



SJIF IMPACT FACTOR
2026
8.727

 Online ISSN 2278-8808

<https://doi.org/10.5281/zenodo.23013371>

An International Peer Reviewed
**SCHOLARLY
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Dr. Vidyanand S. Khandagale
Dr. Chetna P. Sonkamble

JULY-AUG, 2026

VOL-15/97



IMPACT FACTOR SJIF 2026 = 8.727

ONLINE ISSN 2278-8808

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Editors

Dr. Vidyanand S. Khandagale

Conference Convener, Department of Education, Shivaji University,
Kolhapur (MS)

Dr. Chetna P. Sonkamble

Head, Department of Education, Shivaji University, Kolhapur (MS)

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Telco Colony, Ambegaon (Kh), Pune. Maharashtra. 411046. India.

Website: www.srjis.com Email: srjisarticles16@gmail.com

**An International Peer reviewed, Refereed & Quarterly
Scholarly Research Journal for Interdisciplinary Studies**

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Non Member	₹ 2000/-	₹ 650/-	2650/-	One Issue
Individual Membership	₹ 550/-	₹ 3000/-	3550/-	One Year
Institutional Membership	₹ 2000/-	₹ 3050/-	5550/-	Five Year

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CHANGE IN POSTAL ADDRESS: One month notice for change in address should be communicated, notified by Sending old postal address and current postal address to Editor in Chief by specifying the Journal Name and ISSN number through postal or e mail: srjisarticles16@gmail.com

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A STUDY OF TEACHER'S PERSPECTIVES ON INCLUSIVE EDUCATION FOR DIVERSE LEARNERS IN HIGHER EDUCATION

Atul Sukhadev Jadhav

Golden Jubilee Research Fellow, Department of Education, Shivaji University Kolhapur

Dr. Chetna Pralhad Sonkamble

Head, Department of Education, Shivaji University, Kolhapur

Abstract

Inclusive education in higher education aims to give all students equal opportunities to learn and succeed, no matter their physical ability, economic background, language, culture, or social status. As colleges and universities become more diverse, teachers play a very important role in creating classrooms where every student feels included and supported. Teachers influence not only how subjects are taught, but also how students feel in the classroom and how actively they participate. Therefore, it is important to understand teacher's views about inclusive education. This study examines teacher's perspectives on inclusive education in higher education institutions. It focuses on their attitudes, level of preparedness, challenges they face, and the teaching practices they use. The study used a descriptive survey method. The Data were collected from faculty members through a structured questionnaire based on a five-point Likert scale. The questionnaire measured teacher's understanding of inclusion, their training in inclusive education, their classroom practices, and the institutional support available to them. The findings show that most teachers have positive attitudes toward inclusive education and believe it is important for fairness and equal opportunity. The study shows that although teachers support the idea of inclusion, their level of preparedness to implement inclusive practices is moderate. Many teachers reported that they have limited formal training in inclusive teaching methods.

Keywords: *Inclusive Education, Diverse Learners, Higher Education, Teacher's Perspectives, Equity, Accessibility.*

Introduction

Inclusive education is built on a simple but powerful idea: education is a basic human right and should be available to everyone. No learner should be excluded because of disability, economic background, gender, language, culture, or social identity. At its core, inclusive education promotes fairness, dignity, and equal opportunity. It encourages educational institutions to see diversity not as a difficulty to manage, but as a strength that enriches classroom learning and broadens perspectives for all students.

The global push for inclusive education gained strong direction after the Salamanca Statement (1994), adopted under the leadership of UNESCO. This landmark framework called on mainstream institutions to welcome all learners and adjust teaching methods to meet diverse needs. It marked an important shift from separating students who were considered different to

redesigning educational systems so that everyone could learn together in supportive environments.

In India, Inclusive Education is supported by significant policy measures such as the Rights of Persons with Disabilities Act and the National Education Policy. These frameworks emphasize equal access, non-discrimination, reasonable accommodation, and the use of flexible teaching approaches. The National Education Policy 2020 further highlights the importance of Universal Design for Learning (UDL), assistive technologies and continuous teacher training to ensure that higher education institutions become more inclusive and learner centred.

Although Inclusive Education has been discussed a lot in school settings, putting it into practice in higher education brings different and more complex challenges. Today, universities and colleges welcome students from many different backgrounds, including students with disabilities, first-generation college learners, those from marginalized communities, linguistic minorities, and economically weaker sections. As more students gain access to higher education, classrooms are becoming increasingly diverse. This diversity adds value and richness to the academic environment, but it also requires teachers to use flexible teaching methods and institutions to provide strong support systems to ensure that every student can succeed.

In higher education faculty members are often appointed primarily for their subject expertise and many may not receive formal preparation in inclusive pedagogy. Large class sizes, structured evaluation systems, limited infrastructure and heavy workloads can make it difficult to provide individualized attention. As a result, even when policies promote inclusion translating those policies into meaningful classroom practice can be challenging. Teachers play a central role in shaping inclusive environments. Their attitudes, confidence, and professional training strongly influence how inclusion is practiced. When teachers believe in the value of inclusive education and feel adequately prepared, they are more likely to adopt flexible teaching methods, varied assessment techniques, and supportive learning strategies. However, when training and institutional support are limited, inclusive practices may remain more theoretical than practical. The present study aims to explore these perspectives in order to contribute to the effective and meaningful implementation of inclusive education in higher education institutions. It becomes imperative to empirically examine teacher's perspectives on inclusive education within higher education institutions. Understanding their attitudes, preparedness, and perceived barriers provides a foundation for designing targeted professional development programs and institutional reforms.

Review of Related Literature

Ramdas (2025) The study was conducted a scoping review of empirical studies on teacher attitudes toward equity, diversity, and inclusion (EDI) in higher education, highlighting three key attitudinal dimensions openness, comfort, and willingness and noting that despite extensive policy efforts, changes in instructional practice remain limited and under-studied.

Carrillo-Sierra et al. (2025) The study analysed faculty attitudes, knowledge, and inclusive practices across Colombian universities, reporting heterogeneity in how inclusive education

dimensions are understood and enacted. Their study found generally positive attitudinal dispositions among faculty, but significant gaps in instructional knowledge and consistent pedagogical practice, pointing to the need for contextualised and sustained professional development to bridge theory and practice.

Marin, Briede, Kravale-Pauliņa, and Presņakova (2025) The study analyzed differences faculty attitudes, competencies, and perceived challenges related to inclusive pedagogy in higher education settings in Romania and Latvia. Their research identified common barriers such as limited institutional support and time constraints, even among professors who conceptualise inclusive education positively, emphasising that supportive policies must be accompanied by institutional resources and training opportunities.

Cojocariu, Amălăncei, Mareş, Cîrţiţă-Buzoianu, and Măţă (2025) explored higher education teacher's attitudes toward inclusion. The finding that attitudes vary across instructional contexts and that while many faculty members express favourable views about inclusive education. This does not always translate into active inclusive practice without formal training and institutional encouragement.

Moriña (2021) Earlier scholarship, although not confined to higher education, provides theoretical foundations for understanding inclusive attitudes. Moriña (2021) synthesised inclusive pedagogy research, outlining core components beliefs, knowledge, design, and action that influence teacher behaviour, and emphasising the need for research that connects conceptual understanding with classroom enactment.

Cojocariu et al.'s (2025) The study in geographically diverse contexts illustrate similar patterns. For instance, Cojocariu et al.'s (2025) work stands alongside literature demonstrating that teacher attitudes are necessary but not sufficient for inclusive practice when systemic barriers exist. The study on EDI attitudes in higher education by Ramdas (2025) similarly underscores the disconnect between positive dispositions and practical application.

Filippou's (2025) The professional learning and support systems are central to translating positive attitudes into effective inclusive instruction. Filippou's (2025) systematic review of inclusive policies and practices in higher education stresses that policy alone cannot ensure inclusion without concrete teacher development strategies and institutional commitment.

Objectives of the Study

- 1) To examine teacher's attitudes toward inclusive education in higher education.
- 2) To assess teacher's preparedness for addressing diverse learning needs.
- 3) To identify challenges faced in implementing inclusive practices.
- 4) To analyze inclusive instructional strategies adopted by teachers.
- 5) To examine differences in perspectives based on gender and teaching experience.
- 6) To determine the relationship between training and positive attitudes toward inclusion.

Research Questions

1. What are teacher's perceptions of inclusive education in higher education?
2. Are teachers adequately trained to address diverse learning needs?
3. What barriers do teachers face while implementing inclusive practices?
4. What instructional strategies are commonly used in inclusive classrooms?

Research Methodology

The present study adopted a quantitative research approach using a descriptive survey design to examine teacher's perspectives on inclusive education in higher education institutions.

Research Design

The present study researcher used a Descriptive Survey Method. The information collected teacher's attitudes, preparedness, challenges, and instructional practices related to inclusive education.

Population of the Study

The population of the study consists of faculty members working Shivaji University Kolhapur.

Sample of the Study

A sample of 60 teachers from selected higher education institutions is selected a convenience or purposive sampling technique.

Data Collection

The present study Data are collected a structured questionnaire designed by the researcher

Data Collection Procedure

The questionnaire is given to teachers through online google forms.

Findings of the Study

Objective 1: To examine teacher's attitudes toward inclusive education in higher education.

The findings indicate that most teachers have a positive attitude toward inclusive education. They believe that inclusive classrooms promote equal learning opportunities and help create a supportive and respectful academic environment for all students.

Objective 2: To assess teacher's preparedness for addressing diverse learning needs.

The study shows that teacher's preparedness to address diverse learning needs is moderate. While many teachers are willing to support diverse learners, they feel that they need more training and practical guidance to effectively implement inclusive teaching strategies.

Objective 3: To identify challenges faced in implementing inclusive practices.

The findings reveal several challenges in implementing inclusive education, such as large class sizes, limited time, lack of assistive technology, insufficient infrastructure, and inadequate institutional support.

Objective 4: To analyse inclusive instructional strategies adopted by teachers.

The study finds that some teachers use inclusive instructional strategies such as flexible teaching methods, group discussions, interactive learning activities, and the use of digital resources to support students with diverse learning needs.

Objective 5: To examine differences in perspectives based on gender and teaching experience.

The analysis shows that there are only minor differences in teacher's perspectives based on gender and teaching experience. Overall attitudes toward inclusive education remain generally positive across different demographic groups.

Objective 6: To determine the relationship between training and positive attitudes toward inclusion.

The findings indicate that teachers who have received professional training in inclusive education tend to have more positive attitudes and greater confidence in implementing inclusive practices in the classroom.

Conclusion: The present study aimed to examine teacher's perspectives on inclusive education for diverse learners in higher education institutions. The findings of the study reveal that most teachers have a positive perception of inclusive education and believe that it is important for providing equal learning opportunities to all students. Teachers generally agree that inclusive classrooms help create a supportive, respectful, and fair learning environment for students from different backgrounds. The study also shows that although teachers support the idea of inclusion, their level of preparedness to implement inclusive practices is moderate. Many teachers reported that they have limited formal training in inclusive teaching methods. As a result, they sometimes find it difficult to address the diverse learning needs of students effectively. The findings further indicate that teachers face several challenges while implementing inclusive education in higher education classrooms. These challenges include large class sizes, lack of assistive technology, limited infrastructure, and heavy teaching workload. Such barriers make it difficult for teachers to provide individual attention and adapt teaching strategies for diverse learners. The important finding of the study is that professional training in inclusive education plays a significant role in shaping teacher's attitudes and practices. Teachers who have received training in inclusive education tend to show more positive attitudes and greater confidence in using inclusive teaching strategies. However, the study found that factors such as gender and teaching experience do not significantly influence teacher's perspectives on inclusive education. The study highlights that inclusive education in higher education requires greater institutional support, improved infrastructure, and regular professional development programs for teachers. Strengthening these areas can help teachers implement inclusive practices more effectively and ensure that all students receive equal and meaningful learning opportunities.

Reference

- Carrillo-Sierra, S. M., Manrique-Julio, J. E., Cerón-Bedoya, J. D., Vásquez-Henao, L. C., Fornaris-Parejo, Z. E., Gómez-Charris, Y., & Rivera-Porras, D. (2025).** *Inclusive education in higher education: A comparative analysis of faculty attitudes, knowledge, and practices in Colombian universities.* *Societies*, 15(11), 299.
- Cojocariu, V.-M., Amălăncei, B.-M., Mareş, G., Cîrţiş-Buzoianu, C., & Măţă, L. (2025).** *Higher education teacher's attitudes towards inclusive education.* *Revista Românească pentru Educaţie Multidimensională*, 17(1), 33–53.

- Marin, E., Briede, L., Kravale-Pauliņa, M., & Presņakova, I. (2025).** Embracing diversity through inclusive pedagogy: A comparative study of university faculty attitudes, competencies, and perceived challenges in Romania and Latvia. *Frontiers in Education*, 10, 1682404.
- Ramdas, S. (2025).** Teacher's attitudes towards equity, diversity, and inclusion in higher education: A scoping review. *International Journal of Educational Research*, 131, 102590.
- Filippou, K. (2025).** Inclusive policies and practices in higher education: A systematic literature review. *Review of Education*.
- Morina, A. (2021).** Approaches to inclusive pedagogy: A systematic literature review. *Pedagogika*, 140(4), 134–154.
- UNESCO. (1994).** The Salamanca Statement and Framework for Action on Special Needs Education. Paris: UNESCO.
- Government of India. (2020).** National Education Policy 2020. New Delhi.
- Ainscow, M. (2005).** Developing inclusive education systems. *Journal of Educational Change*, 6(2), 109–124.
- Sharma, U., & Sokal, L. (2016).** The impact of teacher training on attitudes toward inclusion. *Teaching and Teacher Education*, 55, 1–10.
- Black-Hawkins, K. (2017).** Understanding inclusive pedagogy. In L. Florian (Ed.), *The Sage handbook of special education* (2nd ed., pp. 259–272). Sage.
- Florian, L. (2015).** Inclusive pedagogy: A transformative approach to individual differences. *Cambridge Journal of Education*, 45(1), 5–16. <https://doi.org/10.1080/0305764X.2014.959217>
- Government of India. (2020).** National education policy 2020. New Delhi: Ministry of Education.
- Moriña, A. (2020).** Faculty members who engage in inclusive pedagogy: Methodological and pedagogical practices. *Teaching in Higher Education*, 25(7), 873–888.
- Ainscow, M. (2020).** Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, 6(1), 7–16. <https://doi.org/10.1080/20020317.2020.1729587>
- Sharma, U., & Sokal, L. (2016).** Can teacher training improve attitudes and concerns about inclusive education? *Teaching and Teacher Education*, 55, 1–10.
- Slee, R. (2018).** *Inclusive education isn't dead, it just smells funny*. Routledge.
- Thomas, L. (2016).** Developing inclusive learning to improve the engagement and success of all students. Higher Education Academy Report.
- UNESCO. (2015).** Education 2030: Incheon declaration and framework for action. Paris: UNESCO.
- UNESCO. (2020).** Global education monitoring report: Inclusion and education – All means all. Paris: UNESCO.
- United Nations. (2015).** Transforming our world: The 2030 agenda for sustainable development. New York: United Nations.
- Waitoller, F. R., & Artiles, A. J. (2016).** A decade of professional development research for inclusive education. *Review of Educational Research*, 83(3), 319–356.
- Florian, L. (2019).** On the necessary co-existence of special and inclusive education. *International Journal of Inclusive Education*, 23(7-8), 691–704.
- Göransson, K., & Nilholm, C. (2014).** Conceptual diversities in inclusive education. *European Journal of Special Needs Education*, 29(3), 265–280.

- De Beco, G. (2016).** *Inclusive education and the United Nations convention on the rights of persons with disabilities. International Journal of Inclusive Education*, 20(3), 263–279.
- Booth, T., & Ainscow, M. (2016).** *Index for inclusion: Developing learning and participation in schools. Centre for Studies on Inclusive Education.*
- Rose, D. H., & Meyer, A. (2014).** *Universal design for learning: Theory and practice. CAST Publishing.*
- Rao, K., Ok, M. W., & Bryant, B. R. (2014).** *A review of research on universal design educational models. Remedial and Special Education*, 35(3), 153–166.
- Hodkinson, A. (2016).** *Key issues in special educational needs and inclusion. Sage.*
- Mitchell, D. (2015).** *Inclusive education is a multi-faceted concept. Routledge.*

EDUCATIONAL ASPIRATION AMONG UNDERGRADUATE GIRLS STUDENTS: STATUS AND CHALLENGES

* **Sangeeta K. Chandanwale**

Research Student, Shivaji University, Kolhapur

Email : sangeetachandanwale@gmail.com

** **Dr. Vidyanand S. Khandagale**

Department of Education , Shivaji University ,Kolhapur

Email : vsk_edu@unishivaji.ac.in

Abstract

In the present era of technology, the society has witnessed developments in many areas such as media, politics, education, industry, medicine and information technology. Education holds the most important place among these. Hundreds of avenues have opened up. As a result of these developments, the most important area i.e. education has undergone a transformation. Starting from pre independence till date, the area of education has evolved many positive and developmental changes. The adolescent has to decide about his aims and the courses to achieve success in life. Many times when he is not satisfied with his education at home he turns to go abroad even. Holistic development of personality is the main goal of education which cannot be achieved until and unless the individual is serious about his aspiration. The term "Aspiration" is used in many ways. It can be used as a quest for knowledge, wish for something, targets, goals, ways or strategies to perform any work or the evaluation of one's own performance. In general, individuals are ever striving for knowledge since their birth. The level of aspiration that one possesses influences his results. Examining how girls are socialised differently in terms of education makes it clear how cultural norms affect career choices and educational opportunities. This research investigates the Educational Aspiration Among Undergraduate Girls Students Affiliated Shivaji University Kolhapur. The study scale/Questionnaire to gather responses.

The study concludes that undergraduate girls view education as the ultimate tool for economic empowerment. Securing a job is not just a career goal but the primary way these students intend to set an example for their families. Despite financial hurdles and domestic responsibilities, their remains exceptionally positive, characterized by high self-reliance and a desire for social status through professional success.

Keywords: Educational Aspiration

Introduction:

Educational aspiration is a way, eagerness, an inspiration and a desire to achieve the target. It totally depends upon the level of aspiration that one perceives. If the level of aspiration is high, one can reach the goal with full energy, spirit and vice versa. The word Educational Aspiration stands for a wish for something. It is the basic requirement to achieve targets. Aspiration is the targeted word which is not yet achieved but can be achieved in future. It is the ability to set future goals on the basis of diagnosing the needs and interests. Aspiration becomes the motivational force between ambition and work- life. It not only denotes present but represents

the future as well. Hence the future achievement of goal depends upon the level of aspiration the child possesses. If it is high, he will work to achieve the goal with full dedication, otherwise he will remain in dilemma of what to do or whether to do it or not? It is the driving force which never lets the person have sound and peaceful sleep until the goal is achieved. In comparison between aspiration and abilities, aspiration is more important because it is aspiration that helps one to have mastery over one's abilities. Aspiration basically means the goal of a person that he sets for himself in which his ego, his personal feelings, expectations and his hard work are also involved. It is a psychological construct where hidden incentive is reflected. Aspiration widens the educational perspectives. Educational aspiration needs deep realization with a systematic construction of mind to make progress on the path of education. Hence aspiration is the reflection of oneself. It shows what one wants to become? What kind of hurdles has he to cross or face? How much dedication does it want? What will be its result? Educational aspiration needs deep realization with a systematic construction of mind to make progress on the path of education. So, it becomes a strong or the higher wish other than the present status of an individual towards his target.

Statement :

Educational Aspiration among Undergraduate Girls Students: Status and Challenges

Objectives:

- To Study the Current Status of Perceived Educational Aspirations among Girls Students.
- To analyze the Category-wise Current Status of Perceived Educational Aspirations among Girl Students.

Definition :

Educational Aspiration

Sharma and Gupta (2009) are of the view that in an educational hierarchy, educational aspiration is arranged as orientation towards goal and social prestige to achieve that goal.

The term Aspirations is one which is often used synonymously with goals, ambition, objectives ,purposes, dreams, plans ,designs, intensions, desire, longings, wishes, cravings or aims. Aspirations are what drive individuals to do more and more than they presently.

(Chawala mamata 2018)

Methodology:

This study uses a mixed research approach and data will be collected through a survey educational aspiration questionnaire. The sample population will consist of Undergraduate students The questionnaire was designed to gather data on the following variables: demographic information, such as gender, Category-wise, educational aspiration ,educational background, and field of study, job displacement. Familiarity with Gender Inequality, educational institutions, and personal experience. Data analysis was done using statistical methods such as percentage

Research Design:

This research investigates the Educational Aspiration among Undergraduate Girls Students: Status and Challenges The present study adopted a descriptive survey research design to

investigate the educational aspirations of undergraduate girl students and to identify the status and challenges influencing their educational aspirations in colleges affiliated with Shivaji University, Kolhapur. A research design was considered appropriate as it enables the researcher to collect, analyze, and interpret data regarding the existing conditions, perceptions, aspirations, and challenges experienced by the respondents without manipulating any variables.

The study employed a quantitative research approach using the survey method. Primary data were collected through a structured Educational Aspiration Questionnaire developed by the researcher. The questionnaire consisted of items related to students' educational aspirations, educational planning, career goals, time management, study habits, family support, financial constraints, self-confidence, decision-making, and challenges affecting the achievement of educational aspirations. The collected data were classified, tabulated, and analyzed using statistical techniques such as percentage methods to interpret the findings.

Findings and Discussion :-

Table No.1 Category-wise Responses undergraduate UG Girls Students Regarding Self-Selection of Curriculum

Sr. No.	Category Respondents	UG Girls students	% percentage
1	OPEN		40%
2	OBC		25%
3	SBC		2%
4	SC/ST		15%
5	VJNT		15%

Observation

Table No. 1 shows that, reveals that the Self- selection of curriculum is most prevalent among female students in the OPEN category, who represent the highest proportion at 40%. This is followed by the OBC category at 25%, while the SC/ST and VJ/NT categories show a moderate and equal participation rate of 15% each. The SBC category recorded the minimum response at only 2%.

Interpretation

These findings indicate that while the tendency to self-select academic courses is present across all social groups, it is significantly more prominent within the Open category. The lower percentages in the OBC, SC/ST, VJ/NT, and particularly the SBC categories suggest that while these students are making independent choices, their representation in this specific response set is comparatively marginal.

Table No.2 Category-wise Responses undergraduate UG Girls Students Regarding Educational Aspiration

Sr. No.	UG Girls Respondents	OPEN)%(	OBC)%(	SBC)%(	SC/ST)%(	VJ NT)%(
१	Professional Education	६	५	१५	१०	५
२	Higher Education	५६	५४	३८	४७	५५
३	Competitive Examinations	१७	३७	३८	४२	३१
४	Trading	०.४	०.६	७	०	०
५	Self- Business	०.४	३	०	०	२

Observation:

Table No. 2 shows that, educational Aspiration among undergraduate (UG) Girls students across various social categories.

- Professional Education: OPEN (6%), OBC (5%), SBC (15%), SC/ST (10%), and VJNT (5%).
- Higher Education: OPEN (56%), OBC (54%), SBC (38%), SC/ST (47%), and VJNT (55%).
- Competitive Examinations : OPEN (17%), OBC (37%), SBC (38%), SC/ST (42%), and VJNT (31%).
- Trading: OPEN (0.4%), OBC (0.6%), SBC (7%), SC/ST (0%), and VJNT (0%).
- Trading: OPEN (0.4%), OBC (3%), SBC (0%), SC/ST (0%), and VJNT (2%).

Interpretation:

The above observations, it is seen that the students at the undergraduate have set Aspiration.

- The response rate of OPEN, OBC, SBC, SC/ST, VJ NT students opting for higher education is medium.
- The response rate of OBC, SBC, SC/ST students opting for competitive examinations is medium. Also, the response rate of OPEN, VJ NT students opting for professional education is low.
- It was found that the response rate of OPEN, OBC, SBC, SC/ST, VJ NT students opting for professional education is low.
- The response rate of students doing trading and owning their own business is low.

Table No.3 Category-wise Responses undergraduate - Inspiration for Curriculum Selection Among UG Girls Students

Sr. No.	UG Girls Respondents	OPEN)%(	OBC)%(	SBC)%(	SC/ST)%(	VJ NT)%(
१	Family	८३	७८	६०	७५	७५
२	Teachers	१७	२२	४०	२०	१४

Observation

Table No. 3 shows that, Girls students at the undergraduate who are motivated by family for choosing a course is OPEN (83%), OBC (78%), SBC (60%), SC/ST (75%), VJ NT (75%). Similarly, the percentage of female students who are motivated by teachers is OPEN (17%), OBC (22%), SBC (40%), SC/ST (20%), VJ NT (14%).

Interpretation

The above observation, it is seen that Girls students at the undergraduate are motivated by family members. The response of Girls students at the OPEN, OBC, SBC, SC/ST, VJ NT is high. It was also found that the response of Girls students at the SBC, OBC, OPEN, SC/ST, VJ NT is moderate.

Table No.4 Category-wise Responses Undergraduate Girls Students Regarding Study Planning for Educational Aspiration

Sr. No.	UG Girls students Respondents	OPEN)%(	OBC)%(	SBC)%(	SC/ST)%(	VJ NT)%(
१	Prepares a Timetable	९९	९९	१००	९९	१००

Observation

Table No. 4 shows that, Undergraduate Girls students across all social categories prepare a timetable for their studies. Specifically, 100% of students from the SBC and VJNT categories follow a timetable, while 99% of students from the OPEN, OBC, and SC/ST categories do the same.

Interpretation

The above observation clearly indicates that a vast majority of degree-level female students have recorded a positive response regarding study planning. The data shows that the proportion of students who prepare a study timetable to achieve their educational goals is exceptionally high.

Table No.5. Category-wise Responses of all Undergraduate Girls Students Regarding Time Management for Goal Completion

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
१	Plans time to complete the curriculum and studies accordingly	१४	१६	३८	१५	२८
२	Studies every day	२८	४२	१५	२३	२५
३	Allocates specific time to each subject	२०	२८	१५	२०	१५
४	Ensures no subjects are failed in any semester	१४	१६	३८	१५	२८

Observation

Table No. 5 shows that, following observations are made:

- The proportion of all Undergraduate Girls students who plan their time to complete the curriculum and study accordingly is: OPEN (14%), OBC (16%), SBC (38%), SC/ST (15%), and VJNT (28%).
- The percentage of students who manage their time by studying every day to achieve their goals within a specific period is: OPEN (28%), OBC (42%), SBC (15%), SC/ST (23%), and VJNT (25%).
- The proportion of students who allocate specific time to each subject is: OPEN (20%), OBC (28%), SBC (15%), SC/ST (20%), and VJNT (15%).
- The percentage of students who aim for goal completion by ensuring they do not fail any subject in a semester is: OPEN (38%), OBC (14%), SBC (31%), SC/ST (42%), and VJNT (39%).

Interpretation

The above observations indicate that all Undergraduate Girls students actively practice time management to achieve their set goals within a specific timeframe.

- Curriculum-Based Planning: It is observed that the response rate for students in the SBC category is moderate regarding planning time to complete the curriculum. In contrast, the proportion of students from OPEN, OBC, and SC/ST categories who follow this specific method of curriculum-oriented planning is minimal.
- Daily Study Habits: The response from the OBC category is moderate in terms of daily study for goal completion. However, the participation rate for students from OPEN, SC/ST, VJNT, and SBC categories in daily study habits was found to be minimal.
- Subject-Specific Allocation: It is observed that across all categories (OPEN, OBC, SBC, SC/ST, and VJNT), the proportion of students who manage their time by allocating specific hours to each individual subject is minimal.

