನಿಕ ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಬಯಸುತ್ತಾರೆ. ಆಧುನಿಕ ತಂತ್ರಜ್ಞಾನ ಮತ್ತು ಶಿಕ್ಷಣದಲ್ಲಿ ಶಿಕ್ಷಕರ ಐಸಿಟಿ ಬಳಕೆ ಮತ್ತು ಅನುಷ್ಠಾನದ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರುವ ಅಂಶಗಳನ್ನು ಗಮನಿಸಬಹುದು. ಭಾಷಾ ತರಗತಿಗಳಲ್ಲಿ ನಡೆಸಿದ ಅಗತ್ಯಗಳ ವಿಶ್ಲೇಷಣೆ, ಭಾಷಾ ಶಿಕ್ಷಕರಲ್ಲಿ, ಭಾಷಾ ವೃತ್ತಿಪರರ ಕಲಿಕೆಯ ಸಂಗತಿಗಳೊಂದಿಗೆ, ಆನ್‌ಲೈನ್ ಕಾರ್ಯಕ್ಷೇತ್ರವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವ ಉದ್ದೇಶವನ್ನು ಹೊಂದಿದೆ.

ಭಾಷಾ ಶಿಕ್ಷಕರು ಆನ್‌ಲೈನ್ ಬೋಧನೆಯನ್ನು ಬಹುಕಾಲದಿಂದ ವಿರೋಧಿಸಿದರು. ಮುಖ್ಯವಾಗಿ ಆನ್‌ಲೈನ್ ಪರಿಸರದಲ್ಲಿ ಮಾತನಾಡುವುದನ್ನು ಕಲಿಸುವುದು ಯೋಚಿಸಲಾಗದ ಕಾರಣ. ಆದಾಗ್ಯೂ, ತಂತ್ರಜ್ಞಾನದಲ್ಲಿನ ಇತ್ತೀಚಿನ

ಪ್ರಗತಿಗಳು ಕಲಿಸುತ್ತಿವೆ. ಕಷ್ಟಕರವಾದ ಸಮಸ್ಯೆಗಳನ್ನು ಪರಿಹರಿಸಲು ಸಹಾಯ ಮಾಡಿದ ಶಿಕ್ಷಣದ ಆವಿಷ್ಕಾರಗಳನ್ನೂ ಗಮನ ಸೆಳೆಯುವಂತೆ ಮಾಡುತ್ತದೆ. ಆನ್‌ಲೈನ್ ಬೋಧನೆಯ ಪರಿಣಾಮಕಾರಿತ್ವವನ್ನು ಸಹ ಸ್ಪರ್ಶಿಸಲಾಗುವುದು. ವಿದ್ಯಾರ್ಥಿಗಳು ಆನ್‌ಲೈನ್ ಕಲಿಕೆಯಲ್ಲಿ ಎದುರಿಸುವ ಸವಾಲುಗಳು, ಪರಿಹಾರಗಳನ್ನು ಅಧ್ಯಯನ ಮಾಡುತ್ತದೆ.

**ಆನ್‌ಲೈನ್ ಬೋಧನೆ ಎಂದರೇನು?**

1. ಪಠ್ಯಕ್ರಮ ಅಥವಾ ಪಠ್ಯಕ್ರಮದ ಪ್ರಸ್ತುತಿ ಅಥವಾ ಬೋಧನೆ. ತಂತ್ರಜ್ಞಾನ ಮತ್ತು ಕಂಪ್ಯೂಟರ್ ನೆಟ್‌ವರ್ಕ್ ವ್ಯವಸ್ಥೆಗಳ ಸ್ಪಷ್ಟ ಬಳಕೆಯ ಮೂಲಕ ಕಲಿಕೆ ನಡೆಯುತ್ತದೆ.
2. ದೂರದಲ್ಲಿರುವ ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಕಲಿಕೆಯನ್ನು ಒದಗಿಸಲು ಆನ್‌ಲೈನ್ ತಂತ್ರಗಳ ಅನ್ವಯ
3. ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಅಧ್ಯಾಪಕರ ಮುಖಾಮುಖಿ ಸಭೆಗಳ ಅಗತ್ಯವಿಲ್ಲದೇ ಕಂಪ್ಯೂಟರ್ ನೆಟ್‌ವರ್ಕ್, ಸಾಮಾನ್ಯವಾಗಿ ಇಂಟರ್ನೆಟ್ ಬಳಸಿ ಸೂಚನೆಗಳನ್ನು ನೀಡುತ್ತದೆ. ಕೋರ್ಸ್‌ಗಳು ಸಿಂಕ್ರೋನಸ್, ಅಸಮಕಾಲಿಕ ಅಥವಾ ಸಂಯೋಜನೆಯಾಗಿರಬಹುದು. (ಇದನ್ನು ಸಾಮಾನ್ಯವಾಗಿ ಆನ್‌ಲೈನ್ ದೂರ ಶಿಕ್ಷಣ, ದೂರ ಶಿಕ್ಷಣ, ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ಮತ್ತು ವಿತರಣಾ ಕಲಿಕೆ ಎಂದೂ ಕರೆಯಲಾಗುತ್ತದೆ)
4. ಇಂಟರ್ನೆಟ್ ಅಥವಾ ಅಂತರ್ಜಾಲ ಮತ್ತು ಇತರ ಸಂವಹನ ತಂತ್ರಜ್ಞಾನಗಳಿಂದ ವಿವಿಧ ವೆಬ್-ಆಧಾರಿತ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಬೋಧನೆ ವಿತರಣೆ, ಇದು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕ್ಯಾಂಪಸ್‌ನ ಆಚೆಗಿನ ಕಲಿಕೆಯ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಭಾಗವಹಿಸಲು ಅನುವು ಮಾಡಿಕೊಡುತ್ತದೆ, ವಿದ್ಯಾರ್ಥಿಗಳ ಮನೆಗಳಿಂದ ಕೆಲಸದ ಸ್ಥಳಗಳು ಮತ್ತು ಇತರ ಸ್ಥಳಗಳಿಗೆ
5. ಇಂಟರ್ನೆಟ್ ಮಾಧ್ಯಮದ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವಿಚಾರಗಳು ಮತ್ತು ಜ್ಞಾನದ ವಿಷಯವನ್ನು ಪ್ರಸ್ತುತಪಡಿಸುವ ವ್ಯವಹಾರಗಳು
6. ಇಂಟರ್ನೆಟ್ ಬಳಕೆ ಮತ್ತು ವೈಡ್ ಬ್ಯಾಂಡ್ ಪ್ರವೇಶದ ಮೂಲಕ ನಡೆಸಲಾದ ದೂರಶಿಕ್ಷಣ
7. ನೆಟ್‌ವರ್ಕ್ ವಿತರಿಸಿದ ಕಂಪ್ಯೂಟರ್ ಆಧಾರಿತ ಸೂಚನೆ

**ಪ್ರಮುಖ ನಿರ್ಬಂಧಗಳು, ಮಿತಿಗಳು ಅಥವಾ ಪರಿಗಣನೆಗಳು**

#### 1. ತಂತ್ರಜ್ಞಾನದ ಪ್ರವೇಶ

ಕೆಲವು ನಿದರ್ಶನಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಶಿಕ್ಷಕರು ವಿಶ್ವಾಸಾರ್ಹ ಅಥವಾ ಸೂಕ್ತವಾದ ತಂತ್ರಜ್ಞಾನದ ನಿಯಮಿತ ಪ್ರವೇಶದಲ್ಲಿ ಸೀಮಿತವಾಗಿರಬಹುದು. ಹಲವಾರು ಜನರು ಕಂಪ್ಯೂಟರ್ ಅಥವಾ ಮೊಬೈಲ್ ಸಾಧನವನ್ನು ಒಂದು ಮನೆಯೊಳಗೆ ಹಂಚಿಕೊಳ್ಳುತ್ತಿರಬಹುದು, ಅಥವಾ ಕ್ಯಾಂಪಸ್‌ನಲ್ಲಿ ಅಥವಾ ಸಾರ್ವಜನಿಕ ಸ್ಥಳದಲ್ಲಿ ಕಂಪ್ಯೂಟರ್‌ಗಳನ್ನು ಬಳಸುವುದನ್ನು ಅವಲಂಬಿಸಿರಬಹುದು. (ಉದಾ. ಸಾರ್ವಜನಿಕ ಗ್ರಂಥಾಲಯ, ಇಂಟರ್ನೆಟ್ ಕೆಫೆ, ಇತ್ಯಾದಿ). ವಿದ್ಯಾರ್ಥಿಗಳು ಅಥವಾ ಶಿಕ್ಷಕರು ಅಗತ್ಯವಿರುವ ಸಾಫ್ಟ್‌ವೇರ್‌ಗಳಿಗೆ ಮಾತ್ರ ಸೀಮಿತ ಪ್ರವೇಶವನ್ನು ಹೊಂದಿರಬಹುದು.

#### 2. ಇಂಟರ್ನೆಟ್ ಪ್ರವೇಶ

ಎಲ್ಲಾ ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಶಿಕ್ಷಕರು ನಿಯಮಿತವಾಗಿ ಅಥವಾ ವಿಶ್ವಾಸಾರ್ಹ ಇಂಟರ್ನೆಟ್ ಪ್ರವೇಶವನ್ನು ಹೊಂದಿಲ್ಲ. ಅನೇಕ ಸಂದರ್ಭಗಳಲ್ಲಿ ಇಂಟರ್ನೆಟ್ ಪ್ರವೇಶವು ಡಯಲ್-ಅಪ್ ವೇಗಕ್ಕೆ ಸೀಮಿತವಾಗಿರಬಹುದು, ಅಥವಾ ಅವರ ಅಂತರ್ಜಾಲದಲ್ಲಿ ಮುಚ್ಚಿದ ಮಾಸಿಕ ಬಳಕೆ ಇರಬಹುದು, ಅದು ಮಾಹಿತಿಯನ್ನು ಪ್ರವೇಶಿಸುವ ಅಥವಾ ತೊಡಗಿಸಿಕೊಳ್ಳುವ ಸಾಮರ್ಥ್ಯವನ್ನು ನಿರ್ಬಂಧಿಸುತ್ತದೆ.

#### 3. ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸುವ ಸಾಮರ್ಥ್ಯ

ಕೆಲವು ತಂತ್ರಜ್ಞಾನಗಳು ಮತ್ತು ಸಾಧನಗಳಿಗೆ ತರಬೇತಿಯ ಅಗತ್ಯವಿರುತ್ತದೆ. ಕೆಲವು ನಿದರ್ಶನಗಳಲ್ಲಿ, ತಾಂತ್ರಿಕ ತರಬೇತಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅಥವಾ ಶಿಕ್ಷಕರಿಗೆ ಸುಲಭವಾಗಿ ಲಭ್ಯವಿಲ್ಲದಿರಬಹುದು.

#### 4. ಪ್ರತ್ಯೇಕತೆ

ತಮ್ಮ ಆನ್‌ಲೈನ್ ಉಪಕ್ರಮಗಳಿಗೆ ಪೀರ್ ಬೆಂಬಲವಿಲ್ಲದ ಶಿಕ್ಷಕರು, ಇದು ಏಕಾಂಗಿ ಮತ್ತು ಪ್ರತ್ಯೇಕ ಅನುಭವವಾಗಿದೆ.

#### 5. ಮಾಹಿತಿ ಓವರ್ಲೋಡ್

ಅನೇಕ ನಿದರ್ಶನಗಳಲ್ಲಿ, ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಒದಗಿಸಲಾದ ಮಾಹಿತಿಯ ಪ್ರಮಾಣ 'ಹೇಗೆ' ಮಾರ್ಗದರ್ಶಿಗಳು, ಸಹಾಯ ಮತ್ತು ಸಂಪನ್ಮೂಲಗಳು ಸರಿಯಾಗಿ ನಿರ್ವಹಿಸದಿದ್ದರೆ ಅಗಾಧ ಮತ್ತು ಗೊಂದಲಕ್ಕೊಳಗಾಗುವ ಪ್ರವೃತ್ತಿಯನ್ನು

ಹೊಂದಬಹುದು. ಸಂಬಂಧಿತ ಅಥವಾ ಮುಖ್ಯವಾದವುಗಳನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಶಿಕ್ಷಕರು ಗ್ರಹಿಸುವುದು ಕಷ್ಟಕರವಾಗಿರುತ್ತದೆ.

#### **ಆನ್‌ಲೈನ್ ಬೋಧನೆಯಲ್ಲಿ ಶಿಕ್ಷಕರ ಅಗತ್ಯತೆಗಳು ಮತ್ತು ಸವಾಲುಗಳು**

ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಬೋಧಿಸುವುದು ತರಗತಿಯಲ್ಲಿ ಬೋಧಿಸುವುದಕ್ಕಿಂತ ಭಿನ್ನವಾದುದು. ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ನಿಮಗೆ ಉಪನ್ಯಾಸಗಳಿಗಿಂತ ಹೆಚ್ಚು ಪರಿಣಾಮಕಾರಿಯಾದ ರೀತಿಯಲ್ಲಿ ವಿಷಯ ಅಥವಾ ಮಾಹಿತಿಯನ್ನು ತಲುಪಿಸಲು ಅನುವು ಮಾಡಿಕೊಡುತ್ತದೆ. ನಿಮ್ಮ ಮುಖಾಮುಖಿ ಕೋರ್ಸ್‌ಅನ್ನು ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಆನ್‌ಲೈನ್ ಕಲಿಯುವವರಿಗೆ ಕಳಪೆ ಫಲಿತಾಂಶ ಬರುತ್ತದೆ.

ಇಂಟರ್ನೆಟ್ ಅಥವಾ ಅಂತರ್ಜಾಲ ಮತ್ತು ಇತರ ಸಂವಹನ ತಂತ್ರಜ್ಞಾನಗಳಿಂದ ವಿಭಿನ್ನ ವೆಬ್-ಆಧಾರಿತ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಬೋಧನೆಯಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕ್ಯಾಂಪಸ್‌ನ ಆಚೆಗಿನ ಕಲಿಕೆಯ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಭಾಗವಹಿಸಲು ಶಾಲೆ ಅಥವಾ ಶಾಲೆಯಿಂದ (ಮನೆಯಿಂದ) ಹೊರಗೆ ಕಲಿಯಲು ಅನುವು ಮಾಡಿಕೊಡುತ್ತದೆ.

#### **ಮೂಲಭೂತ ವಿಷಯಗಳೊಂದಿಗೆ ವಿಷಯವನ್ನು ಪ್ರಾರಂಭಿಸುವುದು.**

ನೀವು ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಬೋಧಿಸಲು ಹೊಸಬರಾಗಿದ್ದೀರಾ ಅಥವಾ ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಬೋಧನೆ / ಕಲಿಕೆಯ ಕಳಪೆ ಅನುಭವವನ್ನು ಹೊಂದಿದ್ದೀರಾ? ಹಾಗಿದ್ದಲ್ಲಿ, ನಿಮಗೆ ಸಹಾಯ ಮಾಡಲು ನಾವು ಇಲ್ಲಿದ್ದೇವೆ. ಈ ಪರಿಚಯವು ಆನ್‌ಲೈನ್ ಬೋಧನೆಯ ಮೂಲಭೂತ ಅಂಶಗಳನ್ನು ಕೇಂದ್ರೀಕರಿಸುವ ಮೂಲಕ ತರಗತಿಯಿಂದ ಆನ್‌ಲೈನ್ ಬೋಧನೆಗೆ ಪರಿವರ್ತಿಸಲು ನಿಮಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಕಲಿಕೆ ಎನ್ನುವುದು ನಿರಂತರ ಪ್ರಕ್ರಿಯೆಯಾಗಿದ್ದು ಅದು ಎಂದಿಗೂ ಮುಗಿಯುವುದಿಲ್ಲ.

#### **ನೀವು ಕಲಿಸುವ ವಿಧಾನವನ್ನು ಮತ್ತೆ ಯೋಚಿಸುವುದು.**

ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಬೋಧಿಸುವುದು ತರಗತಿಯಲ್ಲಿ ಬೋಧಿಸುವುದಕ್ಕಿಂತ ಭಿನ್ನವಾಗಿದೆ. ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ನಿಮಗೆ ಉಪನ್ಯಾಸಗಳಿಗಿಂತ ಹೆಚ್ಚು ಪರಿಣಾಮಕಾರಿಯಾದ ರೀತಿಯಲ್ಲಿ ವಿಷಯ ಅಥವಾ ಮಾಹಿತಿಯನ್ನು ತಲುಪಿಸಲು ಅನುವು ಮಾಡಿಕೊಡುತ್ತದೆ. ನಿಮ್ಮ ಮುಖಾಮುಖಿ ಕೋರ್ಸ್ ಅನ್ನು ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಸರಿಸುವುದರಿಂದ ಆನ್‌ಲೈನ್ ಕಲಿಯುವವರಿಗೆ ಕಳಪೆ ಫಲಿತಾಂಶ ಬರುತ್ತದೆ.

#### **ಪೂರ್ಣಗೊಂಡ ಪತ್ರವನ್ನು ಸಂಪಾದಿಸುವುದು.**

ನಿಮಗೆ ಬೇಕಾದುದನ್ನು ನಿಮ್ಮ ಸ್ವಂತ ವೇಗದಲ್ಲಿ ತಿಳಿಯಿರಿ. ಕೆಳಗಿನ ಪ್ರತಿಯೊಂದು ಮಾಡ್ಯೂಲ್‌ಗೆ ಓದಿ, ವೀಕ್ಷಿಸಿ, ಪೂರ್ಣಗೊಳಿಸಿ ಮತ್ತು ಬ್ಯಾಡ್ಜ್ ಸಂಪಾದಿಸಿ. ಸಿಕ್ಸ್ ಬ್ಯಾಡ್ಜ್‌ಗಳನ್ನು ಸಂಪಾದಿಸಿ ಮತ್ತು ನೀವು ಪೂರ್ಣಗೊಳಿಸುವ ಪತ್ರಕ್ಕೆ ಅರ್ಹತೆ ಪಡೆಯುತ್ತೀರಿ. ಈ ಪತ್ರವು ಗುತ್ತಿಗೆ ನವೀಕರಣ, ಅಧಿಕಾರಾವಧಿ ಮತ್ತು ಪ್ರಚಾರಕ್ಕಾಗಿ ಒಂದು ಅಮೂಲ್ಯವಾದ ಸಾಕ್ಷ್ಯವಾಗಿದೆ.

#### **ಆನ್‌ಲೈನ್ ಬೋಧನೆ ಏಕೆ ಮುಖ್ಯವಾಗುತ್ತದೆ.**

ನಾವು ಪರಸ್ಪರ ಹೇಗೆ ಸಂವಹನ ನಡೆಸುತ್ತೇವೆ ಮತ್ತು ಮಾಹಿತಿಯನ್ನು ನಾವು ಹೇಗೆ ಪ್ರವೇಶಿಸುತ್ತೇವೆ, ಹಂಚಿಕೊಳ್ಳುತ್ತೇವೆ ಮತ್ತು ಸುಗಮಗೊಳಿಸುತ್ತೇವೆ ಎಂಬುದನ್ನು ಇಂಟರ್ನೆಟ್ ಗಮನಾರ್ಹವಾಗಿ ಬದಲಾಯಿಸುತ್ತದೆ. ಈ ವಿಷಯವು ಇನ್ನು ಮುಂದೆ ಕಲಿಸಲು ತಂತ್ರಜ್ಞಾನವನ್ನು ಹೇಗೆ ಬಳಸುವುದು ಎಂಬುದರಲ್ಲ, ಆದರೆ ಶಿಕ್ಷಕರು ಜಗತ್ತು ಈಗಾಗಲೇ ಅಭಿವೃದ್ಧಿ ಹೊಂದುತ್ತಿರುವ ವಿಧಾನವನ್ನು ಅಂಗೀಕರಿಸುತ್ತಾರೆ ಮತ್ತು ಆನ್‌ಲೈನ್ ಸಾಕ್ಷರತೆಯ ಮಹತ್ವವನ್ನು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಯಲ್ಲಿ ಸಹಯೋಗ ಮತ್ತು ಆನ್‌ಲೈನ್ ನಿಶ್ಚಿತಾರ್ಥದ ಪಾತ್ರವನ್ನು ಮತ್ತು ಅವರ ಭವಿಷ್ಯದ ಕೆಲಸದ ಸ್ಥಳವನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುತ್ತಾರೆ. ಪರಿಸರ.