Table No.6 Category-wise Responses undergraduate Girls students regarding difficulties faced during course planning

Sr. No.	UG Girls students	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Difficulties during Teaching	0	6	34	9	8
2	Difficulties during Learning	16	16	23	18	23
3	Family Difficulties	31	36	38	30	26
4	Family and Personal Difficulties	9	38	23	12	18
5	Personal Difficulties	33	10	8	30	80

Observations

Table No. 6 shows that, undergraduate Girls students face various difficulties while planning during their course:

- Difficulties during Teaching: The percentage of students facing teaching-related issues is 6% OBC, 15% SBC, 7% SC/ST, and 4% VJ NT.
- Difficulties during Learning: The proportion of students is 16% for OPEN, 16% OBC, 23% SBC, 14% SC/ST, and 23% VJ NT.
- Family Difficulties: Students reporting family-related hurdles stand at 31% OPEN, 36% OBC, 38% SBC, 30% SC/ST, and 26% VJ NT.
- Family and Personal Difficulties: The percentage of students facing combined family and personal issues is 9% OPEN, 34% OBC, 23% SBC, 12% SC/ST, and 14% VJ NT.
- Personal Difficulties: The proportion of students facing personal difficulties is 33% OPEN, 10% OBC, 8% SBC, 30% SC/ST, and 40% VJ NT.

Interpretation

Based on the above observations, the following conclusions can be drawn regarding the difficulties faced by undergraduate Girls students during course planning:

- Teaching-related issues: It was found that a low proportion of students across the OBC, SBC, SC/ST, and VJ NT categories reported facing difficulties during teaching.
- Learning-related issues: A low proportion of students from SBC and VJ NT categories reported learning difficulties, while a very low proportion was noted for OPEN, OBC, and SC/ST categories.
- Family-related issues: A moderate proportion of Girls students from OBC and SBC categories reported facing family difficulties. In contrast, students from OPEN, SC/ST, and VJ NT categories showed a low proportion of family-related responses.
- Combined Family and Personal issues: For OBC and SBC categories, a low proportion of students reported facing both family and personal difficulties, and a similarly low proportion was recorded for OPEN, SC/ST, and VJ NT categories.
- Personal issues: The response regarding personal difficulties was moderate for the VJ NT category. Additionally, a low proportion was observed for the OPEN and SC/ST categories, and a low proportion of personal difficulties was also recorded for the OBC and SBC categories.

Table No.7 Category-wise responses of undergraduate Girls students regarding financial difficulties in achieving educational goals

Sr. No.	UG Girls students	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Difficulty in paying fees	0	9	6	6	4
2	Books are not available on time	3	3	33	1	4

Observations

Table No. 7 shows that, undergraduate Girls students across various categories face financial difficulties while striving to achieve their educational goals:

- I. Difficulty in Paying Fees: The percentage of students facing challenges with fee payments is 98% OBC, 67% SBC, 69% SC/ST, and 52% VJ NT.
- II. Late Availability of Books: The proportion of students reporting that books are not available on time is 3% OPEN, 3% OBC, 33% SBC, 1% SC/ST, and 5% VJ NT.

Interpretation

The above observations, the following conclusions can be drawn regarding the financial hurdles faced by undergraduate Girls students:

- Fee Payment Challenges: It was found that a very high proportion of students from the OBC, SBC, SC/ST, and VJ NT categories recorded a response indicating significant difficulty in paying educational fees. This suggests that fee payment is a primary financial barrier for these students.
- Resource Accessibility (Books): Regarding the timely availability of books, a low proportion of responses was recorded across the OPEN, OBC, SC/ST, and VJ NT categories. However, for the SBC category, the proportion is relatively higher compared to others, though still categorized as a moderate-to-low concern overall in the context of the entire study.

Table No.8 Category-wise responses of undergraduate Girls students regarding consistent efforts made to achieve educational Aspiration

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Studying by preparing notes	1	1	38	2	3
2	Attending an Academy/Coaching	6	12	23	9	14
3	General Studying	13	12	12	14	10
4	Studying without interruption	0.3	1	0	19	1
5	Watching online videos	2	1	0	1	1
6	Studying in the Library	0.3	0.6	0	2	0
7	Reading books	41	41	0	38	33
8	Studying according to a timetable	33	38	0	30	38

Observations

Table No. 8 shows that, undergraduate Girls students across different categories make consistent efforts to achieve their educational Aspiration:

- Studying by preparing notes: The category-wise proportion of students is 1% OPEN, 1% OBC, 38% SBC, 2% SC/ST, and 3% VJ NT.
- Attending Academy: The proportion of students is 6% OPEN, 12% OBC, 23% SBC, 9% SC/ST, and 14% VJ NT.
- General Studying: The proportion of students is 13% OPEN, 12% OBC, 12% SBC, 14% SC/ST, and 10% VJ NT.

- Continuous study without interruption: The proportion of students is 0.8% OPEN, 1% OBC, 0% SBC, 17% SC/ST, and 1% VJ NT.
- Watching online videos: The proportion of students is 2% OPEN, 1% OBC, 0% SBC, 1% SC/ST, and 1% VJ NT.
- Studying in the library: The proportion of students is 0.8% OPEN, 0.6% OBC, 0% SBC, and 2% SC/ST.
- Reading books: The proportion of students is 41% OPEN, 41% OBC, 0% SBC, 34% SC/ST, and 33% VJ NT.
- Studying according to a timetable: The proportion of students is 32% OPEN, 28% OBC, 0% SBC, 30% SC/ST, and 34% VJ NT.

Interpretation

The above observations, the following conclusions can be drawn regarding the consistent efforts made by undergraduate Girls students to achieve their educational goals:

- Preparing Notes: The proportion of students who study by preparing their own notes is found to be the highest in the SBC category.
- Attending Academy: The response for attending coaching academies is notably higher among SBC category students.
- General Studying: The preference for regular studying is found to be relatively higher in the SC/ST category.
- Consistency in Study: The proportion of students maintaining continuous study without any interruption is highest in the SC/ST category.
- Digital Learning: The use of online videos for educational purposes is found to be highest in the OPEN category.
- Library Usage: The habit of visiting the library for studies is more prevalent in the SC/ST category compared to others.
- Reading Habits: The proportion of students who consistently read books is found to be highest in the OPEN and OBC categories.
- Planned Study: The response for studying according to a fixed timetable is found to be highest in the VJ NT category.

Table No.9 Category-wise responses of undergraduate Girls students regarding daily priority for educational Aspiration

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Studies every day	60	40	100	43	30
2	Studies for 2 hours daily	4	80	0	36	60

Observations

Table No. 9 shows that, undergraduate Girls students prioritize their daily routine to achieve educational goals as follows:

- Studies every day: The category-wise proportion of students is 80% OPEN, 50% OBC, 100% SBC, 53% SC/ST, and 30% VJ NT.
- Studies for 2 hours daily: The proportion of students is 5% OPEN, 40% OBC, 36% SC/ST, and 60% VJ NT.

Interpretation

The above observations, it is evident that undergraduate Girls students maintain a consistent daily study habit to reach their academic goals:

- Daily Consistency: The response for "studying every day" is the highest in the SBC category (100%), followed by the OPEN category. This indicates a very high level of dedication to daily academic engagement in these groups.
- Structured Study Time: VJ NT (60%) and OBC (40%) students prefer a structured 2-hour daily study session, which is the highest among the categories for this specific timeframe.
- Overall Trend: While the method of study (general daily study vs. specific 2-hour sessions) varies by category, the data shows that a majority of students across all backgrounds prioritize daily academic efforts.

Table No.10 Category-wise responses of undergraduate Girls students regarding skills acquired from the selected course

Sr. No.	UG Girls students	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Mathematical / Statistical Skills	12	14	38	22	13
2	Communication Skills	24	35	31	24	24
3	Computer Skills	1	14	15	7	2
4	Linguistic (Language) Skills	32	17	15	33	10

Observations

Table No. 10 shows that, undergraduate Girls students across various categories have developed different skills through their chosen courses:

- Mathematical / Statistical Skills: The proportion of students is 12% OPEN, 14% OBC, 38% SBC, 22% SC/ST, and 13% VJ NT.
- Communication Skills: The proportion of students is 24% OPEN, 35% OBC, 31% SBC, 24% SC/ST, and 24% VJ NT.
- Computer Skills: The proportion of students is 1% OPEN, 14% OBC, 15% SBC, 7% SC/ST, and 2% VJ NT.
- Linguistic Skills: The proportion of students is 32% OPEN, 17% OBC, 15% SBC, 33% SC/ST, and 10% VJ NT.

Interpretation

Based on the above observations, the following conclusions can be drawn regarding the skills developed by undergraduate Girls students through their curriculum:

- Mathematical / Statistical Skills: The response indicating the development of mathematical and statistical skills is highest in the SBC category.
- Communication Skills: The development of communication skills was reported with the highest frequency by students in the OBC category.
- Computer Skills: The acquisition of computer-related skills is found to be highest among students in the SBC category.
- Linguistic Skills: The response for the development of linguistic (language) skills is highest in the OPEN category, closely followed by the SC/ST category.

Table No.11 Category-wise responses of undergraduate Girls students regarding self-confidence gained through education

Sr. No.	UG Girls students	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Presentation Skills	80	27	31	11	12
2	Problem Solving	8	38	15	22	17
3	Decision Making	0	15	0	17	20
4	Expressing Opinions	0	10	15	33	42
5	Creative Thinking	7	0	15	5	2

Observations

Table No. 11 shows that, undergraduate Girls students across various categories have gained self-confidence through their education in the following ways:

- Presentation Skills: The proportion of students is 80% OPEN, 27% OBC, 31% SBC, 11% SC/ST, and 12% VJ NT.
- Problem Solving: The proportion of students is 8% OPEN, 38% OBC, 15% SBC, 22% SC/ST, and 17% VJ NT.
- Decision Making: The proportion of students is 15% OBC, 17% SC/ST, and 20% VJ NT. (Note: OPEN and SBC categories recorded 0%).
- Expressing Opinions: The proportion of students is 10% OBC, 15% SBC, 33% SC/ST, and 42% VJ NT.
- Creative Thinking: The proportion of students is 7% OPEN, 15% SBC, 5% SC/ST, and 2% VJ NT.

Interpretation

The above observations clearly indicate that education has played a vital role in building self-confidence among undergraduate female students across different social categories:

- Presentation Skills: The response for gaining confidence in presentation skills is found to be the highest in the OPEN category.
- Problem Solving: Regarding the ability to solve problems, the response from the OBC category is the highest.
- Decision Making: The proportion of students who developed confidence in decision-making is highest in the VJ NT category.

- Expressing Opinions: The response for confidence in expressing opinions is found to be the highest in the VJ NT category (closely followed by SC/ST).
- Creative Thinking: The development of creative thinking skills is found to be highest in the SBC category.

Table No.12 Category-wise responses of undergraduate Girls students regarding their responsibilities

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Family Responsibilities	47	51	69	59	53
2	Personal Responsibilities	38	40	31	39	40
3	Both Family and Personal Responsibilities	10	9	31	2	3

Observations

Table No. 12 shows that, undergraduate Girls students manage various responsibilities while working towards achieving their educational goals:

- Family Responsibilities: The proportion of students is 47% OPEN, 51% OBC, 69% SBC, 59% SC/ST, and 53% VJ NT.
- Personal Responsibilities: The proportion of students is 38% OPEN, 40% OBC, 31% SBC, 39% SC/ST, and 40% VJ NT.
- Family and Personal Responsibilities (Combined): The proportion of students managing both is 10% OPEN, 9% OBC, 31% r SBC, 2% SC/ST, and 3% VJ NT.

Interpretation

The above observations clearly indicate how undergraduate female students across different categories balance their duties alongside their education:

- Family Responsibilities: The response indicating a burden of family responsibilities is found to be highest in the OBC, SBC, and SC/ST categories. This suggests that students from these backgrounds carry a significant domestic workload.
- Personal Responsibilities: Regarding personal responsibilities, the response is found to be highest in the OBC category (along with VJ NT).
- Combined Responsibilities: The response for managing both family and personal responsibilities simultaneously is found to be highest in the SBC category.

Table No.13 Category-wise responses of undergraduate Girls students regarding their abilities

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	Positive response regarding abilities at the undergraduate level	100	100	100	100	100

Observations

Table No. 13 shows that, undergraduate Girls students across all categories show a unanimous alignment between their abilities and their aspirations:

Goal Selection Based on Capability: The proportion of students who have chosen their educational goals according to their personal capabilities is 100% across all categories (OPEN, OBC, SBC, SC/ST, and VJ NT).

Interpretation

The above observations lead to a significant conclusion regarding the self-awareness and decision-making of undergraduate Girls students:

- **High Self-Awareness:** The data indicates that there is a very high proportion of students who have selected their goals based on their individual capacities.
- **Confident Decision Making:** The recorded responses show that students across all social categories are highly confident and clear-headed while choosing their career paths, ensuring that their educational targets match their inherent strengths and skills.

Table No.14 Category-wise responses of undergraduate Girls students regarding setting an example for their family through education

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
1	By achieving goals	0.0	7	0	2	8
2	By securing a job	36	83	86	77	77
3	By gaining a prestigious post/position	2	0	15	8	3
4	By achieving overall success	18	2	31	19	18

Observations

Table No. 14 shows that, students have different perspectives on how they want to become role models for their families:

- **Securing a Job:** This is the most prominent way students wish to set an example. It is highest in the OBC category (83%), followed by SC/ST and VJ NT (77% each).
- **Achieving Overall Success:** This is a motivator for the SBC category (31%) and SC/ST category (19%).
- **Gaining a Position:** The desire to set an example by gaining a high-ranking post is highest among SBC students (15%).
- **Achieving Goals:** While lower than the other categories, SBC (8%) and OBC (7%) students lead in this specific response.

Interpretation

The above observations , the following conclusions can be drawn:

- **Economic Empowerment as an Ideal:** Across almost all categories, securing a job is viewed as the ultimate way to set an example for the family. This highlights that financial independence is seen as the primary benchmark of a successful education.
- **OBC and SC/ST Aspirations:** Students from the OBC, SC/ST, and VJ NT categories show a very strong inclination toward employment as a means of establishing their status as role models.

- Holistic Success for SBC: Students in the SBC category show a more diverse set of responses, with higher value placed on achieving success and gaining prestigious positions compared to other groups.
- Open Category Transition: In the OPEN category, the desire for employment is notable (36%), but a large portion of students also focus on general success (14%).

Table No.15 Category-wise responses of undergraduate Girls students regarding future employment prospects

Sr. No.	UG Girls students Respondents	OPEN (%)	OBC (%)	SBC (%)	SC/ST (%)	VJ NT (%)
2	Positive outlook regarding securing a job in the future	100	100	100	100	100

Observations

Table No. 15 shows that, undergraduate Girls students across all categories possess a unanimous belief regarding their career prospects after education: The proportion of students who believe they will secure a job in the future through their current education is 100% for all categories (OPEN, OBC, SBC, SC/ST, and VJ NT).

Interpretation

The above observations lead to a highly optimistic conclusion regarding the career expectations of undergraduate Girls students: 100% of the students believe they will successfully secure employment in the future.

Conclusion: Aspirations and Motivation: While Higher Education is the primary goal for the majority, a significant portion of students (particularly from OBC and SC/ST) are focused on Competitive Examinations. Family remains the most influential factor in curriculum selection, far outweighing the influence of teachers. Discipline and Planning: There is a near-unanimous commitment to study planning, with 100% of students maintaining a study timetable. However, the SBC category shows the highest level of daily dedication (100% daily study) and specialized note-making. Financial constraints represent the most significant hurdle, specifically the difficulty in paying fees, which is overwhelmingly reported by OBC (98%), SC/ST (69%), and SBC (67%) students. Additionally, students manage heavy domestic workloads, with Family Responsibilities being most prominent among SBC (69%) and SC/ST (59%) categories. Empowerment and Skills: Education has successfully fostered diverse skill set ranging from linguistic skills in the OPEN category to mathematical and computer skills in the SBC category. Notably, students from the VJNT category showed the highest growth in Decision-Making and Expressing Opinions, signaling a strong link between education and personal empowerment. There is a 100% unanimous belief across all categories that their education will lead to future employment. Securing a job is viewed as the primary way to become a role model for their families, reflecting a collective focus on economic independence and social mobility. Undergraduate girls students demonstrate strong educational commitment, with near-universal study planning, daily efforts, and high aspirations centered on higher education and employment. Family plays a pivotal role in motivation, while economic and family challenges disproportionately burden reserved categories (OBC, SBC, SC/ST, VJNT). OPEN students exhibit greater autonomy, resource access, and confidence in certain skills like presentation and language. Despite barriers, the unanimous belief in securing future jobs and alignment of goals with capabilities reflects remarkable resilience, determination, and

optimism among these young girls, signaling positive potential for empowerment through education across social strata.

References

- Singh, vikas. What is multimedia .<https://youtu.be/GxY7uIDUwXQ>
- Toppers prime channel. Multimedia introduction. <https://youtu.be/UyFIH-BEYZM>
- <https://shodhganga.inflibnet.ac.in/> <https://youtu.be/C6J3oN3m>
- Chawla Mamta(2018)** Zonunmawi , Lalhlimpuii Ralte , Liantluangpuii Sailo, Dickson
- Vanlalruata Chinzah(2020)** <file:///C:/Users/shree/Downloads/IJCRT2003185.pdf>
- Debnath Manika &Singh Ajay Kuma** <http://shabdbbooks.com/gallery/438april.2020pdf>
- JOHN PAUL A (2017)** PROBLEMS OF ACCESSING PROFESSIONAL EDUCATION IN RELATION TO STUDENTS' OCCUPATIONAL ASPIRATION AND PARENTAL INVOLVEMENT Ph.D., Education
- . <https://shodhganga.inflibnet.ac.in/handle/378137/10603>
- Kumar Narender** 2018 EFFECT OF PARENTAL INVOLVEMENT, EDUCATIONAL ASPIRATIONS AND FAMILY CLIMATE ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS Ph.D., Education
- <https://shodhganga.inflibnet.ac.in/handle/10603/299341>
- Rawat I** 2019 Effect of Socio-Economic Status on Level of Educational Aspiration and Academic Achievement of Higher Secondary Students Ph.D., Education
- <https://shodhganga.inflibnet.ac.in/handle/10603/385527>
- Kumari Nirmla** 2021 SCHOLASTIC ACHIEVEMENT AND SELF-EFFICACY AMONG SECONDARY SCHOOL STUDENTS IN RELATION TO OBEDIENT-DISOBEDIENT TENDENCY, EMOTIONAL COMPETENCE AND EDUCATIONAL ASPIRATIONS
- <https://shodhganga.inflibnet.ac.in/handle/10603/410571>

AWARENESS AMONG PRIMARY TEACHERS ON INCLUSIVE PEDAGOGY AND PRACTICE: A STUDY

Smt. Rupali Sadashiv Wavare

Primary Teacher, Vidya Mandir Nrusinhwadi Shirol Dist, Kolhapur

rupalishelke1982@gmail.com

Dr. (Ms) Rupali Uttam Sankpal

Associate Professor, Department of Education, Shivaji University, Kolhapur

rus_edu@unishivaji.ac.in

Abstract

Inclusive education aims to provide equal learning opportunities to all children by removing barriers and promoting participation in regular classrooms. The present study titled “Awareness Among Primary Teachers on Inclusive Pedagogy and Practice: A Study” was conducted to examine the level of awareness and implementation of inclusive pedagogies and practices among primary school teachers. The study adopted a **descriptive survey research design**. A sample of 50 primary teachers from Shirol, Kolhapur district was selected through simple random sampling. Data were collected using a structured bilingual questionnaire based on Universal Design for Learning (UDL), differentiated instruction, and scaffolding theory. Mean was used for data analysis.

The findings revealed that teachers have a **moderate level of awareness** regarding inclusive pedagogies (Grand Mean = 3.63). They strongly believe in the philosophy of inclusion and expressed a high need for specialized training. However, awareness of technical areas such as UDL and assistive tools was low. The implementation of inclusive practices was also found to be moderate (Grand Mean = 3.22). Teachers frequently used traditional strategies like peer tutoring and providing extra time, but rarely applied differentiated assessment, digital applications, or assistive tools. The study identified a clear gap between awareness and classroom practice. It concludes that while teachers are positively inclined toward inclusion, systematic training, flexible assessment policies, and improved resource support are essential for effective implementation.

Keywords: Inclusive Education, Inclusive Pedagogy, Inclusive Practices, Primary Teachers, Universal Design for Learning, Differentiated Instruction, Teacher Awareness.

INTRODUCTION

Inclusive education means that all children learn together in the same classroom, regardless of their abilities, disabilities, language, gender, social background, or learning differences. It aims to remove barriers to learning so that every child gets equal opportunities to succeed (UNESCO, 1994). Inclusive pedagogy refers to the teaching methods and classroom practices that help all learners participate meaningfully in learning activities (Florian & Black-Hawkins, 2011).

Primary education is the foundation of a child’s academic and social development. At this stage, children develop basic skills such as reading, writing, communication, and cooperation. If inclusive practices are introduced early, children learn to respect diversity and

support one another. Therefore, primary teachers play a very important role in promoting inclusive education.

Although many countries have adopted inclusive education policies, implementing them in real classrooms remains challenging (Ainscow, Booth, & Dyson, 2006). Teachers often struggle to meet diverse learner needs due to limited training, lack of resources, and large class sizes. This study focuses on understanding how aware primary teachers are about inclusive pedagogy and how they implement inclusive practices in their classrooms.

BACKGROUND OF THE STUDY

Concept of Inclusive Education

Inclusive education is not only about placing children with disabilities in regular schools. It is about changing the system so that it supports all learners (UNESCO, 2015). It promotes equality, participation, and respect for diversity.

Inclusive pedagogy encourages teachers to design lessons that allow students to learn in different ways. This includes:

- Using group activities
- Providing different levels of tasks
- Allowing multiple forms of assessment
- Supporting students through scaffolding

Tomlinson (2014) explains that differentiated instruction helps teachers adjust content, process, and assessment according to student needs. Similarly, Rose and Meyer (2002) introduced Universal Design for Learning (UDL), which encourages teachers to present information in multiple ways and allow students different ways to express their learning.

Florian and Spratt (2013) argue that inclusion should not focus only on students with disabilities but should support every learner in the classroom.

Importance of Primary Education in Inclusion

Primary school is the first structured learning experience for children. At this stage, teachers can identify learning difficulties early and provide necessary support. Salend (2011) emphasizes that inclusive classrooms at the primary level build social acceptance and improve academic outcomes for all students.

If teachers lack awareness of inclusive methods, children with learning difficulties may feel excluded or discouraged. Therefore, teacher awareness is essential for successful inclusion.

REVIEW OF RELATED LITERATURE

Several researchers have studied teachers' awareness and attitudes toward inclusive education.

Sharma, Forlin, and Loreman (2008) found that teachers generally have positive attitudes toward inclusion but feel unprepared to implement inclusive practices. Similarly, Forlin and Chambers (2011) reported that professional training improves teachers' confidence and classroom implementation.

Avramidis and Norwich (2002) concluded that teachers with prior training in special education show more positive attitudes and better implementation of inclusive strategies.

Mittler (2012) emphasized that teacher beliefs and school culture significantly influence inclusive practices.

In the Indian context, Srivastava, de Boer, and Pijl (2015) noted that inclusive education policies exist, but implementation faces challenges such as lack of teacher preparation and resources.

Despite these studies, there is still limited research focusing specifically on primary teachers' awareness of structured frameworks like UDL and differentiated instruction in real classroom settings.

RESEARCH GAPS

From the literature review, the following gaps are identified:

1. Most studies focus on teacher attitudes rather than actual classroom practices (Slee, 2011).
2. Limited research connects awareness of inclusive pedagogy with implementation of inclusive practices.
3. Few studies are conducted at the primary level in specific local contexts.
4. There is insufficient focus on the use of modern frameworks like UDL in Indian primary schools.
5. The impact of in-service training on practical classroom implementation is under-researched (Adugna & Desta, 2020).

These gaps highlight the need for the present study.

NEED AND IMPORTANCE OF THE STUDY

This study is important because:

- Every child learns differently, and teachers must adjust their teaching accordingly (Tomlinson, 2014).
- Inclusive education policies need proper classroom implementation (UNESCO, 2017).
- Teacher education programs must understand existing gaps to improve training.
- Inclusive pedagogy benefits all learners, not just children with disabilities.

The study helps identify teachers' strengths and areas needing improvement.

OBJECTIVES OF THE STUDY

1. To study primary teachers' awareness of inclusive pedagogies useful for primary students' teaching and learning.
2. To study primary teachers' awareness of inclusive practices useful for primary students' teaching and learning.
3. To provide suggestions to concerned stakeholders based on the findings.

RESEARCH METHODOLOGY

Research Design

The study used a **Descriptive Survey Research Design**. It aimed to describe the current awareness and practices of teachers without changing any variables.

Population and Sample

- Target Population: Primary school teachers from Shirol, Kolhapur district.
- Sample Size: 50 teachers.

- Sampling Technique: Simple Random Sampling.
- Sample included both Government and Private school teachers.

Tool Used

A structured questionnaire was developed based on:

- Universal Design for Learning (Rose & Meyer, 2002)
- Differentiated Instruction (Tomlinson, 2014)
- Scaffolding theory (Vygotsky, 1978)

Format:

- 10 questions on pedagogies
- 10 questions on practices
- 5-point Likert scale
- Bilingual (English and Marathi)

Data Collection Procedure

1. Permission obtained from school headmasters.
2. Teachers were informed about the study purpose.
3. Questionnaires were distributed.
4. Teachers completed them in 15–20 minutes.
5. Incomplete forms were removed.
6. Data entered into Excel for analysis.

Statistical Techniques

Mean is a statistical technique used for data analysis.

OBJECTIVE -WISE RESEARCH PROCEDURE

Objective 1:

To study primary teachers' awareness of inclusive pedagogies useful for primary students' teaching and learning. To fulfil this objective following research procedure is followed:

1. Ten questionnaire items were prepared focusing on inclusive pedagogies such as Universal Design for Learning (UDL), differentiated instruction, scaffolding, flexible grouping, and adjustment of difficulty levels.
2. These items were developed based on the theoretical frameworks of Rose and Meyer (2002), Tomlinson (2014), and Vygotsky (1978).
3. The questionnaire was distributed to 50 primary school teachers selected through simple random sampling.
4. Teachers responded using a 5-point Likert scale ranging from Strongly Agree to Strongly Disagree.
5. The responses were collected and organised in an Excel sheet.
6. The mean score is calculated for each item.
7. The grand mean score was computed to determine the overall level of awareness regarding inclusive pedagogies.
8. The results were interpreted as High, Moderate, or Low awareness based on the mean values. As shown in Table No.1

Table 1: Mean Scores of Teacher Awareness regarding Inclusive Pedagogies

Q. No.	Statement (Pedagogy Focus)	Mean Score ($\bar{x}$)	Interpretation
1	Use of multiple media (Visuals/Videos)	4.12	High Awareness
2	Providing diverse expression options	3.84	High Awareness
3	Adjusting difficulty levels (Differentiation)	3.20	Moderate Awareness
4	Philosophy of social inclusion	4.45	Very High Awareness
5	Providing Scaffolding/Support	3.56	Moderate Awareness
6	Knowledge of UDL Framework	2.10	Low Awareness
7	Adapting to student interests	3.40	Moderate Awareness
8	Use of Cultural/Mother tongue context	4.05	High Awareness
9	Use of Digital/Assistive tools	2.85	Low Awareness
10	Need for specialized training	4.70	Very High Agreement
Grand Mean Score		3.63	General Moderate Awareness

The findings of the study from Table No. 1 show that the overall (grand) mean score of teachers' awareness about inclusive pedagogies is **3.63**. This indicates that primary teachers have a **moderate level of awareness** about inclusive teaching methods. It means that teachers understand the basic idea of inclusion, but their knowledge is not very deep in all areas.

Teachers strongly agreed that they **need special training** to teach in inclusive classrooms, as shown by the high mean score of **4.70**. They also strongly believe in the **philosophy of inclusive education**, with a mean score of **4.45**. This clearly shows that teachers have a positive attitude toward inclusive education and believe that all children should learn together.

However, the study also found that teachers have **low awareness in some technical areas**. For example, knowledge about the **Universal Design for Learning (UDL) framework** received a low mean score of **2.10**. Similarly, the **use of assistive tools** scored **2.85**, which shows limited understanding. This means that while teachers support inclusion in theory, they may not be fully aware of modern frameworks and tools that support inclusive teaching (Rose & Meyer, 2002).

Objective 2:

To study primary teachers' awareness of inclusive practices useful for primary students' teaching and learning. In light of this objective following research study procedure was adopted:

1. Ten separate questionnaire items were framed to measure the practical implementation of inclusive strategies in classrooms.
2. These included questions on peer tutoring, providing extra time, use of assistive tools, digital applications, and differentiated assessment.
3. The same sample of 50 teachers responded to these items using the 5-point Likert scale.

4. Data was tabulated and analysed by using the mean.
5. A mean score was calculated to determine the level of implementation of inclusive practices.
6. The analysis of the collected data for fulfilling objective No. 2 is shown in Table No. 2

Table 2: Mean Scores of primary teachers' awareness of inclusive practices useful for primary students'

Q. No.	Statement (Practice Focus)	Mean Score ($\bar{x}$)	Interpretation
11	I organize group activities where bright students help slow learners.	4.25	Frequently Practiced
12	I use different types of assessment (drawing/oral) instead of just writing.	2.50	Rarely Practiced
13	I prepare separate simplified notes for children with special needs.	3.10	Occasionally Practiced
14	I use educational apps or videos specifically for inclusive learning.	2.15	Rarely Practiced
15	I rearrange the classroom seating to help students with physical needs.	3.80	Frequently Practiced
16	I collaborate with parents to understand the child's specific needs.	3.45	Occasionally Practiced
17	I use storytelling and role-play to include every child in the lesson.	4.10	Frequently Practiced
18	I use specialized tools like Braille or hearing aids in my teaching.	1.80	Almost Never
19	I give extra time to students who have difficulty in finishing tasks.	4.35	Frequently Practiced
20	I modify the curriculum goals for children with learning disabilities.	2.65	Rarely Practiced
Grand Mean Score (Practices)		3.22	Moderate Implementation

From the Table No. 2 it is clear that the grand mean score for the implementation of inclusive practices is **3.22**, which indicates a **moderate level of classroom practice**.

Teachers reported that they frequently provide **extra time to students** (Mean = 4.35) and use **peer tutoring** (Mean = 4.25). These are traditional and commonly used strategies in classrooms.

However, some important inclusive practices are rarely used. The use of **assistive tools** received a very low mean score of **1.80**, and **digital applications** scored **2.15**. In addition, **differentiated assessment**, which is important for meeting diverse learner needs, scored only **2.50**. This shows that teachers are not regularly using modern and advanced inclusive strategies.

Overall, the findings reveal a **gap between knowledge and practice**. Teachers believe in inclusive education, but they are not fully applying modern inclusive methods in their classrooms.

Thus, after studying in the light of the two objectives, the Major Findings are:

- Primary teachers strongly support the idea of inclusive education.
- There is a clear gap between teachers' awareness and their actual classroom practices.
- Teachers mainly use traditional strategies rather than modern inclusive techniques.
- Differentiated assessment is not widely practised in classrooms.
- Teachers clearly feel the need for professional training to improve their inclusive teaching skills.

Thus from these findings following conclusions are drawn those are:

The study concludes that primary teachers are philosophically ready for inclusion. They believe every child deserves equal educational opportunities, aligning with NEP 2020.

However, they lack deep knowledge of UDL and differentiated instruction. Modern inclusive strategies are not fully implemented. Teachers rely mostly on traditional methods like peer tutoring and extra time.

Inclusive education is in a transition phase. Teachers are willing but need proper training, digital resources, and policy support.

Objective 3:

To provide suggestions to concerned stakeholders based on the findings.

Research Procedure:

1. The findings from Objectives 1 and 2 were carefully analysed.
2. Areas with low mean scores (such as UDL knowledge and use of assistive tools) were identified.
3. The gap between awareness and classroom practice was examined.
4. Based on the statistical results, practical suggestions were formulated for:
 - Teachers
 - School administrators
 - Teacher training institutions
 - Educational policymakers
5. Suggestions were made to improve training, digital resource availability, and assessment flexibility. These are:
 - First, **mandatory training on Universal Design for Learning (UDL)** should be provided to all primary teachers. Many teachers support inclusive education but lack technical knowledge of modern frameworks. Regular workshops, refresher courses, and in-service training programs can help teachers understand how to plan lessons that meet the needs of all learners.
 - Second, schools should adopt **flexible assessment policies**. Traditional assessment methods do not always support diverse learners. Teachers should be encouraged to use varied assessment techniques such as project work, oral presentations, and activity-based evaluation so that every child gets a fair opportunity to demonstrate learning.
 - Third, teachers need proper **training in digital and assistive tools**. Technology can greatly support students with learning difficulties. Training programs should focus on the practical use of educational apps, assistive devices, and digital platforms.

- Finally, the government should provide **increased funding for inclusive resources**. Schools require learning materials, assistive devices, and infrastructure support to effectively implement inclusive education. Financial support will help schools create a truly inclusive learning environment for all students.

REFERENCES

- Adugna, D., & Desta, M. (2020). Teacher perceptions towards inclusive education. *International Journal of Inclusive Education*, 24(8), 857–873.
- Ainscow, M., Booth, T., & Dyson, A. (2006). *Improving schools, developing inclusion*. Routledge.
- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards inclusion. *European Journal of Special Needs Education*, 17(2), 129–147.
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5), 813–828.
- Florian, L., & Spratt, J. (2013). Enacting inclusion. *European Journal of Special Needs Education*, 28(2), 119–135.
- Forlin, C., & Chambers, D. (2011). Teacher preparation for inclusive education. *Asia-Pacific Journal of Teacher Education*, 39(1), 17–32.
- Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age*. ASCD.
- Salend, S. J. (2011). *Creating inclusive classrooms*. Pearson.
- Sharma, U., Forlin, C., & Loreman, T. (2008). Impact of training. *Disability & Society*, 23(7), 773–785.
- Srivastava, M., de Boer, A., & Pijl, S. J. (2015). Inclusive education in India. *International Journal of Inclusive Education*, 19(3), 273–286.
- Tomlinson, C. A. (2014). *The differentiated classroom* (2nd ed.). ASCD.
- UNESCO. (1994). *The Salamanca statement*. UNESCO.
- UNESCO. (2015). *Education 2030 framework*. UNESCO.
- UNESCO. (2017). *Guide for ensuring inclusion and equity in education*. UNESCO.
- Vygotsky, L. S. (1978). *Mind in society*. Harvard University Press.

PROGRESS OF INCLUSIVE EDUCATION IN INDIA IN THE CONTEXT OF GLOBALISED ERA-A STUDY

Ms. Geeta Sugandh Ghatage

Research Scholar, Department of education, Shivaji University Kolhapur

Dr. Rupali Uttam Sankpal

Associate Professor, Department of education, Shivaji University Kolhapur

Abstract

Inclusive education has become highly significant in today's globalised world. As societies are increasingly connected through technology, communication, and cultural exchange, education systems must ensure equal opportunities for every learner. Inclusive education promotes the idea that all children, irrespective of their social, economic, cultural, linguistic, or physical differences, should learn together in the same classroom with appropriate support and understanding. This paper presents a clear conceptual understanding of inclusive education in the present global context. It explains its meaning, core principles, and relevance in modern times. The study also refers to international efforts such as the UNESCO Salamanca Statement (1994) and the United Nations Sustainable Development Goal 4, which emphasize equitable and quality education for all learners. The focus is on moving from traditional, rigid teaching practices to more flexible, learner-centred, and supportive approaches. In addition, the paper highlights the importance of teacher preparedness, curriculum modification, the use of technology, and the creation of a positive school environment in achieving inclusion. It also discusses the practical challenges faced by educational institutions while implementing inclusive policies in a rapidly changing world. The paper concludes that inclusive education goes beyond mere enrollment in schools. It ensures active participation, equal learning opportunities, and overall development of every child, which is necessary for building a fair and inclusive society.

INTRODUCTION :

Education is a basic right of every individual and plays a vital role in the development of society. In the era of globalization, many countries are trying to provide equal and quality education to all children. Globalization has increased awareness about human rights, equality, and social inclusion. Because of this, the concept of inclusive education has become an important part of modern education systems. Inclusive education means educating all children together in the same classroom, including children with disabilities and those from different social, economic, and cultural backgrounds. The main aim of inclusive education is to remove barriers in learning and to provide equal opportunities for every child to participate in education. The idea of inclusive education received strong global support after the Salamanca Statement adopted in 1994. This statement was developed during the World Conference on Special Needs Education organized by UNESCO. It stated that schools should accept all children regardless of their physical, intellectual, emotional, social, or language differences. The Salamanca Statement encouraged countries to develop educational policies that support the inclusion of children with special needs in regular schools. India also supported this

declaration and began to introduce policies and programs to promote inclusive education in the country (UNESCO, 1994).

In India, inclusive education has been strengthened through several important laws and policies. One of the major laws is the Right of Children to Free and Compulsory Education Act, 2009. This Act guarantees free and compulsory education for all children between the ages of 6 and 14 years. It ensures that every child has the opportunity to receive education without facing discrimination. The Act promotes equality in schools and supports the inclusion of children from disadvantaged groups as well as children with special needs. It also requires schools to provide a safe, supportive, and child-friendly learning environment for all students (Government of India, 2009).

Another important legal step in promoting inclusive education in India is the Rights of Persons with Disabilities Act, 2016. This Act protects the rights of persons with disabilities and encourages their full participation in education and society. According to this law, children with disabilities should have access to education in regular schools through inclusive learning practices. The Act also emphasizes the need for appropriate facilities, trained teachers, and suitable learning resources to support students with disabilities. This legislation has played an important role in strengthening inclusive education in India (Government of India, 2016).

In the globalized world, education systems are increasingly influenced by international ideas, technological progress, and global educational goals such as Sustainable Development Goal 4, which focuses on providing inclusive and equitable quality education for all. India has also introduced several initiatives such as Sarva Shiksha Abhiyan and Samagra Shiksha to improve access to education and support inclusive practices in schools.

Therefore, the development of inclusive education in India is the result of both global influence and national policies. The Salamanca Statement provided international guidance, while the RTE Act and the Rights of Persons with Disabilities Act offered strong legal support within the country. Together, these efforts aim to build an education system where every child, regardless of ability or background, can learn together and reach their full potential.

Objectives of the Study

1. To understand the concept of inclusive education in India in the context of the globalized era.
2. To examine the progress of inclusive education in India.
3. To suggest improvements in inclusive education in India.

Research Method

Document Analysis Method was used for present study. Document analysis involves systematic examination and interpretation of existing documents to gain understanding and develop empirical knowledge.

Sample of the Study

The sample of the study includes selected national and international documents, policy reports, research articles, and educational frameworks related to inclusive education and globalization.

The documents were selected purposively based on relevance, authenticity, and contribution to the conceptual understanding of inclusive education and progress of inclusive education in India.

Tools and Techniques of Data Collection

Document review was taken by researcher to collect the data. Collected data was further interpreted in the form of table.

Following steps were involved for the research.

1. Identification of relevant documents from authentic sources.
2. Classification of documents based on themes such as definition, principles, policies, and globalization.
3. Thematic analysis of content.
4. Interpretation of findings in relation to research objectives.

Data were analysed through content analysis to identify recurring patterns, concepts, and emerging dimensions of inclusive education in the India in the context of globalised era.

Objective wise procedure of the study

Objective no.1 To understand the concept of inclusive education in the context of globalized era. for fulfilment of this objective researcher reviewed the literature regarding inclusive education in India. It comprises Sargent Report (1944), Kothari Commission Report (1964-66), Right of Children to Free and Compulsory Education Act (2009), Rights of Persons with Disabilities Act (2016), Sarva Shiksha Abhiyan (SSA) report, National Education Policy (NEP) 2020, Mel Ainscow's book "Promoting Inclusive Education Systems", "The Sage Handbook of Inclusion and Diversity in Education" edited by Naraian and Schuelka, UNESCO State of the Education Report for India, Which concludes inclusive education ensures equal learning opportunities for all students regardless of disability, gender, social background, or cultural differences, importance of inclusive and equitable education, support universal access to the education, learning together in regular classrooms and appropriate support for diverse learners.

Therefore, inclusive education in India combines global educational principles with national policies to ensure equitable and quality education for all learners. Thus the first objective of the research was fulfilled and second objective of the research is **to examine the progress of inclusive education in India.**

For fulfilling this objective researcher studied various reports regarding progress of inclusive education in India. Following table shows the progress of inclusive education in India with respect to the globalized era.

Year / Period	Policy/ Programme	Key Features for Inclusive Education	Significance in the Globalized Era
1974	Integrated Education for Disabled Children (IEDC) Scheme	Promoted integration of children with disabilities in regular schools with support services	Early step toward inclusive education aligning with global ideas of equal education

1986	National Policy on Education (NPE)	Emphasized “Education for Equality” and special support for disadvantaged groups	Strengthened social justice and equity in education
1994	Salamanca Statement (Global Declaration)	Encouraged countries to educate all children together regardless of disabilities	Influenced India to adopt inclusive education principles
1995	Persons with Disabilities Act	Provided legal framework for education and reservation for persons with disabilities	Strengthened rights-based approach to inclusive education
2001	Sarva Shiksha Abhiyan (SSA)	Focused on universal elementary education and support for children with special needs	Major national programme promoting inclusive schooling
2009	Right to Education Act (RTE)	Guaranteed free and compulsory education for children aged 6–14 years	Recognized education as a fundamental right in India
2016	Rights of Persons with Disabilities Act	Expanded disability categories and strengthened educational rights	Aligned Indian laws with the UN Convention on disability rights.
2018	Samagra Shiksha Programme	Integrated SSA, RMSA and teacher education to support inclusive learning, assistive devices and teacher training	Focus on inclusive quality education for all learners.
2020	National Education Policy (NEP) 2020	Emphasized equitable and inclusive education for socio-economically disadvantaged groups	Aligns Indian education with global goals such as SDG-4
Recent Developments	Inclusive guidelines, resource rooms, assistive technology	Schools adopting accessible infrastructure and individualized learning support	Reflects modernization and global inclusive education practices

Table No.1 Progress of Inclusive Education in India in the Context of the Globalized Era

From Table No.1 it seems that progress of inclusive education in India shows gradual shift from integration to full inclusion, supported by national policies, international declarations, and educational reforms. Over time, India has adopted laws, programmes, and policies that promote equal access, participation, and support for diverse learners, aligning its education system with global inclusive education standards. Thus this objective of the research was fulfilled and the third objective of the research is **to suggest improvements in inclusive education**

Following are the suggestion drawn by the study for Strengthening Inclusive Education in India.

1. Effective Implementation of Educational Policies

India has introduced several policies to promote inclusive education; however, their proper implementation is necessary. Continuous supervision and evaluation should be carried out to ensure that the provisions of the Right of Children to Free and Compulsory Education Act and the Rights of Persons with Disabilities Act are effectively practiced in all educational institutions.

2.Enhancing Teacher Training

Teachers play a crucial role in inclusive classrooms. Therefore, they should be trained in inclusive teaching strategies, differentiated instruction, and classroom management techniques that help address the needs of diverse learners. Training programs for teachers should include both theoretical knowledge and practical exposure.

3.Development of Inclusive School Infrastructure

Educational institutions should ensure the availability of accessible facilities such as ramps, accessible toilets, appropriate seating arrangements, and learning aids. Such infrastructure will make the school environment more supportive for students with disabilities.

4.Integration of Assistive Technology

The use of technology can significantly support inclusive learning. Tools such as screen readers, audio materials, hearing devices, and educational software can help students with special needs learn more effectively and independently.

4.Active Participation of Parents and Community

The involvement of parents and local communities is important for promoting inclusive attitudes. Awareness campaigns and community participation can help reduce discrimination and encourage acceptance of children with special needs in mainstream schools.

5.Availability of Support Services

Schools should provide additional support through resource teachers, counselors, therapists, and special educators. These professionals can guide classroom teachers and offer specialized assistance to students who require extra support.

6.Flexible Curriculum and Evaluation Methods

The curriculum and assessment system should be flexible to accommodate the learning abilities of all students. Adopting varied teaching approaches and alternative assessment methods can ensure better learning outcomes for diverse learners.

7. Early Detection and Support

Identifying learning difficulties or disabilities at an early stage is important. Early diagnosis allows timely intervention and appropriate support, which can improve academic performance and prevent school dropout.

8. Encouraging Research and Data-Based Planning

More studies and systematic data collection should be conducted to understand the challenges related to inclusive education in India. Research findings can help policymakers design more effective educational strategies.

9. Collaboration with National and International Organizations

Cooperation with organizations such as UNESCO and UNICEF can help India adopt global best practices and strengthen inclusive education through shared knowledge and resources.

We can conclude that, improving policy implementation, teacher preparedness, infrastructure, and community awareness can significantly strengthen the inclusive education system in India and ensure equal educational opportunities for all learners.

References

- Ainscow, M. (2020). *Promoting inclusion and equity in education: Lessons from international experiences*. *Nordic Journal of Studies in Educational Policy*, 6(1), 7–16. <https://doi.org/10.1080/20020317.2020.1729587>
- Florian, L. (2014). *Reimagining special education: Why new approaches are needed*. In L. Florian (Ed.), *The SAGE handbook of special education* (2nd ed., pp. 9–22). SAGE Publications.
- Global Education Monitoring Report Team. (2020). *Inclusion and education: All means all* (Global Education Monitoring Report). UNESCO. Retrieved February 28, 2026, from <https://www.unesco.org/gem-report>
- Government of India. (1995). *The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995*. Ministry of Law and Justice. Retrieved February 28, 2026, from <https://legislative.gov.in>
- Government of India. (2009). *The Right of Children to Free and Compulsory Education Act, 2009*. Ministry of Law and Justice. Retrieved February 28, 2026, from <https://legislative.gov.in>
- Government of India. (2016). *The Rights of Persons with Disabilities Act, 2016*. Ministry of Law and Justice. Retrieved February 28, 2026, from <https://legislative.gov.in>
- Ministry of Education, Government of India. (2020). *National Education Policy 2020*. Retrieved February 28, 2026, from <https://www.education.gov.in>
- Ministry of Human Resource Development. (2001). *Sarva Shiksha Abhiyan: Framework for implementation*. Government of India. Retrieved February 28, 2026.
- Ministry of Human Resource Development. (2018). *Samagra Shiksha: An integrated scheme for school education*. Government of India. Retrieved February 28, 2026.
- Sharma, U., & Deppeler, J. (2005). *Inclusive education in India: Challenges and prospects*. *Asia Pacific Journal of Education*, 25(1), 67–77.
- Slee, R. (2018). *Inclusive education isn't dead, it just smells funny*. Routledge.
- United Nations. (1948). *Universal Declaration of Human Rights*. Retrieved February 28, 2026, from <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- United Nations. (1989). *Convention on the Rights of the Child*. Retrieved February 28, 2026, from <https://www.un.org>

- United Nations. (2006). Convention on the Rights of Persons with Disabilities. Retrieved February 28, 2026, from <https://www.un.org/development/desa/disabilities>*
- United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. Retrieved February 28, 2026, from <https://sdgs.un.org/2030agenda>*
- UNESCO. (1990). World declaration on education for all (Jomtien). Retrieved February 28, 2026, from <https://www.unesco.org>*
- UNESCO. (1994). The Salamanca Statement and Framework for Action on Special Needs Education. Retrieved February 28, 2026, from <https://www.unesco.org>*
- UNESCO. (2000). The Dakar framework for action: Education for all. Retrieved February 28, 2026, from <https://www.unesco.org>*
- UNESCO. (2015). Incheon declaration and framework for action for the implementation of Sustainable Development Goal 4. Retrieved February 28, 2026, from <https://www.unesco.org>*

THE IMPACT OF TRI-LEVEL PEDAGOGICAL STRATEGIES ON ACADEMIC ACHIEVEMENT AND SOCIAL PARTICIPATION IN INCLUSIVE CLASSROOMS

Kirtikar Yogeshwar Shripal

Assistant Professor, Research Scholar (Education Department, SUK) Appasaheb Birnale College of Education, Sangli, Email: yogprit0503@gmail.com

Abstract

This study examined the impact of the three-tiered teaching-learning method on students' academic achievement and social participation in inclusive classrooms. The three-tiered approach consisted of pre-teaching preparation, active classroom instruction, and application. During the pre-teaching phase, students engaged in homework-based preparation that introduced key concepts and encouraged initial reflection. In the classroom phase, interactive reading, guided discussions, questioning, and collaborative activities promoted deeper understanding. Teachers identified learning difficulties and provided targeted support using diverse learning resources. In the application phase, students participated in summarization, enrichment tasks, and practical exercises. A quasi-experimental design with control and experimental groups was used. Data were collected through achievement tests, observations, and participation scales. Findings revealed that the experimental group showed significant improvement in academic achievement and social participation. The study concluded that the tri-level teaching-learning method effectively supports inclusive education.

Keywords: *Three-Tiered Teaching-Learning Method, Inclusive Education, Academic Achievement, Social Participation*

Introduction

Inclusive education requires instructional approaches that address diverse learning needs within the same classroom. The tri-level teaching method provides structured support through preparation, interaction, and application stages. It promotes active participation and continuous assessment. In contrast, traditional methods rely on lecture-based instruction with limited student engagement. Therefore, comparing both approaches helps determine their effectiveness in improving academic achievement and participation.

Need and Importance of the Study

The increasing diversity in inclusive classrooms demands effective teaching strategies. Traditional approaches often fail to address individual differences, limiting both academic progress and participation. The tri-level method offers a structured and inclusive framework. This study is important to evaluate its effectiveness and provide practical guidance for teachers.

Research Title

“The Impact of Tri-Level Pedagogical Strategies on Academic Achievement and Social Participation in Inclusive Classrooms”

Objectives

1. To compare academic achievement between tri-level and traditional teaching methods.
2. To examine the effect of the tri-level method on social participation.

Hypothesis

Research Hypothesis (H₁): There is a significant difference in academic achievement and social participation between the two methods.

Null Hypothesis (H₀): There is no significant difference between the two methods.

Research Process

Experimental Research

This study used an experimental method to examine the effect of teaching strategies. It ensured objective and reliable results by controlling variables.

Experimental Design

A quasi-experimental pre-test and post-test control group design was used. Two groups (experimental and control) were selected. Pre-tests and post-tests were conducted to measure improvement.

Sample Selection

A purposive sample of 30 students was selected from a secondary school.

Tools for Data Collection

- Academic Achievement Test
- Social Participation Rating Scale

Statistical Tools

- Mean
- Standard Deviation
- Independent t-test
- Paired t-test

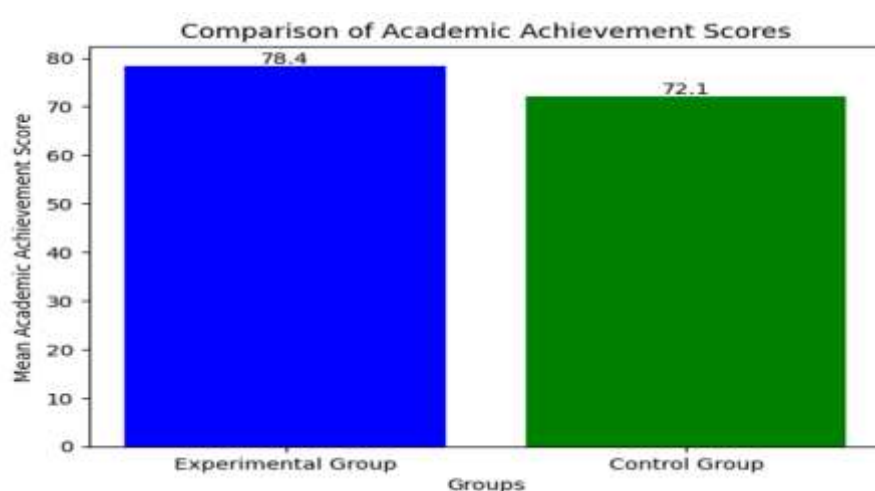
Analysis and Interpretation

The experimental group showed higher improvement compared to the control group. Statistical analysis confirmed significant differences at the 0.05 level.

TABLE NO. 1 COMPARISON OF ACADEMIC ACHIEVEMENT SCORES

Group	N	Mean	SD	DF	t-value	t-critical	Decision
Experimental	15	78.40	6.25	28	2.31	2.048	Significant
Control	15	72.10	5.80				

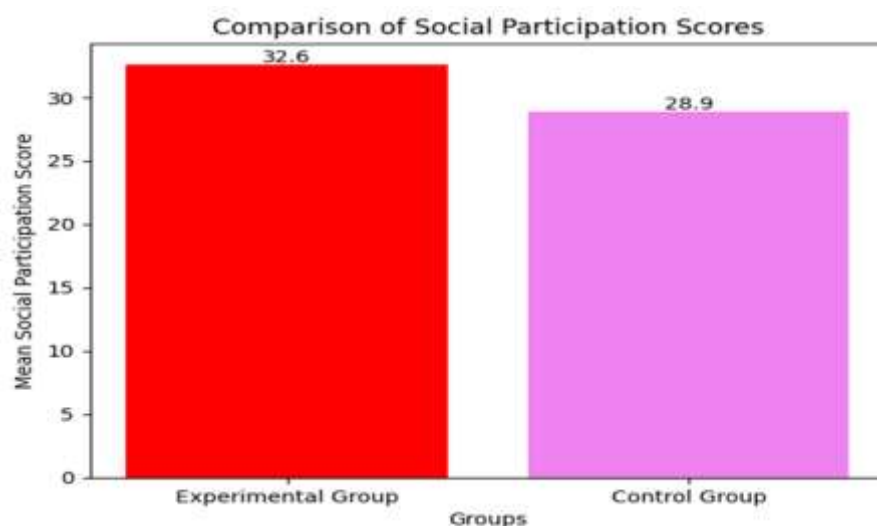
FIGURE NO. 1



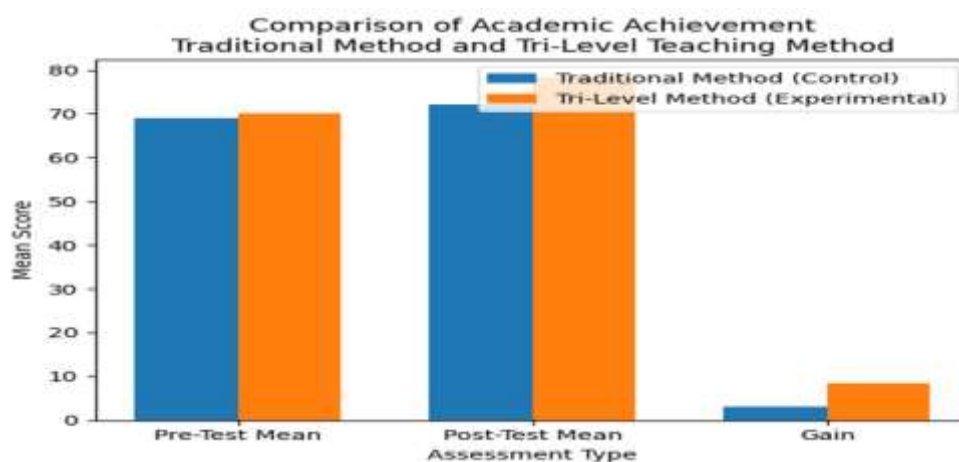
The experimental group achieved higher academic scores than the control group.

TABLE NO. 2 COMPARISON OF SOCIAL PARTICIPATION SCORES

Group	N	Mean	SD	DF	t-value	t-critical	Decision
Experimental	15	32.60	3.45	28	2.57	2.048	Significant
Control	15	28.90	3.10				

FIGURE NO. 2

The experimental group showed higher social participation.

FIGURE NO. 3

Both groups had similar pre-test scores, but the experimental group showed higher post-test improvement.