ಸಾಫ್ಟ್‌ವೇರ್ ಮತ್ತು ತಂತ್ರಜ್ಞಾನವು ಬಹಳ ವೇಗವಾಗಿ ಬದಲಾಗುತ್ತದೆ, ಮತ್ತು ಈ ಬೆಳವಣಿಗೆಗಳನ್ನು ಮುಂದುವರಿಸುವುದು ಕಷ್ಟವಾಗುತ್ತದೆ. ಆದ್ದರಿಂದ ತಂತ್ರಜ್ಞಾನಕ್ಕಿಂತ ಹೆಚ್ಚಾಗಿ ಆನ್‌ಲೈನ್ ಬೋಧನೆಗಾಗಿ ಪರಿಣಾಮಕಾರಿ ಶಿಕ್ಷಣ ತಂತ್ರಗಳನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವಲ್ಲಿ ಗಮನಹರಿಸುವುದು ಬಹಳ ಮುಖ್ಯ.

#### **ಗುಣಮಟ್ಟದ ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ಎಂದರೇನು?**

ನಿಮ್ಮ ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್ ಒಂದೇ ಮಟ್ಟವನ್ನು ತಲುಪುತ್ತದೆಯೇ ಅಥವಾ ಸಮಾನ ಮುಖಾಮುಖಿ ಕೋರ್ಸ್‌ನೊಂದಿಗೆ ಉತ್ತಮವಾಗಿದೆಯೇ? ಎರಡು ಪರಿಮಾಣಾತ್ಮಕ ವಿಮರ್ಶಾತ್ಮಕ ಕಾರ್ಯಕ್ಷಮತೆಯ ಸೂಚಕಗಳಿವೆ.

1. ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್‌ಗೆ ಪೂರ್ಣಗೊಳ್ಳದ ದರಗಳು ಉತ್ತಮವಾಗಿದ್ದರೆ ಉತ್ತಮವಾಗಿರುತ್ತದೆ.

2. ಶ್ರೇಣಿಗಳನ್ನು ಮತ್ತು ಕಲಿಕೆಯ ಕ್ರಮಗಳು ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್‌ಗೆ ಉತ್ತಮವಾಗಿಲ್ಲದಿದ್ದರೆ ಉತ್ತಮವಾಗಿರುತ್ತದೆ. ಗುಣಾತ್ಮಕ ಮಟ್ಟದಲ್ಲಿ, ನಿಮ್ಮ ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್‌ನಲ್ಲಿ ಕಲಿಯುವುದು ಹೊಸ, ವಿಭಿನ್ನ ಮತ್ತು ಹೆಚ್ಚು ಪ್ರಸ್ತುತ ಫಲಿತಾಂಶಗಳಿಗೆ ಕಾರಣವಾಗುತ್ತದೆ.

ನೀವು ಆನ್‌ಲೈನ್‌ಗೆ ಹೋದಾಗ ನೀವು ಕಲಿಸುವ ವಿಧಾನವನ್ನು ನೀವು ಮರು ಯೋಚಿಸಬೇಕು - ನಿಮ್ಮ ಮುಖಾಮುಖಿ ಬೋಧನೆಯನ್ನು ಆನ್‌ಲೈನ್ ಆವೃತ್ತಿಗೆ ಸರಿಸುವುದಲ್ಲದೆ, ಆನ್‌ಲೈನ್ ಕಲಿಯುವವರ ಅವಶ್ಯಕತೆಗಳಿಗೆ ತಕ್ಕಂತೆ ಬೋಧನೆಯನ್ನು ಮರು ವಿನ್ಯಾಸಗೊಳಿಸುವುದು. ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಉತ್ತಮವಾಗಿ ಬೋಧಿಸುವುದು ಅನೇಕವನ್ನು ಹೊಂದಿದೆ ಮುಖಾಮುಖಿಯಾಗಿ ಚೆನ್ನಾಗಿ ಕಲಿಸುವ ಅದೇ ಅವಶ್ಯಕತೆಗಳು, ಉದಾಹರಣೆಗೆ - ಸ್ಪಷ್ಟ ಕಲಿಕೆಯ ಫಲಿತಾಂಶಗಳು, ಅಪೇಕ್ಷಿತ ಕಲಿಕೆಯ ಫಲಿತಾಂಶಗಳನ್ನು ಪರೀಕ್ಷಿಸುವ, ಮೌಲ್ಯಮಾಪನಗಳು ಮತ್ತು ವಿವಿಧ ಹಂತದ ಸಾಧನೆಗಳ ನಡುವೆ ವ್ಯತ್ಯಾಸವನ್ನು ತೋರಿಸುವುದು ಇತ್ಯಾದಿ. ಆದಾಗ್ಯೂ, ವಿಭಿನ್ನ ಅವಶ್ಯಕತೆಗಳೂ ಇವೆ, ಏಕೆಂದರೆ ಸಂದರ್ಭ ಯಾರು ಕಲಿಯುವವರು ಕೆಲಸ ಮಾಡುತ್ತಿದ್ದೀರಿ ಎಂಬುದು ವಿಭಿನ್ನವಾಗಿರುತ್ತದೆ.

#### 1. ಹೊಂದಿಕೊಳ್ಳುವಿಕೆ.

ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ಒಂದು ಗಂಟೆ ಉಪನ್ಯಾಸ ಕೋರ್ಸ್‌ಗಿಂತ ಉತ್ತಮ ಕಲಿಕೆಗೆ ಕಾರಣವಾಗುವ ರೀತಿಯಲ್ಲಿ ವಿಷಯ ಅಥವಾ ಮಾಹಿತಿಯನ್ನು ತಲುಪಿಸಲು ನಮಗೆ ಅನುಮತಿಸುತ್ತದೆ.

#### 2. ಆನ್‌ಲೈನ್ ವಿದ್ಯಾರ್ಥಿಗಳ ವಿಭಿನ್ನ ಅಗತ್ಯಗಳು.

ಆನ್‌ಲೈನ್ ವಿದ್ಯಾರ್ಥಿಗಳು, ಬೋಧಕ ಆನ್‌ಲೈನ್‌ನಲ್ಲಿದ್ದಾರೆ ಎಂದು ಭಾವಿಸಬೇಕಾಗಿದೆ ಎಂದು ತೋರಿಸಲು ಉತ್ತಮ ಸಂಶೋಧನೆ ಇದೆ, ಅಂದರೆ ಚರ್ಚಾ ವೇದಿಕೆಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಸಂವಹನ ನಡೆಸುವುದು, ಇತ್ತೀಚಿನ ಸಂಬಂಧಿತ ಲೇಖನಗಳು ಅಥವಾ ಘಟನೆಗಳಿಗೆ ನಿರ್ದೇಶಿಸುವುದು ಮತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ತ್ವರಿತವಾಗಿ ಪ್ರತಿಕ್ರಿಯಿಸುವುದು.

#### 3. ನೀವು ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಹೇಗೆ ಕಲಿಸಲು ಬಯಸುತ್ತೀರಿ?

ನಿಮ್ಮ ಮೂಲ ಬೋಧನಾ ತತ್ವಶಾಸ್ತ್ರವನ್ನು ಪರಿಗಣಿಸಲು ಈ ಪ್ರಶ್ನೆ ನಿಜವಾಗಿಯೂ ನಿಮ್ಮನ್ನು ಕೇಳುತ್ತದೆ. ಬೋಧಕನಾಗಿ ನನ್ನ ಪಾತ್ರವೇನು?

#### 4. ವಸ್ತುನಿಷ್ಠ ದೃಷ್ಟಿಕೋನ.

ಜ್ಞಾನವು ಸೀಮಿತವಾಗಿದೆ ಮತ್ತು ವ್ಯಾಖ್ಯಾನಿಸಲಾಗಿದೆ. ನಾನು ವಿದ್ಯಾರ್ಥಿಗಳಿಗಿಂತ ಹೆಚ್ಚು ತಿಳಿದಿರುವ ವಿಷಯದಲ್ಲಿ ಪರಿಣಿತನಾಗಿದ್ದೇನೆ ಮತ್ತು ಆ ಮಾಹಿತಿ ಅಥವಾ ಜ್ಞಾನವನ್ನು ವಿದ್ಯಾರ್ಥಿಗೆ ಸಾಧ್ಯವಾದಷ್ಟು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ವರ್ಗಾಯಿಸುವುದನ್ನು ಖಚಿತಪಡಿಸಿಕೊಳ್ಳುವುದು ನನ್ನ ಕೆಲಸ?

#### 5. ವೈಯಕ್ತಿಕ ಬೆಳವಣಿಗೆಯಾಗಿ ಕಲಿಯುವುದು.

ಕಲಿಯುವವರ ಕೌಶಲ್ಯ ಮತ್ತು ಮಾಹಿತಿ ಅಥವಾ ಜ್ಞಾನವನ್ನು ಪ್ರಶ್ನಿಸುವ, ವಿಶ್ಲೇಷಿಸುವ ಮತ್ತು ಅನ್ವಯಿಸುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವುದರತ್ತ ಗಮನ ಹರಿಸಲಾಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಲಿಕೆಯ ಮಾರ್ಗದರ್ಶಿ ಅಥವಾ ಸುಗಮಕಾರನಾಗಿ ನಾನು ನನ್ನನ್ನು ಹೆಚ್ಚು ನೋಡುತ್ತೇನೆಯೇ?

#### 6. ಎರಡೂ ವಿಧಾನಗಳನ್ನು ಸಂಯೋಜಿಸಿ.

ಈ ಯಾವುದೇ ವಿಧಾನಗಳಲ್ಲಿ ಕಲಿಸಲು ನೀವು ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್‌ಗಳನ್ನು ವಿನ್ಯಾಸಗೊಳಿಸಬಹುದು, ಆದರೆ ನಿಮ್ಮ ತರಗತಿಯನ್ನು ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಚಲಿಸುವುದರಿಂದ ನಿಮ್ಮ ಬೋಧನೆಯನ್ನು ಪುನರ್ವಿಮರ್ಶಿಸಲು ನಿಮಗೆ ಅವಕಾಶ ನೀಡುತ್ತದೆ, ಬಹುಶಃ ತರಗತಿಯ ಬೋಧನೆಯ ಕೆಲವು ಮಿತಿಗಳನ್ನು ನಿಭಾಯಿಸಲು ಮತ್ತು ಬೋಧನೆಗೆ ನಿಮ್ಮ ವಿಧಾನವನ್ನು ನವೀಕರಿಸಲು.

ನೀವು ಆನ್‌ಲೈನ್‌ಗೆ ಹೋಗುವ ಬಗ್ಗೆ ಯೋಚಿಸುತ್ತಿದ್ದರೆ, ನೀವು ನಿಜವಾಗಿಯೂ ಹೇಗೆ ಕಲಿಸಲು ಇಷ್ಟಪಡುತ್ತೀರಿ ಮತ್ತು ಆನ್‌ಲೈನ್ ಪರಿಸರದಲ್ಲಿ ಇದನ್ನು ಸರಿಹೊಂದಿಸಬಹುದೇ ಎಂದು ಯೋಚಿಸಲು ನೀವು ಕಲಿಸಲು ಪ್ರಾರಂಭಿಸುವ ಮೊದಲು ಅವಕಾಶವನ್ನು ಪಡೆಯಿರಿ. ಆದರೂ ನೀವು ತಕ್ಷಣ ತೆಗೆದುಕೊಳ್ಳಬೇಕಾದ ನಿರ್ಧಾರವಲ್ಲ.

**ಭಾಷಾ ಶಿಕ್ಷಕರು ತಮ್ಮ ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಬೋಧನೆಯಲ್ಲಿನ ಕಂಡುಕೊಂಡ ನಾವೀನ್ಯತೆಗಳು**

#### 1. ಸಮಯದ ಹೆಚ್ಚಿದ ನಮ್ಯತೆ

ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮತ್ತು ಶಿಕ್ಷಕರಿಗೆ ಹೆಚ್ಚು ಅನುಕೂಲಕರ ಮತ್ತು ಉತ್ಪಾದಕವಾದ ಸಮಯಗಳಲ್ಲಿ ಕಲಿಕೆ ಮತ್ತು ಬೋಧನೆ ಸಂಭವಿಸಬಹುದು. ನಿರ್ದಿಷ್ಟ ಚೌಕಟ್ಟಿನೊಳಗೆ ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮದೇ ಆದ ವೇಗದಲ್ಲಿ ಕೆಲಸ ಮಾಡಬಹುದು



ಮತ್ತು ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ಮತ್ತು ಬೋಧನೆ ನಿಶ್ಚಿತಾರ್ಥದ ಪ್ರಕ್ರಿಯೆಯನ್ನು ಸಮಯದ ಸಣ್ಣ ಭಾಗಗಳಾಗಿ ವಿಂಗಡಿಸಬಹುದು, ನಡುವೆ ಪ್ರತಿಬಿಂಬಿಸುವ ಅವಕಾಶವಿದೆ.

## 2. ಸ್ಥಳದ ಹೆಚ್ಚಿದ ನಮ್ಮತೆ

ಕಲಿಕೆ ಮತ್ತು ಬೋಧನೆ ಯಾವುದೇ ಸ್ಥಳದಲ್ಲಿ (ಮನೆ, ಕಚೇರಿ, ಪ್ರಯಾಣ ಮಾಡುವಾಗ, ಕಾಫಿ ಅಂಗಡಿ) ನಡೆಯಬಹುದು ಮತ್ತು ವಿವಿಧ ಭೌಗೋಳಿಕ ಸ್ಥಳಗಳಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಶಿಕ್ಷಕರನ್ನು ಸೇರಿಸಿಕೊಳ್ಳಬಹುದು

## 3. ಸಂದರ್ಭ

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ಸಮಕಾಲೀನ ಸಮಾಜ ಮತ್ತು ವೃತ್ತಿಪರ ಮತ್ತು ಉದ್ಯಮ ಅಭ್ಯಾಸಕ್ಕೆ ಹೊಸ ಪ್ರಸ್ತುತತೆಯನ್ನು ನೀಡುತ್ತದೆ

## 4. ಮಾಹಿತಿ ಹಂಚಿಕೆ

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ಮಾಹಿತಿಯನ್ನು ಸುಲಭವಾಗಿ ಮತ್ತು ಸುಲಭವಾಗಿ ಪ್ರವೇಶಿಸಲು ಮತ್ತು ಹಂಚಿಕೊಳ್ಳಲು ಅವಕಾಶಗಳನ್ನು ಒದಗಿಸುತ್ತದೆ. ಶಿಕ್ಷಕರು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಭೌಗೋಳಿಕ ಸ್ಥಳಕ್ಕಿಂತ ಹೆಚ್ಚಾಗಿ ತಮ್ಮ ಆಸಕ್ತಿಯ ಕ್ಷೇತ್ರವನ್ನು ಆಧರಿಸಿ ಆನ್‌ಲೈನ್ ಅಭ್ಯಾಸದ ಸಮುದಾಯಗಳಿಗೆ ಸೇರಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

## 5. ಆನ್‌ಲೈನ್ ಸಂಪನ್ಮೂಲಗಳು

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ಸಂಪನ್ಮೂಲಗಳು ಮತ್ತು ಮಾಹಿತಿಯ ಹೆಚ್ಚಿನ ಆಳ ಮತ್ತು ವಿಸ್ತಾರಕ್ಕೆ ಪ್ರವೇಶವನ್ನು ಒದಗಿಸುತ್ತದೆ.

## 6. ವೈವಿಧ್ಯಮಯ ಮತ್ತು ಸಮೃದ್ಧ ಅನುಭವ

ಉತ್ತಮ ಶಿಸ್ತು, ಸಂಸ್ಕೃತಿ, ಅಥವಾ ಕಾಲೇಜಿನ ಆವರಣದ ಸಹಯೋಗಗಳಿಗೆ ಅವಕಾಶಗಳನ್ನು ಒದಗಿಸುವ ಮೂಲಕ ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಯ ಅನುಭವವನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ. ಈ ಕಲಿಕೆಯ ಅನುಭವವು ಸ್ಥಳೀಯ, ರಾಷ್ಟ್ರೀಯ ಅಥವಾ ಅಂತರರಾಷ್ಟ್ರೀಯ ಮಟ್ಟದಲ್ಲಿ ಸಂಭವಿಸಬಹುದು ಮತ್ತು ಹೆಚ್ಚಿದ ಸಂವಹನ ಮತ್ತು ನಿಶ್ಚಿತಾರ್ಥ, ಪ್ರತಿಕ್ರಿಯೆ ಮತ್ತು ಗುಂಪು ಕೆಲಸದ ಕೌಶಲ್ಯಗಳಿಂದ ಸಮೃದ್ಧವಾಗಬಹುದು.

## 7. ಪ್ರವೇಶ, ಇಕ್ಷಿತಿ ಮತ್ತು ಅಂಗವೈಕಲ್ಯ

ಅಂಗವಿಕಲತೆಯೊಂದಿಗೆ ವಾಸಿಸುವ ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಶಿಕ್ಷಕರಲ್ಲಿ ಅಥವಾ ಮುಖಾಮುಖಿ ತರಗತಿಗೆ ಹಾಜರಾಗುವ ಸಾಮರ್ಥ್ಯವನ್ನು ನಿರ್ಬಂಧಿಸುವ ಪ್ರವೇಶ ತೊಂದರೆಗಳನ್ನು ಹೊಂದಿರುವ ಆನ್‌ಲೈನ್ ವಿತರಣೆಯು ಸಮಾನ ಅವಕಾಶಕ್ಕಾಗಿ ಒಂದು ಕಾರ್ಯವಿಧಾನವನ್ನು ಒದಗಿಸುತ್ತದೆ

## 8. ಡಿಜಿಟಲ್ ಮಾಹಿತಿ ಸಾಕ್ಷರತೆ

ಆನ್‌ಲೈನ್ ಕಲಿಕೆ ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತಾ ಕೌಶಲ್ಯಗಳನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುತ್ತದೆ, ಅದು ಸಮಕಾಲೀನ ಸಮಾಜ ಮತ್ತು ಕೆಲಸದ ವಾತಾವರಣದಲ್ಲಿ ಹೆಚ್ಚು ಅಗತ್ಯವಾಗಿರುತ್ತದೆ.

## 9. ಆಡಳಿತ

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ಬೋಧನೆಯ ಕೆಲವು ಆಡಳಿತಾತ್ಮಕ ಅಂಶಗಳನ್ನು ಸುಗಮಗೊಳಿಸುತ್ತದೆ

**ಭಾಷಾ ಶಿಕ್ಷಕರು ಆನ್‌ಲೈನ್ ಬೋಧನೆಯಲ್ಲಿನ ಎಚ್ಚರಿಕೆಗಳು.**

ನಿಮ್ಮ ಉಪನ್ಯಾಸ ಟಿಪ್ಪಣಿಗಳನ್ನು ನೀವು ವೆಬ್‌ನಲ್ಲಿ ಇಟ್ಟರೆ ಅಥವಾ ಡೌನ್‌ಲೋಡ್ ಮಾಡಲು ನಿಮ್ಮ 50 ನಿಮಿಷಗಳ ಉಪನ್ಯಾಸಗಳನ್ನು ರೆಕಾರ್ಡ್ ಮಾಡಿದರೆ, ನಿಮ್ಮ ಮುಖಾಮುಖಿ ವರ್ಗಕ್ಕಿಂತ ಕಡಿಮೆ ವಿದ್ಯಾರ್ಥಿಗಳ ಪೂರ್ಣಗೊಳಿಸುವಿಕೆ ಮತ್ತು ಶ್ರೇಣಿಗಳನ್ನು ಹೊಂದಿರುವುದು ನಿಮಗೆ ಖಚಿತವಾಗಿದೆ.

ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್ ಎಂದರೇನು? ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್ ಇಂದಿನಂತೆಯೇ ಇರಬೇಕೆಂದು ಕಲಿಯುವವರು ಏನು ನಿರೀಕ್ಷಿಸುತ್ತಾರೆ? ಅವರು ಆನ್‌ಲೈನ್ ಕೋರ್ಸ್‌ಗಳು ಹೆಚ್ಚಾಗಿ ಅಸಮಕಾಲಿಕವಾಗಿರುತ್ತವೆ ಎಂದು ನಿರೀಕ್ಷಿಸಿ, ಅವುಗಳನ್ನು ಕಲಿಯಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಸಾಮಾನ್ಯ ತರಗತಿಯ ಕೋರ್ಸ್‌ಗಿಂತ ಹೆಚ್ಚಿನ ಪ್ರಮಾಣದಲ್ಲಿ ಸ್ವಂತ ಕಲಿಕೆಯ ವೇಗವನ್ನು ತಿಳಿದು ನಾವು ಹೇಗೆ ಕಲಿಸಬಹುದು. ಈ ರೀತಿಯ ಪರಿಸರದಲ್ಲಿ ಮಾತನಾಡುತ್ತೀರಾ? ಇದು ನಮ್ಮ ಮೊದಲ ಸವಾಲು.

ಶೈಕ್ಷಣಿಕ ಸಂದರ್ಭಗಳಲ್ಲಿ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನಗಳ ಬಳಕೆ ಬೆಳೆಯುತ್ತಿರುವಾಗ ಮತ್ತು ಶಿಕ್ಷಕರು ತಮ್ಮ ತರಗತಿ ಕೋಣೆಗಳಲ್ಲಿ ಕಂಪ್ಯೂಟರ್ ನೆರವಿನ ಭಾಷಾ ಕಲಿಕೆಯನ್ನು ಹೆಚ್ಚಾಗಿ ಬಳಸಬೇಕು. ಭಾಷಾ ಶಿಕ್ಷಕರು ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಮೂಲಕ ಸಮಾಜದ ಪ್ರತಿಯೊಬ್ಬ ವಿದ್ಯಾರ್ಥಿಗಳ ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಬೆಳೆಸಲು ಪ್ರಮುಖ ಸಂಗತಿಗಳನ್ನು ಬೋಧನೆಯಲ್ಲಿ



ರೂಢಿಸಿಕೊಳ್ಳಬೇಕಾದ ಅವಶ್ಯಕತೆಯಿದೆ. ಉದಾ : 1) ಮಾತೃಭಾಷೆಯಲ್ಲಿ ಸಂವಹನ, 2) ವಿದೇಶಿ ಭಾಷೆಗಳಲ್ಲಿ ಸಂವಹನ, 3) ಗಣಿತದ ಸಾಮರ್ಥ್ಯ ಮತ್ತು ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನದಲ್ಲಿನ ಮೂಲ ಸಾಮರ್ಥ್ಯಗಳು, 4) ಡಿಜಿಟಲ್ ಸಾಮರ್ಥ್ಯ, 5) ಕಲಿಯಲು ಕಲಿಯುವುದು, 6) ಸಾಮಾಜಿಕ ಮತ್ತು ನಾಗರಿಕ ಸಾಮರ್ಥ್ಯಗಳು, 7) ಉಪಕ್ರಮ ಮತ್ತು ಉದ್ಯಮಶೀಲತೆಯ ಪ್ರಜ್ಞೆ, 8) ಸಾಂಸ್ಕೃತಿಕ ಅರಿವು ಮತ್ತು ಅಭಿವ್ಯಕ್ತಿ.

ಈ ಹಲವಾರು ಸಾಮರ್ಥ್ಯಗಳು ನೇರವಾಗಿ ಅಥವಾ ಪರೋಕ್ಷವಾಗಿ ಭಾಷಾ ಕಲಿಕೆಗೆ ಸಂಬಂಧಿಸಿವೆ ಮತ್ತು ಐಸಿಟಿಯ ಬಳಕೆ, ಅವುಗಳೆಂದರೆ ಮಾತೃಭಾಷೆಯಲ್ಲಿ ಮತ್ತು ವಿದೇಶಿ ಭಾಷೆಗಳಲ್ಲಿ ಸಂವಹನ ಡಿಜಿಟಲ್ ಮತ್ತು ತಾಂತ್ರಿಕ ಸಾಮರ್ಥ್ಯ ಕಲಿಯಲು ಕಲಿಯುವುದು ಮತ್ತು ಅಂತರ್ ಸಾಂಸ್ಕೃತಿಕ ಮತ್ತು ಸಾಮಾಜಿಕ ಸಾಮರ್ಥ್ಯಗಳು ಹಾಗೂ ಭಾಷಾ ಶಿಕ್ಷಕರು ಮತ್ತು ಐಸಿಟಿ ಸಾಂಸ್ಕೃತಿಕ, ಸಾಮಾಜಿಕ ಮತ್ತು ವೃತ್ತಿಪರ ನಿರ್ಬಂಧಗಳು

ಭಾಷಾ ಶಿಕ್ಷಕರ ಆಸಕ್ತಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಮೂರು ಪ್ರಮುಖ ಅಂಶಗಳನ್ನು ಪರಿಗಣಿಸಬೇಕಾಗಿದೆ. ತಮ್ಮ ತರಗತಿಗಳಲ್ಲಿ ಐಸಿಟಿಗಳನ್ನು ಬಳಸುವ ಪ್ರೇರಣೆ ತಂತ್ರಜ್ಞಾನದೊಂದಿಗೆ ಇಂಗ್ಲಿಷ್ ಬೋಧನೆ - ಆನ್‌ಲೈನ್ ಬೋಧನಾ ಕೌಶಲ್ಯಗಳನ್ನು ಕಲಿಯಬೇಕಾಗುತ್ತದೆ. 1 ಅವರು ಕೆಲಸ ಮಾಡುವ ಸಂಸ್ಥೆ (ಗಳು) ಪ್ರಕಾರ, 2 ಅವರ ಸಾಮಾಜಿಕ ಸ್ಥಾನಮಾನ, 3 ಶಿಕ್ಷಕರಾಗಿ ಅವರ ಸ್ವಯಂ ಗ್ರಹಿಕೆ.

**ಆನ್‌ಲೈನ್ ಕಲಿಕೆಯಿಂದ ಭಾಷಾ ಶಿಕ್ಷಕರಿಗಾಗುವ ಪ್ರಯೋಜನಗಳು**

1. **ಸಂವಹನ:** ಅನೇಕ ವಿದ್ಯಾರ್ಥಿಗಳು ತರಗತಿಗಿಂತ ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಅರ್ಥಪೂರ್ಣ ಚರ್ಚೆಗಳಲ್ಲಿ ತೊಡಗಿಸಿಕೊಳ್ಳಲು ಹೆಚ್ಚು ಆರಾಮದಾಯಕವಾಗಿದ್ದಾರೆ. ಈ ವಿದ್ಯಾರ್ಥಿಗಳು ಶ್ರವಣ ಅಥವಾ ಮಾತಿನ ದುರ್ಬಲತೆಯನ್ನು ಹೊಂದಿರಬಹುದು. ವಿವಿಧ ಭಾಷೆಗಳನ್ನು ಮಾತನಾಡುತ್ತಾರೆ ಹಾಗೂ ತೀವ್ರ ಸಾಮಾಜಿಕ ಆತಂಕವನ್ನು ಹೊಂದಿರುತ್ತಾರೆ ಅಥವಾ ಅವರ ಆಲೋಚನೆಗಳನ್ನು ಸಂಘಟಿಸಲು ಹೆಚ್ಚಿನ ಸಮಯ ಬೇಕಾಗುತ್ತದೆ.
2. **ವೈಯಕ್ತಿಕ ಕಲಿಕೆ:** ಎಲ್ಲಾ ವಿದ್ಯಾರ್ಥಿಗಳು ಒಂದೇ ರೀತಿ ಕಲಿಯುವುದಿಲ್ಲ. ವೆಬ್ ಆಧಾರಿತ ಕಲಿಕೆ ಬೋಧಕರಿಗೆ ವೀಡಿಯೋಗಳು ಅಥವಾ ಸಿಮ್ಯುಲೇಶನ್‌ಗಳಂತಹ ವಿಭಿನ್ನ ಮಾಧ್ಯಮಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಒಂದೇ ವಿಷಯವನ್ನು ತಲುಪಿಸಲು, ಕಲಿಕೆಯನ್ನು ವೈಯಕ್ತೀಕರಿಸಲು ಅನುಮತಿ ನೀಡಲಾಗುತ್ತದೆ. ತರಗತಿಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಹೆಚ್ಚು ಗಮನಹರಿಸುತ್ತವೆ ಮತ್ತು ತೊಡಗಿಸಿಕೊಂಡಿದೆ ಎಂದು ಭಾವಿಸಿದಾಗ ಹೆಚ್ಚು ಅಧ್ಯಯನ ಮಾಡಲು ಅವಕಾಶ ನೀಡುತ್ತದೆ.
3. **ಪ್ರವೇಶಿಸುವಿಕೆ:** ಆನ್‌ಲೈನ್ ಕಾರ್ಯಕ್ರಮಗಳು ಸಮಯ, ಭೌಗೋಳಿಕ ಮತ್ತು ಉನ್ನತ ಶಿಕ್ಷಣದ ಇತರ ಅಡೆತಡೆಗಳನ್ನು ಮೀರಿಸುತ್ತದೆ. ಪೂರ್ಣ ಸಮಯ ಕೆಲಸ ಮಾಡುವ, ದೂರದ ಪ್ರದೇಶಗಳಲ್ಲಿ ವಾಸಿಸುವ ಅಥವಾ ಮಿಲಿಟರಿಯಲ್ಲಿ ಸೇವೆ ಸಲ್ಲಿಸುವವರಿಗೆ ಇದು ಸಹಾಯಕವಾಗಿರುತ್ತದೆ.
4. **ಹೊಂದಿಕೊಳ್ಳುವಿಕೆ:** ಪಠ್ಯದಿಂದ ಭಾಷಣ ಮತ್ತು ಇತರ ಹೊಂದಾಣಿಕೆಯ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಸಂಯೋಜಿಸುವ ಕಲಿಕೆ ನಿರ್ವಹಣಾ ವ್ಯವಸ್ಥೆಗಳು ಕಲಿಯುವವರನ್ನು ದೈಹಿಕ, ನಡವಳಿಕೆ ಮತ್ತು ಕಲಿಕೆಯ ಸವಾಲುಗಳೊಂದಿಗೆ ಬೆಂಬಲಿಸುತ್ತದೆ.
5. **ದಕ್ಷತೆ:** ಆನ್‌ಲೈನ್ ವಿದ್ಯಾರ್ಥಿಗಳು ತರಗತಿ ಆಧಾರಿತ ವಿದ್ಯಾರ್ಥಿಗಳ ಅರ್ಥದಷ್ಟು ಸಮಯದಲ್ಲಿಯೇ ಅದೇ ಕಲಿಕೆಯ ಫಲಿತಾಂಶಗಳನ್ನು ಸಾಧಿಸುತ್ತಾರೆ ಎಂದು ಅಧ್ಯಯನಗಳು ತೋರಿಸುತ್ತವೆ.
6. **ನಿಶ್ಚಿತಾರ್ಥ:** ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪ್ರೇರೇಪಿಸಲು ಮತ್ತು ಕಲಿಕೆಯನ್ನು ಹೆಚ್ಚಿಸಲು ಆನ್‌ಲೈನ್ ಬೋಧಕರು ಆಟಗಳು, ಸಾಮಾಜಿಕ ಮಾಧ್ಯಮ, ವರ್ಚುವಲ್ ಬ್ಯಾಡ್ಜ್‌ಗಳು ಮತ್ತು ಇತರ ಆಕರ್ಷಕವಾಗಿರುವ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಬಳಸಬಹುದು.

**ಉಪಸಂಹಾರ**

ಆನ್‌ಲೈನ್ ಬೋಧನೆಯು ಉಳಿಯಲು ಇಲ್ಲಿದೆ. ಅನೇಕ ವಿದ್ಯಾರ್ಥಿಗಳು ಆನ್‌ಲೈನ್ ತರಗತಿಯನ್ನು ಬಯಸುತ್ತಾರೆ ಏಕೆಂದರೆ ಇದು ಅವರ ಬಿಡುವಿಲ್ಲದ ವೇಳಾಪಟ್ಟಿಯಲ್ಲಿ ನಮ್ಮತೆಯನ್ನು ನೀಡುತ್ತದೆ. ಮಾಹಿತಿ ಮತ್ತು ಜ್ಞಾನದ ಪ್ರಸರಣದೊಂದಿಗೆ, ವಿದ್ಯಾರ್ಥಿಗಳು ಇಂದಿನ ಜಗತ್ತಿನಲ್ಲಿ ಆಜೀವ ಕಲಿಯುವವರಾಗಬೇಕು ಮತ್ತು ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಯುವ ಕೇಂದ್ರಿತ ಮತ್ತು ಸ್ವಯಂ ನಿರ್ದೇಶಿತ ಸೂಚನೆಯನ್ನು ಪ್ರವೇಶಿಸಲು ಸಹಾಯ ಮಾಡುವಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ.

ಮುಂದುವರಿದ ಸಾಫ್ಟ್‌ವೇರ್, ಹಾರ್ಡ್‌ವೇರ್ ಮತ್ತು ಇಂಟರ್‌ನೆಟ್ ಸಂಪರ್ಕದೊಂದಿಗೆ ಪ್ರವೇಶವನ್ನು ಪಡೆದು ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣಕ್ಕಾಗಿ ಹೆಚ್ಚಿನ ಆಯ್ಕೆಗಳು ಲಭ್ಯವಾಗುತ್ತವೆ. ತರಗತಿ ಕೊಠಡಿಗಳನ್ನು ನಿರ್ಮಿಸುವುದಕ್ಕಿಂತ ವೇಗವಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳ ದಾಖಲಾತಿ ಹೆಚ್ಚುತ್ತಿದೆ, ವಿದ್ಯಾರ್ಥಿಗಳು ತಂತ್ರಜ್ಞಾನದೊಂದಿಗೆ ಹೆಚ್ಚು ಪ್ರವೀಣರಾಗುತ್ತಾರೆ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಅಗತ್ಯಗಳನ್ನು ಪೂರೈಸುವ ಶಿಕ್ಷಣವನ್ನು ಅನುಸರಿಸುತ್ತಿದ್ದಾರೆ, ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಭವಿಷ್ಯವು ಬೆಳೆಯುತ್ತಲೇ ಇರುತ್ತದೆ. ಆನ್‌ಲೈನ್ ಪದವಿ ಕಾರ್ಯಕ್ರಮಗಳು ಹೆಚ್ಚು ಸಾಮಾನ್ಯ ಅಭ್ಯಾಸವಾಗಿರುವುದರಿಂದ ಹೆಚ್ಚು ವ್ಯಾಪಕವಾಗಿ ಅಂಗೀಕರಿಸಲ್ಪಡುತ್ತವೆ.

ಒಟ್ಟಿನಲ್ಲಿ ಭಾರತದ ಪ್ರಾಚೀನ ಜ್ಞಾನದ ಕಲಿಕಾ ವ್ಯವಸ್ಥೆಯಿಂದ ಆಧುನಿಕ ಶಿಕ್ಷಣದ ಕಲಿಕಾ ವ್ಯವಸ್ಥೆಯೊಂದಿಗೆ ಸಂಯೋಜಿಸಬೇಕಿದೆ. ಭಾರತದ ಹಾಗೂ ಪಾಶ್ಚಿಮಾತ್ಯ ರಾಷ್ಟ್ರಗಳೊಂದಿಗೆ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸುವ ಹಾಗೂ ಹೊಸ ಹೊಸ ಜ್ಞಾನದ ಮಜಲುಗಳನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳಬೇಕಾದ ಅವಶ್ಯಕತೆ ಇದೆ. ಆದ್ದರಿಂದ ಇವುಗಳನ್ನು ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ 2020ರಲ್ಲಿ ಭವ್ಯ ಪರಂಪರೆಯ ಜ್ಞಾನದ ಆಯಾಮಗಳನ್ನು ಮುಕ್ತವಾಗಿ ಚರ್ಚಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಶಿಕ್ಷಕ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳು ಮುಕ್ತ ಮನಸ್ಸುಗಳನ್ನು ಇಟ್ಟುಕೊಂಡು ಕಲಿಕಾ ವ್ಯಾಪ್ತಿಯನ್ನು ಉನ್ನತೀಕರಿಸುವ ಅವಶ್ಯಕತೆಯಿದೆ.