Findings

- The tri-level method significantly improved academic achievement.
- It enhanced social participation and interaction.
- Students showed increased confidence and engagement.

Discussion

The tri-level teaching method proved effective due to its structured approach. It supported diverse learners and promoted collaboration. The findings align with inclusive education principles.

Conclusion

The study concluded that the tri-level teaching-learning method is more effective than traditional methods. It improves both academic achievement and social participation. The structured approach enhances understanding, engagement, and inclusive practices.

Recommendations

1. Teachers should adopt the tri-level method.
2. Training programs should include this strategy.
3. Schools should provide adequate resources.
4. Continuous assessment should be encouraged.
5. Further research should be conducted with larger samples.

Acknowledgement

The researcher expresses gratitude to the institution, students, and teachers for their cooperation and support in completing this study successfully.

References

- Adu, E. O., Omodan, B. I., Tsoetsi, C. T., & Damoah, B. (Eds.). (2024). *Pedagogical strategies for 21st-century classrooms*.
- Asad, M. M., Churi, P., Sherwani, F., & Hassan, R. B. (Eds.). (2025). *Innovative pedagogical practices for higher education 4.0*. CRC Press.
- Belle, C. (2024). *Start with radical love*.
- Cardon, L. S., & Womack, A. M. (2023). *Inclusive college classrooms*. Routledge.
- Chang, M. (Ed.). (2026). *Innovative teaching methods*. Springer.
- Kaushik, B. (Ed.). (2025). *Equitable and inclusive school education*. Routledge.
- Khaldi, M. (Ed.). (2024). *Fostering pedagogical innovation*.
- Mastropieri, M. A., Scruggs, T. E., & Regan, K. S. (2023). *The inclusive classroom (7th ed.)*. Pearson.
- McLeskey, J., Spooner, F., Algozzine, B., & Waldron, N. L. (2022). *Handbook of inclusive schools (2nd ed.)*. Routledge.
- Nel, M. N., & Bornman, J. (Eds.). (2025). *Cultivating inclusive classrooms*. MDPI Books.

THE IMPACT OF INCLUSIVE PEDAGOGIES AND PRACTICES IN LEARNING GEOGRAPHY AMONG SECONDARY SCHOOL STUDENTS

Mamata Mukund Ghotal

Department of Education, Shivaji University, Kolhapur

Abstract

*Inclusive pedagogies aims to provide equitable learning opportunities for all students regardless of ability, gender, socio-economic background, language, or learning differences. Geography, as a subject that connects environmental, social, and cultural understanding, benefits greatly from inclusive teaching practices. This research-based study examines how inclusive pedagogical strategies influence learning outcomes, participation, and engagement among secondary school students studying geography. Using questionnaires, classroom observations, and analytical data interpretation, the study finds that inclusive practices significantly improve conceptual understanding, collaboration skills, and academic performance. The research highlights the importance of differentiated instruction, assistive technology, cooperative learning, and culturally responsive teaching aligned with NEP 2020 principles. The main objectives of the study are to analyze inclusive teaching methods used in geography classrooms, evaluate student engagement and achievement, and identify challenges faced by teachers while implementing inclusive practices. A **quantitative research approach** supported by qualitative feedback was adopted. Data were collected using a structured questionnaire administered to secondary school students and teachers. The questionnaire included items related to teaching methods, classroom participation, use of technology, assessment practices, and support for diverse learners. The collected data were analyzed using percentage analysis and mean score interpretation to understand students' perceptions and learning outcomes. Findings indicate that inclusive pedagogical practices such as collaborative learning, use of visual aids, differentiated instruction, and technology-supported teaching significantly enhance students' conceptual understanding of geography. Students reported higher motivation, confidence, and participation when inclusive strategies were implemented. The study also highlights that inclusive classrooms promote cooperation, respect for diversity, and improved academic engagement. However, some challenges were identified, including teacher, lack of inclusive teaching resources, large class sizes, and insufficient institutional support. Despite these challenges, the research confirms that inclusive pedagogy positively contributes to effective geography learning and supports equitable education. The study concludes that adopting inclusive pedagogical practices is essential for achieving quality education goals and aligning with modern educational policies. It recommends continuous teacher training, integration of technology, flexible assessment methods, and supportive school environments to strengthen inclusive geography education at the secondary level.*

Keywords: Inclusive Pedagogy, Geography Education, Secondary School Students, Inclusive Practices, Learning Outcomes, NEP 2020, Equity in Education

Introduction

Education systems today emphasize inclusion as a fundamental principle to ensure equal learning opportunities for every learner. Geography education involves spatial thinking,

environmental awareness, and socio-cultural understanding, making inclusive pedagogy essential for meaningful participation of diverse learners.

Traditional geography teaching often relied on lecture-based methods that limited participation of students with different learning needs. Inclusive pedagogy shifts the focus from “teaching to the average learner” to “teaching for learner diversity.” The National Education Policy (NEP) 2020 strongly advocates inclusive and experiential learning approaches.

This study investigates how inclusive teaching practices affect students’ achievement and engagement in geography learning at the secondary level.

Geography, as a subject, plays a significant role in developing students’ understanding of environmental awareness, spatial thinking, cultural diversity, and global citizenship. However, traditional geography teaching methods often rely on lecture-based instruction, which may not effectively address individual learning differences among students. Learners vary in their cognitive abilities, learning pace, interests, and prior knowledge, making it essential for teachers to adopt inclusive pedagogical practices that support diverse learners.

Inclusive pedagogy in geography education involves the use of **differentiated instruction, collaborative learning, experiential activities, visual aids, field-based learning, and technology integration**. These strategies help create an engaging and supportive learning environment where every student actively participates in the learning process. Inclusive practices also encourage peer interaction, respect for diversity, and development of critical thinking skills, which are essential for meaningful geography learning.

At the secondary school level, students experience significant academic and social development. Therefore, implementing inclusive teaching practices during this stage can improve students’ confidence, motivation, and academic achievement. Inclusive geography classrooms provide opportunities for students with different abilities, including those with learning difficulties or disabilities, to participate equally in classroom activities and assessments.

Despite the recognized importance of inclusive education, several challenges remain in its effective implementation. Teachers often face issues such as limited training in inclusive pedagogy, lack of teaching resources, large classroom sizes, and insufficient institutional support. Understanding how inclusive practices influence learning outcomes in geography is therefore essential for improving teaching strategies and educational planning.

This study aims to examine the **impact of inclusive pedagogical practices on geography learning among secondary school students**. It explores how inclusive teaching methods affect

student engagement, participation, conceptual understanding, and academic performance. The research also seeks to identify the strengths and challenges of implementing inclusive pedagogy in geography classrooms.

Objectives of the Study

1. To examine inclusive pedagogical practices used in geography classrooms.
2. To analyze the impact of inclusive strategies on student learning outcomes.
3. To study students’ participation and engagement levels.

4. To identify challenges faced by geography teachers in implementing inclusive pedagogy.

Review of Literature

Research indicates that inclusive classrooms promote collaboration and deeper understanding. Studies show:

- Differentiated instruction enhances conceptual clarity.
- Visual and experiential methods support students with learning difficulties.
- Cooperative learning improves social interaction and academic achievement.

Geography education particularly benefits from maps, models, fieldwork, and multimedia tools that support multiple learning styles. The concept of inclusive education has gained significant attention in educational research as it promotes equal learning opportunities for all students, including those with diverse learning needs and abilities. Several researchers have emphasized that inclusive pedagogy improves participation, academic achievement, and social development among learners.

Mel Ainscow (2005) highlighted that inclusive education focuses on removing barriers to learning and participation by modifying teaching strategies and classroom environments. According to his work, inclusive practices encourage collaboration among students and create supportive learning communities. Similarly, Tony Booth and Mel Ainscow (2011) developed the *Index for Inclusion*, which provides a framework for schools to promote inclusive culture, policies, and practices.

Florian Lani and Black-Hawkins (2011) introduced the concept of **inclusive pedagogy**, emphasizing teaching approaches that extend learning opportunities to all students rather than focusing only on students with special needs. Their study suggested that differentiated instruction and flexible teaching methods improve classroom engagement and reduce learning gaps.

In the Indian context, studies influenced by the **Right to Education Act (2009)** and **NEP 2020** highlight the importance of inclusive classrooms. National Council of Educational Research and Training (NCERT) emphasizes learner-centered pedagogy, activity-based learning, and the integration of local contexts in subjects like geography to ensure accessibility for diverse learners.

Research on geography education indicates that experiential and visual learning methods enhance conceptual understanding.

David Lambert (2018) argued that geography teaching should encourage inquiry-based learning and real-world connections to promote deeper understanding. Inclusive geography teaching through maps, models, and fieldwork supports varied learning styles and improves student participation.

Studies on technology integration by Punya Mishra and Matthew Koehler (2006) demonstrated that technology-supported pedagogy helps teachers address diverse learner needs through multimedia resources and interactive learning environments.

Overall, the reviewed literature suggests that inclusive pedagogical practices positively influence

student engagement, academic achievement, and classroom participation. However, gaps remain in empirical research focusing specifically on inclusive practices in geography classrooms at the secondary school level. This study attempts to address this gap by examining the impact of inclusive pedagogy on geography learning outcomes.

Significance of the Study

This study is important because it highlights how **inclusive pedagogical practices** can improve the teaching and learning of geography at the secondary school level. The study helps to

understand how inclusive teaching methods support students with different learning abilities, backgrounds, and needs. It shows how strategies such as **group learning, visual aids, and activity-based teaching** improve students' participation, confidence, and understanding of geography concepts. The findings provide guidance for teachers on using **inclusive teaching strategies** in geography classrooms. Teachers can learn how to adapt their teaching methods to support diverse learners and create a more engaging and supportive classroom environment.

Methodology

Research Design

Descriptive survey Method was used in this research.

Sample

In this research, a sample of 60 students and 2 teachers of Marathi medium schools of the secondary level in karveer taluka were selected.

Tools Used

The tool used in this research is a Questionnaire

Research Question

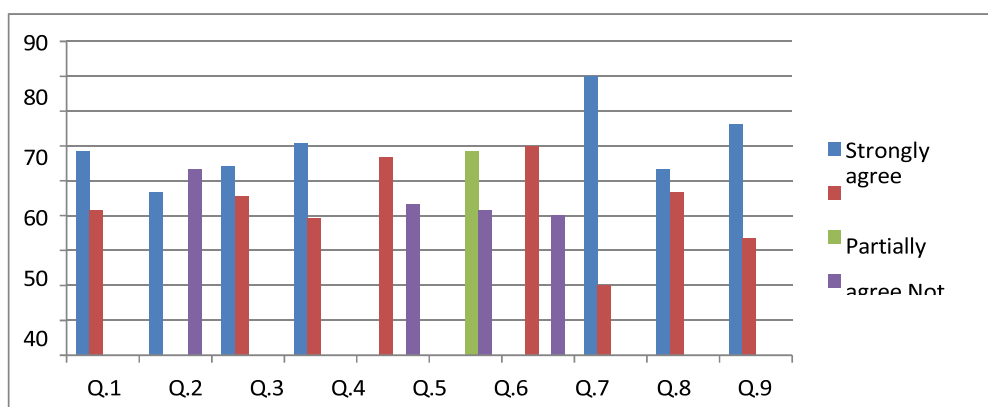
Questions	Strongly agree	Partially agree	Not agree	Rarely agree	Strongly disagree
1 The teacher explains geography concepts clearly.					
2 Different teaching methods are used In geography class.					
3 Maps, globes, and charts are used during geography lessons.					
4 Geography lessons include real-life examples.					
5 All students get equal opportunities to participate.					
6 Students with different abilities					

	are included in activities.					
7	Teachers encourage teamwork and group learning.					
8	I enjoy learning geography through activities.					
9	I feel confident asking questions in geography class					
10	I participate in group discussions.					

Data Analysis

For the analysis and interpretation of study the collected data from the resources was organized into tables and analysis and interpretation was done with help of percentage organized into tables and analysis and interpretation was done with help of percentage.

Graphical Analysis and Interpretation of Students questioner



From the above graph, it can be analyzed that the data collected by researcher the graph is showing the percentage of students belonging to the range of their attitudes in the rating scales

Findings

Most of the reveals that the percentage score of the teacher explains geography concepts clearly is 58.33 which in the range of average category and hence indicates that overall value is Average.

Most of the reveals that the mean of the different teaching methods are used In geography class is 46.66% which in the range of average category and hence indicates that the positive attitude value is average.

Most of the reveals that the percentage of the level of impact is 54.33% of doing homework and study of Maps, globes, and charts are used during geography lessons together with someone in the range of average category and hence indicates that the positive impact value is average.

Most of the reveals that the percentage of the level of Geography lessons included real-life examples is 60.66% in the range of average category and hence indicates that the

positive ways of spending time productively attitude is average.

Most of the reveals that the percentage score of the all students get equal opportunities to participate in geography learning in the class is 56.66% which in the range of average category and hence indicates that overall attitude value is average.

Most of the reveals that the mean of the negative value of Students with different abilities are included in activities is 58.33% which in the range of average category and hence indicates that overall attitude value of average.

Most of the reveals that the percentage of the Teachers encourage teamwork and group learning is 60.00% which in the range of average category and hence indicates that overall attitude value is average

Most of the reveals that the percentage of the student enjoy learning geography through activities is 80% which in the range of high category and hence indicates that overall impact value is high.

Most of the reveals that the percentage of the level of students feel confident asking questions in geography class is 53.33% of engaged ourselves in learning geography in the range of average category and hence indicates that the positive impact value is average.

Most of the reveals that the mean of the students participate in group discussions is 66.33% which is the range of overage category and hence indicates that the positive attitude value is average.

Inclusive Pedagogical Practices Observed

- Use of maps, globes, and digital simulations
- Group discussions and peer learning
- Local environment-based examples
- Multilingual explanations
- Assistive learning materials
- Project-based learning

Conclusions

The conclusion of the study related to objective.

1) Conclusion related to objective No. 1

The study found that inclusive pedagogical practices are being implemented in geography classrooms to some extent. Teachers use different instructional methods such as visual aids, classroom discussions, group activities, and real-life examples to make geography learning more understandable and engaging. These practices help in addressing the diverse learning needs of students.

2) Conclusion related to objective No. 2

The study concluded that inclusive teaching strategies positively influence students' understanding of geography concepts. Most students reported that teaching tools such as maps, charts, models, and digital resources improve their comprehension of geographical topics. Inclusive classroom practices also help students relate theoretical concepts to real-world situations.

3) Conclusion related to objective No. 3

The findings indicate that inclusive pedagogy increases student participation and engagement in geography classes. Students feel more confident asking questions, sharing

opinions, and participating in collaborative learning activities. This creates a supportive classroom environment where learners feel respected and valued.

4) Conclusion related to objective No. 4

The research highlights that inclusive practices contribute to improved academic performance and learning outcomes. Students expressed that activity-based learning and cooperative tasks help them remember lessons better and develop critical thinking skills.

The study also identified certain challenges in implementing inclusive pedagogy, such as limited teaching resources, large classroom sizes, and the need for additional teacher training. Addressing these challenges is essential for strengthening inclusive teaching practices.

Summary

This study examined the **role and impact of inclusive pedagogical practices in learning geography among secondary school students**. The main purpose of the research was to understand how inclusive teaching methods influence students' participation, understanding, and academic performance in geography classrooms.

The study focused on several objectives, including examining inclusive teaching practices used in geography classes, analyzing their impact on students' learning, and identifying the benefits and challenges of implementing inclusive pedagogy. To achieve these objectives, a **structured questionnaire** was used as the main research tool. Data were collected from **30 secondary school students**. The questionnaire included statements related to teaching methods, classroom participation, use of visual aids and technology, and support for diverse learners. Students responded using a **Likert scale**, which helped in collecting quantitative data.

The collected data were analyzed using **percentage and descriptive analysis**. The findings revealed that most students have a **positive perception of inclusive teaching practices**. Teaching methods such as the use of **maps, charts, group discussions, collaborative activities, and real-life examples** help students understand geography concepts more effectively. Inclusive classroom practices also encourage students to participate actively in discussions and learning activities.

The study also found that inclusive pedagogy helps improve **students' interest, confidence, and motivation** in learning geography. Students feel more comfortable asking questions and sharing ideas in a supportive classroom environment. Inclusive teaching strategies also help address the diverse learning needs of students, including those who require additional support. However, the study identified certain **challenges**, such as limited resources, large class sizes, and the need for better teacher training in inclusive education. These challenges may affect the effective implementation of inclusive practices in some classrooms.

In conclusion, the research indicates that **inclusive pedagogical practices play an important role in improving geography learning among secondary school students**. By creating a supportive and participatory learning environment, inclusive education promotes equal opportunities for all learners and contributes to better educational outcomes.

References (APA Style)

- Ainscow, M. (2020). *Promoting inclusion and equity in education*. Routledge.
- Florian, L., & Black-Hawkins, K. (2011). *Exploring inclusive pedagogy*. *Cambridge Journal of Education*, 41(4), 495–510.
- Government of India. (2020). *National Education Policy 2020*. Ministry of Education.
- Tomlinson, C. A. (2017). *How to differentiate instruction in academically diverse classrooms*. ASCD.
- UNESCO. (2017). *A guide for ensuring inclusion and equity in education*. UNESCO Publishing.
- Ainscow, M. (2005). *Developing inclusive education systems: What are the levers for change?* *Journal of Educational Change*, 6(2).

STUDENT'S PERCEPTIONS OF LANGUAGE BARRIERS AND LANGUAGE PREFERENCE IN INCLUSIVE MULTILINGUAL HIGHER EDUCATION CLASSROOMS

* Pooja R. Hegade

*Research Student B.Ed.-M.Ed. (Integrated) Department of Education Shivaji University Kolhapur 416004 MS. India, poojahegade10@gmail.com

** Dr. Chetna P. Sonkamble

**Head and Research Guide, Department of Education Shivaji University, Kolhapur 416004 MS. India, yaadni6@gmail.com

Abstract

Inclusive education in higher Education provides equal learning opportunities to students who coming from diverse linguistic and cultural backgrounds. Language plays a crucial role in students' participation, understanding, and overall learning experience in multilingual classrooms. However, the dominance of a single instructional language often creates barriers for learners who are more comfortable in their familiar languages. Language barriers may affect students' classroom interaction, confidence, and comprehension of academic content, which affects inclusive learning and practices. The present study focuses on understanding students' perceptions of language barriers and their language preferences in inclusive multilingual higher education classrooms. The study aims to identify the language barriers experienced by students in inclusive multilingual classrooms, to find out student's language preference for medium of instruction in inclusive classrooms, and to provide suggestions regarding language use in classroom teaching. A descriptive survey method was used for the study. Data were collected from postgraduate students of various departments of Shivaji University, Kolhapur through a structured questionnaire. The findings indicate that students experience certain barriers in understanding lectures and expressing their ideas when teaching is conducted mainly in one language. Many students reported that hesitation and confusion in asking questions and classroom participation due to language differences. This study further found that learners prefer multilingual teaching approaches and feel more confident when familiar languages are used during instruction. Students suggested the use of simple language, bilingual explanations, and use of familiar languages to improve understanding. The study highlights the importance of adopting inclusive multilingual practices in higher education classrooms and to understand students' language barriers and their preference for language to learn which enhance comprehension, confidence, and active participation among students.

Keywords: Language Barriers, Language Preferences, Inclusive Multilingual Classrooms, Higher Educations

INTRODUCTION:

Higher education plays an important role in enhancing social inclusion, academic development and equal learning opportunities among students from diverse linguistic and cultural backgrounds. With increasing diversity in higher education classrooms, multilingualism has become an important characteristic of contemporary educational environments. Students entering higher education bring varied language experiences shaped by

their regional, cultural, and educational contexts. Language therefore becomes a central factor influencing students' participation, comprehension, interaction, and overall academic engagement within classroom learning processes. Inclusive education emphasizes equal access to learning by recognizing learners' linguistic diversity and participation of all students. However, the dominance of a single instructional language in higher education institutions often creates barriers for learners who are more comfortable studying through their familiar or mother tongue languages. According to the UNESCO (2025) State of Education Report for India: Bhasha Matters, learning through familiar languages enhances comprehension, classroom participation and conceptual understanding and thereby strengthening inclusive learning environments. The report further focuses on that multilingual approaches promote equitable educational practices and improve learning outcomes in linguistically diverse classrooms. Research in the Indian educational context further strengthens the importance of multilingual pedagogy in improving students' learning experiences and classroom engagement. Lina Mukhopadhyay (2020), in her study on translanguaging pedagogy published in the Journal of Indian Education (NCERT), demonstrated that allowing learners to use multiple languages during classroom interaction supports deeper vocabulary development, conceptual understanding, and participation of students. The study shows that when students connect new academic knowledge with their familiar linguistic resources that are familiar or native language then they develop greater confidence and actively engage in classroom discussions and learning activities. Translanguaging practices were also found to reduce anxiety in learning and promote inclusive classroom environments where students feel academically valued and supported. Similarly, Nag (2018), in the study Transformative Potentials of Multilingual Education Models in Odisha, India, emphasized that multilingual education models promote equity and inclusivity by bridging linguistic gaps between home language and school language. The research shows that multilingual instructional approaches enhance learner engagement, improve comprehension levels, and encourage collaborative learning among students from diverse linguistic backgrounds. The study further focuses on that the multilingual education contributes to social inclusion by recognizing linguistic identity as an essential component of students' educational experiences. Despite these developments, students' perceptions regarding the language preference and the language barriers in higher education remain an important area which requires more further exploration. Differences between the instructional language and students' preferred languages may influence confidence, classroom participation, and overall learning experiences. Therefore, understanding students' perspectives on language use in multilingual classrooms becomes essential for strengthening inclusive educational practices. The present study aims to examine students' perceptions of language barriers and language preferences in multilingual higher education classrooms and to understand their implications for developing inclusive multilingual learning environments.

STATEMENT OF THE PROBLEM:

Student's Perceptions of Language Barriers and Language Preference in Inclusive Multilingual Higher Education Classrooms

OBJECTIVES:

1. To identify the language barriers experienced by students in inclusive multilingual classrooms.
2. To find out students' language preference for medium of instruction in inclusive classrooms.
3. To give suggestions on language preference to teachers.

PURPOSE OF THE STUDY:

The purpose of this study is to identify students' perceptions and to find out preferences regarding inclusive multilingual practices in higher education classrooms.

RESEARCH QUESTIONS:

1. Do students experience or face language barriers in inclusive multilingual higher education classrooms?
2. Which language students prefers as an option to learn?
3. Whether the preferred language help students to understand better in multilingual classrooms?

LITERATURE REVIEW:

Mukhopadhyay (2024) in the study Language and Ideology in Indian Multilingual Classrooms examined how the dominance of a single instructional language affects participation of multilingual learners in Indian classrooms. Using a qualitative classroom analysis method, the study explored language practices and interaction patterns in multilingual settings. The findings revealed that the use of a single dominant language creates inequality, reduces learner participation, and limits inclusive classroom engagement.

oy and Swargiary (2024) studied the Impact of Language Choice on Teaching and Learning in North East India focusing on students' language preferences in higher education. Through a survey research method, the study shows that students' comfort levels in using regional languages and English during learning processes. The findings indicated that students understood concepts better and participated more actively when familiar languages were integrated with English instruction.

Tsimpli et al. (2019) studied the multilingualism and multiliteracy in Indian education by analysing challenges faced in multilingual learning environments. Using a comparative educational research approach, the study investigated language use and literacy development among learners. The findings showed that language barriers influence learning outcomes and highlighted the importance of multilingual support for improving comprehension and academic achievement.

Sridevi et al. (2024) explored language and social identity in multilingual urban communities in India. Using a sociolinguistic research method, the study analysed multilingual communication patterns and identity formation among learners. The findings revealed that recognition of linguistic identity promotes confidence, social inclusion, and meaningful participation in educational contexts.

DESIGN OF THE STUDY: The present study a descriptive survey research method is used to identify students' perceptions and to find out preferences regarding language barrier in

higher education classrooms and give suggestions on language preference to teachers based on findings.

METHODOLOGY: The present study titled “Student’s Perceptions of Language Barriers and Language Preference in Inclusive Multilingual Higher Education Classrooms.” Researchers used Survey Method.

SAMPLING: The sample size is the Under Graduate, Post Graduate and Doctoral students of various departments of Shivji university Kolhapur pursuing higher education. Random students of the various departments are selected; total 62 responses are received and selected to collect the data.

RESEARCH TOOL: In this present study researcher used a structured “questionnaire” for Under Graduate, Post Graduate and Doctoral students pursuing higher education in Shivaji university Kolhapur for data collection.

STATISTICAL METHOD: Percentage (%) statistical methods were used for the presented study.

FINDINGS AND RESULT:

Findings for objective 1: A) Language Difficulty Barrier

1. (62.9%) Marathi language is mostly used in classrooms for interactions
2. (48.4 %) Students face language barriers in understanding lectures and discussions.
3. (43.5%) Feels nervous or hesitant while speaking in class because of language problem
4. (46.8%) Get confused when teaching is done mainly in one language.
5. (62.9%) Language differences did not stop students from asking questions and participation yet (37.2%) are stops.
6. (83.8%) Marathi is native language but (16.1%) other languages like Hindi, Kannada, Konkani, maghi, Malayalam, Odia like these languages is also native language of other students.

Findings for objective 2: B) Language Preference

1. (95.2%) Learn and understand better when teacher uses multilingualism
2. Most suggested strategies by respondents are
 - teacher using simple and easy language while teaching (59.7%)
 - use of bilingual teaching (54.8%) (explaining concepts in more than one language)
 - (53.2%) explaining difficult concepts in student familiar language
3. (48.4%) Prefers English+ Hindi + Marathi language for learning or understanding better.
4. (98.4%) Feel more confident when their familiar language is used in class
5. (71.0%) Marathi language is more familiar with students.
6. (96.8%) Think that inclusive ness of multilingual language will increase the participation of students in classroom.

Findings for objective 3: C) Suggestions based on findings

1. Teachers should use multilingual instruction to improve students’ understanding and classroom participation.

2. Teachers should explain difficult concepts using students' familiar or native languages to reduce language barriers.
3. Simple and easy language should be used during teaching to minimize confusion and improve comprehension.
4. Bilingual or multilingual explanations (English+Hindi+Marathi) should be incorporated according to student preference.

CONCLUSION:

In this research, the study focused on students' perceptions and preferences regarding inclusive multilingual practices in higher education classrooms. The results show that students experience language-related challenges such as difficulty in understanding lectures, hesitation in classroom communication, and confusion when teaching is conducted mainly in one language. The findings also indicate that although Marathi is the dominant classroom language, students from diverse linguistic backgrounds are present, reflecting multilingual diversity in higher education settings. The study reveals that students learn and understand better when teachers use multilingual teaching approaches, simple language, and explanations in familiar languages. It is also found that the use of students' familiar languages increases their confidence and encourages active classroom participation. The research highlights those inclusive multilingual practices, such as bilingual teaching and flexible language use, play a significant role in improving comprehension, engagement, and inclusiveness. Therefore, adopting multilingual teaching strategies and promoting linguistically inclusive classroom environments are essential for enhancing students' learning experiences and participation in higher education.

REFERENCES:

- Mukhopadhyay, L. (2020) *Using translanguaging pedagogy to teach naming and action words*. NCERT Journal of Indian Education. Available at <https://ncert.nic.in>.
- Mukhopadhyay, L. (2024) *Language and ideology in Indian multilingual classrooms*. ResearchGate. ResearchGate. Available at <https://www.researchgate.net/publication/391249349>.
- Nag, S. (2018) *Transformative potentials of multilingual education models in Odisha, India*. European Journal of Education Studies. Available at <https://oapub.org/edu/index.php/ejes/article/view/1557>.
- Roy, K. & Swargiary, K. (2024) *Impact of language choice on teaching and learning in North East India*. ResearchGate. ResearchGate. Available at <https://www.researchgate.net/publication/381907996>.
- Sridevi, T. et al. (2024) *Language and social identity: A sociolinguistic study of multilingual communities in urban India*. ResearchGate. ResearchGate. Available at <https://www.researchgate.net/publication/393518539>.
- Tsimpli, I.M., Mukhopadhyay, L., Treffers-Daller, J., Alladi, S., Marinis, T., Panda, M., Balasubramanian, A. & Sinha, P. (2019) *Multilingualism and multiliteracy in primary education in India: A discussion of some methodological challenges of an*

interdisciplinary research project. Research in Comparative and International Education, 14, 54-76. Available at

<https://www.researchgate.net/publication/331897009>

UNESCO (2025). State of Education Report for India: Bhasha Matters.