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## ಶಿಕ್ಷಣದಲ್ಲಿ ಯೋಗ

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### ಸಾರಾಂಶ

ಯೋಗ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯು ತಾತ್ವಿಕ ಕಲ್ಪನೆಗಳಲ್ಲಿ ವಿಶಿಷ್ಟ ಸ್ಥಾನಮಾನವನ್ನು ಹೊಂದಿದೆ, ಇದು ಸಾಮಾಜಿಕ, ನೈತಿಕ, ಆಧ್ಯಾತ್ಮಿಕ ಮತ್ತು ನೈತಿಕ ನೀತಿ ಸಂಹಿತೆಗಳ ಪುರಾತನ ವ್ಯವಸ್ಥೆಯಾಗಿದೆ. ಪ್ರಸ್ತುತ ಶತಮಾನದ ಭಾರತವು ವಿಶ್ವದಲ್ಲಿ ಆಧುನಿಕ ಚಿತ್ರಣವನ್ನು ನಿರ್ಮಿಸಲು ಪ್ರಯತ್ನಿಸುತ್ತಿದೆ, ಜಾಗತಿಕ ವಾತಾವರಣದಲ್ಲಿ ತನ್ನ ಅಸ್ತಿತ್ವವನ್ನು ಅನುಭವಿಸಲು ಪ್ರಯತ್ನಿಸುತ್ತಿದೆ. ನಾಗರಿಕತೆಯ ಕೆಳಭಾಗದಲ್ಲಿ ನಮ್ಮ ಸಮಾಜವು ಅಸಂಸ್ಕೃತ ಯುಗದಿಂದ ಆಧುನಿಕ ಬಾಹ್ಯಾಕಾಶ ಯುಗಕ್ಕೆ ಬೃಹತ್ ಬದಲಾವಣೆಗಳು ಮತ್ತು ಬೆಳವಣಿಗೆಗಳಿಗೆ ಒಳಗಾಗಿದೆ, ಮೂಲಭೂತವಾಗಿ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಕ್ಷೇತ್ರದಲ್ಲಿ ಶ್ಲಾಘನೀಯ ಪ್ರಗತಿಯಿಂದಾಗಿ. ಆದರೆ ಮನುಷ್ಯನು ಜೀವನದಲ್ಲಿ ಸಾಮಾಜಿಕ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ನೀತಿಗಳನ್ನು ಕಳೆದುಕೊಂಡರೆ ಈ ಎಲ್ಲಾ ಪ್ರಗತಿಗಳು ನಿರರ್ಥಕವಾಗುತ್ತವೆ. ಈ ಗಮನಾರ್ಹ ಪ್ರಗತಿಯ ಹೊರತಾಗಿಯೂ, ಜಾತೀಯತೆ, ಕೋಮುವಾದ, ಮೂಲಭೂತವಾದ, ಸಂಪ್ರದಾಯವಾದ, ಭೌತವಾದ ಇತ್ಯಾದಿಗಳಿಂದ ಬಳಲುತ್ತಿದೆ, ಆದ್ದರಿಂದ ಆಧುನಿಕ ಸಮಾಜದಲ್ಲಿನ ಬಿಕ್ಕಟ್ಟು ಸುದೀರ್ಘ ಇತಿಹಾಸವನ್ನು ಹೊಂದಿದೆ, ಏಕೆಂದರೆ ಸಾಮಾಜಿಕ ಪುನರ್ ನಿರ್ಮಾಣದ ಸಮಸ್ಯೆಯು ಸಮಸ್ಯೆಯನ್ನು ಅದರ ಎಲ್ಲಾ ಸಂರಕ್ಷಣೆಯನ್ನು ಒತ್ತಾಯಿಸುತ್ತದೆ. 'ಶಿಕ್ಷಣವು ಈಗಾಗಲೇ ಮನುಷ್ಯನಲ್ಲಿರುವ ದೈವತ್ವದ ಧ್ಯೋತಕವಾಗಿದೆ'. ಯೋಗ ಶಿಕ್ಷಣವು ಸಮಾಜದಲ್ಲಿ ಸರಿಯಾದ ವರ್ತನೆಗಳು, ಭಾವನೆಗಳು ಮತ್ತು ಪಾತ್ರದ ಬೆಳವಣಿಗೆಯ ಗುರಿಯನ್ನು ಹೊಂದಿದೆ. ಯೋಗ ಶಿಕ್ಷಣವು ಪ್ರಾಥಮಿಕವಾಗಿ ನೈತಿಕತೆ ಮತ್ತು ಸಾಮಾಜಿಕ ತತ್ವಶಾಸ್ತ್ರದ ಸಮಸ್ಯೆಗಳೊಂದಿಗೆ ಮೌಲ್ಯದ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಬಂಧಿಸಿದೆ. ಯೋಗ ಶಿಕ್ಷಣವು ಮಾನವರ ಘನತೆಯನ್ನು ಎತ್ತಿಹಿಡಿಯುವ ಅಗತ್ಯವಿದೆ ಮತ್ತು ಇದು ಇಡೀ ಮಾನವೀಯತೆಯನ್ನು ಕಾಪಾಡುವ ವಿಭಿನ್ನ ಮೌಲ್ಯಗಳನ್ನು ಶಿಫಾರಸು ಮಾಡುತ್ತದೆ. ಇದು ವ್ಯವಸ್ಥೆ, ವಿಧಾನ ಮತ್ತು ಶಾಂತಿಯನ್ನು ಸಾಧಿಸುವ ಗುರಿಯನ್ನು ಅಳವಡಿಸುವ ಜವಾಬ್ದಾರಿಯನ್ನು ತೆಗೆದುಕೊಳ್ಳುತ್ತದೆ. ಈ ನೈತಿಕ ಅಭ್ಯಾಸಗಳನ್ನು ತನ್ನೊಳಗೆ ಅಳವಡಿಸಿಕೊಳ್ಳದ ಹೊರತು ಯಾವುದೇ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯು ಪರಿಣಾಮಕಾರಿಯಾಗಿರುವುದಿಲ್ಲ. ಆದ್ದರಿಂದ ಸಮಾಜ, ಎಲ್ಲಾ ನಾಗರಿಕತೆಗಳು ಇತರ ಮನುಷ್ಯರೊಂದಿಗೆ ಸಾಮರಸ್ಯದಿಂದ ಬದುಕಲು ನಿರಂತರ ಪ್ರಯತ್ನವಾಗಿದೆ. ಇಡೀ ಜಗತ್ತು ನಮ್ಮ ಕುಟುಂಬವಾಗುವವರೆಗೆ ನಾವು ನಮ್ಮದನ್ನು ಮುಂದುವರಿಸಬೇಕು.

**ಕೀ ಪದಗಳು:-** ಯೋಗ, ಶಿಕ್ಷಣ, ನೈತಿಕತೆ ಮತ್ತು ಬಾಲ್ಯ.

ಪೀಠಿಕೆ

ಪ್ರಾಚೀನ ಭಾರತವು ಕಲಿಕೆಗೆ ಪ್ರಖ್ಯಾತವಾದ ದೇಶವಾಗಿತ್ತು. ಅದಕ್ಕೆ ವೇದಗಳು' ಉಪನಿಷತ್ತುಗಳು, ಸಂಸ್ಕೃತ ಸಾಹಿತ್ಯವೇ ಸಾಕ್ಷಿ. ಜ್ಞಾನವಷ್ಟೇ ಅಲ್ಲದೇ ಯೋಗ ಶಿಕ್ಷಣಕ್ಕೂ ಪ್ರಾಚೀನರು ಆದ್ಯತೆ ನೀಡಿದ್ದರು. ಹಗಾಗಿ ದೇಹ ಮತ್ತು ಮನಸ್ಸಿನ ಆರೋಗ್ಯ ಸದೃಢವಾಗಲು ಸಹಾಯಕವಾಯಿತು. ಇಂದಿನ ಅನೇಕ ಅಭಿವೃದ್ಧಿ ಹೊಂದಿದ ರಾಷ್ಟ್ರಗಳು ಇನ್ನು ನಾಗರಿಕತೆಯ ಹೊಸ್ತಿಲು ಮೆಟ್ಟುವ ಮೊದಲೇ ಭಾರತವು

ವಿಜ್ಞಾನ ಮತ್ತು ಆರೋಗ್ಯ ಕ್ಷೇತ್ರದಲ್ಲಿ ಮಹತ್ವದ ಸಾಧನೆ ಮಾಡಿತ್ತು. ಯೋಗವು ಹಿಂದೂ ಧರ್ಮದಿಂದ ಬಹಳ ಹಿಂದೆಯೇ ಬಂದಿದೆ ಎಂದು ಹೇಳಲಾಗುತ್ತದೆ. ಇಂದು ಪ್ರಪಂಚದಾದ್ಯಂತ ಅಭ್ಯಾಸ ಮಾಡಲಾಗುತ್ತಿದೆ. ಜನರು ಯೋಗದ ಯೋಗ್ಯತೆಯ ಬಗ್ಗೆ ತಿಳಿದುಕೊಂಡಿದ್ದಾರೆ ಮತ್ತು ಅದನ್ನು ವ್ಯಾಯಾಮ ಮತ್ತು ಧ್ಯಾನದ ರೂಪದಲ್ಲಿ ಸ್ವೀಕರಿಸಿದ್ದಾರೆ. ಮೂಲಭೂತವಾಗಿ ಯೋಗವು ವ್ಯಾಯಾಮದ ಒಂದು ರೂಪವಲ್ಲ ಆದರೆ ಇದು ಆರೋಗ್ಯಕರ, ಸಂತೋಷ ಮತ್ತು ಶಾಂತಿಯುತ ಜೀವನ ವಿಧಾನಕ್ಕಾಗಿ ಪ್ರಾಚೀನ ಬುದ್ಧಿವಂತಿಕೆಯಾಗಿದೆ. ಇದು ಆಂತರಿಕ ಶಾಂತಿಯನ್ನು ಕಂಡುಕೊಳ್ಳಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ ಮತ್ತು ಸ್ವಯಂ ಒಕ್ಕೂಟಕ್ಕೆ ಕಾರಣವಾಗುತ್ತದೆ.

ಸಂಯಮ, ಆಚರಣೆ, ಭಂಗಿ, ಉಸಿರಾಟದ ನಿಯಂತ್ರಣ, ಅಮರತೆ, ಏಕಾಗ್ರತೆ, ಧ್ಯಾನ ಮತ್ತು ಆಧ್ಯಾತ್ಮಿಕ ಹೀರಿಕೊಳ್ಳುವಿಕೆ ಇವು ಯೋಗದ ಎಂಟು ಅಂಶಗಳಾಗಿವೆ, ಅಹಿಂಸೆ, ಸತ್ಯ, ಅಸ್ತೇಯ, ಬ್ರಹ್ಮಚರ್ಯ, ಅಪರಿಗ್ರಹ, ಸೌಚ, ಸಂತೋಷ, ತಪಃ, ಸ್ವಾಧ್ಯಾಯ ಮತ್ತು ಸ್ವಾಧ್ಯಾಯ ತತ್ವಗಳು. ಹಠ ಯೋಗವು ಮನುಷ್ಯನ ದೈಹಿಕ, ಮಾನಸಿಕ, ಬೌದ್ಧಿಕ ಭಾವನಾತ್ಮಕ ಮತ್ತು ಆಧ್ಯಾತ್ಮಿಕ ಬೆಳವಣಿಗೆಗಳನ್ನು ಹೆಚ್ಚಿನ ಮಟ್ಟಕ್ಕೆ ಅರಳಿಸುತ್ತದೆ. ಇದು ನಾಲ್ಕು ಪಟ್ಟು ಪ್ರಜ್ಞೆಯನ್ನು ತರುತ್ತದೆ - ನಾಗರಿಕ ಪ್ರಜ್ಞೆ, ದೇಶಭಕ್ತಿಯ ಪ್ರಚೋದನೆ, ಸೇವಾ ಉತ್ಸಾಹ ಮತ್ತು ಸಮಗ್ರ ದೃಷ್ಟಿಗಾಗಿ ಸಮಾಜಕ್ಕೆ ಉಪಯುಕ್ತವಾದ ಆಧ್ಯಾತ್ಮಿಕ ಆಕಾಂಕ್ಷೆ

### ಯೋಗದ ಅರ್ಥ

ಯೋಗ ಎನ್ನುವ ಪದ ಸಂಸ್ಕೃತದ ಮೂಲ ಧಾತುವಾದ "ಯುಜ್" ಎಂಬುದರಿಂದ ಬಂದಿದೆ. "ಯುಜ್" ಎಂದರೆ ಕೂಡಿಸು, ಬಂಧಿಸು, ಕೇಂದ್ರೀಕರಿಸು ಎಂದರ್ಥ. ಚಿತ್ತವನ್ನು ಒಂದೇ ಕಡೆಗೆ ಕೇಂದ್ರೀಕರಿಸುವ, ಸಂಯೋಜಿಸುವುದು (ಮನಸ್ಸು ಮತ್ತು ಆತ್ಮ) ಎಂತಲೂ ಕರೆಯುತ್ತಾರೆ. ಯೋಗವು ಎಲ್ಲಾ ಸಮಸ್ಯೆಗಳಿಗೆ ಪರಿಹಾರದ ಮಾರ್ಗವಾಗಿದೆ. ಯೋಗವು ಚಿತ್ತ ಕಾರ್ಯಾಚರಣೆಯ ನಿಗ್ರಹವಾಗಿದೆ. ಚಿತ್ತ ಆತ್ಮಸಾಕ್ಷಿಯ ಶಕ್ತಿಯು ಸಂಪೂರ್ಣತೆಯಲ್ಲಿ ಸ್ವಯಂ ಸ್ಥಾಪಿತವಾಗಿದೆ. ಯೋಗದ ಸಮಯದಲ್ಲಿ ಮನಸ್ಸು ಜಾಗೃತವಾಗಿರುತ್ತದೆ ಮತ್ತು ಅರಿವು ವಿಸ್ತರಿಸುತ್ತದೆ.

ಮತ್ತಷ್ಟು ಪತಂಜಲಿ ಮಹರ್ಷಿಗಳು ಹೇಳಿದರು. "ಯೋಗ ಚಿತ್ತ ವೃತ್ತಿ ನಿರೋಧಃ". ಮಹಾರಿ ವಸಿಷ್ಠರು ಹೇಳಿದರು, "ಮನಃ ಪ್ರಶಂಸಾಮನೋಪಾಯಃ ಯೋಗ ಇಧಿಯಾಭಿಧೀಯತೇ", ಅಂದರೆ "ಒಬ್ಬರ ಮನಸ್ಸನ್ನು ಆನಂದದಿಂದ ಇಡುವ ಕಲೆ ಯೋಗ". ಭಗವದ್ಗೀತೆಯಲ್ಲಿ, "ಯೋಗ ಭವತಿ ದುಃಖ ನಿವಾರಕ ಯೋಗ" ಮನಸ್ಸಿನ ದುಃಖಗಳನ್ನು ನಿವಾರಿಸುತ್ತದೆ.

ಯೋಗ ಎಂಬುದು ಅನಾದಿಕಾಲದಿಂದಲೂ ಪ್ರಯೋಜನ ಪೂರಕವಾಗಿ ಶರೀರದ ಮತ್ತು ಆತ್ಮದ ವಿಷಯಗಳನ್ನು ತಿಳಿಸುತ್ತಾ ಬಂದಿದೆ ಇದನ್ನು ಸೂತ್ರ ಬದ್ಧವಾಗಿ ವಿಜ್ಞಾನ ಶಾಸ್ತ್ರವಾಗಿ ನಮಗೆ ತಿಳಿಯುವಂತೆ ಪರಿವಿವರವಾಗಿ ನೂರ ತೊಂಬತ್ತಾರು (196) ಯೋಗ ಸೂತ್ರಗಳನ್ನು ಯೋಗ ಪಿತಾಮಹ ಎಣಿಸಿಕೊಂಡ ಪತಂಜಲಿ ಮಹರ್ಷಿಗಳು ನಮಗೆ ನೀಡಿದ್ದಾರೆ.

### ವಿಷಯ ವಿವರಣೆ

ಈ ದಿನಗಳಲ್ಲಿ ಮಕ್ಕಳು ತಮ್ಮ ಶಾಲೆ, ಬಹು ಟ್ಯೂಷನ್ ತರಗತಿಗಳು, ಪಠ್ಯೇತರ ಚಟುವಟಿಕೆಗಳು ಮತ್ತು ಮನೆಕೆಲಸದಲ್ಲಿ ವಯಸ್ಕರಂತೆ ನಿರತರಾಗಿದ್ದಾರೆ. ಅವರು ಸಮಾನವಾಗಿ ಒತ್ತಡಕ್ಕೊಳಗಾಗುತ್ತಾರೆ ಆದರೆ ಅವರು ವಯಸ್ಕರಂತೆ ತಮ್ಮನ್ನು ತಾವು ವಿರಳವಾಗಿ ವ್ಯಕ್ತಪಡಿಸಬಹುದು. ಬೆದರಿಸುವ-ವಿರೋಧಿ ಅಭಿಯಾನಗಳು, ವ್ಯಕ್ತಿತ್ವ ಮತ್ತು ಚಾರಿತ್ರ್ಯದ ಅಭಿವೃದ್ಧಿ, ಅವರ ಶಾಲಾ ಸಲಹೆಗಾರರಿಂದ ಸಕಾರಾತ್ಮಕ

ಮಾನಸಿಕ ಆರೋಗ್ಯ ಸಂಗತಿಗಳು ಮತ್ತು ಮುಖ್ಯವಾಗಿ ಅವರ ಪಠ್ಯೇತರ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಯೋಗವನ್ನು ಸೇರಿಸುವ ಮೂಲಕ ಮಗುವಿಗೆ ಸಮಗ್ರ ಶಿಕ್ಷಣ ಮಾಡ್ಯೂಲ್ ಅನ್ನು ಒದಗಿಸುವಲ್ಲಿ ಶಾಲೆಗಳು ಗಮನಹರಿಸಬೇಕು.

ಯೋಗವು ಎಲ್ಲಾ ವಯಸ್ಸಿನ ಜನರು ಅನುಸರಿಸಬಹುದಾದ 'ಮನಸ್ಸು-ದೇಹದ ಅಭ್ಯಾಸ'ದ ಒಂದು ರೂಪವಾಗಿದೆ. ನಮ್ಮ ಮಕ್ಕಳಿಗೆ ಸಮಾನವಾಗಿ ಸಂಬಂಧಿಸಿದ ವಯಸ್ಕರಿಗೆ ಯೋಗದಿಂದ ಅನೇಕ ಆರೋಗ್ಯ ಪ್ರಯೋಜನಗಳಿವೆ, ಏಕೆಂದರೆ ಯೋಗವು ಮನಸ್ಸು, ದೇಹ ಮತ್ತು ಆತ್ಮವನ್ನು ಪೋಷಿಸುತ್ತದೆ ಮತ್ತು ಆರೋಗ್ಯ ಮತ್ತು ಕ್ಷೇಮದ ಮಧ್ಯಕಾಲೀನ ಸಂಪ್ರದಾಯಕ್ಕೆ ಅಡಿಪಾಯವನ್ನು ಹಾಕುತ್ತದೆ.

ಯೋಗ ಶಿಕ್ಷಣವು ದೈಹಿಕ-ಮಾನಸಿಕ ವಿಕಾಸಕ್ಕೆ ಸಾಧನ. ಮಾನವನ ದೇಹದ ಪ್ರತಿಯೊಂದು ಅವಯವದ ಸಕ್ರಿಯ ಚಟುವಟಿಕೆಗೆ ಯೋಗ ಶಿಕ್ಷಣವು ಆದ್ಯತೆ ನೀಡುವುದಲ್ಲದೇ, ವೃದ್ಯಾಪ್ಯದಲ್ಲಿ ಸಂಭವಿಸಬಹುದಾದ ಅನೇಕ ದೈಹಿಕ-ಮಾನಸಿಕ ಕಾಯಿಲೆಗಳಿಗೆ ಸವಾಲಾಗಿ ನಿಲ್ಲುವ ಸ್ವಾಸ್ಥ್ಯವನ್ನು ವೃದ್ಧಿಸುತ್ತದೆ. ಅಷ್ಟೇ ಅಲ್ಲದೇ ಚಿಕ್ಕ ವಯಸ್ಸಿನಲ್ಲಿಯೇ ಯೋಗ ಪಾಠವನ್ನು ಮಕ್ಕಳಿಗೆ ಕಲಿಸುವುದರಿಂದ ಅವರಲ್ಲಿ ಮೆದಳು, ಕಣ್ಣು ಮೊದಲಾದ ಸೂಕ್ಷ್ಮ ಅಂಗಗಳು ಚುರುಕುಗೊಳ್ಳಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

ಇಂದು ಭಾರತ ದೇಶದ ಅನೇಕ ಶಾಲೆಗಳು ಪ್ರಾಥಮಿಕ ಮತ್ತು ಪ್ರೌಢ ಶಿಕ್ಷಣದಲ್ಲಿ ಯೋಗ ಶಿಕ್ಷಣವನ್ನು ಕಡ್ಡಾಯಗೊಳಿಸಿದೆ. ಯೋಗದ ನಿರಂತರ ಅಭ್ಯಾಸದಿಂದ ಮನೋನಿಯಂತ್ರಣ, ಇಂದ್ರಿಯ ನಿಗ್ರಹ ಅಧಿಕ ಉತ್ಸಾಹ ಮೊದಲಾದ ಸ್ವಾಸ್ಥ್ಯವನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳಬಹುದು. ಯೋಗಭ್ಯಾಸವನ್ನು ಪ್ರತಿಯೊಬ್ಬರು ಅಭ್ಯಾಸ ಮಾಡಿ ಆಚರಣೆಯಲ್ಲಿರಿಸಿಕೊಂಡರೆ ಇಡೀ ದೇಶ ಎದುರಿಸುತ್ತಿರುವ ಅನೇಕ ನೈತಿಕ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸಲು ಸಾಧ್ಯ.

ನಿಮ್ಮ ಆಂತರಿಕ ಆತ್ಮವನ್ನು ಪ್ರಕೃತಿಯೊಂದಿಗೆ ಸಂರ್ದಿಸಲು ಯೋಗವು ಅತ್ಯಂತ ಪರಿಣಾಮಕಾರಿ ಮರ್ಗವೆಂದು ಪರಿಗಣಿಸಲಾಗಿದೆ. ಪ್ರತಿದಿನ ಯೋಗಾಭ್ಯಾಸವು ಆತಂಕ ಮತ್ತು ಒತ್ತಡದಿಂದ ತುಂಬಿರುವ ಈ ಜಗತ್ತಿನಲ್ಲಿ ಹೆಚ್ಚು ಅಗತ್ಯವಿರುವ ಜೀವನದ ಸಮತೋಲನವನ್ನು ಕಾಪಾಡಿಕೊಳ್ಳಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಯೋಗವು ನಿಮ್ಮ ದೇಹ ಮತ್ತು ಮನಸ್ಸನ್ನು ಒಂದುಗೂಡಿಸುತ್ತದೆ, ಅದು ನಿಮಗೆ ಶಾಂತಿಯುತ ಮನಸ್ಥಿತಿಯನ್ನು ತಲುಪಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ, ಇದು ಅಂತಿಮವಾಗಿ ನಿಮ್ಮ ಜೀವನದಲ್ಲಿ ಸಾಮರಸ್ಯ ಮತ್ತು ವಿಷಯವನ್ನು ತರುತ್ತದೆ. ಆದ್ದರಿಂದ ನೀವು ನಿಮ್ಮ ದೈಹಿಕ, ಭಾವನಾತ್ಮಕ ಮತ್ತು ಮಾನಸಿಕ ಅಸ್ತಿತ್ವವನ್ನು ನಿಯಂತ್ರಿಸಲು ಸಾಧ್ಯವಾದಾಗ, ನೀವು ಜೀವನದಲ್ಲಿ ಸಂತೃಪ್ತ ವ್ಯಕ್ತಿಯಾಗುತ್ತೀರಿ. ಮತ್ತು ನೀವು ಪ್ರತಿದಿನ ಯೋಗವನ್ನು ಅಭ್ಯಾಸ ಮಾಡಿದರೆ ಇದೆಲ್ಲವನ್ನೂ ಸಾಧಿಸಬಹುದು.

ಯೋಗವು ಜನರ ಜೀವನವನ್ನು ಸಂತೋಷದಾಯಕ ಮತ್ತು ಆರೋಗ್ಯಕರವಾಗಿಸುವಲ್ಲಿ ಮಹತ್ವದ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತದೆ. ಆದ್ದರಿಂದ, ಜನರು ಆಂತರಿಕ ಶಾಂತಿ ಮತ್ತು ತೃಪ್ತಿಯನ್ನು ಪಡೆಯಲು ಸಹಾಯ ಮಾಡಲು ಸಮಾಜದಲ್ಲಿ ಯೋಗ ತರಗತಿಗಳನ್ನು ಪ್ರಾರಂಭಿಸಲು ಅನೇಕ ಜನರು ಉಪಕ್ರಮವನ್ನು ತೆಗೆದುಕೊಳ್ಳುತ್ತಾರೆ. ಶಾಲೆಗಳು ಮತ್ತು ಕಾಲೇಜುಗಳು ನೈತಿಕ ಮೌಲ್ಯಗಳನ್ನು ಬೆಳೆಸಲು ಮತ್ತು ಭವಿಷ್ಯದಲ್ಲಿ ಸಂಭವನೀಯ ಅಸ್ವಸ್ಥತೆಗಳನ್ನು ತಪ್ಪಿಸಲು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಸಹಾಯ ಮಾಡಲು ಯೋಗದ ವಿಷಯವನ್ನು ಪಠ್ಯಕ್ರಮದ ಒಂದು ಭಾಗವಾಗಿ ಮಾಡುತ್ತಿವೆ.



## ಯೋಗದ ಪ್ರಾಮುಖ್ಯತೆ

ಯೋಗವು ಮಕ್ಕಳ ದೈಹಿಕ, ಮಾನಸಿಕ ಮತ್ತು ಭಾವನಾತ್ಮಕ ಯೋಗಕ್ಷೇಮಕ್ಕಾಗಿ ಧನಾತ್ಮಕ ಮತ್ತು ಆರೋಗ್ಯಕರ ಜೀವನಶೈಲಿಯನ್ನು ಉತ್ತೇಜಿಸುತ್ತದೆ. ದೈಹಿಕ ಮಟ್ಟದಲ್ಲಿ, ಯೋಗವು ಶಕ್ತಿ, ಶ್ರಾಣ, ಸಹಿಷ್ಣುತೆ ಮತ್ತು ಹೆಚ್ಚಿನ ಶಕ್ತಿಯ ಬೆಳವಣಿಗೆಯಲ್ಲಿ ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಇದು ನಿಮಗೆ ಹೆಚ್ಚಿನ ಏಕಾಗ್ರತೆ, ಶಾಂತತೆ, ಶಾಂತಿ ಮತ್ತು ಮಾನಸಿಕ ಮಟ್ಟದಲ್ಲಿ ತೃಪ್ತಿಯನ್ನು ನೀಡುತ್ತದೆ, ಇದು ಆಂತರಿಕ ಮತ್ತು ಬಾಹ್ಯ ಸಾಮರಸ್ಯಕ್ಕೆ ಕಾರಣವಾಗುತ್ತದೆ. ದೈನಂದಿನ ಒತ್ತಡ ಮತ್ತು ಅದರ ಪರಿಣಾಮಗಳನ್ನು ನಿರ್ವಹಿಸಲು ಯೋಗವು ನಿಮಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ.

ಯೋಗವು ದೇಹ ಮತ್ತು ಮನಸ್ಸು ಹೆಚ್ಚು ಸ್ಥಿರವಾಗಿರಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಇದು ದೇಹದ ಕೀಲುಗಳು, ಅಸ್ಥಿರಜ್ವಗಳು ಮತ್ತು ಸ್ನಾಯುರಜ್ವಗಳಲ್ಲಿ ನಯಗೊಳಿಸುವಿಕೆಯನ್ನು ಸುಧಾರಿಸುತ್ತದೆ. ವೈದ್ಯಕೀಯ ಅಧ್ಯಯನಗಳ ಪ್ರಕಾರ ಎಲ್ಲಾ ಆಂತರಿಕ ಅಂಗಗಳು ಮತ್ತು ಗ್ರಂಥಿಗಳನ್ನು ಮಸಾಜ್ ಮಾಡುವ ದೈಹಿಕ ಚಟುವಟಿಕೆಯ ಏಕೈಕ ರೂಪವೆಂದರೆ ಯೋಗ. ಇದರ ಪರಿಣಾಮವಾಗಿ ಅನೇಕ ರೋಗಗಳು ಕಡಿಮೆಯಾಗುತ್ತವೆ. ಪ್ರತಿದಿನ ಯೋಗವನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವ ಯಾರಾದರೂ ತಮ್ಮ ಜೀವನಶೈಲಿಯಲ್ಲಿ ಶಾಶ್ವತ ಸುಧಾರಣೆಯನ್ನು ಕಾಣಬಹುದು.

1. ಯೋಗವು ಸಮಗ್ರ ಜೀವನ ವಿಜ್ಞಾನವಾಗಿದೆ ಇದು ಮಾನವ ವ್ಯಕ್ತಿತ್ವದ ಎಲ್ಲಾ ಅಂಶಗಳನ್ನು ನೋಡಿಕೊಳ್ಳುತ್ತದೆ.

ದೈಹಿಕ, ಮಾನಸಿಕ, ಸಾಮಾಜಿಕ, ಭಾವನಾತ್ಮಕ, ಬೌದ್ಧಿಕ ಮತ್ತು ಆಧ್ಯಾತ್ಮಿಕ ಮಟ್ಟಗಳು. ಯೋಗವು ಮಾನವನ ಸರ್ವತೋಮುಖ ವ್ಯಕ್ತಿತ್ವವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವ ಸಾಧನವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತದೆ. ಯೋಗವು ಜೀವನದ ಒಂದು ವಿಜ್ಞಾನವಾಗಿದ್ದು, ಅದು ಜನನ ಮತ್ತು ಮರಣದ ಅವಧಿಯ ನಡುವೆ ಮಾರ್ಗದರ್ಶಿಯಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತದೆ. ಭಾರತೀಯ ತತ್ವಶಾಸ್ತ್ರದ ಪ್ರಕಾರ, ತಂತ್ರಗಳು ವ್ಯಕ್ತಿಯ ಶರೀರಶಾಸ್ತ್ರವನ್ನು ಸುಧಾರಿಸುವ ಮೂಲಕ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತವೆ. ನರಮಂಡಲಗಳು, ಅಂತಃಸ್ರಾವಕ ವ್ಯವಸ್ಥೆಯು ಅತ್ಯುತ್ತಮ ಮಟ್ಟದಲ್ಲಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತದೆ. ಯೋಗಾಭ್ಯಾಸವು ದಿನನಿತ್ಯದ ಒತ್ತಡಕ್ಕೆ ನಿರೋಧನವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತದೆ, ಇದು ಬಾಲ್ಯದ ಹಂತಗಳಲ್ಲಿಯೂ ಸಹ ಬೇರುಬಿಡುತ್ತದೆ. ಪತಂಜಲಿ ವಿವರಿಸಿದಂತೆ ಯೋಗದ ಅಡಿಪಾಯ ಯಮ ಮತ್ತು ನಿಯಮಗಳು. ಇವು ಸಾಮಾಜಿಕ ಮತ್ತು ವೈಯಕ್ತಿಕ ಪ್ರತಿಬಂಧಗಳು ಮತ್ತು ಸಂಯೋಗಗಳಾಗಿವೆ. ಈ ಶಿಸ್ತಿನ ಅಭ್ಯಾಸಗಳು ಮಗುವಿಗೆ ಎಲ್ಲಾ ಹಂತಗಳಲ್ಲಿ ದೇಶದ ಆರೋಗ್ಯವಂತ ನಾಗರಿಕನಾಗಿ ಬರಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

ಇದು ಸಮಯದ ಅಗತ್ಯವಾಗಿರುವ ಸಾರ್ವತ್ರಿಕ ಸಹೋದರತ್ವವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವಲ್ಲಿ ಮತ್ತಷ್ಟು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಆಸನ ಮತ್ತು ಪ್ರಾಣಾಯಾಮ ಅಭ್ಯಾಸವು ಸಮತೋಲಿತ ದೈಹಿಕ ರಚನೆಯನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ, ಸ್ನಾಯುಗಳ ನಾದವನ್ನು ಸುಧಾರಿಸುತ್ತದೆ, ಮೆಮೊರಿ ಮತ್ತು ಬುದ್ಧಿವಂತಿಕೆಯನ್ನು ಸುಧಾರಿಸುತ್ತದೆ. ಇದಲ್ಲದೆ, ಇದು ನಕಾರಾತ್ಮಕ ಭಾವನೆಗಳನ್ನು ನಿಯಂತ್ರಿಸುತ್ತದೆ ಮತ್ತು ಆದ್ದರಿಂದ ಜೀವನದ ದ್ವಂದ್ವಗಳ ಅಡಿಯಲ್ಲಿ ಜೀವನಕ್ಕೆ ಧನಾತ್ಮಕತೆಯ ಪ್ರವೃತ್ತಿಯನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುತ್ತದೆ. ಧಾರಣ ಮತ್ತು ಧ್ಯಾನದ ಪ್ರಕ್ರಿಯೆಯು ಏಕಾಗ್ರತೆಯನ್ನು ಸುಧಾರಿಸುತ್ತದೆ ಮತ್ತು ಆತಂಕದ ಖಿನ್ನತೆ ಮತ್ತು ಇತರ ಮಾನಸಿಕ ಅಸ್ವಸ್ಥತೆಗಳನ್ನು ನಿವಾರಿಸುತ್ತದೆ. ಇದನ್ನು ಸಹ ಉಲ್ಲೇಖಿಸಲಾಗಿದೆ. ಅದು, ಯೋಗ ರೈಷು ಕೌಶಲಮ್, ಯೋಗವು ಕಾರ್ಯಗಳನ್ನು ಮಾಡಲು ಕಲಿಸುತ್ತದೆ, ನಿಸ್ವಾರ್ಥವಾಗಿ, ನಿಷ್ಪಕ್ಷಪಾತವಾಗಿ ಮತ್ತು ಯಾವುದೇ ಲಾಭವಿಲ್ಲದೆ ಮಾಡಲಾಗುತ್ತದೆ.



ಫಲಿತಾಂಶ ಆಧಾರಿತ ಬಯಕೆ. ಮಾನವ ಭವಿಷ್ಯತ್ತಿಗೆ ಮತ್ತು ಮೋಕ್ಷ (ವಿಮೋಚನೆ). ಅದ್ವೈತ, ವಿಶಿಷ್ಟಾದ್ವೈತ ಮತ್ತು ದ್ವೈತದಲ್ಲಿ ಮೋಕ್ಷ, ನಿರ್ವಾಣದ ಜಿನಿಸಂ ಬೌದ್ಧ ಪರಿಕಲ್ಪನೆ, ಯೋಗದ ಸಾಂಖ್ಯ ಯೋಗ ಮೂಲ. ಭಗವದ್ಗೀತೆಯಲ್ಲಿ ಮಾನಸಿಕ ಮತ್ತು ಐತಿಹಾಸಿಕ ಯೋಗ, ಸಮತ್ವ ಯೋಗ, ಜ್ಞಾನ ಯೋಗ, ಆತ್ಮ-ಸಂಯಮ ಯೋಗ ಮತ್ತು ಭಕ್ತಿ ಯೋಗ ಇದು ವ್ಯಕ್ತಿಯ ಸಂಪೂರ್ಣ ವ್ಯಕ್ತಿತ್ವವನ್ನು ರೂಪಿಸುತ್ತದೆ.

## 2. ಯೋಗ ಶಾಲೆಗಳು.

ರಾಜ ಯೋಗ (ಅಷ್ಟಾಂಗ ಯೋಗ) ಧರ್ಮ, ಜ್ಞಾನ, ಭಕ್ತಿ, ಬುದ್ಧಿ, ಹಠ ಮತ್ತು ಕುಂಡಲಿನಿ. ಇದರ ಮೂಲಕ ಮನುಷ್ಯನು ತನ್ನ ಶಾಶ್ವತ ಹಂತವನ್ನು ಪಡೆಯಬಹುದು.

3. ಅಂಗರಚನಾಶಾಸ್ತ್ರ ಮತ್ತು ಶರೀರಶಾಸ್ತ್ರವು ಮಾನವ ದೇಹ ಮತ್ತು ಯೋಗ ಚಿಕಿತ್ಸೆಯ ಹಾರ್ಮೋನ್ ಮತ್ತು ಪ್ರತಿರಕ್ಷಣಾ ವ್ಯವಸ್ಥೆಯ ನಿಯಂತ್ರಕಗಳಾಗಿವೆ.

ಅವು ದೇಹದಾದ್ಯಂತ ಜೀವರಾಸಾಯನಿಕ ಮತ್ತು ಸೆಲ್ಯುಲಾರ್ ಪ್ರಕ್ರಿಯೆಗಳ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರುತ್ತವೆ. ಮೆದುಳು ಪ್ರಮುಖ ಹಾರ್ಮೋನುಗಳ ಸ್ರವಿಸುವಿಕೆಯನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ ಮತ್ತು ಈ ಹಾರ್ಮೋನುಗಳು ಪ್ರತಿಯಾಗಿ, ಜೀವಕೋಶಗಳು, ಅಂಗಾಂಶಗಳು, ಸಾವಯವ ವ್ಯವಸ್ಥೆಗಳು, ಅಸ್ಥಿಪಂಜರ, ಸ್ನಾಯು, ರಕ್ತಪರಿಚಲನೆ, ಉಸಿರಾಟ, ಜೀರ್ಣಕಾರಿ, ವಿಸರ್ಜನಾ ಸಂತಾನೋತ್ಪತ್ತಿ, ಅಂತಃಸ್ರಾವಕ ಮತ್ತು ನರಮಂಡಲದ ಮೇಲೆ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತವೆ. ಯೋಗಾಭ್ಯಾಸದ ಸಮಯದಲ್ಲಿ ಸಾಮಾನ್ಯ ಅವಶ್ಯಕತೆಯ 70% ನಷ್ಟು ಪ್ರಮಾಣದಲ್ಲಿ ಆಯ್ಕೆಜನಕದ ಸೇವನೆಯು ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಹೃದಯ ಬಡಿತವು ನಿಮಿಷಕ್ಕೆ 5 ಬಡಿತಗಳಿಂದ ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಯೋಗಾಭ್ಯಾಸದಿಂದ ಒತ್ತಡ ಕಡಿಮೆಯಾಗುವುದರಿಂದ ಲ್ಯಾಕ್ಟಿಕ್ ಆಸಿಡ್ ಮತ್ತು ಕರ್ಟಿಸೋಲ್ ನಂತಹ ಪದಾರ್ಥಗಳು ಹೆಚ್ಚಾಗುತ್ತವೆ, ಉಪಶಮನ, ಒತ್ತಡದ ತಲೆನೋವು, ಅಸ್ತಮಾ, ಬಿ.ಪಿ. ಹೃದಯ-ಉಸಿರಾಟದ ದಕ್ಷತೆ ಮತ್ತು ನಿದ್ರಾಹೀನತೆ.

## 4. ವ್ಯಕ್ತಿತ್ವ ವಿಕಸನಕ್ಕೆ ಯೋಗ.

ಮಗುವು ತ್ವರಿತ ದೈಹಿಕ, ಭಾವನಾತ್ಮಕ ಮತ್ತು ಬೌದ್ಧಿಕ ಬೆಳವಣಿಗೆಯನ್ನು ಅನುಭವಿಸಿದಾಗ, ಯೋಗವು ಮಕ್ಕಳಿಗೆ ವಿವಿಧ ವ್ಯಕ್ತಿತ್ವ ಗುಣಲಕ್ಷಣಗಳನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ ಅದು ಹೆಚ್ಚು ಧನಾತ್ಮಕ ಮತ್ತು ಸಂತೋಷದ ಜೀವನಕ್ಕೆ ಕಾರಣವಾಗುತ್ತದೆ. ಉದಾಹರಣೆಗೆ, ಯೋಗವನ್ನು ನಿಯಮಿತವಾಗಿ ಅಭ್ಯಾಸ ಮಾಡುವ ವ್ಯಕ್ತಿಯು ಹೆಚ್ಚು ಆತ್ಮವಿಶ್ವಾಸವನ್ನು ಅನುಭವಿಸಬಹುದು, ಅವರ ಶಕ್ತಿಯನ್ನು ಹೆಚ್ಚು ನಿಖರವಾಗಿ ಗುರುತಿಸಬಹುದು ಮತ್ತು ಆಲೋಚನೆಯ ಸ್ಪಷ್ಟತೆಯನ್ನು ಹೊಂದಿರಬಹುದು. ಯೋಗಾಭ್ಯಾಸವು

ಒಟ್ಟಾರೆ ಮಾನಸಿಕ ಆರೋಗ್ಯಕ್ಕೆ ಅಸಂಖ್ಯಾತ ರೀತಿಯಲ್ಲಿ ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಯೋಗ, ಕ್ರಿಯಾ, ಆಸನ, ಪ್ರಾಣಾಯಾಮ ಮತ್ತು ಧ್ಯಾನವನ್ನು ಸತತವಾಗಿ ಮಾಡುವ ಮೂಲಕ ಮಕ್ಕಳು ಅಸಾಧಾರಣ ಮಟ್ಟದ ಮಾನಸಿಕ ಸ್ಪಷ್ಟತೆ ಮತ್ತು ಶಾಂತತೆಯನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳಬಹುದು. ಅಷ್ಟೇ ಅಲ್ಲ, ಇದು ಸ್ವಯಂ ಮತ್ತು ಇತರರ ಕಡೆಗೆ ಎತ್ತರದ ದೃಢತೆ ಮತ್ತು ತಾಳ್ಮೆಯನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಇದು ಸ್ವಯಂ-ವಾಸ್ತವೀಕರಣಕ್ಕೆ ಕಾರಣವಾಗುತ್ತದೆ ಮತ್ತು ಮಕ್ಕಳು ತಮ್ಮ ಗರಿಷ್ಠ ಸಾರ್ಥವನ್ನು ಸಾಧಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