Available at <https://www.unesco.org/en/articles/unesco-launch-bhasha-matters-state-education-report-india-2025-mother-tongue-and-multilingual>.

EDUCATIONAL LEADERSHIP IN THE CONTEMPORARY ERA FOR HOLISTIC DEVELOPMENT

R. L. Nirmale¹, Nigar K. Mujawar^{2*}, Vidyanand Khandagale³

¹ Research Scholar, Department of Education, Shivaji University, Kolhapur; I/C Principal, College of Education, Peth Vadgaon, Kolhapur, Maharashtra, India.

(Email: shweta.chougule5583@gmail.com | ORCID: <https://orcid.org/0009-0000-9811-007X>)

^{2*} Research Scholar, Shree Santkrupa College of Pharmacy, Ghogaon, Karad; Professor, ASPM College of Pharmacy, Vaibhavwadi, Sindhudurg, Maharashtra, India.

(Email: nigarwcp2017@gmail.com | ORCID: <https://orcid.org/0009-0001-7663-9279>)

³ Assistant Professor, Department of Education, Shivaji University, Kolhapur, Maharashtra, India. (Email: vidyanandkhandagale@gmail.com |

ORCID: <https://orcid.org/0000-0003-2989-6645>)

Abstract

Educational leadership plays a pivotal role in shaping the effectiveness, sustainability, and performance of schools in contemporary society. This study provides a comprehensive analysis of the foundational concepts of educational leadership, exploring major theoretical frameworks including Trait, Behavioral, Contingency, Transformational, Instructional, and Distributed leadership models. The paper examines the core roles of modern school leaders—ranging from vision development and curriculum supervision to financial management and stakeholder engagement. It highlights the profound impact of instructional leadership and positive school climate on student learning outcomes and teacher motivation. Furthermore, contemporary challenges such as resource constraints, policy implementation, and technology integration are critically analyzed alongside emerging trends like digital governance, globalization, and sustainable leadership. Ultimately, the paper establishes that effective educational leadership is a dynamic, ethical, and strategic process essential for achieving long-term institutional excellence and holistic student development.

Keywords: Educational Leadership, Instructional Leadership, School Improvement, Organizational Effectiveness, Student Achievement.

1. Introduction

In the contemporary era, marked by rapid technological advancement, globalization, socio-economic shifts, and rigorous accountability standards, the paradigm of school education has undergone a massive transformation (Bush, 2020). Educational institutions are no longer merely centers for curriculum delivery; they are complex, dynamic ecosystems requiring strategic direction, collaborative environments, and sustainable innovation. At the core of this institutional evolution lies educational leadership—a vital catalyst that provides the vision, guidance, and coordination necessary to achieve educational equity and excellence (Leithwood et al., 2020).

Educational leadership transcends traditional bureaucratic administration. While conventional management centers on compliance, rules, and daily operational maintenance, modern

educational leadership is inherently relational, driven by influence, inspiration, and transformation (Fullan, 2020). It involves mobilizing the school community—including teachers, students, parents, and policymakers—toward shared educational aspirations.

Empirical research consistently underscores that leadership is second only to classroom instruction in its impact on student learning outcomes (Hattie, 2012). Leaders profoundly shape the school environment by establishing high performance expectations, fostering academic optimism, and supporting continuous professional development. In an era of shared responsibility, contemporary models like Distributed Leadership emphasize that leadership is not a solo endeavor restricted to the principal's office, but a distributed practice that empowers teachers and builds collective capacity across the organization (Spillane, 2012).

1.1 Distinguishing Leadership from Management

To optimize school performance, a clear conceptual distinction must be drawn between management and leadership, although both are mutually reinforcing (Kotter, 2010):

- **Educational Management:** Focuses on maintaining stability, order, predictability, budgeting, staffing, and compliance with statutory frameworks (Bush, 2020).
- **Educational Leadership:** Focuses on driving change, articulating a compelling future vision, inspiring innovation, altering cultural norms, and steering strategic institutional growth (Fullan, 2020).

A successful school administrator must balance both paradigms: managerial competence ensures operational structural stability, while visionary leadership ensures progressive institutional evolution.

2. Theoretical Frameworks of Educational Leadership

The conceptual evolution of educational leadership can be understood through several major theoretical frameworks that guide contemporary administrative practices (Northouse, 2021):

2.1 Trait and Behavioral Theories

Trait Theory posits that effective leaders possess innate personal attributes such as emotional intelligence, integrity, decisiveness, and resilience (Northouse, 2021). While foundational, it is limited because it overlooks that leadership competencies can be developed through structured training and experiential learning. In contrast, Behavioral Theories shift the focus from inherent traits to observable actions, classifying leadership into Task-Oriented (structuring goals, monitoring output) and Relationship-Oriented (building trust, supporting morale) behaviors.

2.2 Contingency and Situational Theories

These models argue that there is no singular 'optimal' leadership style. Instead, effectiveness depends on the leader's ability to assess the organizational maturity, context, and immediate environment, dynamically adjusting their approach from directive to highly participative as circumstances demand (Fiedler, 1967; Hersey & Blanchard, 1988).

2.3 Transformational and Instructional Leadership

Transformational Leadership focuses on altering organizational culture by motivating followers through shared values, vision, and higher-order professional commitment (Bass & Avolio, 1994). It empowers teachers, builds intrinsic motivation, and drives systemic reform. Instructional Leadership places teaching and learning explicitly at the center of administrative

action (Hallinger & Murphy, 1985). Leaders directly involve themselves in curriculum planning, classroom observations, data-driven decision-making, and the active mentoring of teaching staff.

2.2 Distributed Leadership

This paradigm views leadership as an organizational property rather than a personal status. It emphasizes distributed governance, sharing leadership responsibilities among department heads, senior teachers, and instructional coaches, thereby fostering collective ownership and enhanced organizational resilience (Spillane, 2012).

3. Core Roles and Strategic Responsibilities

Modern school leaders handle multifaceted responsibilities that directly govern institutional outcomes (Marzano et al., 2005):

- **Vision and Mission Development:** Collaboratively formulating long-term institutional aspirations that align stakeholders and give meaning to daily school operations.
- **Curriculum and Instructional Supervision:** Ensuring pedagogical practices align with national standards while monitoring learning quality via evidence-based observations and evaluations (Hallinger, 2011).
- **Capacity Building:** Fostering a professional learning community (PLC) through structured mentoring, action research, and continuous professional development (DuFour, 2004).
- **Student Welfare and Discipline:** Cultivating a safe, inclusive, and emotionally supportive learning ecosystem that prioritizes positive behavioral interventions.
- **Financial and Resource Management:** Executing transparent budgeting, strategic resource allocation, and maintaining infrastructural sustainability.

4. Leadership Styles and School Culture

The leadership style adopted by school administrators directly dictates the school climate and teacher retention rates (Bryk & Schneider, 2002):

Leadership Style	Core Characteristics	Impact on School Culture & Outcomes
Democratic / Participative	Shared decision-making; collaborative problem solving.	Enhances professional commitment, teacher satisfaction, and sustainable innovation.
Transformational	Vision-driven; inspires staff to transcend standard expectations.	High intrinsic motivation, strong collaborative culture, and elevated student outcomes.
Autocratic / Bureaucratic	Centralized authority; rigid compliance and top-down directives.	Useful in acute crises, but cripples teacher autonomy, stifles innovation, and lowers morale.
Transactional	Focuses on contingent rewards, compliance, and strict monitoring.	Sustains short-term operational targets but fails to foster deep institutional transformation.
Laissez-faire	High autonomy with minimal leadership intervention or direction.	Promotes creativity among highly expert teams, but often leads to operational fragmentation.

5. Ethical, Moral, and Community Leadership

Educational leaders are inherently moral agents responsible for anchoring their schools in fairness, justice, and social equity (Sergiovanni, 2007). Leaders must operate within strict codes of conduct, maintaining transparency, confidentiality, and absolute equity across diverse student demographics while adhering to macro-level educational legislation and policy directives (Starratt, 2004).

Effective leadership builds vibrant partnerships between the school and external communities (Epstein, 2018). By strengthening parent-school partnerships, fostering civic engagement, and establishing collaborative linkages with universities and industries, leaders turn schools into community hubs that enrich student learning ecosystems.

6. Contemporary Challenges and Future Horizons

Educational leadership is an arduous practice bounded by systemic challenges that require proactive, strategic responses (Fullan, 2020):

- **Resource Constraints:** Leaders must optimize limited financial allocations and material resources without compromising instructional quality.
- **Teacher Retention & Motivation:** Mitigating professional burnout through systemic recognition, supportive working conditions, and robust career pathways (Darling-Hammond, 2017).
- **Policy Implementation:** Navigating complex policy shifts (e.g., implementing contemporary reforms like NEP 2020) requires translating macro mandates into practical classroom strategies.
- **Technology Integration:** Bridging digital divides and ensuring that educational technology serves as an accelerator for effective pedagogy rather than an administrative distraction (Selwyn, 2016).

Future Trends

The 21st-century educational landscape demands Digital Leadership—the strategic use of data analytics, virtual collaboration tools, and AI to optimize institutional processes. Furthermore, Globalized and Sustainable Leadership models are becoming essential (Hargreaves & Fink, 2006). These approaches emphasize culturally responsive education and robust succession planning to ensure long-term school resilience amidst an interconnected, rapidly changing global landscape.

7. Discussion: The comprehensive analysis of educational leadership presented in this study demonstrates that modern school leadership has evolved from simple bureaucratic management into a complex, multi-layered art of organizational transformation. The literature and theoretical frameworks reviewed indicate that relying on a single leadership style is insufficient for managing modern educational institutions. Instead, a dynamic integration of Instructional Leadership (Hallinger, 2011)—to protect academic standards—and Transformational Leadership (Bass & Avolio, 1994)—to cultivate a resilient, innovative institutional culture—is required. Furthermore, the data highlights that when leadership responsibilities are distributed rather than centralized, schools show significant improvements in teacher retention, morale, and collective efficacy (Spillane, 2012). The intersection of ethical governance, policy

compliance, and proactive community engagement forms the foundation upon which high-performing school cultures are built. Ultimately, addressing contemporary challenges like digital integration and resource scarcity depends directly on the strategic agility and emotional intelligence of school leaders.

8. Significance and Future Implications: This research article carries profound academic, practical, and systemic significance for the broader landscape of contemporary education:

- **For Institutional Advancement and School Principals:** This study serves as a strategic roadmap for school leaders and principals. It provides actionable insights into how balancing instructional and transformational leadership styles can improve school climate, elevate teacher retention, and maximize student learning outcomes.
- **For Policy Formulation and Educational Governance:** As educational systems transition through major reforms, this paper offers valuable perspectives for policymakers. It emphasizes the critical need to embed structured leadership training frameworks within national educational policies, shifting the administrative focus from mere compliance to visionary leadership.
- **For Professional Development Programs:** The insights within this paper can be directly utilized to design curriculum modules for leadership academies, B.Ed., and M.Ed. programs. It highlights the importance of mentoring, reflective practice, and digital literacy in preparing future-ready institutional heads.
- **For Academic Literature and Future Research:** This article enriches the existing body of educational research by synthesizing classic leadership theories with modern-day emerging trends like digital governance, sustainable leadership, and community collaboration.

9. Conclusion: Educational leadership is a dynamic, multi-dimensional, and deeply ethical framework that forms the backbone of institutional excellence and holistic student development. This study highlights that effective contemporary leaders must blend deep theoretical insights with adaptive practical strategies, bridging the gap between operational management and visionary transformation. By cultivating a positive school culture, championing data-driven instructional practices, prioritizing the continuous professional growth of educators, and embracing shared governance, leaders can successfully navigate modern socio-technological complexities. Investing in the ongoing professional development of school leaders is not just an administrative necessity, but a core requirement for building inclusive, future-ready, and high-performing learning organizations equipped for 21st-century demands.

10. References

- Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications.
- Bryk, A. S., & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. Russell Sage Foundation.
- Bush, T. (2020). *Theories of educational leadership and management* (5th ed.
- Darling-Hammond, L. (2017). *Empowered educators: How high-performing systems shape teaching quality around the world*. Jossey-Bass.
- DuFour, R. (2004). What is a "professional learning community"? *Educational Leadership*, 61(8), 6–11.

- Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed).
- Fiedler, F. E. (1967). *A theory of leadership effectiveness*. McGraw-Hill.
- Fullan, M. (2020). *Leading in a culture of change* (2nd ed).
- Hallinger, P. (2011). Leadership for learning: Lessons from 30 years of empirical research on instructional leadership. *International Journal of Leadership in Education*, 14(2), 125–142.
- Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. *Elementary School Journal*, 86(2), 217–247.
- Hargreaves, A., & Fink, D. (2006). *Sustainable leadership*. Jossey-Bass.
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge.
- Hersey, P., & Blanchard, K. H. (1988). *Management of organizational behavior: Utilizing human resources* (5th ed).
- Kotter, J. P. (2010). *Leading change*. Harvard Business Press.
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22.
- Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. ASCD.
- Northouse, P. G. (2021). *Leadership: Theory and practice* (9th ed).
- Selwyn, N. (2016). *Education and technology: Key issues and debates* (2nd ed).
- Sergiovanni, T. J. (2007). *Rethinking leadership: A collection of articles* (2nd ed).
- Spillane, J. P. (2012). *Distributed leadership* (1st ed).
- Starratt, R. J. (2004). *Ethical leadership*. Jossey-Bass.

A STUDY OF B.ED. AND M.ED. STUDENTS' PERCEPTIONS TOWARDS GOVERNMENT POLICIES ON INCLUSIVE EDUCATION

* **Sangeeta Babaso Mane**

Research Scholar, Department of Education, Shivaji University Kolhapur

Mobile number: - 7666138580, Email: - sangeetamane966@gmail.com

** **Dr. Chetna P. Sonkamble**

Head of Department, Department of Education, Shivaji University Kolhapur ,

Email- yaadni6@gmail.com

Abstract

Education is considered a powerful instrument of social transformation and in the modern era, education is no longer limited to the acquisition of knowledge; it emphasizes providing equal and just opportunities to all students. In this context, the concept of Inclusive Education has gained special importance. Inclusive education means providing quality education to all students within the same educational system without discrimination based on caste, gender, economic status, language, religion, or disability. Inclusive education has become an important part of educational reforms in India, especially under the Right of Children to Free and Compulsory Education Act, the National Education Policy 2020, and the global commitment to Sustainable Development Goal 4. Hence, the present study aims to examine the perceptions of B.Ed. and M.Ed. students towards government policies on inclusive education. The findings of this study will help in understanding the effectiveness of teacher education programs as well as the practical implementation of these policies.

Keywords: - Perceptions, Government Policies, Inclusive Education.

Introduction: -

Inclusive education is an educational concept that emphasizes providing equal learning opportunities to all students, including those with disabilities, from diverse socio-economic backgrounds, and from marginalized groups. At the global level, this concept has been strengthened by UNESCO through the Salamanca Statement (1994) and by the United Nations through the Sustainable Development Goals, especially SDG 4. In India, inclusive education has been promoted through laws and policies such as the Right of Children to Free and Compulsory Education Act (2009), Sarva Shiksha Abhiyan, the Rights of Persons with Disabilities Act (2016), and the National Education Policy (2020). The main objective of these initiatives is to create a barrier-free educational environment, provide equal opportunities for all learners, and increase every student's participation in mainstream classrooms.

However, the proper implementation of these policies depends largely on teachers' attitudes, awareness, skills, and training. B.Ed. and M.Ed. teacher education programs help in developing future teachers' understanding and preparedness for inclusive education. Therefore, the purpose of this study is to examine the understanding, attitudes, and

preparedness of B.Ed. and M.Ed. students regarding government policies on inclusive education. Following are the provisions.

- **Right of Children to Free and Compulsory Education Act (2009)**

The objective of Right to Children Compulsory to provide free and compulsory elementary education to all children aged 6–14 years. The provisions made for it is every child has the right to admission in a nearby school and no school can charge fees or capitation fees for admission and with no screening tests or admission interviews. Government and local authorities are responsible for establishing schools. Duties of teachers and schools are clearly defined.

- **Sarva Shiksha Abhiyan (SSA)**

The Objective of SSA is to universalize elementary education and ensure quality education for all children and the provisions are made Enrolling all children aged 6–14 years in schools. Special support for children with special needs (CWSN): Braille books, large-print books, assistive devices, therapy services. Teacher training, curriculum reforms, and scholarships for girls. In 2018, it was merged into Samagra Shiksha Abhiyan for integrated school education.

- **Rights of Persons with Disabilities Act (2016)**

The Objective for to ensure equal rights and opportunities for persons with disabilities. Education-related and the made are Provisions: Guarantee of inclusive education for children with disabilities. Schools and colleges must provide the necessary facilities for disabled students and Provision of assistive devices, special educators, and curriculum modifications. Reservation and support in higher education admissions.

National Education Policy (NEP 2020)

The Objectives for NEP 2020 is to transform the Indian education system into a more inclusive, flexible, and skill-based model and the provisions made are School Education: New 5+3+3+4 structure (Foundational, Preparatory, Middle, Secondary). Language Policy: Emphasis on mother tongue/regional language as medium of instruction. Higher Education: Multidisciplinary courses, Academic Credit Bank, flexibility in learning. Inclusivity: Special measures for disadvantaged and disabled students. Technology Use: Digital learning, online platforms. Goal: Achieve 100% Gross Enrollment Ratio by 2030.

Objectives of the Study

1. To study the awareness among B.Ed. and M.Ed. students regarding government policies on inclusive education.
2. To examine the perceptions and attitudes of B.Ed. and M.Ed. students towards inclusive education policies.

Hypotheses: -

1. There is no significant difference in the level of awareness of B.Ed. and M.Ed. students regarding government policies on inclusive education.
2. There is no significant difference in the perceptions and attitudes of B.Ed. and M.Ed. students towards inclusive education policies.

Sampling Method: -

At Aapasaheb Birnale Shikashanshastra Mahavidyalaya sangli, which is affiliated with Shivaji University, a total of 100 students are enrolled in the B.Ed. programme. For this research study, the researcher adopted the Simple Random Sampling method. The names of all 100 students were written on separate slips of paper and placed in a box. Fourty slips were then drawn randomly; accordingly, these 56 B.Ed. Students were selected as the study sample.

Methodology: -

The study adopts a descriptive research method. Primary data were gathered via structured questionnaires and surveys conducted among student teachers currently undergoing professional training.

Data Analysis: -

Table No. 1: I clearly understand the concept of inclusive education.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	14	25%
2	Agree	37	66.1%
3	Neutral	01	1.8%
4	Disagree	02	3.6%
5	Strongly Disagree	02	3.6%
Total		56	100%

Observation: -

The table represents the level of understanding among 56 respondents regarding the concept of inclusive education. 37 respondents (66.1%) agreed that they understood the concept. 14 respondents (25%) strongly agreed. A very small minority—4 respondents (7.2%) in total—either disagreed or strongly disagreed.

Only 1 respondent (1.8%) remained neutral.

Interpretation: -

When we combine the Strongly Agree and Agree categories, a massive 91.1% of the total participants claim to have a clear grasp of what inclusive education entails. This suggests that the majority of the group is well-informed or has been properly sensitized to the idea of teaching students with diverse needs in a shared classroom environment. The negligible percentage of disagreement (7.2%) indicates that the concept is not foreign to most of the subjects involved in this study.

Table No. 2: I clearly understand the concept of inclusive education.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	11	19.6%
2	Agree	37	66.1%
3	Neutral	01	1.8%
4	Disagree	02	3.6%
5	Strongly Disagree	05	8.9%
Total		56	100%

Observation: -

Table No. 2 shows the responses regarding the clarity of the concept of inclusive education among 56 participants. 37 respondents (66.1%) marked Agree. 11 respondents (19.6%) marked Strongly Agree. Together, 48 out of 56 people feel they understand the concept. On the other hand, 5 respondents (8.9%) strongly disagree, and 2 respondents (3.6%) disagree. Only 1 person (1.8%) is neutral.

Interpretation: -

The data shows that a significant majority- 85.7% (combined Agree and Strongly Agree) have a clear understanding of inclusive education. While this is a very high percentage, it is slightly lower than the previous data set, as the number of Strongly Disagree responses has risen to nearly 9%. This indicates that while most people are confident, there is a small, specific group that feels they lack clear conceptual knowledge.

Table No. 3: I am aware of the provisions related to inclusive education in the National Education Policy.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	18	33.3%
2	Agree	24	44.4%
3	Neutral	04	7.5%
4	Disagree	07	13%
5	Strongly Disagree	01	1.8%
Total		56	100%

Observation

Table No. 3 focuses on the respondents' awareness of the specific provisions for inclusive education mentioned in the National Education Policy (NEP). 24 respondents (44.4%) agree that they are aware. 18 respondents (33.3%) strongly agree. 4 respondents (7.5%) are neutral. 7 respondents (13%) disagree, and 1 respondent (1.8%) strongly disagrees.

Interpretation: -

A total of 77.7% (combined Agree and Strongly Agree) of the participants feel informed about the NEP's guidelines on inclusion. This shows a high level of professional awareness. However, when compared to the previous tables regarding the general concept of inclusion, the awareness of specific policy provisions is slightly lower. Around 14.8% of respondents admit they are not aware of these specific legal or policy details, which is a larger gap than seen in the basic conceptual understanding.

Table No. 4: I have knowledge about the Rights of Persons with Disabilities Act.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	14	25.5%
2	Agree	35	63.6%
3	Neutral	05	9.1%
4	Disagree	01	1.8%
5	Strongly Disagree	00	00%

Total	56	100%
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Observation

Table No. 4 details the respondents' knowledge regarding the Rights of Persons with Disabilities Act. 35 respondents (63.6%) marked Agree. 14 respondents (25.5%) marked Strongly Agree. 5 respondents (9.1%) remained Neutral. Only 1 respondent (1.8%) disagreed, and none (0%) strongly disagreed.

Interpretation: -

The data shows an overwhelmingly high level of legal awareness. A total of 89.1% of the participants (Combined Agree and Strongly Agree) state they are knowledgeable about the RPWD Act. Notably, there are zero Strongly Disagree responses, which suggests that almost everyone in the group has at least heard of or been exposed to this legislation. The 9.1% who are neutral might represent a group that knows the Act exists but isn't confident about its specific clauses.

Table No. 5: I am aware of the Right of Children to Free and Compulsory Education Act.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	08	14.3%
2	Agree	42	75%
3	Neutral	04	7.1%
4	Disagree	01	1.8%
5	Strongly Disagree	01	1.8%
Total		56	100%

Observation: -

Table No. 5 illustrates the respondents' awareness of the Right of Children to Free and Compulsory Education Act (RTE). 42 respondents (75%) agree that they are aware of the Act. 08 respondents (14.3%) Strongly Agree. 04 respondents (7.1%) remained Neutral. Only 02 respondents (3.6% combined) either Disagree or Strongly Disagree.

Interpretation: -

The data indicate an extremely high level of awareness regarding the RTE Act. By combining the positive responses, we see that 89.3% of the participants are familiar with this fundamental law. This is the highest Agree percentage (75%) seen across the tables so far, suggesting that while many Strongly Agree on other topics, the RTE Act is the most commonly recognized piece of legislation among the general group. The very low disagreement rate (3.6%) shows that almost the entire sample group acknowledges the legal right to free and compulsory education.

Table No. 6: I am aware of the inclusive education schemes under Samagra Shiksha Abhiyan.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	10	17.9%
2	Agree	38	67.9%
3	Neutral	05	8.9%

4	Disagree	02	3.6%
5	Strongly Disagree	01	1.8%
Total		56	100%

Observation: -

Table No. 6 presents the level of awareness among 56 respondents regarding the inclusive education schemes under Samagra Shiksha Abhiyan. 38 respondents (67.9%) agree that they are aware of these schemes. 10 respondents (17.9%) Strongly Agree. 05 respondents (8.9%) opted for the Neutral position. 03 respondents (5.4% combined) either Disagree or Strongly Disagree.

Interpretation: -

The data shows that a total of 85.8% of the respondents (Strongly Agree + Agree) have a good understanding of the specific schemes provided by the government through Samagra Shiksha Abhiyan. This suggests that the majority are not just aware of the laws (like RTE or RPWD), but also of the practical government programs designed to support inclusion. However, the 8.9% neutral response indicates that nearly one-tenth of the participants are aware of the name but might not be fully confident about the specific benefits or functioning of these schemes.

Table No. 7: Government policies promote inclusive education.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	16	28.6%
2	Agree	37	66.1%
3	Neutral	02	3.6%
4	Disagree	01	1.8%
5	Strongly Disagree	00	00%
Total		56	100%

Observation:

Table No. 7 reflects the respondents' opinions on whether government policies actually promote inclusive education. 37 respondents (66.1%) agree with this statement. 16 respondents (28.6%) Strongly Agree. 02 respondents (3.6%) are Neutral. Only 01 respondent (1.8%) Disagree, and none (0%) Strongly Disagree.

Interpretation: -

A massive 94.7% (combined Agree and Strongly Agree) of the participants believe that government policies are actively promoting inclusive education. This is one of the highest positive response rates in the entire study. It shows that the respondents don't just *know* about the policies (as seen in previous tables), but they also *believe* these policies are effective and supportive. The fact that 0% Strongly Disagree indicates a very high level of trust in the government's efforts toward inclusion.

Table No. 8: Inclusive education policies create equal opportunities for all students.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	20	35.7%
2	Agree	31	55.4%
3	Neutral	05	8.9%
4	Disagree	00	00%
5	Strongly Disagree	00	00%
Total		56	100%

Observation: -

Table No. 8 shows the respondents' views on whether inclusive education policies create equal opportunities for all students. 31 respondents (55.4%) agree with this statement. 20 respondents (35.7%) Strongly Agree. 05 respondents (8.9%) are Neutral. Zero respondents (0%) Disagree or Strongly Disagree.

Interpretation: -

The data shows an overwhelmingly positive outlook. A total of 91.1% (combined Strongly Agree and Agree) of the participants believe that these policies ensure equality in the classroom. Most importantly, not a single person (0%) expressed disagreement. This indicates a unanimous belief that inclusive education is a fair system. The 8.9% who are neutral might be waiting to see more long-term results of these policies in practice.

Table No. 9: Policies provide opportunities for students with disabilities to learn in mainstream classrooms.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	19	33.9%
2	Agree	31	55.4%
3	Neutral	03	5.4%
4	Disagree	01	1.8%
5	Strongly Disagree	02	3.6%
Total		56	100%

Observation: -

Table No. 9 displays the opinions of 56 respondents regarding whether policies successfully provide opportunities for students with disabilities to learn in mainstream classrooms. 31 respondents (55.4%) agree. 19 respondents (33.9%) Strongly Agree. 03 respondents (5.4%) are Neutral. 03 respondents (5.4% combined) either Disagree or Strongly Disagree.

Interpretation: -

The data shows that a high majority—89.3% (combined Strongly Agree and Agree)—believe that current policies are effective in opening the doors of regular, mainstream classrooms to students with disabilities. This suggests that the transition from special schools to inclusive schools is being viewed as a practical reality by most participants. However, about 5.4% of respondents expressed disagreement, which may indicate that in some specific areas, the physical or academic infrastructure for mainstreaming might still be facing challenges.