### 5. ನಮ್ಮತೆ, ಶಕ್ತಿ ಮತ್ತು ತ್ರಾಣವನ್ನು ಸುಧಾರಿಸುತ್ತದೆ.

ಯೋಗ ಭಂಗಿಗಳು/ಆಸನಗಳು ನಮ್ಮ ದೇಹದ ವಿವಿಧ ಸ್ನಾಯು ಗುಂಪುಗಳ ನಮ್ಮತೆಯನ್ನು ಸುಧಾರಿಸಲು ಸಹಾಯ ಮಾಡುವ ಕ್ರಮೇಣ ವಿಸ್ತರಣೆಗಳನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಹೆಚ್ಚಿನ ಯೋಗ ಭಂಗಿಗಳು ನಿಮ್ಮ ದೇಹವನ್ನು ಒಳಗೆ ಹೆಚ್ಚಿಸಲು ಉದ್ದೇಶಿಸಲಾಗಿದೆ. ಸ್ನಾಯುಗಳ ಬಲವನ್ನು ಸುಧಾರಿಸುವುದು ಮತ್ತು ದೇಹವನ್ನು ಟೋನ್ ಮಾಡುವುದರ ಹೊರತಾಗಿ, ಯೋಗವು ಮಕ್ಕಳು ತಮ್ಮ ದೇಹದ ನಿಲುವು, ಉತ್ಕೃಷ್ಟತೆ ಮತ್ತು ಚಯಾಪಚಯವನ್ನು ಸುಧಾರಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಉತ್ತಮ ದೈಹಿಕ ಶಕ್ತಿ ಮತ್ತು ತ್ರಾಣವು ಆರೋಗ್ಯಕರ ಬಾಲ್ಯವನ್ನು ಹೊಂದಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

### 6. ಅರಿವಿನ ಕಾರ್ಯವನ್ನು ಸುಧಾರಿಸುತ್ತದೆ.

ಕೆಲವು ತಜ್ಞರ ಪ್ರಕಾರ, ಯೋಗಾಭ್ಯಾಸವು ಗ್ರಹಿಕೆ, ಗಮನ, ಕಾರ್ಯನಿರ್ವಾಹಕ ಕಾರ್ಯಗಳು, ದೃಷ್ಟಿಗೋಚರ ಸಾರ್ಥಗಳು, ಅಲ್ಪಾವಧಿಯ ಮತ್ತು ದೀರ್ಘಾವಧಿಯ ಸ್ಮರಣೆಯನ್ನು ಹೆಚ್ಚಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಯೋಗವನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವುದರಿಂದ ಮನಸ್ಸು ಮತ್ತು ದೇಹ ಎರಡರ ಸಂಪೂರ್ಣವಾಗಿ ಸಿಂಕ್ರೊನೈಸೇಶನ್ ಆಗುವ ಅಗತ್ಯವಿದೆ. ಯೋಗವು ಅರಿವಿನ ಕಾರ್ಯನಿರ್ವಹಣೆಯನ್ನು ಹೆಚ್ಚಿಸುವುದರಿಂದ, ಇದು ಸುಧಾರಿತ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಕಾರಣವಾಗಬಹುದು ಮತ್ತು ಅಂತಿಮವಾಗಿ ಮಕ್ಕಳು ವಿವಿಧ ಕಾರ್ಯಗಳಲ್ಲಿ ಕೌಶಲ್ಯ ಪರಿಪೂರ್ಣರಾಗಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

### 7. ಭಾವನಾತ್ಮಕ ಸ್ಥಿರತೆಯನ್ನು ಬಲಪಡಿಸುತ್ತದೆ.

ಆರೋಗ್ಯಕರ ಮಾನಸಿಕ ಬೆಳವಣಿಗೆಗೆ ಭಾವನಾತ್ಮಕ ಬುದ್ಧಿವಂತಿಕೆ ಅತ್ಯಗತ್ಯ. ಇದು ನಿಮ್ಮ ಸ್ವಂತ ಭಾವನೆಗಳನ್ನು ಮತ್ತು ನಿಮ್ಮ ಸುತ್ತಮುತ್ತಲಿನ ಜನರ ಭಾವನೆಗಳನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವ ಮತ್ತು ನಿರ್ವಹಿಸುವ ಸಾರ್ಥವಾಗಿದೆ. ಯೋಗವನ್ನು ನಿಯಮಿತವಾಗಿ ಅಭ್ಯಾಸ ಮಾಡುವ ಮೂಲಕ, ಭಾವನೆಗಳು ಮತ್ತು ಭಾವನೆಗಳನ್ನು ಸಕಾರಾತ್ಮಕ ರೀತಿಯಲ್ಲಿ ಕ್ರಮಬದ್ಧಗೊಳಿಸಬಹುದು. ಧನಾತ್ಮಕ ಭಾವನೆಗಳು ಮಾನಸಿಕ ಆರೋಗ್ಯಕ್ಕೆ ಒಳ್ಳೆಯದು ಆದರೆ ಋಣಾತ್ಮಕ ಭಾವನೆಗಳು ಮಾನಸಿಕ ನಿರ್ಬಂಧವಾಗಿ ಕೆಲಸ ಮಾಡುತ್ತವೆ. ನಮ್ಮ ಭಾವನಾತ್ಮಕ ಯೋಗಕ್ಷೇಮವನ್ನು ಸುಧಾರಿಸುವಲ್ಲಿ ಯೋಗವು ಮಹತ್ತರವಾದ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತದೆ.

### 8. ಆಧ್ಯಾತ್ಮಿಕತೆಯೊಂದಿಗೆ ತನ್ನನ್ನು ಸಂಸ್ಕರಿಸುತ್ತದೆ.

ಯೋಗವು ಮಕ್ಕಳನ್ನು ಆಧ್ಯಾತ್ಮಿಕತೆ ಮತ್ತು ಸ್ವಯಂ ಜೊತೆ ಸಂಸ್ಕರಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ನಿಯಮಿತವಾದ ಯೋಗಾಭ್ಯಾಸವು ಅವರಿಗೆ ತೃಪ್ತಿಯನ್ನುಂಟು ಮಾಡುತ್ತದೆ ಮತ್ತು ಅವರ ಕೃತಜ್ಞತೆಯ ಭಾವವನ್ನು ಮತ್ತು ಯೋಗಕ್ಷೇಮವನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ. ಮಕ್ಕಳಲ್ಲಿ ಒಟ್ಟಾರೆ ಯೋಗಾಭ್ಯಾಸವು ದೈಹಿಕ, ಮಾನಸಿಕ, ಭಾವನಾತ್ಮಕ ಮತ್ತು ಆಧ್ಯಾತ್ಮಿಕ ಸೇರಿದಂತೆ ಎಲ್ಲಾ ಹಂತಗಳಲ್ಲಿ ಸಮಗ್ರ ಬೆಳವಣಿಗೆಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ.

### 9. ಸೈಕಾಲಜಿ ಮತ್ತು ಯೋಗ ಫೆರಪಿ.

ಮನಸ್ಸು ಮತ್ತು ದೇಹದ ನಡುವಿನ ಸಂಬಂಧವು ಸೈಕೋಸೋಮ್ಯಾಟಿಕ್ ಮೆಡಿಸಿನ್ ಕ್ಷೇತ್ರವಾಗಿದೆ. ಇಡೀ ಮಾನವ ಜೀವಿಗಳ ಎಲ್ಲಾ ಪ್ರಕ್ರಿಯೆಯನ್ನು ಲೆಕ್ಕಹಾಕುವ ಮೂಲಕ ಯೋಗವನ್ನು ರೈಸಿಕೊಳ್ಳಲಾಗುತ್ತದೆ.

ಮಾನಸಿಕ ಪ್ರಕ್ರಿಯೆಗಳು, ಸಂವೇದನೆ, ಗ್ರಹಿಕೆ, ಗಮನ, ಸ್ಮರಣೆ, ಭಾವನೆಗಳು ಮತ್ತು ಇಚ್ಛೆ, ಅದರ ಬೆಳವಣಿಗೆಯ ಯೋಗದ ಪರಿಕಲ್ಪನೆಯು ಹತಾಶೆ ಮತ್ತು ಸಂರಕ್ಷಣೆಗಳಂತಹ ಮಾನಸಿಕ ಸಮಸ್ಯೆಗಳನ್ನು

ಉಂಟುಮಾಡುತ್ತದೆ ಮತ್ತು ಪರಿಣಾಮಗಳನ್ನು ಉಂಟುಮಾಡುತ್ತದೆ ಮತ್ತು ಮನೋವೈದ್ಯಕೀಯ ಕಾಯಿಲೆಗಳನ್ನು ಗುಣಪಡಿಸುತ್ತದೆ.

ಪರಿಸರಕ್ಕೆ ಹೊಂದಿಕೊಳ್ಳಲು ವ್ಯಕ್ತಿ ಮತ್ತು ಸಮಾಜದ ನಡುವೆ ನಿರಂತರ ಕೊಡುಕೊಳ್ಳುವಿಕೆಯ ಅಗತ್ಯ. ಇದು ವ್ಯಕ್ತಿಯು ಉದ್ದೇಗ ಮತ್ತು ಆತಂಕಕ್ಕೆ ಗುರಿಯಾಗುತ್ತಾನೆ. ವ್ಯಕ್ತಿತ್ವದ ಎಲ್ಲಾ ಅಂಶಗಳ ಮೇಲೆ ನಿಯಂತ್ರಣವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವ ಸಲುವಾಗಿ ಪತಂಜಲಿ ಮಾರ್ಗ ಯೋಗವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಿದರು. ಯೋಗವು ಸಾಮಾಜಿಕ ಪರಿಸರದಲ್ಲಿ ನಡವಳಿಕೆಯ ಮಾರ್ಗಸೂಚಿಗಳನ್ನು ಹೊಂದಿದೆ ಮತ್ತು ನರಮಂಡಲದ ಮೇಲೆ ನಿಯಂತ್ರಣವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವ ವ್ಯಾಯಾಮಗಳನ್ನು ಹೊಂದಿದೆ. ಮೂಲಭೂತವಾಗಿ ಯಮ, ನಿಯಮ, ಆಸನ, ಪ್ರಾಣಾಯಾಮ, ಪ್ರತ್ಯಾಹಾರ, ಧಾರಣ, ಧ್ಯಾನದಿಂದ ಸಮಾಧಿಯವರೆಗೆ ಎಂಟು ಹಂತಗಳ ಮೂಲಕ ಎಚ್ಚರದ ಸ್ಥಿತಿಯಿಂದ ಆತ್ಮಸಾಕ್ಷಾತ್ಕಾರದತ್ತ ಸಾಗುವುದು ಗುರಿಯಾಗಿದೆ. ಯೋಗ ಚಿಕಿತ್ಸೆಯು ಒಂದು ಹಂತದವರೆಗೆ ಅಭ್ಯಾಸ ಮಾಡುವಾಗ ಪ್ರಯೋಜನಕಾರಿಯಾಗಿದೆ.

ಯೋಗದ ಅಭ್ಯಾಸವು ದೇಹ, ಮನಸ್ಸು ಮತ್ತು ಆತ್ಮದ ನಡುವೆ ಒಕ್ಕೂಟವನ್ನು ಸೃಷ್ಟಿಸಲು ಮೀಸಲಾದ ಕಲೆ ಮತ್ತು ವಿಜ್ಞಾನವಾಗಿದೆ. ಏಕೀಕೃತ ಇಡೀ ಸೃಷ್ಟಿಗೆ ನಿಕಟವಾಗಿ ಸಂಪರ್ಕ ಹೊಂದಿದ ವ್ಯಕ್ತಿಗತ ಜೀವಿಗಳಾಗಿ ನಮ್ಮ ಬಗ್ಗೆ ಅವರನ್ನು ಬೆಳೆಸಲು ಉಸಿರು ಮತ್ತು ದೇಹವನ್ನು ಬಳಸುವಲ್ಲಿ ಸಾಧಕರಿಗೆ ಸಹಾಯ ಮಾಡುವುದು ಇದರ ಉದ್ದೇಶವಾಗಿದೆ. ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಹೇಳುವುದಾದರೆ, ಇದು ಶಾಂತಿ, ಉತ್ತಮ ಆರೋಗ್ಯ ಮತ್ತು ಸಾಮರಸ್ಯದಿಂದ ಬದುಕಲು ಸಮತೋಲನವನ್ನು ಮಾಡುವುದು ಮತ್ತು ಸಮಚಿತ್ತತೆಯನ್ನು ಸೃಷ್ಟಿಸುವುದು. ಯೋಗ ಶಿಕ್ಷಣವು ವ್ಯಕ್ತಿಯ ಪಾತ್ರ ಮತ್ತು ವ್ಯಕ್ತಿತ್ವವನ್ನು ರೂಪಿಸುವಲ್ಲಿ ಮತ್ತು ವ್ಯಕ್ತಿಗಳು ಮತ್ತು ರಾಷ್ಟ್ರಗಳ ಭವಿಷ್ಯವನ್ನು ನಿರ್ಧರಿಸುವ ಅತ್ಯಂತ ಶಕ್ತಿಶಾಲಿ ಪ್ರಾಚೀನ ಏಜೆನ್ಸಿಗಳಲ್ಲಿ ಒಂದಾಗಿದೆ.

ಇದು ಜೀವನದ ಹಂತಗಳಲ್ಲಿ ಕೌಶಲ್ಯ ಮತ್ತು ಕೌಶಲ್ಯವನ್ನು ಪಡೆದುಕೊಳ್ಳುವ ಪ್ರಕ್ರಿಯೆಯಾಗಿದೆ, ನಿಜವಾದ ಅರ್ಥವು ವ್ಯಕ್ತಿಯ ಸರ್ವತೋಮುಖ ಬೆಳವಣಿಗೆಗೆ ಸಹಾಯ ಮಾಡುವ ಪ್ರಕ್ರಿಯೆ

**ಯೋಗದ ಕೆಲವು ಸಂಭಾವ್ಯ ಪ್ರಯೋಜನಗಳು.**

- ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಯೋಗದ ಮಹತ್ವವನ್ನು ತಿಳಿಸಿ ನಿತ್ಯ ಜೀವನದಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳುವಂತೆ ಪ್ರೇರೇಪಿಸಿ ಪ್ರೋತ್ಸಾಹಿಸುವುದು.
- ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ದೈಹಿಕ ಆರೋಗ್ಯವನ್ನು ಕಾಪಾಡಿಕೊಳ್ಳುವ ಸರಳ ತಂತ್ರಗಳನ್ನು ತಿಳಿದುಕೊಳ್ಳುವಂತೆ ಮಾಡುವುದು.
- ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮಾನಸಿಕ ಆರೋಗ್ಯವನ್ನು ಕಾಪಾಡಿಕೊಳ್ಳುವಂತೆ ಪ್ರಮುಖ ಅಂಶಗಳನ್ನು ಗ್ರಹಿಸುವಂತೆ ತಿಳಿಸಿಕೊಡುವುದು.
- ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಯೋಗ ಶಿಕ್ಷಣದ ಮೂಲಕ ನಿತ್ಯ ಜೀವನದಲ್ಲಿ ಉತ್ತಮ ಮೌಲ್ಯಗಳನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳುವಂತೆ ಮಾಡುವುದು.
- ಯೋಗವನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವುದರಿಂದ ನಿಮ್ಮ ದೇಹವು ಹೆಚ್ಚು ಹೊಂದಿಕೊಳ್ಳಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

- ಇದು ನಿಮ್ಮ ಕೀಲುಗಳು ಮತ್ತು ಸ್ನಾಯುಗಳಲ್ಲಿ ಉತ್ತಮ ಶ್ರೇಣಿಯ ಚಲನೆಗೆ ಕಾರಣವಾಗಬಹುದು ಮತ್ತು ಭವಿಷ್ಯದಲ್ಲಿ ನಿಮ್ಮ ಗಾಯದ ಅಪಾಯವನ್ನು ಕಡಿಮೆ ಮಾಡಬಹುದು.
- ಸುಧಾರಿತ ಸಮತೋಲನವು ಯೋಗದ ಮತ್ತೊಂದು ಸಂಭಾವ್ಯ ಪ್ರಯೋಜನವಾಗಿದೆ. ಅನೇಕ ಯೋಗ ಭಂಗಿಗಳು ನೀವು ಹಲವಾರು ಸೆಕೆಂಡುಗಳ ಕಾಲ ಸವಾಲಿನ ಸ್ಥಾನವನ್ನು ಕಾಯ್ದುಕೊಳ್ಳುವ ಅಗತ್ಯವಿರುತ್ತದೆ.
- ಯೋಗವು ನಮ್ಮ ಒಟ್ಟಾರೆ ಯೋಗಕ್ಷೇಮವನ್ನು ಸುಧಾರಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.
- ಇದು ನಮ್ಮ ಸ್ವಾಭಿಮಾನ ಮತ್ತು ಆತ್ಮವಿಶ್ವಾಸವನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ ಮತ್ತು ಜೀವನದ ಬಗ್ಗೆ ಸಕಾರಾತ್ಮಕ ದೃಷ್ಟಿಕೋನವನ್ನು ಉತ್ತೇಜಿಸುತ್ತದೆ.

### ಸಮಾರೋಪ

ಯೋಗವು ಮಗುವನ್ನು ಸ್ವಯಂ ಮತ್ತು ಸಮಾಜಕ್ಕೆ ಉತ್ತಮ ಮನುಷ್ಯನಾಗಿ ಬೆಳೆಸುವಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತದೆ. ಯೋಗದಿಂದ ಶಿಕ್ಷಣದ ಉದ್ದೇಶ ಮತ್ತು ಅರ್ಥವು ಅದರ ನಿಜವಾದ ಅರ್ಥದಲ್ಲಿ ಅರಿತುಕೊಳ್ಳುತ್ತದೆ.

ಯೋಗ ಶಿಕ್ಷಣವು ಸಾಂಪ್ರದಾಯಿಕ ಶಿಕ್ಷಣವೆಂಬ ಕಾರಣದಿಂದ ಅನೇಕರು ಇದನ್ನು ಹೀಗೆಯೇ ಕಾಣುತ್ತಾರೆ. ಆದರೆ ಯೋಗ ಶಿಕ್ಷಣದ ಮಹತ್ವವನ್ನು ಅರಿತ ಅನೇಕ ಅಭಿವೃದ್ಧಿ ಹೊಂದಿದ ದೇಶಗಳು ಯೋಗ ಶಿಕ್ಷಣವನ್ನು ತಮ್ಮ ನೆಲದಲ್ಲಿ ಅಳವಡಿಸಿವೆ. ಆದ್ದರಿಂದ ಯೋಗ ಶಿಕ್ಷಣವನ್ನು ಅಳವಡಿಸುವುದರಿಂದ ಶಿಸ್ತಿನ ಜೀವನ ನಡೆಸಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

ಯೋಗಾಭ್ಯಾಸವು ಸುರಕ್ಷಿತವಾಗಿದೆ ಮತ್ತು ಸಾಧಕರಿಗೆ ಅನೇಕ ಆರೋಗ್ಯ ಪ್ರಯೋಜನಗಳನ್ನು ತರುತ್ತದೆ. ಯೋಗದ ಸೌಂದರ್ಯ ಎಂದರೆ ಅದನ್ನು ಯಾರು ಬೇಕಾದರೂ ಅಭ್ಯಾಸ ಮಾಡಬಹುದು. ಯೋಗಾಭ್ಯಾಸ ಮಾಡಬೇಕು ಮತ್ತು ಅದರಿಂದ ಪ್ರಯೋಜನಗಳನ್ನು ಪಡೆಯಬೇಕು. ಯೋಗವು ಹಲವಾರು ಹಂತದ ತೊಂದರೆಗಳನ್ನು ಹೊಂದಿದೆ, ಆದ್ದರಿಂದ ಪ್ರತಿಯೊಬ್ಬ ವ್ಯಕ್ತಿಯು ತಮ್ಮ ಅಗತ್ಯಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಯೋಗವನ್ನು ಅಭ್ಯಾಸ ಮಾಡಬಹುದು ಮತ್ತು ಯಾವುದೇ ಔಷಧಿಗಳು ಮತ್ತು ತಂತ್ರಜ್ಞಾನವಿಲ್ಲದೆ ತಮ್ಮ ಜೀವನವನ್ನು ಉತ್ತಮಗೊಳಿಸಬಹುದು.