Table No. 10: Adequate facilities are available for the implementation of these policies.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	20	35.7%
2	Agree	34	60.7%
3	Neutral	01	1.8%
4	Disagree	01	1.8%
5	Strongly Disagree	00	00%
Total		56	100%

Observation: -

Table No. 10 presents the respondents' views on whether adequate facilities (such as infrastructure, tools, or resources) are available to implement inclusive education policies. 34 respondents (60.7%) agree that facilities are adequate. 20 respondents (35.7%) Strongly Agree. 01 respondent (1.8%) is Neutral. Only 01 respondent (1.8%) Disagree, and none (0%) Strongly Disagree.

Interpretation: -

The data shows an exceptionally high level of satisfaction regarding resources. A total of 96.4% (combined Strongly Agree and Agree) of the participants believe that the necessary facilities are available for these policies to work. This is the highest positive rating across all the tables provided so far. It suggests that, in the view of these 56 respondents, the schools or institutions they are associated with are well-equipped with the physical and educational tools needed for inclusion.

Table No. 11: Inclusive education policies promote social justice.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	22	39.3%
2	Agree	30	53.6%
3	Neutral	02	3.6%
4	Disagree	02	3.6%
5	Strongly Disagree	00	00%
Total		56	100%

Observation

Table No. 11 illustrates the respondents' opinions on whether inclusive education policies promote social justice. 30 respondents (53.6%) marked Agree. 22 respondents (39.3%) marked Strongly Agree. 02 respondents (3.6%) remained Neutral. 02 respondents (3.6%) "Disagree," and none (0%) Strongly Disagree.

Interpretation:-

The data shows a very strong belief in the ethical impact of these policies. A total of 92.9% (combined Strongly Agree and Agree) of the participants believe that inclusive education is a driver for social justice. The percentage of Strongly Agree"(39.3%) is one of the highest in your survey, suggesting that respondents feel deeply that these policies help create a fairer and equitable society. Only a tiny fraction (3.6%) expressed doubt or disagreement.

Table No. 12: I am aware of the teaching skills required for inclusive education.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	18	32.1%
2	Agree	33	58.9%
3	Neutral	03	5.4%
4	Disagree	01	1.8%
5	Strongly Disagree	01	1.8%
Total		56	100%

Observation

Table No. 12 shows the self-assessment of 56 respondents regarding their awareness of the teaching skills needed for inclusive education. 33 respondents (58.9%) agree that they are aware of these skills. 18 respondents (32.1%) Strongly Agree. 03 respondents (5.4%) are Neutral. 02 respondents (3.6% combined) either Disagree or Strongly Disagree.

Interpretation:-

The data indicates that a vast majority—91% (combined Strongly Agree and Agree)—feel confident in their knowledge of the specific teaching methodologies required for an inclusive classroom (such as differentiated instruction or adaptive teaching). This high percentage suggests that the respondents have likely received some form of teacher training or professional development. While the conceptual awareness is high, the small percentage of neutral and negative responses (9%) reminds us that a few individuals may still feel unprepared for the practical demands of a diverse classroom.

Table No. 13: Teachers need more training regarding inclusive education.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	31	56.4%
2	Agree	20	36.4%
3	Neutral	02	3.6%
4	Disagree	02	3.6%
5	Strongly Disagree	00	00%
Total		56	100%

Observation

Table No. 13 highlights the respondents' views on the necessity of further training for teachers regarding inclusive education. 31 respondents (56.4%) Strongly Agree that more training is needed. 20 respondents (36.4%) agree. 02 respondents (3.6%) are Neutral. 02 respondents (3.6%) Disagree, while none (0%) Strongly Disagree.

Interpretation:-

This table shows a very strong demand for professional development. A total of 92.8% (combined Strongly Agree and Agree) of the participants believe that teachers require more training. Interestingly, the Strongly Agree category (56.4%) is significantly higher here than in previous tables. Even though the respondents in Table 12 felt they had the skills, they clearly believe that continuous training is essential to keep up with the complexities of inclusive classrooms.

Table No. 14: Training workshops are useful for understanding inclusive education.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	17	30.4%
2	Agree	37	66.1%
3	Neutral	02	3.6%
4	Disagree	00	00%
5	Strongly Disagree	00	00%
Total		56	100%

Observation

Table No. 14 explores the respondents' opinions on the utility of training workshops for understanding inclusive education. 37 respondents (66.1%) agree that workshops are useful. 17 respondents (30.4%) Strongly Agree. 02 respondents (3.6%) are Neutral. Zero respondents (0%) Disagree or Strongly Disagree.

Interpretation:-

The data shows a nearly unanimous positive response. A combined 96.5% of participants believe that workshops are a beneficial tool for learning. Significantly, not a single person disagreed with this statement. This suggests that the group values practical, collaborative learning environments (workshops) over just reading policy documents or theoretical textbooks. This result directly supports the finding from Table 13, where respondents asked for more training.

Table No. 15: Schools receive adequate support from the government for the effective implementation of inclusive education policies.

Sr. No	Option	Frequency	Percentage
1	Strongly Agree	23	41.1%
2	Agree	28	50%
3	Neutral	03	5.4%
4	Disagree	01	1.8%
5	Strongly Disagree	01	1.8%
Total		56	100%

Observation

Table No. 15 illustrates the respondents' views on whether schools receive adequate support from the government to implement inclusive education policies effectively. 28 respondents (50%) marked Agree. 23 respondents (41.1%) marked Strongly Agree. 03 respondents (5.4%) remained Neutral. Only 02 respondents (3.6% combined) either Disagree or Strongly Disagree.

Interpretation:-

The data shows a very high level of satisfaction with government assistance. A total of 91.1% of the participants believe that the government is providing enough help to schools. This is a very positive sign, as it suggests that the policies are not just on paper, but are backed by actual support (which could include funding, teaching aids, or administrative guidance). The

high "Strongly Agree" percentage (41.1%) indicates that almost half of the group feels the government's role is very strong and visible.

Finding: -

1. The primary finding is that there is a high level of awareness and conceptual clarity regarding inclusive education among the respondents and the vast majority feel confident in their understanding, which provides a strong foundation for implementing inclusive practices in a real-world setting.
2. The major finding is that the bulk of the respondents (85.7%) possess a good grasp of inclusive education and there is a small gap in understanding for about 12.5% of the group (those who disagree or strongly disagree), suggesting that some targeted orientation or training might still be necessary for a few individuals.
3. The finding indicates that while the majority of the respondents are familiar with NEP provisions, there is a notable group (nearly 15%) that lacks specific knowledge about the policy. Which highlights a need for more detailed workshops or study sessions specifically focused on the legal and policy-level frameworks of the National Education Policy.
4. The main finding is that there is an excellent legal literacy among the respondents concerning disability rights. Since nearly 9 out of 10 participants are aware of the RPWD Act, the group is well-positioned to uphold the legal rights of students with disabilities in an educational environment.
5. The finding reveals that awareness of the RTE Act is widespread and solid among the respondents and this high level of legal literacy ensures that the majority of the participants understand the mandatory nature of providing education to all children, which is a critical pillar for successful inclusive education.
6. The finding reveals that most respondents are well-informed about government-led inclusive education schemes and over 85% show awareness, it indicates that information regarding Samagra Shiksha Abhiyan has reached the grassroots level effectively. To reach 100% awareness, more focus could be placed on the 14% who are either neutral or unaware of these specific financial and educational supports.
7. The finding reveals a very high level of confidence and trust in government policies. Nearly 95% of the respondents feel that the existing legal and educational frameworks are successful in promoting the cause of inclusive education, and it is seen that a positive perception is crucial for the successful implementation of such policies at the ground level.
8. The finding reveals a strong consensus that inclusive education is a tool for social justice and equality and over 91% of respondents see these policies as a way to provide equal opportunities, it shows that the core philosophy of "education for all" is deeply accepted by the group.
9. The finding indicates that mainstream education for disabled students is widely supported and recognized as a policy-driven opportunity. Nearly 9 out of 10 respondents agree that the system allows for integration, which is a very positive sign for the future of social and academic inclusion.

10. The finding reveals that infrastructure and facilities are not seen as a barrier by the vast majority of the respondents. With over 96% agreement, it is clear that the respondents feel the "ground reality" matches the "policy goals," and the necessary support systems are in place to make inclusive education a success.

11. The finding reveals that the vast majority of respondents view inclusive education as a moral and social success and beyond just academic learning, the policies are seen as a way to provide justice to marginalized groups and ensure that every student is treated with dignity and fairness.

12. The finding reveals that the respondents have a high level of self-perceived professional competence and Over 90% of the group claims to understand the necessary teaching skills, which is a vital prerequisite for the successful day-to-day implementation of inclusive education policies.

13. The major finding is a strong and urgent demand for teacher training programs and despite having basic knowledge, the vast majority of respondents recognize that inclusive education is an evolving field that requires ongoing workshops, seminars, and practical training sessions to be truly successful.

14. The finding clearly indicates that workshops are perceived as the most effective method for professional development and since there is zero disagreement, the study proves that organizing more hands-on training sessions is the best way to ensure that educators successfully adopt and understand inclusive education practices.

15. The main finding is that government support is seen as effective and sufficient by the vast majority of educators and stakeholders and this perceived support is a key reason why the implementation of inclusive education is viewed as successful in this study. It confirms that schools do not feel "left alone" in the process of adapting to inclusive standards.

Conclusion

This study highlights that while B.Ed. and M.Ed. students recognize the importance of government policies and NEP 2020 in shaping inclusive education, their perceptions differ in depth and critical engagement. B.Ed. Students tend to focus on immediate classroom challenges, whereas M.Ed. students analyze broader systemic issues and policy implications. Both groups agree that NEP 2020 is a transformative framework, but effective implementation requires stronger institutional support, practical training, and continuous professional development. The findings suggest that teacher education curricula must be redesigned to bridge the gap between policy and practice. By integrating inclusive pedagogy, ICT training, and research orientation, B.Ed. and M.Ed. programs can prepare future educators to act as agents of change in achieving the vision of NEP 2020 and global commitments under SDG 4.

References: -

- Ainscow, M. (2020). *Promoting inclusion and equity in education: Lessons from international experiences*. *Nordic Journal of Studies in Educational Policy*,
- Booth, T., & Ainscow, M. (2011). *Index for inclusion: Developing learning and participation in schools*. Bristol: Centre for Studies on Inclusive Education.
- Florian, L., & Black-Hawkins, K. (2011). *Exploring inclusive pedagogy*. *British Educational Research Journal*, 37(5), 813–828.

- Government of India. (2009). *Right of Children to Free and Compulsory Education Act, 2009*. New Delhi: Ministry of Law and Justice.
- Government of India. (2016). *Rights of Persons with Disabilities Act, 2016*. New Delhi: Ministry of Social Justice and Empowerment.
- Government of India. (2020). *National Education Policy 2020*. New Delhi: Ministry of Education.
- Government of India. (2018). *Samagra Shiksha Abhiyan Framework for Implementation*. New Delhi: Ministry of Education.
- Sharma, U., & Deppeler, J. (2019). Inclusive education in India: Challenges and prospects. *International Journal of Inclusive Education*, 23(5), 506–522.
- Singal, N. (2014). Inclusive education in India: International concept, national interpretation. *International Journal of Disability, Development and Education*, 61(3), 272–287.
- UNESCO. (2017). *A guide for ensuring inclusion and equity in education*. Paris: UNESCO Publishing.
- UNESCO. (2020). *Global Education Monitoring Report: Inclusion and education – All means all*. Paris: UNESCO Publishing.
- UNICEF. (2019). *Inclusive education: Every child learns*. New York: UNICEF.
- Forlin, C. (2013). *Future directions for inclusive teacher education: An international perspective*. Routledge.
- Loreman, T. (2017). *Pedagogy for inclusive education*. Oxford Research Encyclopedia of Education.
- Mitra, S. (2018). Disability, education and inclusive development in India. *Disability & Society*, 33(3), 454–474.
- Narayan, J., & Prasad, J. (2021). Legal literacy and disability rights in India: A review. *Indian Journal of Social Work*, 82(2), 145–162.
- Rao, S. (2019). Teachers' perceptions of inclusive education in India. *International Journal of Inclusive Education*, 23(12), 1323–1338.
- Rose, R., & Garner, P. (2012). *Inclusive education in the mainstream classroom*. London: Routledge.
- Thomas, E., & Subramanian, A. (2020). Policy perspectives on inclusive education in India. *Journal of Education Policy*, 35(4), 567–582.
- World Bank. (2021). *Inclusive education in South Asia: Policies, practices, and progress*. Washington, DC: World Bank Publications.

INNOVATIVE TEACHING LEARNING STRATEGIES FOR PROMOTING INCLUSIVE EDUCATION IN DIVERSE CONTEXT: A STUDY

Smt.Sanjana Sanjay Bhalkar

Department of Education, Shivaji University, Kolhapur, Maharashtra

Email-sanjanabhalkar12@gmail.com

Abstract

Inclusive Education is an educational approach that ensures all students, regardless of their abilities, backgrounds, or disabilities, learn together in the same classrooms. It promotes equal access to quality education by removing barriers and providing necessary accommodations to support diverse learning needs. An example of Inclusive Education is Finland's education system. Finland has successfully integrated students with disabilities into mainstream schools by providing personalised support, co-teaching models, and flexible learning methods. This approach has led to improved student engagement and academic success. The present research of innovative teaching learning strategies for promoting inclusive education benefits all students, not just those with diverse learning needs. By encouraging a variety of teaching methods and learning strategies, students learn to appreciate different perspectives enhancing their understanding and knowledge. In an inclusive classroom, children with and without disabilities learn side by side. This helps build a sense of belonging and teaches respect for individual differences. It encourages children to support one another, making friendships based on empathy and understanding. This experience benefits all learners, enabling them to develop social, emotional and cognitive strategies in a natural, collaborative setting. One of the key benefits of inclusive education is that helps children develop real world skills such as cooperation, communication and conflict resolution. These strategies are not only essential for academic success but also form the foundation for strong character and responsible citizenship. By learning from each other's strengths and challenges, children develop a deeper appreciation for diversity and become more inclusive in their attitude as they grow.

Keywords:- Innovative, Teaching Learning Strategies, Inclusive Education

Introduction :- Human beings, by nature, have considerable misgivings about others who appear to diverge significantly from them in one or more personality characteristics, regardless of whether these differences are bad or favourable. So, from the time immemorial, the exceptional children have a long history of being intimidated, harassed, isolated and segregated from the mainstream of the society. The roots of earlier special education efforts, such as placing exceptional children in residential institutions, special schools, and special classes, can thus be traced and seen as a repetition and reminder of earlier practices of isolation, segregation, and separation, which were prevalent in most societies for the care and education of exceptional or disabled children. The concept of inclusive education represents the latest trend in the provision of placement or alternative programs suggested in the field of education to the exceptional and disabled children. It runs against to the principles and philosophy of institutionalization, separation, or segregation, which were developed to meet the needs of

constructing institutions and special schools for the care and teaching of children with special needs. Inclusive education is achieved by enrolling all of society's children in the same school. Here the school has to experience changes to include all of its students to be a part of it. So, inclusive education is the act of ensuring all children, regardless of their differences, have the opportunity to be in the same classroom as other children of their age and, as a result, have the best possible exposure to the curriculum. Inclusion has emerged as an educational reform in the education of children with disabilities that gained momentum since 1994. The concept of inclusive education conveys the message 'every one belongs to the school and that everyone is welcome to the school.

Objectives of the study:-

- 1.To study the inclusive education and National Education Policy 2020.
- 2.To study the innovative teaching learning strategies used in inclusive education.
- 3.To study the impact of teaching learning strategies on students in an inclusive classroom.

Importance of the study:- Present study important for Teacher ,students ,educators ,Researchers for clear the concept of Innovative Teaching Learning Strategies for Promoting Inclusive Education in Diverse Context.

Delimitations of the study:- Present study delimited only Innovative Teaching Learning strategies and inclusive education.

Research methodology:- For the Present study researcher used by verified documentations and qualitative method for appropriate to achieve the objectives of the study.

Analytical Interpretation:-

Inclusive Education

Inclusive education strategies refer to the different strategies and techniques to meet the diversity of children's needs and abilities- including differences in their ways and pace of learning. Inclusive practices involve collaborative team work, a shared frame work, family involvement, regular educator ownership, clear role relationship among paraprofessionals, effective use of support staff, meaningful individualized educational plans ,Activity based learning ,project based learning and procedure for evaluating effectiveness. The Indian Constitution guarantees equality, freedom, justice, and dignity to all individuals and mandates an inclusive society that comprises people with disabilities. An inclusive school aims to meet everyone's educational needs by having them supported by their peers and other members of the school community. The importance of inclusive education can be clearly evident through its benefits to students, teachers and the society at large.

Why is inclusive education important?

- It improves learning for all children – both those with and without disabilities.
- It promotes understanding, reduces prejudice and strengthens social integration
- It ensures that children with disabilities are equipped to work and contribute economically and socially to their communities.

National Education Policy (NEP), 2020

NEP 2020 continues to strengthen India's focus on fostering inclusive and equitable education. It stresses "no child should be left behind" and underscores the need for prompt identification

and intervention for children with learning challenges and disabilities (Ministry of Education, 2020).

The major points concerning inclusion as per NEP 2020 are:

- Establishing Resource Centre's on Inclusive Education.
- Teaching inclusivity to educators as part of their Professional Development Programs.
- Inclusivity supportive assistive devices, adaptive technologies, and other methods of interface.
- Flexibility in curriculum and assessment frameworks, as well as guided, multi-faceted, and layered learning strategies.
- Multilingual pedagogies designed to enhance accessibility.

In addition, NEP 2020 promotes the strategy of "learning how to learn", which is tailored to learners with diverse needs, especially through exploration and discovery approaches (Kumar, 2021).

This policy put together strengthen the students' right to inclusive education policy that are meant to be central, interwoven deeply, fundamentally oriented around India's aspirations for education in the 21st century.

The Innovative Teaching Learning Strategies used in Inclusive Education

1. Experiential learning :- Experiential learning is a pedagogical approach in which individuals learn by engaging with real-world scenarios, followed by a cycle of reflection, conceptualizing what they learned, and applying it in relevant contexts. The concept stems from the premise that knowledge creation occurs in the interaction of social situations and the physical environment (Kolb, 1984; Taneja & Pathak, 2022).

In Kolb's theoretical approach, learning does not depend on passive reception and rote memorization students perform active, inquiry-based tasks, interact, collaborate, and solve problems in a way that resembles real life. Common practices of experiential learning include project-based learning, simulation activities, field missions, role-playing, community service, and hands-on experiments (Singh, 2021).

The impact of Experiential learning strategies

- **Diverse Learning Styles:** Methods like role-plays, model building, and experiments accommodate various learners, making education more equitable.
- **Enhanced Peer Interaction:** Collaborative activities such as group projects foster communication and acceptance, improving social dynamics for students with special needs.
- **Active Engagement & Reflection:** The focus is on "learning by doing" and analyzing experiences, which helps build deeper knowledge rather than relying on rote memorization.

2. Social /Emotional learning :- Social Emotional Learning is where schools integrate social and emotional skills into their academic programs. Alongside developing students academically, educational programs also seek to develop students socially and emotionally as essential skills for students to succeed in personal life, academic study, and future career. While social skills should be taught to help students develop essential skills, such as positive friendship skills, social values, and empathy, emotional development helps students to

understand feelings, develop emotional awareness and coping skills, and to understand and manage anger.

The impact of Social /Emotional learning strategies

- **Systematic Implementation:** Involves school-level approaches, universal classroom instruction, and targeted support for students with specific emotional needs.
 - **Classroom Culture:** Nurturing an empathetic atmosphere where diversity is appreciated, and students feel safe to take risks and learn from mistakes.
 - **Inclusive Pedagogy:** Adapting curriculum and teaching methods to ensure every student feels valued, understood, and capable of participating.
 - **Core Competencies :-** Social awareness, self-awareness, relationship building and management and responsible for decision making.
- **3.Flexible Assessment:-** Flexible assessment in inclusive education is a student centered approach that allows students to demonstrate knowledge and understanding in diverse ways to their individual leaning ,understanding capacity.

The impact of Flexible evaluation strategies:-

- **Choice based Assessment:-** Allowing students to chose how they demonstrate learning. eg. Oral, Written, Video, Activity or project based.
- **Formative & Diverse Methods:** Utilizing portfolios, self-reflections, teacher observations, and collaborative assessments instead of traditional exams.
- **Customized Timing and Setting:** Adjusting deadlines, extending time limits, and modifying the testing environment to accommodate individual needs.

4.Multisensory teaching methods:- This is multisensory learning in action a powerful approach that combines visual, auditory tactile and kinaesthetic simultaneously to enhance learning and comprehension for diverse learners.

- **Visual:** Learning through seeing. This includes using pictures, charts, videos, and written text.
- **Auditory:** Learning through hearing. This involves listening to explanations, music, rhymes, and discussions.
- **Tactile:** Learning through touch. This includes hands-on activities like building with blocks, molding clay, or feeling different textures.
- **Kinaesthetic:** Learning through movement. This involves using the whole body, such as through games, dancing, or role-playing.

The impact of Multisensory teaching methods strategies:-

- **Developing Memory and Retention:** Engaging multiple senses creates stronger pathways, making information easier to store and recall.
- **Increased Engagement and Motivation:** These methods turn passive learning into hands-on, interactive experiences that boost motivation.
- **Support for Diverse Learners:** Multisensory techniques are effective for students with special needs and learning differences, making abstract concepts concrete.
- **Reduced Learning Anxiety:** By providing varied ways to understand material, students feel less pressure, reducing anxiety and increasing confidence.

5.Responsive Teaching for cultural diversity:- cultural diversity responsive teaching in inclusive education is a student-centered approach that validates, affirms, and integrates students' diverse cultural backgrounds, languages, and experiences into the curriculum to foster equity, engagement, and belonging.

The impact of Responsive Teaching for cultural diversity strategies:-

- Build Relationships :- Know students background ,learning style and interest through conversations.
- Create inclusive environment :-Set a welcoming tone by learning to pronounce every students name correctly and feel safe sharing their experiences and create a good environment.
- Cultural assets :-Incorporate diverse literature ,perspectives and materials that reflects students background. And use use various types of teaching methods to understand all types of learners.

6.Using Information Communication Technology:-

Removes barriers for students with special needs, offering tailored, accessible, and engaging learning experiences. ICT can facilitate early intervention and inclusion person with disability UNESCO, 2006.Accessible ICT support system can enable realization and implementation of inclusive education. It facilitates virtual communities and communities practice. ICT in inclusive classroom opens door to lifelong learning.

The impact of Using Information Communication Technology strategies:-

- Accessibility: ICT enables students with visual, hearing, motor, or cognitive impairments to access curriculum materials, such as through audiobooks, screen magnification, or eye-tracking systems.
- Personalized Learning: Technologies like intelligent tutoring systems and adaptive learning software allow for customized pacing and content tailored to individual learner needs.
- Communication & Interaction: Alternative and Augmentative Communication tools, including speech-generating devices and apps, help students with speech impairments interact with teachers and peers.
- Engagement: virtual reality and digital, interactive media make learning more engaging and accessible for students with diverse needs.

7.Activity Based Learning:- Activity Based Learning is a teaching approach that emphasizes learning by doing rather than passive absorption of information. It encourages students to actively engage in activities like problem-solving, discussions, projects, and hands-on experiments, fostering creativity and critical thinking. Unlike traditional methods that focus on rote memorization, ABL ensures that students understand and apply concepts practically.

The impact of Activity Based Learning strategies:-

- Active Participation: Replaces traditional lectures with experiential, hands-on activities, projects, and experiments.
- Personalized Pace: Students, including those with special needs, can often work through structured at their own speed.

- Individualized Support: Encourages self-learning and peer-to-peer learning, allowing teachers to act as facilitators rather than sole sources of information.
- Diverse Methodologies: Incorporates visual, auditory, activities like flashcards, role-playing, and field trips to accommodate varied types of learners.
- Enhanced Engagement: Promotes critical thinking, problem-solving, and social skills through collaboration, reducing behavioural issues often found in traditional, lecture-based classrooms.

Conclusion:-

Inclusive Education is more than just integrating students with special needs into mainstream classrooms; it's about creating an equitable, diverse, and welcoming learning environment for all. Schools that embrace inclusivity help shape future generations that value diversity, equity, and mutual respect. By implementing Inclusive Education, we take a significant step toward a fairer and more just society.

- Children with disabilities demonstrate high level of social interaction with nondisabled peers in an inclusive setting compared to segregated settings.
- Children with diverse abilities improve their social competence and communication skills in an inclusive setting.
- Children with disabilities in inclusive settings often have more vigorous educational program resulting in improved skill acquisition and academic gains
- Normal children get benefit from improved instructional technologies in the classroom, as, children with diverse abilities will require the use of technology to help them learn and hence these can be utilized by the normal children when they are not required by the differentially abled children.
- All children are enriched by the opportunity in which they learn and care for each other and hence gain the right attitudes, skills and values needed for community living.
- Inclusive education promotes the social value of equality.
- Inclusive setting lead to independent thoughts, positive competency and improved self esteem.

Inclusive education classroom help every child safe, respected and understood. This environment allows students to develop confidence and believe in their abilities. They feel encouraged to express themselves to ask questions and to take ownership of their learning.

Recommendations of the study:-

- Commit all government departments to work towards inclusion
- Introduce laws and policies to end discrimination and guarantee the right to inclusive education.
- Make a plan of action and timetable for introducing inclusive education.
- Make money and resources available to enable the transition to inclusion.
- Collect information and measure progress ✓ Bring an end to institutions for children with disabilities.
- Provide early childhood care and education.
- Provide teacher training for inclusive education.

- Introduce inclusive testing and assessment.
- Introduce complaints procedures.

The need of the hour is for teachers, from inclusive education to apex levels, to switch from conventional to modern teaching methods. Learners should not be mere passive participants but active ones. The best teaching principles should be adopted to make teaching student-centred and goal-oriented. Without the proper intervention of teachers, the dream of NEP 2020 is unachievable.

References:-

OERDoc_768_32904_11_08_2021.pdf

<https://www.theoasisdoon.com/activity-based-learning/>

mybrightwheel.com

<https://icert.org.in/index.php/2025/11/21/learning-by-doing-learning-for-all-integrating-experiential-methods-in-inclusive-education/>

[://novapublishers.com/social-and-emotional-learning-sel-for-inclusive-education/](https://novapublishers.com/social-and-emotional-learning-sel-for-inclusive-education/)

https://www.unicef.org/eca/sites/unicef.org.eca/files/IE_summary_accessible_220917_brief.pdf

<https://oxford-review.com/the-oxford-review-dei-diversity-equity-and-inclusion-dictionary/inclusive-education-definition-and-explanation/>

<https://balrakshabharat.org/blog/education/how-inclusive-education-empowers-every-child-to-grow/>

CRITICAL ANALYSIS OF NATIONAL EDUCATION POLICY (NEP) 2020 WITH REFERENCE TO INCLUSIVE EDUCATION

Smt.Saraswati Avinash Kamble

Department of Education,Kolhapur

Dr.Supriya Krishna Patil

Department of Education,Kolhapur

Smt.Sarika Sujit Patil

Department of Education,Kolhapur

Abstract

Inclusive education has emerged as a central global commitment, particularly under Sustainable Development Goal 4 (SDG-4), which emphasizes equitable and quality education for all. India's National Education Policy (NEP) 2020 presents an ambitious roadmap to transform the education system by embedding principles of equity, access, and inclusion. This paper critically analyses NEP 2020 with specific reference to inclusive education. The study adopts a qualitative policy analysis approach using secondary sources such as policy documents, government reports, and scholarly literature. The analysis reveals that NEP 2020 demonstrates strong conceptual alignment with inclusive education through its focus on Socio-Economically Disadvantaged Groups (SEDGs), the Gender Inclusion Fund, Special Education Zones, flexible curricula, and teacher capacity building. The policy recognizes education as a tool for social justice and aims to reduce disparities in access and participation.

However, the paper identifies significant implementation challenges, including digital divide, inadequate teacher preparation, infrastructural gaps, and risks of increased privatization. While the policy's vision is progressive and aligned with global frameworks, its success depends heavily on financial commitment, inter-sectoral coordination, and robust monitoring mechanisms. The study concludes that NEP 2020 has strong transformative potential for inclusive education in India but requires systemic strengthening and context-sensitive implementation strategies to realize SDG-4 targets. The paper offers recommendations for policy makers, teacher educators, and institutions to enhance the inclusive impact of NEP 2020.

Keywords: Educational Policy, NEP 2020, Inclusive Education, Equity, SDG-4,

Introduction

Education is universally acknowledged as a fundamental human right and a powerful instrument for social transformation and national development. It plays a crucial role in promoting equality, reducing poverty, and empowering individuals to participate fully in social, economic, and political life. In contemporary educational discourse, the focus has gradually shifted from merely expanding access to education toward ensuring equitable, inclusive, and quality learning opportunities for all individuals. This shift reflects the growing

recognition that education systems must respond to the diverse needs of learners in increasingly pluralistic societies.

In the 21st century, global educational reforms are strongly influenced by the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015. Among these goals, SDG-4 specifically emphasizes the need to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The goal highlights that education should not only reach every child but should also be meaningful, inclusive, and empowering.

India, with one of the largest education systems in the world, has made significant progress in expanding access to schooling in the past few decades. Policies such as the Right to Education Act (2009) and initiatives like Sarva Shiksha Abhiyan have improved enrolment rates and school infrastructure. However, despite these achievements, the Indian education system continues to face deep structural inequalities. Disparities persist along multiple axes such as caste, gender, disability, language, geographical location, and socio-economic status. Children from marginalized communities, including Scheduled Castes (SC), Scheduled Tribes (ST), minority groups, rural populations, and children with disabilities, often face barriers in accessing and benefiting from quality education.

Recognizing the need for comprehensive educational reform, the Government of India introduced the National Education Policy (NEP) 2020, replacing the earlier policy of 1986 (revised in 1992). NEP 2020 represents the first major educational reform in more than three decades and aims to transform India's education system into a more flexible, multidisciplinary, inclusive, and learner-centered framework. The policy explicitly acknowledges education as "the single greatest tool for achieving social justice and equality."

The concept of inclusive education within the Indian context extends beyond the traditional understanding of disability inclusion. It encompasses a broader commitment to ensuring that all learners, particularly those belonging to marginalized and disadvantaged groups, have equal opportunities to access, participate in, and benefit from education. NEP 2020 attempts to address long-standing inequalities through structural reforms, curriculum redesign, improved teacher education, and targeted support mechanisms for disadvantaged groups.

However, while the policy presents a progressive and comprehensive vision, concerns remain regarding its implementation and the extent to which it can effectively address deeply entrenched inequalities. Policy aspirations often encounter challenges when translated into practice due to issues such as limited resources, administrative constraints, and varying capacities across states.

Against this background, the present paper critically examines the provisions of NEP 2020 through the lens of inclusive education, with particular attention to its alignment with the goals of SDG-4.

Inclusive Education

Inclusive education refers to an educational approach that ensures all learners, regardless of their individual differences, learn together within a common educational environment. It emphasizes the removal of barriers that prevent students from accessing and participating fully

in educational processes. Rather than treating diversity as a problem, inclusive education recognizes diversity as a valuable resource that enriches the learning experience.

The concept emerged from global movements advocating the rights of marginalized populations, particularly children with disabilities. International declarations such as the Salamanca Statement (1994) emphasized that regular schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic, or other conditions.

In contemporary educational theory, inclusive education extends beyond disability to encompass all forms of marginalization and exclusion. Learners may experience disadvantage due to poverty, gender discrimination, caste hierarchy, linguistic differences, migration status, or geographical isolation. Inclusive education therefore seeks to create an education system that is responsive to the needs of diverse learners.

The key dimensions of inclusive education include:

1. Access-Access refers to the opportunity for all learners to enroll in educational institutions without discrimination. Ensuring access involves removing physical, financial, social, and institutional barriers that prevent marginalized children from attending school.

2. Participation-Participation goes beyond enrolment and involves meaningful engagement in classroom activities, learning processes, and school life. Inclusive classrooms ensure that all learners feel welcomed, respected, and supported.

3. Achievement-Inclusive education aims to improve learning outcomes for all students by providing appropriate pedagogical strategies, individualized support, and differentiated instruction.

4. Equity-Equity emphasizes fairness in the distribution of educational resources and opportunities. It recognizes that some learners require additional support in order to achieve similar outcomes.

Importantly, inclusive education is not merely about placing diverse learners in the same classroom. Instead, it requires transforming school culture, curriculum, teaching methods, and assessment systems to accommodate diversity.

SDG-4 and Inclusion

The Sustainable Development Goals (SDGs) represent a global agenda for sustainable development adopted by the United Nations in 2015. Among the seventeen goals, SDG-4 focuses on education and highlights the need for inclusive, equitable, and quality education systems.

The central objective of SDG-4 is to “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”

This goal reflects the recognition that education is a fundamental driver of sustainable development and social progress.

SDG-4 incorporates following several key principles related to inclusion:

1. Universal Access-All children and youth should have access to free, equitable, and quality primary and secondary education.

2. Equity and Inclusion-Education systems must address inequalities and ensure that marginalized populations receive adequate support.

3. Lifelong Learning-Learning opportunities should extend beyond formal schooling and continue throughout life.

4. Quality Education-Education should equip learners with relevant skills, competencies, and knowledge needed for the modern world.

5. Gender Equality-Educational systems must eliminate gender disparities and empower girls and women.

For countries like India, achieving SDG-4 requires significant reforms to ensure that the education system becomes more inclusive and equitable. NEP 2020 claims to align closely with these global commitments by integrating inclusive principles across different levels of education.

Review of Literature

Recent scholarly research has examined the potential of the National Education Policy (NEP) 2020 to transform India's education system into a more inclusive and equitable framework. Several studies highlight both the opportunities and challenges associated with implementing inclusive education under the policy.

A study by **Sarkar and Yadav (2023)** focused on teacher preparation for inclusive education within the framework of NEP 2020. The authors argue that the policy expands the concept of inclusive education by including not only children with special needs but also socio-economically disadvantaged learners. Their study emphasizes that effective teacher preparation is essential for implementing inclusive classrooms and addressing diverse learning needs. However, the authors also note that teacher education institutions must significantly strengthen training programs to equip teachers with inclusive pedagogical skills.

Similarly, **Rajkonwar (2023)** conducted a critical review of barriers to inclusive education in light of NEP 2020. The study highlights several challenges such as inadequate infrastructure, limited accessibility, and lack of institutional support that may hinder the successful implementation of inclusive education in Indian schools. The author concludes that although NEP 2020 promotes social justice and equal opportunities in education, systemic reforms and adequate resource allocation are necessary to remove barriers to inclusion.

Research on higher education inclusion has also gained attention. **Mangat (2024)** examined the implementation of NEP 2020 in higher education institutions with a focus on marginalized communities. Using interviews with students, educators, and policymakers, the study found that financial constraints, language barriers, and limited digital infrastructure continue to restrict access to higher education for disadvantaged groups. The research emphasizes that while the policy framework supports inclusivity, practical implementation remains uneven across regions.

Another study by **Shelke et al. (2024)** explored the role of assistive technologies in promoting the inclusion of students with disabilities in higher education. The findings suggest that technological tools can significantly enhance learning opportunities for differently-abled students. However, the study also identifies gaps in awareness, accessibility, and institutional support that limit the effective use of such technologies in educational institutions.

Further research by **Frank, Kaur, and Srivastava (2024)** highlights the importance of curriculum reforms, teacher training, and early identification of disabilities to strengthen inclusive education under NEP 2020. The study also notes that policy initiatives such as assistive technologies, flexible curriculum, and holistic learning approaches can significantly improve educational opportunities for marginalized and differently-abled learners if implemented effectively.

Overall, recent studies indicate that NEP 2020 provides a progressive framework for promoting inclusive education in India. However, scholars consistently emphasize that successful implementation will depend on adequate funding, teacher preparedness, infrastructure development, and effective monitoring mechanisms.

Objectives of the Study

The present study aims to critically examine the inclusive dimensions of the National Education Policy 2020. The specific objectives of the study are:

1. To analyze the provisions related to inclusive education in NEP 2020.
2. To examine the alignment between NEP 2020 and the goals of SDG-4.
3. To identify the strengths of NEP 2020 in promoting inclusive education.
4. To critically evaluate the gaps and implementation challenges in the policy.
5. To suggest measures for strengthening inclusive education within the framework of NEP 2020.

Methodology

The study adopts a qualitative research approach based on document analysis. Document analysis is a widely used method in educational research for examining policy frameworks, official reports, and scholarly literature in order to understand underlying themes, priorities, and implications.

Sources of Data

The study relies on multiple secondary sources, including:

- The official **National Education Policy 2020 document**
- Reports from the **Ministry of Education, Government of India**
- Academic research articles and scholarly journals
- Publications from international organizations such as UNESCO
- Secondary literature related to SDG-4 and inclusive education

Method of Analysis

The collected documents were analyzed using the following techniques:

Thematic Analysis – Identifying major themes related to inclusion, equity, and access within the policy framework.

Critical Policy Review – Examining the strengths, limitations, and implications of policy provisions.

Comparative Interpretation – Assessing the alignment between NEP 2020 and international frameworks such as SDG-4.

This methodological approach enables a comprehensive understanding of the inclusive vision embedded in NEP 2020 and its potential implications for educational equity in India.

Inclusive Vision of NEP 2020

One of the most notable features of NEP 2020 is its strong emphasis on equity and inclusion. The policy acknowledges that India's education system has historically excluded large sections of society and therefore requires targeted interventions to address these disparities.

Focus on Socio-Economically Disadvantaged Groups (SEDGs)

A significant conceptual innovation in NEP 2020 is the introduction of the category Socio-Economically Disadvantaged Groups (SEDGs). This category includes learners who face social and economic barriers to education, such as girls and women, Scheduled Castes (SC) and Scheduled Tribes (ST), Other Backward Classes (OBC), Minority communities, Children with disabilities and Rural and tribal populations.

By identifying SEDGs, the policy acknowledges that certain groups face higher risks of dropout, poor learning outcomes, and limited access to educational resources.

Significance of the SEDG Framework

The SEDG concept has several important implications:

- It broadens the scope of inclusion beyond disability.
- It recognizes the intersection of multiple disadvantages.
- It enables targeted policy interventions for marginalized groups.
- It promotes equity-based educational planning.

Gender Inclusion Fund

NEP 2020 proposes the creation of a Gender Inclusion Fund aimed at supporting the education of girls and transgender students. The fund is intended to assist states in implementing programs that promote gender equality in education, such as scholarships, sanitation facilities, safe transportation, and community awareness initiatives.

Strengths

- Addresses persistent gender disparities in education.
- Encourages state-specific strategies to improve girls' education.
- Supports retention and transition of girls across educational stages.

Critical Concern

Despite its progressive intent, the policy does not clearly specify:

- Allocation mechanisms
- Operational guidelines
- Monitoring frameworks

Without clear implementation strategies, the effectiveness of the fund may be limited.

Special Education Zones (SEZs)

The policy proposes establishing **Special Education Zones** in regions with high concentrations of disadvantaged populations. These zones are expected to receive additional funding, resources, and institutional support to improve educational access and quality.

Potential Benefits

- Targeted resource allocation for marginalized regions
- Improved infrastructure and educational services
- Greater focus on regional educational equity

Limitations

However, several concerns arise:

- Risk of labeling regions as “educationally backward”
- Need for strong monitoring and evaluation systems
- Uncertainty regarding funding sources and sustainability

Inclusion of Children with Disabilities

NEP 2020 strongly supports the inclusion of children with disabilities in mainstream education. The policy emphasizes the need to provide appropriate support mechanisms such as:

- Assistive technologies
- Resource centers
- Cross-disability teacher training
- Flexible curriculum and assessment methods

The policy advocates that children with disabilities should receive educational opportunities comparable to those available to other learners.

Positive Aspect

This approach reflects a shift from **segregated special education toward inclusive schooling**, which aligns with international conventions such as the **UN Convention on the Rights of Persons with Disabilities (UNCRPD)**.

Curriculum Reform for Inclusion

Curriculum plays a crucial role in shaping learners’ attitudes, values, and understanding of diversity. NEP 2020 proposes several curriculum reforms aimed at promoting inclusive values and social harmony.

The policy emphasizes the integration of themes such as:

- Empathy and compassion
- Respect for cultural diversity
- Human rights education
- Gender equality
- Global citizenship

Additionally, the policy calls for the removal of biases, stereotypes, and discriminatory representations in textbooks and learning materials.

Such curricular reforms can contribute to building a more inclusive school culture where diversity is respected and valued.

Teacher Education and Capacity Building

Teachers play a central role in implementing inclusive education. Recognizing this, NEP 2020 emphasizes strengthening teacher education and professional development.

Key provisions include:

- Training teachers in inclusive pedagogical practices
- Recruiting teachers from diverse backgrounds
- Providing continuous professional development programs
- Integrating inclusive education modules into teacher education curricula

Strength

The policy acknowledges that teachers are the primary agents of educational change.

Gap

However, the scale of required teacher training is extremely large, and existing teacher education institutions may face challenges in meeting these demands.

Alignment of NEP 2020 with SDG-4

NEP 2020 demonstrates substantial alignment with the principles of SDG-4. Several policy provisions correspond closely with the key dimensions of the global education agenda.

SDG-4 Dimension	NEP 2020 Response
Universal Access	Universalization of education from early childhood to secondary level
Equity	Focus on Socio-Economically Disadvantaged Groups
Quality	Competency-based curriculum and experiential learning
Lifelong Learning	Flexible learning pathways and multiple entry–exit
Gender Equality	Gender Inclusion Fund
Disability Inclusion	Assistive technologies and inclusive education strategies

Overall, the policy shows strong conceptual coherence with global educational commitments.

Critical Analysis of NEP 2020

Despite its progressive vision, several challenges may hinder the realization of inclusive education goals.

Implementation Gap

One of the major concerns in Indian education policy is the gap between policy formulation and implementation.

Challenges include:

- Limited administrative capacity in some states
- Uneven infrastructure development
- Weak monitoring mechanisms
- Insufficient funding

Without sustained political commitment and adequate financial resources, many inclusive initiatives may remain largely aspiration.

Digital Divide

NEP 2020 strongly promotes digital learning and technology integration.

However, significant disparities exist in digital access across socio-economic groups.

Implications

- Rural students may lack internet connectivity.
- Economically disadvantaged families may not afford digital devices.
- Children with disabilities may require specialized accessibility tools.

Thus, an excessive reliance on digital education could unintentionally deepen educational inequalities.

Teacher Preparedness

Inclusive education requires teachers who possess specialized skills in differentiated instruction, classroom management, and inclusive pedagogy.

Current challenges include:

- Shortage of trained special educators
- Limited training in inclusive pedagogy
- High teacher workload
- Significant variations in teacher training quality across states

Addressing these issues will require large-scale investment in teacher professional development.

Financing Constraints

NEP 2020 recommends increasing public expenditure on education to 6% of GDP. However, historically India has struggled to reach this target.

Insufficient funding may lead to:

- Under-resourced inclusion programs
- Inadequate infrastructure development
- Persistent inequalities between private and public schools

Inclusive education requires significant financial investment in infrastructure, teacher training, and support services.

Privatization Concerns

Some scholars argue that certain provisions in NEP 2020 may indirectly encourage the expansion of private education institutions.

Potential consequences include:

- Increased educational inequality
- Reduced access for economically disadvantaged students
- Commercialization of education

Strong regulatory frameworks will be necessary to ensure that privatization does not undermine the goals of inclusion and equity.

Opportunities Created by NEP 2020

Despite these challenges, NEP 2020 offers several promising opportunities for strengthening inclusive education.

1. Holistic and Flexible Learning

The policy promotes a multidisciplinary and flexible learning system with features such as:

- Multiple entry and exit points
- Academic Bank of Credits
- Interdisciplinary learning opportunities

Such flexibility can benefit learners from diverse backgrounds and life circumstances.

2. Early Childhood Care and Education (ECCE)

The policy emphasizes universal access to Early Childhood Care and Education.

Quality ECCE can significantly reduce early learning disparities by supporting:

- First-generation learners

- Children from disadvantaged communities
- Improved school readiness

3. Foundational Literacy and Numeracy

The National Mission on Foundational Literacy and Numeracy aims to ensure that all children acquire basic reading and numeracy skills by the early grades.

Strong foundational skills are essential for preventing early academic failure and reducing dropout rates.

4. Community and School Complexes

NEP proposes the creation of school complexes where multiple schools share resources, teachers, and infrastructure.

This model can:

- Improve educational access in rural areas
- Facilitate resource sharing
- Strengthen support systems for inclusive education

Implications for Teacher Education

Teacher education institutions have a critical role in implementing the inclusive vision of NEP 2020. They must:

- Integrate inclusive pedagogy in training programs
- Introduce disability studies modules
- Train teachers in differentiated instruction
- Promote Universal Design for Learning (UDL)
- Encourage reflective teaching practices

Without strong teacher preparation, inclusive education policies cannot succeed.

Recommendations

Based on the analysis, several measures are suggested.

At Policy Level

- Ensure education funding reaches at least 6% of GDP
- Develop clear inclusion indicators
- Strengthen monitoring mechanisms
- Regulate private education institutions
- Promote coordination between ministries

Institutional Level

- Make educational campuses barrier-free
- Establish resource rooms and support services
- Provide assistive technologies
- Strengthen counseling and psychological support

Teacher Education Level

- Make inclusive education training mandatory
- Provide continuous professional development
- Recruit teachers from diverse social backgrounds
- Expand the cadre of special educators

Technology and Equity

- Bridge the digital divide through infrastructure development
- Provide offline learning alternatives
- Ensure accessibility standards in digital platforms
- Subsidize digital devices for disadvantaged learners

Conclusion

The National Education Policy 2020 represents one of the most ambitious educational reforms undertaken in India in recent decades. Its strong emphasis on equity, inclusion, and support for socio-economically disadvantaged groups reflects a significant shift toward a more inclusive educational vision.

The policy aligns closely with the global goals of **SDG-4**, particularly in its focus on universal access, gender equality, disability inclusion, and lifelong learning. Conceptually, NEP 2020 offers a transformative framework capable of addressing many of the systemic inequalities within the Indian education system.

However, the ultimate success of the policy depends largely on effective implementation. Persistent structural inequalities, limited financial resources, digital disparities, and gaps in teacher preparedness pose significant challenges.

For NEP 2020 to truly transform India's education system, inclusive education must move beyond policy rhetoric and become a practical reality within classrooms. Achieving this goal will require strong political commitment, adequate funding, robust monitoring systems, and collaborative efforts from policymakers, educators, communities, and institutions.

Only through such sustained and coordinated efforts can India ensure that no learner is left behind and that education becomes a genuine instrument of social justice and national development.

References

- Bandhana, K. (2025). *NEP 2020 and inclusive education: Potential for enhancing access and equity*. *International Education and Research Journal*.
- Frank, D., Kaur, A., & Srivastava, P. (2024). *Inclusive education in India: Strategies for enhancing educational opportunities for marginalised and differently-abled learners under NEP 2020 and NCF-SE 2023*. In *Educational transformation: Reflections on NEP 2020 & NCF-SE 2023*.
- Government of India. (2020). *Equitable and inclusive education—SEDGs framework*. Ministry of Education.
- Government of India. (2020). *National Education Policy 2020*. Ministry of Education.
- Mangat, P. K. (2024). *Inclusivity in higher education: Analysing the implementation of NEP 2020 for marginalized communities in India*. *ShodhKosh: Journal of Visual and Performing Arts*, 5(1). <https://doi.org/10.29121/shodhkosh.v5.i1.2024.1990>
- Ministry of Education. (2024). *Inclusive education initiatives*. DSEL Education.
- Rajkonwar, D. (2023). *Barriers of inclusive education: A critical review in light of NEP-2020*. *Educational Administration: Theory and Practice*, 29(3), 1548–1554. <https://doi.org/10.53555/kuey.v29i3.10199>
- Rasool, S., & Rasool, S. (2024). *NEP 2020 and inclusive education in India*. *IJRASET*.

- Sarkar, L., & Yadav, S. (2023). *Teacher preparation for inclusive education: Intervention of NEP 2020*. *International Research Journal of Educational Psychology*, 7(2), 6–10.
- Shelke, M., Singh, P., Baral, S., Biniwale, M., & Kumar, K. (2024). *Inclusion of differently abled students in higher education through modern technology: A comprehensive analysis with reference to RPwD Act 2016 and NEP 2020*. *Educational Administration: Theory and Practice*, 30(1), 6491–6495. <https://doi.org/10.53555/kuey.v30i1.9811>
- Tiwari, A. (2025). *Roadmap for inclusive education for children with disabilities*. *Journal of Applied Research in Higher Education*.
- UNESCO. (2015). *Sustainable Development Goal 4: Quality education*.

CONCEPTUAL UNDERSTANDING OF INCLUSIVE EDUCATION IN THE GLOBALISED ERA

Ms. Shradha Vijay Tandel

Lecturer in Education , Department of Education ,Shivaji University, Kolhapur

Email: shradhatandel14@gmail.com

Abstract

Inclusive and sustainable development has become a global priority in response to rising inequalities, environmental degradation, and socio-economic vulnerabilities. This paper explores the interconnected dimensions of inclusivity and sustainability and proposes a future-oriented policy roadmap to ensure equitable and resilient development. Using a descriptive and analytical research design based on secondary data, the study examines existing policy frameworks, governance mechanisms, and development practices at national and global levels. The findings reveal that fragmented policy implementation, governance gaps, and unequal access to resources remain major challenges. The study emphasizes integrated policy planning, participatory governance, green transitions, and digital inclusion as essential strategies for achieving inclusive and sustainable development. The paper concludes that a people-centered and long-term policy approach is critical for ensuring shared prosperity and intergenerational equity.

Keywords: *Inclusive Development, Sustainable Development, Policy Roadmap, Governance, Equity, SDGs, Intergenerational equity.*

1. Introduction

Development in the twenty-first century faces complex challenges including poverty, inequality, climate change, and resource depletion. Traditional growth-centric development models have often failed to address social exclusion and environmental sustainability simultaneously. As a result, the concept of inclusive and sustainable development has gained prominence in global policy discourse.

Inclusive development ensures equitable access to opportunities, resources, and benefits of growth for all sections of society, particularly marginalized and vulnerable groups.

Sustainable development focuses on meeting present needs without compromising the ability of future generations to meet their own needs. The integration of these two dimensions is essential for achieving balanced and resilient development. This paper seeks to analyze the need for inclusive and sustainable development and to propose a policy roadmap that aligns economic growth with social equity and environmental responsibility.

Inclusive and sustainable development has emerged as a central paradigm in global policy discourse as a central paradigm in global policy discourse, emphasizing the need for economic growth that is equitable, environmentally responsible, and socially empowering. Traditional development models, often driven solely by economic metrics, have increasingly demonstrated

limitations, including widening social inequalities, environmental degradation, and exclusion of marginalized communities. In response, inclusive and sustainable development seeks to balance economic advancement with social justice and ecological stewardship, ensuring that the benefits of growth are widely shared and future generations are not compromised.

The urgency of this approach has been underscored by international frameworks such as the United Nations Sustainable Development Goals (SDGs), which highlight the interconnectedness of poverty eradication, environmental sustainability, and social inclusion. Achieving these objectives, however, requires more than aspirational goals, it demands coherent policy interventions, innovative governance mechanisms, and active participation from diverse stakeholders, including governments, civil society, and the private sector. The research aims to map a comprehensive policy roadmap for advancing inclusive and sustainable development in the future. By examining current challenges, policy gaps, and best practices from global and local contexts, the study provides actionable recommendations to guide policymakers, practitioners, and communities toward development pathways that are both equitable and resilient.

Ultimately, this paper seeks to contribute to a transformative agenda where growth does not come at the expense of social cohesion or environmental integrity, but rather reinforces them in a mutually reinforcing cycle of progress.

2. Objectives of the Study

1. To examine the concept and significance of inclusive and sustainable development.
2. To analyze existing national and global policy frameworks that promote inclusive and sustainable development.
3. To identify key barriers and gaps that hinder the effective implementation of inclusive and sustainable development policies.
4. To assess the role of governance, institutions, and stakeholder participation in advancing inclusive and sustainable development outcomes.
5. To explore the contribution of innovation, technology, and green practices in promoting equitable and environmentally sustainable growth.
6. To propose a comprehensive policy roadmap that integrates inclusivity, sustainability, and resilience for future development planning.
7. To recommend actionable strategies for policymakers to ensure equitable access to resources, opportunities, and benefits of development for all sections of society.

3. Research Methodology

This study employs a qualitative research approach to develop a comprehensive policy roadmap for inclusive and sustainable development. The methodology is designed to capture both theoretical insights and practical policy considerations, ensuring a holistic understanding of the challenges and opportunities in promoting sustainable and equitable growth.

A. Research Design

The research adopts a descriptive-analytical design, focusing on examining existing policies, development frameworks, and case studies to identify best practices and gaps in current approaches. The design allows for in-depth exploration of socio-economic, environmental, and

governance dimensions of development, facilitating the formulation of actionable policy recommendations.

B. Data Collection

Data for this study is collected through a combination of :

- Secondary sources: Extensive review of academic literature, policy documents, government reports, international frameworks (such as the UN Sustainable Development Goals), and relevant global and national case studies.
- Expert consultations: Insights from policymakers, development practitioners, and academic experts through structured interviews and discussions to validate findings and understand on-ground implementation challenges.

C. Data Analysis

The collected data is analyzed using thematic analysis, which involves identifying recurring patterns, challenges, and successful strategies across different contexts. Comparative analysis is also applied to examine how different countries or regions approach inclusive and sustainable development, highlighting transferable lessons.

D. Policy Roadmap Development

Based on the findings, a policy roadmap is formulated, outlining strategic priorities, actionable interventions, and governance mechanisms. This roadmap is designed to address economic, social, and environmental dimensions simultaneously, ensuring coherence with both national development objectives and international sustainability commitments.

E. Limitations

The study acknowledges potential limitations, including the reliance on secondary data, which may not capture all local nuances, and the variability in policy contexts across regions, which may affect the direct applicability of certain recommendations.

4. Conceptual Framework

Inclusive and sustainable development is based on three interlinked pillars:

- Economic Inclusion: Employment generation, inclusive growth, and poverty reduction.
- Social Inclusion: Equity, gender equality, access to education, healthcare, and social protection.
- Environmental Sustainability: Climate action, resource efficiency, and ecological conservation.

Effective governance and institutional capacity act as enabling factors connecting these pillars. The framework illustrates how coordinated policy actions can lead to equitable growth, social inclusion, and long-term environmental sustainability.

Key Components of the Framework

a. Policy Inputs (Independent Variables)

Policy inputs represent strategic interventions undertaken by governments and institutions to promote inclusive and sustainable development.

These include:

- Inclusive economic policies (employment generation, poverty reduction, equitable growth)

- Social policies (education, health, gender equity, social protection)
- Environmental policies (climate action, resource conservation, sustainable infrastructure)
- Governance reforms (transparency, decentralization, stakeholder participation)

b. Enabling Mechanisms (Mediating Variables)

These mechanisms determine the effectiveness of policy inputs in achieving desired outcomes:

- Institutional capacity and coordination
- Stakeholder participation and partnerships □ Technological innovation and digital inclusion □ Policy coherence and implementation efficiency.

c. Development Dimensions (Core Domains)

The framework integrates three interlinked dimensions:

- Economic sustainability (productive employment, resilient economies)
- Social inclusion (equity, access to basic services, empowerment of marginalized groups)
- Environmental sustainability (ecosystem protection, sustainable resource use)

d. Development Outcomes (Dependent Variable)

The interaction of policy inputs and enabling mechanisms across development dimensions leads to:

- Inclusive growth
- Reduced inequalities
- Improved quality of life
- Intergenerational sustainability

e. Feedback Loop

The framework incorporates a feedback mechanisms whereby development outcomes inform future policy reforms, ensuring adaptability and long-term resilience.