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## ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣ ಕುರಿತು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020ರ ಶಿಫಾರಸ್ಸುಗಳು'

ಸಂದೀಪ.ಎಲ್. ಸಂಶೋಧನಾರ್ಥಿ, ಶಿಕ್ಷಣಶಾಸ್ತ್ರ ವಿಭಾಗ, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಂಕರಘಟ್ಟ,  
ಡಾ.ಜಗನ್ನಾಥ ಕೆ.ಡಾಂಗಿ. ಪ್ರಾಧ್ಯಾಪಕರು, ಶಿಕ್ಷಣಶಾಸ್ತ್ರ ವಿಭಾಗ, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಂಕರಘಟ್ಟ.

### ಸಾರಾಂಶ

ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯು 21ನೇ ಶತಮಾನದ ನಾವಿನ್ಯ ಕಲಿಕಾ ವಾತಾವರಣಕ್ಕೆ ಹೊಸ ಚೈತನ್ಯವನ್ನು ಮತ್ತು ಚಲನೆಯನ್ನು ನೀಡುತ್ತದೆ. ಪ್ರಮುಖವಾಗಿ ಶೈಕ್ಷಣಿಕ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣದ ನೀತಿ ಮತ್ತು ಯೋಜನೆಯನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವ ಕುರಿತು ಶಿಫಾರಸ್ಸು ಮಾಡಿದೆ. ಈ ಲೇಖನವು ಮುಖ್ಯವಾಗಿ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣದ ಮೇಲೆ-2020ರ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಶಿಫಾರಸ್ಸುಗಳನ್ನು ಕೇಂದ್ರೀಕರಿಸುತ್ತದೆ. ಪ್ರಸ್ತುತ ಕರ್ನಾಟಕ ರಾಜ್ಯದಲ್ಲಿ ಇರುವ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಹೇಗೆ ಪ್ರಮುಖ ಪಾತ್ರವಹಿಸುತ್ತದೆ ಎಂಬ ದೃಷ್ಟಿಕೋನವನ್ನು ವಿವರಿಸುತ್ತದೆ. ಮತ್ತು ಬಹುಶಿಸ್ತೀಯ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ವಿಭಾಗದ ಸ್ಥಾಪನೆ, ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣದ ಮಹತ್ವವನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು, ಸಂಬಂಧಿತ ಸಾಹಿತ್ಯದ ಅಧ್ಯಯನ ಮತ್ತು ಸ್ಥಳ ಬಾಂಧವ್ಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ಸ್ಥಳ ಆಧಾರಿತ ಸಿದ್ಧಾಂತ ಈ ಎರಡು ಸಿದ್ಧಾಂತಗಳನ್ನು ತಿಳಿಯಬಹುದು ಮತ್ತು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಪ್ರಮುಖ ಉದ್ದೇಶಗಳು, ಪ್ರಸ್ತುತ ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆ ಎದುರಿಸುತ್ತಿರುವ ಕೆಲವು ಪ್ರಮುಖ ಸಮಸ್ಯೆಗಳು ಹಾಗೂ “ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020”ರ ಪ್ರಮುಖ ಅನುಕೂಲಗಳು ಮತ್ತು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯನ್ನು ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದಲ್ಲಿ ಅನುಷ್ಠಾನಗೊಳಿಸಲು ಕೆಲವು ಪ್ರಮುಖ ಸಲಹೆಗಳನ್ನು ನೀಡಲಾಗಿದೆ. ಮುಖ್ಯವಾಗಿ ಪ್ರಶಿಕ್ಷಣಾರ್ಥಿಗಳ ಯಶಸ್ಸು ಕಲಿಕೆಯ ವಾತಾವರಣದೊಂದಿಗೆ ನಿಕಟ ಸಂಬಂಧ ಹೊಂದಿದೆ. ಕಲಿಕೆಯ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಅನೇಕ ವಿಧಗಳಲ್ಲಿ ಪ್ರಶಿಕ್ಷಣಾರ್ಥಿಗಳ ಮೇಲೆ ಪರಿಣಾಮ ಬೀರುತ್ತದೆ. ಧನಾತ್ಮಕ ಕಲಿಕೆಯ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಪ್ರಶಿಕ್ಷಣಾರ್ಥಿಗಳನ್ನು ಹೆಚ್ಚು ಕಲಿಕೆಗೆ ತೊಡಗಿಸಿಕೊಳ್ಳಲು, ಪ್ರೇರೇಪಿಸಲು ಮತ್ತು ಅವರ ಒಟ್ಟಾರೆ ಕಲಿಕೆ ಮತ್ತು ಬೋಧನೆಯ ಸಾಮರ್ಥ್ಯವನ್ನು ಹೆಚ್ಚಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಆದರೆ ಋಣಾತ್ಮಕ ಕಲಿಕೆಯ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಅದರ ವಿರುದ್ಧವಾಗಿ ಮಾಡಬಹುದು, ಋಣಾತ್ಮಕ ಕಲಿಕೆಯ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಕಲಿಕೆ ಮತ್ತು ಬೋಧನೆಯ ವಾತಾವರಣದಲ್ಲಿ ಪ್ರಶಿಕ್ಷಣಾರ್ಥಿಗಳನ್ನು ಕಲಿಕೆಗೆ ತೊಡಗಿಸಿಕೊಳ್ಳಲು ಮತ್ತು ಕಲಿಯುತ್ತಿರುವುದನ್ನು ಉಳಿಸಿಕೊಳ್ಳಲು ಕಷ್ಟವಾಗುತ್ತದೆ ಮತ್ತು ಪ್ರಶಿಕ್ಷಣಾರ್ಥಿಗಳ ಕಲಿಕೆಯ ಸಾಧನೆ ಕಡಿಮೆಯಾಗಬಹುದು. ಆದುದರಿಂದ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣದ ಗುಣಮಟ್ಟವನ್ನು ಸುಧಾರಿಸುವ ಅವಶ್ಯಕತೆ ಪ್ರಸ್ತುತ ದಿನಮಾನಗಳಿಗೆ ಅತ್ಯವಶ್ಯಕವಾಗಿದೆ.

**ಕೀಲಿ ಪದಗಳು:** ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ, ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣ, ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ.

### ಪೀಠಿಕೆ

ಶಿಕ್ಷಕರು 'ನಮ್ಮ ಸಮಾಜದ ಅತಿ ಮುಖ್ಯ ವ್ಯಕ್ತಿಗಳು ಮತ್ತು ಬದಲಾವಣೆಯ ಹರಿಕಾರರು' ಎಂದು ಈ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯು ನಂಬಿರುತ್ತದೆ. ಹಾಗಾಗಿ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣವನ್ನು ಹೆಚ್ಚಿಸುವ



ಯಾವುದೇ ಪ್ರಯತ್ನದ ಯಶಸ್ಸು ಶಿಕ್ಷಕರ ಗುಣಮಟ್ಟವನ್ನು ಅವಲಂಬಿಸಿರುತ್ತದೆ. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣವು ಜಾಗತಿಕವಾಗಿ ಶೈಕ್ಷಣಿಕ ಕ್ಷೇತ್ರದಲ್ಲಿನ ನೀತಿ, ಸ್ಪರ್ಧೆಗಳು ಸಮರ್ಪಕ ಶಿಕ್ಷಕರ ತಯಾರಿಯನ್ನು ರೂಪಿಸುವುದರ ಕುರಿತು ಒಮ್ಮತದ ಅಭಿಪ್ರಾಯವು ಕೊರತೆಯಿಂದ ಕೂಡಿದೆ. ಸಾಮಾಜಿಕ ಮತ್ತು ಶೈಕ್ಷಣಿಕ ಆಕಾಂಕ್ಷೆಗಳು ಬದಲಾಗುತ್ತಿರುವ ಸನ್ನಿವೇಶದಲ್ಲಿ ಮತ್ತು ಜಾಗತಿಕ ಜ್ಞಾನ, ಬೇಡಿಕೆಗಳನ್ನು ಪೂರೈಸಲು ಉತ್ತಮ ಶಿಕ್ಷಕರ ಗುಣಮಟ್ಟವು ಹೆಚ್ಚು ಅನಿವಾರ್ಯವಾಗಿದೆ. ಅನಾದಿಕಾಲದಿಂದಲೂ ಶಿಕ್ಷಕ ವೃತ್ತಿ ಅತ್ಯಂತ ಶ್ರೇಷ್ಠ ವೃತ್ತಿಯೆಂದು ಪ್ರಸಿದ್ಧಿ ಪಡೆದಿದೆ. ಶಿಕ್ಷಕರು ತಪ್ಪು ಮಾಡಿದರೆ ಸಮಾಜವನ್ನು ತಪ್ಪಿನಡೆಗೆ ಕೊಂಡೊಯ್ದಂತೆ. 'ಉತ್ತಮ ಸಮಾಜದೊಂದಿಗೆ ಸಂತೋಷದಾಯಕ ಸಮಾಜ ನಿರ್ಮಾಣ ಮಾಡುವುದರಲ್ಲಿ ಶಿಕ್ಷಕರ ಪಾತ್ರ ಅಗಾಧವಾಗಿರುತ್ತದೆ. ಹಾಗಾಗಿ, ಶಿಕ್ಷಕರ ತರಬೇತಿ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ತರಬೇತಿ ನೀಡುವಾಗ ಕಾಲ-ಕಾಲಕ್ಕೆ ಅನುಗುಣವಾಗಿ ಸಾಕಷ್ಟು ಅಂಶಗಳನ್ನು ಬದಲಾಯಿಸಿಕೊಳ್ಳಬೇಕು' (ಜಗನ್ನಾಥ ಡಾಂಗೆ. ಕೆ. 2020) ಹಾಗಾಗಿಯೇ 'ಸಂತೋಷದಾಯಕ ಸಮಾಜವು ಮಾನವ ಸಂಪನ್ಮೂಲದಿಂದ ಮಾತ್ರ ಸಾಧ್ಯ. ಎಲ್ಲಿ ಮನುಕುಲವು ಸಂತಸದಿಂದ ಇರುತ್ತದೆಯೋ ಅಂತಹ ಸಮಾಜವು ಸಂತೋಷದಾಯಕ ಸಮಾಜ ಎಂದು ಕರೆಯಿಸಿಕೊಳ್ಳುತ್ತದೆ. ಇಂತಹ ಸಂತೋಷದ ಸಮಾಜಕ್ಕೆ ಉತ್ತಮ ಪ್ರಜೆಗಳನ್ನು ನೀಡುವ ಜವಾಬ್ದಾರಿ ಶಿಕ್ಷಕರ ಹೆಗಲ ಮೇಲಿದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ಸಂತೋಷದಾಯಕ ಕಲಿಕೆಯ ವಾತಾವರಣವನ್ನು ಕಲ್ಪಿಸಿದರೆ ಪಾಠದ ಜೊತೆಗೆ ಸಂತೋಷದ ಅನುಭವಗಳನ್ನು ಪಡೆದು, ಕಲಿತ ವಿಷಯವಸ್ತುಗಳನ್ನು ದೀರ್ಘಾವಧಿಯವರೆಗೆ ನೆನಪಿನಲ್ಲಿ ಉಳಿಸಿಕೊಳ್ಳಲು ಹಾಗೂ ಅವರ ಜೀವನಕ್ಕೆ ಅಳವಡಿಸಿಕೊಳ್ಳಲು ಸಹಾಯಕವಾಗುತ್ತದೆ' (ಜಗನ್ನಾಥ ಡಾಂಗೆ. ಕೆ. ಮತ್ತು ಭವ್ಯ. ಆರ್.2020) ಈ ಮೂಲಕ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020ರ ಶಿಫಾರಸ್ಸುಗಳು, ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ವಾತಾವರಣದ ಮೇಲೆ ನೇರವಾದ ಪ್ರಭಾವವನ್ನು ಹೊಂದಿದೆ. ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳನ್ನು ಬಹುಶಿಸ್ತೀಯ ಸಂಸ್ಥೆಗಳಾಗಿ ಪರಿವರ್ತಿಸುವುದು, ಬಹುಶಿಸ್ತೀಯ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ವಿಭಾಗದ ಸ್ಥಾಪನೆ ಮಾಡುವುದು. ಈ ವರ್ಷ ಯು.ಜಿ.ಸಿ.ಯು ಶಿಕ್ಷಕರಿಗೆ ಅದರಲ್ಲೂ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ಪ್ರಶಿಕ್ಷಕರಿಗೆ ಸಾರ್ವಜನಿಕ ಸೂಚನೆಯೊಂದಿಗೆ ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳನ್ನು ಬಹುಶಿಸ್ತೀಯ ಸಂಸ್ಥೆಗಳಾಗಿ ಪರಿವರ್ತಿಸುವ ಮಾರ್ಗಸೂಚಿಗಳನ್ನು ಸೆಪ್ಟೆಂಬರ್-2 ರಂದು ಬಿಡುಗಡೆಗೊಳಿಸಿದೆ. ಈ ನಡೆ ನಿಜಕ್ಕೂ ನೂತನ 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020' ರ ಅನುಷ್ಠಾನವಾಗಿದೆ. ಇದರಿಂದ ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ಬದಲಾವಣೆಯ ಪರ್ವ ಆರಂಭವಾಗಲಿದೆ.

### 1. ಬಹುಶಿಸ್ತೀಯ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ವಿಭಾಗದ ಸ್ಥಾಪನೆ.

ನೂತನ 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020' ಬಹುಶಿಸ್ತೀಯ ಮತ್ತು ಸಮಗ್ರ ಶಿಕ್ಷಣಕ್ಕೆ ಕೊಡುಗೆ ನೀಡಲು ಹಾಗೂ ಈ ಕ್ಷೇತ್ರಗಳಲ್ಲಿ ಸಂತೋಧನೆ ಮತ್ತು ಅಭಿವೃದ್ಧಿಗೆ ಒತ್ತು ನೀಡಲು ಕಾಲೇಜುಗಳು/ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು/ ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಒಂದು ಶಿಕ್ಷಣ ವಿಭಾಗದ ಸ್ಥಾಪನೆಯನ್ನು ಮಾಡಲು ಸೂಚಿಸಿದೆ. ಇದು ಶಿಕ್ಷಣ/ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕೆ ಹೊಸ ಆಯಾಮವನ್ನು ನೀಡಲಿದೆ. ನೂತನ 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020' ಯು ವಿಭಾಗ-15.6 ಹಾಗೂ ವಿಭಾಗ-15.9ರಲ್ಲಿ ಶಿಕ್ಷಣ ವಿಭಾಗದ ಸ್ಥಾಪನೆಯ ಅನಿವಾರ್ಯತೆಯನ್ನು ತೋರಿಸುತ್ತದೆ. ಶಿಕ್ಷಣ ವಿಭಾಗಗಳು/ಶಿಕ್ಷಣ ಶಾಲೆಗಳು ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಅಧ್ಯಯನದ ವಿಭಾಗಗಳಾದ್ಯಂತ ಬಹುಶಿಸ್ತೀಯ ಕೊಡುಗೆ ನೀಡುವುದು, ತನ್ನದೇ ಆದ ಕಾರ್ಯಕ್ರಮಗಳಿಗಾಗಿ ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯ ಬಹುಶಿಸ್ತೀಯ ಪರಿಸರದಿಂದ ಪ್ರಯೋಜನ ಪಡೆಯುವುದು ಮತ್ತು 'ನೂತನ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020' ರಲ್ಲಿ ದೃಶೀಕರಿಸಿದಂತೆ ಬಹುಶಿಸ್ತೀಯ ಬೋಧನೆ, ಕಲಿಕೆಗೆ (ಪಠ್ಯಕ್ರಮ, ಶಿಕ್ಷಣಶಾಸ್ತ್ರ, ತಂತ್ರಜ್ಞಾನ-ಸಕ್ರಿಯಗೊಳಿಸಿದ ಸಂಯೋಜಿತ ಕಲಿಕೆ ಮತ್ತು



ಮೌಲ್ಯಮಾಪನ ಇತ್ಯಾದಿ.) ಕೊಡುಗೆ ನೀಡುವುದು, ಹಾಗೂ ಈ ಕ್ಷೇತ್ರಗಳಲ್ಲಿ ವಿಶೇಷ ತಜ್ಞರನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸುವುದನ್ನು ಒಳಗೊಂಡಿದೆ.

ಪ್ರಸ್ತುತ, ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು ಮತ್ತು/ಅಥವಾ ಕಾಲೇಜುಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ವಿಭಾಗಗಳು ಸೇವೆ ಸಲ್ಲಿಸುವ ಮೂರು ರಚನಾತ್ಮಕ ವ್ಯವಸ್ಥೆಗಳು ಮತ್ತು ಕೆಲಸದ ಕ್ಷೇತ್ರಗಳಿವೆ ಅವುಗಳೆಂದರೆ.

1. ಶಿಕ್ಷಣ ಕೋರ್ಸ್‌ಗಳನ್ನು (ಎಂ.ಎ. ಶಿಕ್ಷಣ ಮತ್ತು ಪಿ.ಎಚ್‌ಡಿ) ವಿಶಾಲ ಶಿಸ್ತು ಮತ್ತು ಸಂಶೋಧನಾ-ಆಧಾರಿತ ಕಾರ್ಯಕ್ರಮಗಳಾಗಿ ನೀಡುವುದು.

2. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ (ಎಂ.ಇಡಿ, ಬಿ.ಇಡಿ, ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣದಲ್ಲಿ ಡಿಪ್ಲೊಮಾ, ಕಲಾ ಶಿಕ್ಷಣ, ದೈಹಿಕ ಶಿಕ್ಷಣ, ಶಾಲಾಪೂರ್ವ ಶಿಕ್ಷಣ, ಅಂತರ್ಗತ ಶಿಕ್ಷಣ ಮತ್ತು ಪಿ.ಎಚ್‌ಡಿ.) ಕೋರ್ಸ್‌/ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಸೇವಾಪೂರ್ವ ಹಾಗೂ ಸೇವಾನಿರತ ಶಿಕ್ಷಕರ/ಪ್ರಶಿಕ್ಷಕರ ವೃತ್ತಿ ಬೆಳವಣಿಗೆಗೆ ಸ್ಥಾಪಿಸುವುದು.

3. ಮೇಲಿನ ಎರಡು ಮಾದರಿಗಳಲ್ಲದೆ, ವಿವಿಧ ಪದವಿ ಕಾಲೇಜುಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ವಿಭಾಗಗಳಿವೆ, (ಉದಾ: ಒಡಿಶಾ, ಜಮ್ಮು-ಕಾಶ್ಮೀರ, ಈಶಾನ್ಯ ರಾಜ್ಯಗಳು, ಪಶ್ಚಿಮ ಬಂಗಾಳ, ದೆಹಲಿ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಕೆಲವು ಕಾಲೇಜುಗಳು ಇತ್ಯಾದಿ) ಇವುಗಳು ಸಾಮಾನ್ಯ ಮತ್ತು ಗೌರವ/ಬಿರುದು ಪದವಿಗಳನ್ನು ಶಿಕ್ಷಣದಲ್ಲಿ ನೀಡುತ್ತಿವೆ. ಅದೇ ಉದ್ದೇಶವನ್ನು ಹೆಚ್ಚಾಗಿ ಬೋಧನೆ-ಕಲಿಕೆ ಕೇಂದ್ರಗಳು ಮತ್ತು ಪಠ್ಯಕ್ರಮ ಮತ್ತು ಶಿಕ್ಷಣಶಾಸ್ತ್ರದಲ್ಲಿನ ಶ್ರೇಷ್ಠತೆಯ ಕೇಂದ್ರಗಳು ಅದೇ ಪಿ.ಎಮ್.ಎಮ್.ಎಮ್.ಎನ್.ಎಮ್.ಟಿ.ಟಿ ಯೋಜನೆಯಡಿಯಲ್ಲಿ ತಿಳಿಸಲಾಗಿದೆ. ಪಿ.ಎಮ್.ಎಮ್.ಎಮ್.ಎನ್.ಎಮ್.ಟಿ.ಟಿ ಅಡಿಯಲ್ಲಿ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕಾಗಿ ಅಂತರ-ವಿಶ್ವವಿದ್ಯಾಲಯ ಕೇಂದ್ರಗಳು (ಐ.ಯು.ಸಿ.ಟಿ.ಇ) ದೇಶದಲ್ಲಿ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ಸಂಶೋಧನೆ ಮತ್ತು ಅಭಿವೃದ್ಧಿ (ಆರ್ ಮತ್ತು ಡಿ) ಅಗತ್ಯಗಳನ್ನು ಪೂರೈಸುತ್ತದೆ.

2. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣದ ಸಂಬಂಧಿತ ಸಾಹಿತ್ಯದ ಅಧ್ಯಯನ.

ಮಧಾಬ್ ಫೋರ್ಸ್, ಅಭಿಜಿತ್ ಗುಹಾ (2016): ಪಶ್ಚಿಮ ಬಂಗಾಳದಲ್ಲಿ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದಲ್ಲಿ ಕೆಲಸ ಮಾಡಲು ಪ್ರೇರಣೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ-ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಸಂಸ್ಥೆಯಲ್ಲಿ ನಿರ್ಣಾಯಕ ಪಾತ್ರವನ್ನು ವಹಿಸಿದೆ, ಇದು ಹೆಚ್ಚಿನ ವೈಯಕ್ತಿಕ, ಸಾಂಸ್ಥಿಕ ಕಾರ್ಯಕ್ಷಮತೆ ಮತ್ತು ವಿಶೇಷವಾಗಿ ಕೆಲಸ ಮಾಡಲು ಪ್ರೇರಣೆ ನೀಡುತ್ತದೆ. ಪ್ರೇರಣೆಯು ಜನರನ್ನು ಕ್ರಿಯೆಗೆ ಉತ್ತೇಜಿಸುವ ಪ್ರಕ್ರಿಯೆ ಮತ್ತು ವ್ಯಕ್ತಿಯ ವ್ಯಕ್ತಪಡಿಸಿದ ವೃತ್ತಿ ಸಂಬಂಧಿತ ಗುರಿಗಳು ಅಥವಾ ಆಯ್ಕೆಗಳಲ್ಲಿ ಅಪೇಕ್ಷಿತ ಕಾರ್ಯ ಮತ್ತು ಆರೋಗ್ಯಕರ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವನ್ನು ಸಾಧಿಸಲು ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವು ಪ್ರೇರಕ ಅಂಶಗಳೊಂದಿಗೆ ಹೆಚ್ಚು ಸಂಬಂಧಿಸಿದೆ.

ಖಂಡಕರ್ ಜಾಹೋರ್ ಅಹ್ಮದ್, ಅಡಿಲೇಡ್ ವಿಶ್ವವಿದ್ಯಾಲಯ ಬಾಂಗ್ಲಾದೇಶ. ಮುಫ್ತಿ ನಾಡಿಮುಲ್ ಕ್ವಾಮರ್ ಅಹ್ಮದ್, ಉತಾನ್ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ. ಶಾನ್ ಎಂಡಿ ಅತೀಕುಲ್ ಹಕ್ ಶಹಜಲಾಲ್ ಯೂನಿವರ್ಸಿಟಿ ಆಫ್ ಸೈನ್ಸ್ ಅಂಡ್ ಟೆಕ್ನಾಲಜಿ- ಶಿಕ್ಷಕರು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ಹವಾಮಾನ ಬದಲಾವಣೆಯ ಗ್ರಹಿಕೆಯನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವುದು: ಒಂದು ಅವಲೋಕನ. ಆಗಸ್ಟ್ (2021): ಪ್ರಸ್ತುತ ಶಿಕ್ಷಣ ಮತ್ತು ಶಿಕ್ಷಣದ ಗುಣಮಟ್ಟವನ್ನು ಮರುಹೊಂದಿಸಲು ವಾತಾವರಣದ ಬದಲಾವಣೆಯ ಸಂಶೋಧನೆಯು ಮುಖ್ಯವಾಗಿದೆ ಎಂದು ಈಗ ವ್ಯಾಪಕವಾಗಿ ಗುರುತಿಸಲಾಗಿದೆ. ವಾತಾವರಣ ಬದಲಾವಣೆಯ ಪ್ರತಿಕೂಲ ಪರಿಣಾಮಗಳನ್ನು ಎದುರಿಸುವಲ್ಲಿ, ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು, ವಿಶೇಷವಾಗಿ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು, ಜ್ಞಾನವನ್ನು ರಚಿಸುವಲ್ಲಿ ಮತ್ತು ಉತ್ತೇಜಿಸುವಲ್ಲಿ ಮತ್ತು ವಾತಾವರಣದ ಸಮಸ್ಯೆಗಳನ್ನು ತಮ್ಮ ಬೋಧನೆ



## 6. ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020ರ ಕೆಲವು ಪ್ರಮುಖ ಅನುಕೂಲಗಳು.

1. ಅನುಕೂಲಕರವಾದ ಕಲಿಕಾ ವಾತಾವರಣವನ್ನು ಸೃಷ್ಟಿಸುವುದು.
2. ಪ್ರಾರಂಭಿಕ (ಅನರ್ಹ, ಗುತ್ತಿಗೆ ಶಿಕ್ಷಕರು) ಅಭ್ಯಾಸವನ್ನು ದೇಶಾದ್ಯಂತ ನಿಲ್ಲಿಸಲಾಗುವುದು.
3. ಶಿಕ್ಷಕರು ತಾವು ಏನನ್ನು ಕಲಿಯಲು ಬಯಸುತ್ತಾರೋ ಅವುಗಳನ್ನು ಕಲಿಯಲು ಅನುಕೂಲವಾಗುವಂತೆ ಶಿಕ್ಷಕರ ನಿರಂತರ ವೃತ್ತಿಪರ ಅಭಿವೃದ್ಧಿಯ ನಮ್ಮ ಮತ್ತು ಮಾಡ್ಯುಲರ್ ವಿಧಾನವನ್ನು ಆಧರಿಸಿದೆ. ಈಗಷ್ಟೇ ಶಿಕ್ಷಕರ ವೃತ್ತಿಯನ್ನು ಪ್ರಾರಂಭಿಸುತ್ತಿರುವ ಶಿಕ್ಷಕರ ಮೇಲೆ ಗಮನವನ್ನು ಕೇಂದ್ರೀಕರಿಸಿ ಅವರಿಗೆ ಮಾರ್ಗದರ್ಶನ ನೀಡಲಾಗುವುದು.
4. ಬೋಧನೆ ಮತ್ತು ಸಂಶೋಧನೆಯಲ್ಲಿನ ಶ್ರೇಷ್ಠತೆಗೆ ಶಕ್ತಿ ತುಂಬುವುದಕ್ಕಾಗಿ ಹೆಚ್ಚಿನ ಸಾಮರ್ಥ್ಯ ಅಥವಾ ದಕ್ಷತೆ ಮತ್ತು ನೈತಿಕ ಬದ್ಧತೆ, ಈ ನೀತಿಯು ಬೋಧಕವರ್ಗವನ್ನು ಉನ್ನತ ಶಿಕ್ಷಣದ ಮುಖ್ಯ ಭಾಗವನ್ನಾಗಿಸುತ್ತದೆ.
5. ಶಿಕ್ಷಕರ ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮಗಳು ಶಿಸ್ತುಬದ್ಧವಾಗಿದ್ದು, ಬಹುಶಿಸ್ತೀಯವಾಗಿ, ಲವಲವಿಕೆಯಿಂದ ಕೂಡಿದ್ದು, ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಮೂಲಕ ನಡೆಸಲಾಗುತ್ತದೆ. ಶಿಕ್ಷಕರನ್ನು ರೂಪಿಸಲು 4 ವರ್ಷಗಳ ಸಂಯೋಜಿತ ಸ್ತರ ನಿರ್ದಿಷ್ಟ, ವಿಷಯ ನಿರ್ದಿಷ್ಟ, ಶಿಕ್ಷಣ ಪದವಿ ಕೋರ್ಸುಗಳನ್ನು ಬಹುಶಿಸ್ತೀಯ ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ನಡೆಸಲಾಗುತ್ತದೆ. ಕಳಪೆ ಗುಣಮಟ್ಟದ ಮತ್ತು ಸಮರ್ಪಕವಾಗಿ ಕೆಲಸ ನಿರ್ವಹಿಸದ ಶಿಕ್ಷಕರ ತರಬೇತಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳನ್ನು ಮುಚ್ಚಲಾಗುವುದು.
6. ನಿರ್ದಿಷ್ಟ ತರಬೇತಿ, ಮಾರ್ಗದರ್ಶನ ಮತ್ತು ನಿರಂತರ ವೃತ್ತಿಪರ ಅಭಿವೃದ್ಧಿ ಮತ್ತು ವೃತ್ತಿ ಬೆಳವಣಿಗೆಯ ಅವಕಾಶಗಳ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಸ್ನೇಹಿ ವಾತಾವರಣದ ವಿನ್ಯಾಸ ಕೈಗೊಳ್ಳಲಾಗುವುದು.
7. ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯನ್ನು ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದಲ್ಲಿ ಅನುಷ್ಠಾನಗೊಳಿಸಲು ಕೆಲವು ಪ್ರಮುಖ ಸಲಹೆಗಳನ್ನು ಈ ಕೆಳಕಂಡಂತೆ ನೀಡಲಾಗಿದೆ. ಅವುಗಳೆಂದರೆ,
  1. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದಲ್ಲಿ ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ನೀಡಲು, ಶಿಕ್ಷಕರಿಗೆ ಸೂಕ್ತ ರೀತಿಯ ತರಬೇತಿ ಮತ್ತು ಅಭಿವೃದ್ಧಿಯ ಘಟಕಗಳನ್ನು ಸ್ಥಾಪಿಸುವುದು.
  2. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ಎಲ್ಲಾ ಕಾಲೇಜುಗಳಿಗೆ ಡಿಜಿಟಲ್ ಮೂಲ ಸೌಕರ್ಯಗಳನ್ನು ಒದಗಿಸುವುದು.
  3. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ಎಲ್ಲಾ ಕಾಲೇಜುಗಳಲ್ಲಿನ ವಿದ್ಯುತ್ ಮತ್ತು ನೆಟ್-ವರ್ಕ್ ವ್ಯತ್ಯಯದಂತಹ ಸಮಸ್ಯೆಗಳನ್ನು ಸರಿಪಡಿಸುವುದು ಮತ್ತು ನಿಭಾಯಿಸುವುದು.
  4. ಶಿಕ್ಷಕರಿಗೆ ಗುಣಮಟ್ಟದ ಸೇವಾ ಪೂರ್ವ ಮತ್ತು ಸೇವಾ ನಿರತ ಉತ್ತಮ ತರಬೇತಿಯನ್ನು ವಿಚಾರ ಸಂಕರಣ ಮತ್ತು ಕಾರ್ಯಾಗಾರಗಳ ಮೂಲಕ ಸರ್ಕಾರದ ಇಲಾಖೆಗಳಾದ, ರಾಜ್ಯ ಶಿಕ್ಷಣ ಸಂಶೋಧನೆ ಮತ್ತು ತರಬೇತಿ ಇಲಾಖೆ, ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಮಂಡಳಿ, ಜಿಲ್ಲಾ ಶಿಕ್ಷಣ ತರಬೇತಿ ಸಂಸ್ಥೆ, ಮತ್ತು ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ಸಂಶೋಧನೆ ಹಾಗೂ ತರಬೇತಿ ಪರಿಷತ್ತುಗಳ ಮೂಲಕ ಆಯೋಜಿಸಿ, ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ನಡೆಸುವುದು.
  5. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದ ಎಲ್ಲಾ ಕಾಲೇಜುಗಳಲ್ಲಿ ಆವಿಷ್ಕಾರ ಮತ್ತು ಸಂಶೋಧನೆಯನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲೆಂದೇ ಮೀಸಲಾದ ಘಟಕದ ರಚನೆ ಮಾಡಿಸುವುದು.
  6. ಶಿಕ್ಷಣದ ಮೇಲಿನ ಸಾರ್ವಜನಿಕ ವೆಚ್ಚವು, ಜಿ.ಡಿ.ಪಿಯು 6% ನ್ನು ಏರಿಸಿ ಕೂಡಲೇ ಜಾರಿಗೆ ತಂದು ಅನುಷ್ಠಾನಗೊಳಿಸುವುದು, ಮತ್ತು ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕೆ ಬಹುಪಾಲು ಹಣವನ್ನು ವಿನಿಯೋಗಿಸಬೇಕು.
  7. ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಶಿಷ್ಯ ವೇತನ/ಪ್ರೋತ್ಸಾಹಧನ ಮತ್ತು ಸರ್ಕಾರದ ನಿಧಿಗಳ ಹಣವನ್ನು ಸಕಾಲದಲ್ಲಿ ಒದಗಿಸುವಂತೆ ನೋಡಿಕೊಳ್ಳುವುದು.

8. ಸರಿಯಾದ ಗುಣಮಟ್ಟದ ಮಾನವ ಸಂಪನ್ಮೂಲ, ಮೂಲ ಸೌಕರ್ಯ ಮತ್ತು ಹಣಕಾಸು ಸಂಪನ್ಮೂಲಗಳನ್ನು ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕೆ ಸಕಾಲದಲ್ಲಿ ಒದಗಿಸುವುದು.

ಈ ಮೇಲಿನ ಅಂಶಗಳನ್ನು ಪರಿಗಣಿಸಿದರೆ, ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಗುಣಮಟ್ಟ ಹೆಚ್ಚಿಸಲು ಅದರ ಸಮಗ್ರತೆ, ವಿಶ್ವಾಸಾರ್ಹತೆ ಹಾಗೂ ಅದರ ನಿಯಂತ್ರಣ ಕ್ರಮಗಳನ್ನು ಅಮೂಲಾಗ್ರವಾಗಿ ಪುನರುಜ್ಜೀವನಗೊಳಿಸುವ ತುರ್ತು ಅಗತ್ಯವಿದೆ. ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಅನುಷ್ಠಾನದಿಂದ ಉತ್ತಮ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣವನ್ನು ಹೊಂದಬಹುದು ಮತ್ತು ಉತ್ತಮ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕೆ ಪ್ರವೇಶ ಪಡೆಯಬಹುದಾಗಿದೆ. ಹಾಗೆಯೇ ಪ್ರಗತಿಯ ವಿವಿಧ ಬಾಗಿಲುಗಳು ತೆರೆಯಲಿವೆ. ಪ್ರತಿ ವ್ಯಕ್ತಿಗೂ ಉತ್ತಮ ಗುಣಮಟ್ಟದ ಬೋಧನಾ ತರಬೇತಿ ಮತ್ತು ಶಿಕ್ಷಣ ಅವಕಾಶ ಕಲ್ಪಿಸುವ ಸಾಧ್ಯತೆಗಳು ಹೆಚ್ಚಾಗಿವೆ. ಹಾಗಾಗಿ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣಕ್ಕಾಗಿ ಹೆಚ್ಚುವರಿ ಕ್ರಮಗಳನ್ನು ಎಲ್ಲಾ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು ಧೃಢ ಸಂಕಲ್ಪದಿಂದ ಕಾರ್ಯ ನಿರ್ವಹಿಸಲಿವೆ. ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ-2020ರ ಪರಿಚಯದೊಂದಿಗೆ ಅನೇಕ ಈ ಬದಲಾವಣೆಗಳನ್ನು ಜಾರಿಗೆ ತರುವ ಮೂಲಕ, ಭಾರತೀಯ ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಾಂಸ್ಥಿಕ ವಾತಾವರಣದ ವ್ಯವಸ್ಥೆಯು ಉನ್ನತ ಶ್ರೇಣಿಗೆ ತಲುಪುವ ಭರವಸೆಯನ್ನು ಮೂಡಿಸಿದೆ. ಮತ್ತು ಶಿಕ್ಷಕರ ಶಿಕ್ಷಣದಲ್ಲಿ ಭಾರತವನ್ನು ಜಾಗತಿಕ ಶಿಕ್ಷಣ ತಾಣವನ್ನಾಗಿ ಮಾಡುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ-2020 ಹೊಂದಿದೆ.

#### ಪರಾಮರ್ಶನ ಗ್ರಂಥಗಳು

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### **Guideline to the Contributors**

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### **General Instruction for Submission**

SRJHSEL strongly recommends following format of manuscripts. The first page of the submission should include the title of the article, the name of the **author(s)**, **institutional affiliation**, **email address (es)** **Title:** Times New Roman, bold, 14 pt., space 6 above and 6 below, centered. **Name of the Author(s):** Times New Roman, 12 pt., bold, centered, below the title. **Author(s) affiliation, email address (es):** Times New Roman, 10 pt., italic. **Abstract:** Abstracts of no more than 10 lines summarizing the primary argument(s) and finding(s) in the article should be included at the beginning of the article. Times New Roman, 10 pt., italic, not exceeds than 150-200 words. **Keywords:** Times New Roman 12 pt., maximum 5 keywords. Articles should be between 2,000 and 4,000 words in length. The pages of the typescript should be numbered in consecutive sequence, with Justify alignment. **Page numbering:** position right, Times New Roman, 12 pt. All articles must be typed in a **Microsoft Word** file. **Subtitles** (sub-headings) use Times New Roman, 12 pt., bold, left justified. **Main text** font use Times New Roman, 12 pt., justified. Articles should be single spaced and have 2.54 cm (1 inch) margins. Please separate paragraphs by one empty line (touching „enter” key once). All abbreviations and acronyms should be defined at first mention. To facilitate reader comprehension, abbreviations should be used sparingly/carefully. Article should be free from spelling and grammatical mistakes. **APA style** of referencing should be used for article referencing. **Tables & Figures:** Number tables / figures are consecutively as they appear in the text. Center tables / figures close in the text where they are first mentioned. Do not split tables / figures across two pages. If there is not enough space at the bottom of a page, continue your text and place the table at the top of the next page. Each table / figure must have a label (title) beginning with the table number and describing the contents. The label needs to inform the reader what the table / figure presents (coefficients, means, percentages, rates, etc.), the time frame, and the geographical coverage. Each row and column of a table must have a heading. If the contents of a table / figure are drawn or adapted from a published source, note that as footnote to the table. **Major Elements of Paper:** **Title:** It should be short, precise. **Authors:** Name, Address, qualification, and institutional affiliations etc. should be provided

beneath to the title. **Abstract:** The Abstract should be informative and completely self-explanatory, which should briefly present the topic, state the scope of the experiments, indicate significant data, and point out major findings and conclusions. The abstract should not be exceeds than 100 to 200 words in length. Complete sentences, active verbs, and the third person should be used, and the abstract should be written in the past tense. **Introduction:** It should be not a long review of the subject area and details of history. It should pertain to specific area. **Research Method:** It should be covers Population, Sample, Tools for data collection, Statistical techniques. Methodology should be provided separately after the research method. **Results:** It should relevant facts only, data, may be given preferable in the form of tables or occasionally in figure/text but do not repeat same data in more than one form. **Discussion:** This is important aspect of the paper, should be drafted carefully. Stating what answers we got, then in individuals paragraphs discussing these in light relevant past work and finally, try to answer: what does it means in the conducting part. In some situation section of Results may be combined with Discussion so as to avoid repetition. **Acknowledgement:** It should be short not exceeds than 150 words, which should include essential facts given at the end of the paper but not necessary. **References:** References must be arranged according to APA style of referencing.

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### **Book with Two Authors**

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