5. Review of Related Literature

Previous studies emphasize that inclusive growth enhances social stability and economic resilience. Scholars highlight that sustainable development cannot be achieved without addressing inequality and social exclusion. Global frameworks such as the Sustainable Development Goals (SDGs) stress integrated and people-centered approaches. However, literature also points to implementation gaps, lack of coordination, and insufficient monitoring mechanisms as persistent challenges. The concept of inclusive and sustainable development has gained significant attention in academic and policy discourse over the past few decades. Scholars increasingly emphasize that economic growth alone is insufficient to ensure long-term development unless it is inclusive, equitable, and environmentally sustainable.

Early development theories primarily focused on economic growth indicators such as GDP, however, later studies highlighted the limitations of growth-centric models (Sen, 1999). Sen's capability approach underscored the importance of expanding human freedoms, access to education, health, and opportunities as central to inclusive development. Subsequent research

has reinforced that inclusion of marginalized groups- such as women, rural populations, and economically disadvantaged communities- is essential for sustainable societal progress.

The Brundtland Report (1987) laid the foundation for sustainable development by defining it as development that meets present needs without compromising the ability of future generations to meet their own needs. Later studies have emphasized the interdependence of environmental protection, economic growth, and social well-being. Research highlights that unchecked industrialization and resource exploitation lead to environmental, which disproportionately affects vulnerable populations, thereby undermining inclusivity.

International framework such as the United Nations Sustainability Development Goals (SDGs) have been widely analyzed in literature as comprehensive policy instruments for achieving inclusive and sustainable development. Studies suggests that the SDGs promote integrated policy approaches by linking poverty reduction, inequality, climate action, and institutional governance. However, scholars also note implementation challenges, including policy incoherence, limited institutional capacity, and insufficient stakeholder engagement at national and local levels.

Governance has been identified as a critical determinant of successful development outcomes. Literature emphasizes that transparent, accountable, and participatory governance structures enhance policy effectiveness and inclusivity. Decentralization and community participation are often cited as mechanisms that enable local ownership and context-specific solutions, thereby strengthening sustainability.

While existing studies provide valuable insights into inclusive growth and sustainability, many focus on isolated dimensions rather than integrated policy roadmaps. There is a notable gap in literature addressing comprehensive frameworks that align economic, social, environmental, and governance policies in a coherent manner. This research seeks to address this gap by proposing a holistic policy roadmap for inclusive and sustainable development.

The reviewed literature establishes a strong theoretical foundation for the present study and highlights the need for integrated, future-oriented policy frameworks. Building upon these insights, the current research aims to synthesize existing knowledge and propose a structured policy roadmap that addresses inclusivity and sustainability in a balanced and practical manner.

6. Findings and Discussion

The study reveals a strong interdependence between inclusivity and sustainability. Policies addressing social equity contribute positively to long-term environmental and economic outcomes. Despite robust policy frameworks, implementation remains uneven due to governance gaps and limited institutional capacity. Green and digital transitions show significant potential but are constrained by unequal access and the digital divide. Participatory governance and multi-stakeholder collaboration emerge as critical success factors. The findings highlight the need for integrated, long-term policy planning supported by strong monitoring and evaluation systems. The analysis of existing literature, policy documents, and expert insights reveals several key findings related to inclusive and sustainable development. These findings highlight critical gaps in current development approaches and identify strategic areas for policy intervention.

A. Economic Growth Remains Uneven and Exclusionary

The study finds that while many countries have achieved steady economic growth, the benefits of this growth are not equitably distributed. Marginalized populations, including low-income groups, women, and rural communities, continue to face limited access to employment opportunities, financial resources, and basic services. This indicates that growth-oriented policies without inclusion mechanisms exacerbate inequality.

B. Social Inclusion is Central to Sustainable Outcomes

Findings indicate that social policies focusing on education, healthcare, gender equality, and social protection significantly enhance development outcomes. Regions with stronger investments in human capital demonstrate greater resilience and long-term sustainability. However, gaps persist in access and quality of services, particularly for vulnerable groups, undermining inclusive development goals.

C. Environmental Sustainability is Often Policy-Segmented

The study reveals that environmental concerns are frequently addressed in isolation rather than as an integral component of development planning. Policies related to climate change, resource management, and sustainable infrastructure lack integration with economic and social objectives. This fragmentation reduces policy effectiveness and threatens long-term sustainability.

D. Governance and Institutional Capacity Determine Policy Success

Effective governance emerges as a key determinant of inclusive and sustainable development. Transparent institutions, policy coherence, and stakeholder participation significantly influence implementation success. Conversely, weak institutional coordination and limited accountability mechanisms hinder policy impact, particularly at the local level.

E. Integrated Policy Approaches Yield Better Outcomes

Comparative analysis indicates that countries and regions adopting integrated, cross-sectoral policy frameworks achieve more balanced and sustainable development outcomes. Alignment between economic, social, and environmental policies enhances inclusivity, reduces tradeoffs, and supports resilience against economic and environmental shocks.

F. Stakeholder Participation Enhances Policy Effectiveness

The findings highlight that inclusive participation of communities, civil society, and the private sector improves policy relevance and sustainability. Participatory approaches foster ownership, ensure context-specific solutions, and strengthen long-term development outcomes.

G. Need for a Future-Oriented Policy Roadmap

The study identifies a significant gap in forward-looking, adaptive policy frameworks. Existing policies often lack flexibility to respond to emerging challenges such as climate change, technological transformation, and demographic shifts. A dynamic policy roadmap is essential for sustaining inclusive development in the future.

7. Policy Roadmap for the Future

Achieving inclusive and sustainable development requires a coherent, integrated, and future-oriented policy roadmap that balances economic growth, social equity, environmental sustainability, and good governance.

Based on the findings, the following policy roadmap outlines strategic priorities and actionable interventions for the future:

- **Strengthening Inclusive Economic Policies:**

Transparent, accountable, and participatory governance systems. Future development strategies must move beyond growth-centric models and prioritize inclusive economic participation. Policies should focus on generating decent employment, supporting small and medium enterprises, promoting skill development, and ensuring equitable access to financial resources. Special emphasis should be placed on women, youth, and marginalized communities to reduce structural inequalities and enhance economic resilience.

- **Investing in Human Capital and Social Protection**

Sustainable development is strongly linked to investments in education, healthcare, and social security systems. Policymakers should prioritize universal access to quality education and healthcare services, strengthen social safety nets, and promote gender equality. These interventions are essential for empowering individuals, enhancing productivity, and ensuring social inclusion.

- **Integrating Environmental Sustainability into Development Planning**

Environmental considerations must be embedded within all development policies rather than treated as standalone objectives. This includes promoting renewable energy, sustainable agriculture, climate-resilient infrastructure, and responsible resource management. Policies should align economic incentives with environmental protection to ensure long-term ecological balance.

- **Enhancing Governance and Institutional Capacity**

Effective governance is central to implementing inclusive and sustainable development policies. Strengthening institutional coordination, transparency, accountability, and decentralization can improve policy outcomes. Capacity-building initiatives for public institutions and local governments are crucial for effective implementation and monitoring.

- **Promoting Participatory and Multi-Stakeholder Approaches**

Inclusive development requires active participation from communities, civil society organizations, the private sector, and academia. Policymakers should institutionalize participatory decision-making processes, encourage public-private partnerships, and foster community-driven development initiatives to ensure policy relevance and sustainability. □

Leveraging Technology and Innovation

Digital technologies and innovation can accelerate inclusive and sustainable development. Policies should promote digital inclusion, support green technologies, and encourage innovation ecosystems that address social and environmental challenges. Technology-driven solutions can improve service delivery, enhance transparency, and expand economic opportunities.

- **Establishing Monitoring, Evaluation, and Adaptive Policy Mechanisms**

A future-oriented policy roadmap must include robust monitoring and evaluation frameworks aligned with measurable indicators. Continuous feedback mechanisms should be used to assess

policy effectiveness and adapt strategies in response to emerging challenges such as climate change, economic shocks, and demographic transitions.

- Integrated Policy Planning:

Alignment of economic, social, and environmental goals.

- Green and Digital Inclusion:

Promotion of renewable energy, green jobs, and universal digital access.

- Capacity Building:

Skill development and empowerment of marginalized communities.

- Public-Private Partnerships:

Collaborative approaches to mobilize resources and innovation.

- Monitoring and Evaluation:

Data-driven mechanisms to track progress and ensure accountability.

8. Conclusion : The study concludes that inclusive and sustainable development is both a moral and strategic imperative for the future. The integration of social equity, economic resilience, and environmental sustainability is essential for achieving long-term development goals. While policy frameworks are well-established, their success depends on effective governance, institutional coordination, and stakeholder participation. The proposed policy roadmap provides a holistic approach to addressing contemporary development challenges and ensuring shared prosperity for present and future generations. This policy roadmap emphasizes that inclusive and sustainable development is not a one-time intervention but an ongoing, adaptive process. By adopting integrated, participatory, and evidence-based policies, governments and institutions can create development pathways that are equitable, resilient, and sustainable for future generations.

References

- Ansarinassab, M., & Santosh, M. (2026). *Inclusive Green Growth as a Policy Framework for Operationalizing Sustainable Development Goals through the Triple Bottom Line. Earth Systems, Resources, and Sustainability*, 1(1), 1-17.
- Budi Hastuti, S. R., Syari'udin, A., Tugiyo, T., & Ramadhany, T. D. (2025). *Income Inequality and Inclusive Development in Environmental Sustainability Context. Indonesian Journal of Innovation Studies*, 26(3).
- Garg, S., & Chhikara, R. (2025). *Inclusive Leadership for Sustainable Development: An Integrative Literature Review. Journal of Informatics Education and Research*, 5(2).
- Lily, M., & Sharma, B. (2025). *Inclusive Society: A Pathway to Achieving Sustainable Development Goals. International Journal of Environmental Sciences*, 11(3), 503-510.
- Munasinghe, M. (2019). *Sustainability in the Twenty-First Century: Applying Sustainomics to Implement the Sustainable Development Goals. Cambridge University Press. (Foundational conceptual work cited in current sustainable development scholarship.)*
- Rammelt, C. F., & Gupta, J. (2021). *Inclusive is not an adjective, it transforms development: A post-growth interpretation of Inclusive Development. Environmental Science & Policy*, 124, 144-155.
- Ullah, I., & Kim, D.-Y. (2021). *Inclusive Governance and Biodiversity Conservation: Evidence from Sub-Saharan Africa. Sustainability*, 13(7), 3847.

ARTIFICIAL INTELLIGENCE AND THE FUTURE OF CLASSROOM TEACHING: A STUDY ON TEACHER-AI COLLABORATION IN SECONDARY EDUCATION

Ashok Ramkrishna Tawar

Research scholar, Shivaji University, Education, Department Kolhapur.

Ashok.tawar58@gmail.com

Dr.G.S.Kamble

Research Guide & Associate professor, Azad College of Education Satara.

Abstract

This research delves at the paradigm of teacher-AI collaboration in light of the rapid evolution of classroom technology and the reimagining of educators' responsibilities in secondary education. Adapting to new technologies, we describe how collaboration between teachers and AI impacts activities such as lesson planning, adaptive education, classroom management, and student assessment. We present the results of a mixed-method study on the secondary school sector that included interviews, observations, and surveys. While the majority of secondary school teachers do think that the technology in issue does, in the end, serve a pedagogical function and inspire pupils (sometimes), they also acknowledge that technology should not be depended upon excessively. This explains why they realized it may improve classroom instruction. Because of this, its ability to enhance education has been widely acknowledged. Because of this, its ability to enhance education has been widely acknowledged. Because of this, its ability to enhance education has been widely acknowledged. Despite its apparent potency, this technology is surprisingly underutilized. Teachers' apparent familiarity with the relevant technologies is, of course, explained by this theory. Open level teaching is a collaborative effort between educators and pupils; specialized technology handles the other, transactional, data procedures that fall outside the purview of human educators. The findings of this study highlight several pressing issues that necessitate policy-level standardization. new refer to shifts in how teachers are prepared for the classroom and how new technologies are integrated into classroom instruction.

Keywords: Artificial Intelligence, Teacher-AI Collaboration, Secondary Education, Classroom Teaching, Educational Technology.

1. Introduction

Considering the Partnership Between AI and Education, There is a lot of academic and technical strain in secondary school classrooms, and the AI revolution is already affecting how teachers and students learn (KIm, 2024). According to Mujiono (2023), some AI applications are already in use within the teaching profession. These include adaptive learning, auto grading, and an evaluation tool for tutoring based on artificial intelligence. A more nuanced investigation of the nature of the partnership between educators and AI is necessary in light of the changing context in which the teaching profession finds itself (AI, 2024). This study in the

field of teaching and learning methods (Huszárova et al., 2024) focuses on the link between instructors and AI, as well as instructional enhancement, learning outcomes, and classroom management. Already, there is pushback against AI's presence in the classroom, and teachers are scrambling to make sense of all the complications.

The use of artificial intelligence (AI) in the classroom is becoming more commonplace and is having a profound impact on both the content and delivery of instruction (Shah, 2023). Educators in secondary schools are implementing AI-powered initiatives to streamline classroom operations, tailor lessons to individual students, and enhance the quality of instruction they provide (Kim, Lee, & Cho, 2022). Intelligent tutoring systems, automated grading, and adaptive learning are all examples of AI technologies that might help meet the demands of both students and instructors while also increasing student engagement (Wang & Liu, 2021). The Evolving Teacher Role, the AI vs. pedagogy argument, and practical difficulties in the classroom are all reasons to be concerned about the rapid adoption of AI in the classroom (Kasepalu et al., 2022). The true challenge in studying teacher-AI collaboration is how to use pedagogical AI without limiting teacher autonomy (Lee & Perret, 2022). The research primarily concerns artificial intelligence (AI) and its potential educational effects on secondary school educators (Pedro et al., 2019).

2. Research Questions

1. How is artificial intelligence (AI) being included in high school curricula, and which AI tools are most commonly employed by educators?
2. Is there a way that high school educators think about, feel about, and prepare for artificial intelligence (AI) in the classroom?
3. From their experience working with AI in the classroom and with teens in the school, what improvements and advantages have instructors noticed in their own teaching and their students' learning?
4. When it comes to educating high school pupils with AI, what challenges and issues do educators encounter?

3. Objectives of the Study

- Find out what kinds of AI-based instructional tools are now being used by secondary school teachers and how far down the AI integration curve they are.
- Gain an appreciation for the experiences, viewpoints, and general situation of educators who are interested in integrating AI into their classrooms.
- Evaluate the pros and cons of using AI in the classroom based on the perspectives of secondary school educators.
- Create a system that allows secondary school teachers and AI to work together to enhance classroom instruction.

4. Significance of the Study

This study takes on greater significance as the use of artificial intelligence in education grows. Examining how AI may alleviate administrative tasks and increase the quality, efficiency, and personalizability of education through teacher-AI cooperation in secondary school is the primary goal of this project. In light of the study's findings, educational professionals may

utilize them to show how AI technologies could be integrated into the classroom, along with some of the obstacles that could stand in the way. This study might be a rare gem for educational administrators looking to guide resource allocation and the selection of AI tools for professional education. The tools will be trained to perform certain instructional activities. Researchers hope that policymakers will utilize this study as a starting point for developing fair and ethical frameworks to support the deployment of AI in classrooms. Since there is a dearth of literature on human-AI collaborative instruction, this study fills a critical gap by providing some empirical evidence in this field. Future classrooms that combine human teachers with AI might improve students' learning results, and this research will contribute to that effort.

5. Research Methodology

This research looks at how artificial intelligence has changed and is changing the way secondary school teachers use the technology in the classroom. In this section, we go over the study's framework and the methods and tools used to gather and analyze data from the participants.

5.1 Research Design

This study incorporates both quantitative (survey-based) and qualitative (interview-based) methodologies into a somewhat interpretable design process. It is possible to provide a definitive response to the research question and its associated objectives by following this pattern of data collecting. From this data, we were able to deduce the purpose and pattern of data gathering, which allowed us to gauge educators' opinions.

5.2 Population and Sample

Teachers in secondary education might work for either the public, private, or semi-public sector. One hundred twenty-two educators were chosen at random to ensure a diverse range of school types and topic areas were covered.

5.3 Sampling Techniques

In order to ensure a representative sample, we employed a stratified random sampling technique to divide the schools into many groups. Teachers that are currently utilizing AI technologies in their classrooms were identified through the use of purposive sampling in order to acquire qualitative data.

5.4 Research Tools

- **Structured Questionnaire:** Participants were asked to rate their level of AI knowledge as well as its benefits and drawbacks using a standardized questionnaire.
- **Observation Checklist:** Smart boards, adaptive learning software, AI-based assessment tools, etc. were among the AI-based products that were observed in the courses to record their use.
- **Semi-Structured Interviews:** Through in-depth interviews, we aimed to learn about instructors' perspectives on AI technologies, their experiences collaborating with these systems, and how they see their use influencing their teaching efficacy.
- **Data Collection Procedure:** There were three phases to the data collection process: sending out questionnaires, visiting classrooms, and recording interviews. In order to

safeguard the participants' identities and the sensitive information gathered from the research, a consent slip was collected from them.

- **Data Analysis Techniques:** Triangulation and correlational data were used to analyze quantitative data in order to define outcomes and distinguish between them. The main subjects regarding the interaction between instructors and AI were identified by analyzing qualitative data using applied thematic coding.

6. Results and Findings

Findings from this study provide light on how secondary school teachers make use of and view AI. The findings show that instructors and AI are already beginning to work together, combining qualitative and quantitative evidence.

6.1 Demographic Profile of Respondents

Table 1: Demographic Profile of Secondary School Teachers (N = 120)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	46	38.3
	Female	74	61.7
Age Group	21–30 years	32	26.7
	31–40 years	51	42.5
	41–50 years	25	20.8
	Above 50 years	12	10.0
Teaching Experience	1–5 years	29	24.2
	6–10 years	37	30.8
	11–15 years	28	23.3
	Above 15 years	26	21.7
School Type	Government	48	40.0
	Private	57	47.5
	Semi-Government	15	12.5

There are around 120 secondary education instructors to consider, and the data also shows that they are socially diverse. Women make up a larger percentage of the responses (61.7%), suggesting that they are more prevalent in the teaching profession. Teachers tend to be younger and more active, with a major share falling within the age group of 31–40 (42.5%). Additionally, the quantity of teaching experience remains stable, with 30.8% having 6-10 years in the field and an equal number of experience at all other levels. Given the wide age range of the instructors surveyed, researchers will be able to get a good feel for how different generations view the potential benefits and drawbacks of AI in the classroom. When asked about the sorts of schools attended, the majority of respondents(47.5%) said private schools, while 40% said public schools, and 12.5% said a mix of the two. We can verify the validity of the results and how they relate to various schools' technological capabilities in this way. This will contribute to our ability to draw broad conclusions on the usage of AI by secondary school educators.

6.2 Teachers' Awareness and Attitude toward AI

Table 2: Teachers' Awareness and Attitude toward AI (N = 120)

Awareness & Attitude Indicators	High (%)	Moderate (%)	Low (%)
Awareness of basic AI tools (chatbots, LMS analytics)	52	38	10
Understanding of AI-assisted teaching methods	45	41	14
Confidence in using AI in classroom activities	39	44	17
Perceived usefulness of AI for teaching improvement	61	29	10
Willingness to collaborate with AI tools	57	33	10

Nearly half of the secondary school instructors surveyed had a good understanding of artificial intelligence (AI) and its applications, including chatbots and learning analytics tools. Unfortunately, just 45% of educators felt they had a strong grasp of AI-assisted pedagogies, suggesting a possible need for further formal training in this area. Also, it appears like teachers are on the fence about using AI in the classroom; just 39% are very confident in it, and 44% are unsure, suggesting some degree of uncertainty. According to 61% of instructors, AI has the potential to greatly benefit and enhance education. This suggests that AI is generally well-received by the teaching community. In addition, 57% of educators have shown a strong ambition to use AI in the classroom, suggesting that they are receptive to the idea. It appears that, on the whole, educators are open to the idea of AI and are even prepared to use a support system if needed.

6.3 Current Level of AI Integration in Secondary Classrooms

A survey was carried out with 120 educators from various school types to determine the extent to which artificial intelligence (AI) has been incorporated into secondary education. Lesson preparation, evaluation, and classroom engagement were all areas where AI was quantified in the study.

Table 3: Frequency of AI Tool Usage in Secondary Classrooms (N=120)

AI Usage Area	Frequently (%)	Occasionally (%)	Rarely/Never (%)
Lesson Planning	40	35	25
Classroom Instruction	30	45	25
Student Assessment & Feedback	25	40	35
Administrative Tasks	35	40	25

According to the data, secondary school instructors make minimal use of AI, with usage being inconsistent across several domains. Forty percent of instructors say they use AI for lesson planning and 35 percent say they use it for administrative work. The use of AI in classroom instruction is just above 30%, making it the second most utilized assistance, while the usage of AI in assessment is the lowest at 25%. It appears that this technology is more commonly used for administrative purposes rather for active educational support, based on its distribution. It appears that faculty members in all areas have been making efforts to incorporate AI more

fully. However, they have probably encountered the typical challenges faced by educational institutions, including a lack of training, an absence of suitable edtech resources, and an overall lack of knowledge about the available technologies. The adoption stage as a whole shows that teachers' AI cooperation may need some more aid, and this is exactly where AI pedagogical tools come in handy for overcoming some of the obstacles that educators encounter.

6.4 Combined Interpretation

Table 4: Teacher Perception and AI Integration in Secondary Classrooms

Parameter	High Integration (%)	Moderate Integration (%)	Low Integration (%)
Teacher Awareness of AI	45	40	15
Use of AI for Lesson Planning	35	50	15
AI-Assisted Student Assessment	25	55	20
AI Support for Personalized Learning	30	50	20
Overall Teacher-AI Collaboration	28	52	20

Despite having a solid grasp of AI, 85 percent of educators surveyed said they never use the technology into their lessons. While AI is being used by teachers to create lesson plans, it is not being used to create evaluations. Educators employ AI on a minimal scale. Even though they don't utilize AI very much, 28% of educators use it moderately. Just because a teacher is familiar with AI doesn't mean they'll really implement it in their lessons. We hear from educators that they've used AI to cut down on administrative tasks, but not all of them have found a way to make it work for highly participatory lessons. Even if they aren't implementing technology in their lessons, 85 percent of educators say they are very knowledgeable with AI. There would be a considerable improvement in the level of AI implementation in classrooms if teachers were given more training in this area, according to teachers' surveys. They are seeking advice on how to use AI into their lessons in a way that empowers students to take an active role in their own education and improves their academic performance in secondary school.

6.5 Model of Effective Teacher-AI Collaboration Proposed by the Study

In order to better comprehend how teachers might keep collaborating in secondary school classes utilizing AI, this study suggests a methodology. There are three interconnected parts to this model: the ability of teachers, the use of AI, and student engagement. The following table shows the average weighted score for each of the three model components, as well as the correlation between score and component order and realizability.

Table 5: Key Dimensions of Teacher-AI Collaboration in Secondary Classrooms

Dimension	Weighted Score (out of 5)	Average Implementation Feasibility (%)
Teacher Competence	4.3	80
AI Integration Level	3.9	70

Student Engagement	4.1	75
Continuous Professional Development	4.2	78

On a scale from 1 to 5, the level of expertise among educators is the most essential factor. It is clear that proper training on AI technologies is absolutely necessary. Although the AI integration score is 3.9 out of 5, it still shows a modest level of tool integration, which might be an indication of infrastructure and support deficiencies. Teachers' active interaction with AI can favorably effect learning results, as seen by the 4.1 score for engaging pupils. Teachers need ongoing professional training (4.2) to stay up with the ever-evolving field of artificial intelligence. Because it strikes a good mix between instructor expertise, AI resources, and student engagement, this model suggests an integration framework for use in educational settings.

7. Conclusion

Investigations into AI and Its Potential Impact on the Educational Landscape Using artificial intelligence (AI) to supplement traditional classroom instruction has the potential to improve student learning and the value of teachers in secondary education. Through active participation from students, AI can enhance the effectiveness of classroom education and student learning. Because educators aren't willing or able to collaborate with one another and/or AI, these advantages will remain out of reach. Educators are hopeful that AI will alleviate some of their pedagogical and/or research paper writing responsibilities. By prioritizing the ethical considerations of the AI teaching-teacher relationship and implementing the appropriate framework, practical education may be achieved. Future classrooms may combine AI with education. In order to be effective educators using AI in the classroom, educators must undergo personal transformations. Educators must employ AI responsibly so that it does not stifle or dominate classroom instruction.

References

- Kim, J. (2024). *Leading teachers' perspective on teacher-AI collaboration in education*. *Education and information technologies*, 29(7), 8693-8724.
- Mujiono, M. (2023). *Educational collaboration: Teachers and artificial intelligence*. *Jurnal kependidikan*, 9(2), 618-632.
- Kim, J. (2024). *Types of teacher-AI collaboration in K-12 classroom instruction: Chinese teachers' perspective*. *Education and Information Technologies*, 29(13), 17433-17465.
- Huszárová, K., Šmida, D., Kmet, A., Karolcik, Š., & Hájková, E. (2024, October). *AI in the Classroom: How Teachers Perceive the Future of Education*. In *2024 International Conference on Emerging eLearning Technologies and Applications (ICETA)* (pp. 206-211). IEEE.
- Shah, P. (2023). *AI and the Future of Education: Teaching in the Age of Artificial Intelligence*. John Wiley & Sons.
- Kim, J., Lee, H., & Cho, Y. H. (2022). *Learning design to support student-AI collaboration: Perspectives of leading teachers for AI in education*. *Education and information technologies*, 27(5), 6069-6104.
- Wang, W., & Liu, Z. (2021). *Using artificial intelligence-based collaborative teaching in media learning*. *Frontiers in psychology*, 12, 713943.

- Kasepalu, R., Prieto, L. P., Ley, T., & Chejara, P. (2022, February). Teacher artificial intelligence-supported pedagogical actions in collaborative learning coregulation: A wizard-of-oz study. In *Frontiers in Education* (Vol. 7, p. 736194). Frontiers Media SA.
- Lee, I., & Perret, B. (2022, June). Preparing high school teachers to integrate AI methods into STEM classrooms. In *Proceedings of the AAAI conference on artificial intelligence* (Vol. 36, No. 11, pp. 12783-12791).
- Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2019). Artificial intelligence in education: Challenges and opportunities for sustainable development.
- Weber, D. (2024). AI in the Classroom: Teachers' Views on Artificial Intelligence.
- Ding, L. J., Li, J. M., & Hui, B. H. (2025). Will Teacher-AI Collaboration Enhance Teaching Engagement?. *Behavioral Sciences*, 15(7), 866.
- Taufikin, M. S. I., Azifah, N., Nikmah, F., & Kuanr, J. (2024, April). The Impact of AI on Teacher Roles and Pedagogy in the 21st Century Classroom. In *2024 International Conference on Knowledge Engineering and Communication Systems (ICKECS)* (Vol. 1, pp. 1-5). IEEE.
- Holstein, K., McLaren, B. M., & Aleven, V. (2019, June). Designing for complementarity: Teacher and student needs for orchestration support in AI-enhanced classrooms. In *International conference on artificial intelligence in education* (pp. 157-171). Cham: Springer International Publishing.
- Edwards, B. I., & Cheok, A. D. (2018). Why not robot teachers: artificial intelligence for addressing teacher shortage. *Applied Artificial Intelligence*, 32(4), 345-360.
- Celik, I., Dindar, M., Muukkonen, H., & Järvelä, S. (2022). The promises and challenges of artificial intelligence for teachers: A systematic review of research. *TechTrends*, 66(4), 616-630.
- Dimitriadou, E., & Lanitis, A. (2023). A critical evaluation, challenges, and future perspectives of using artificial intelligence and emerging technologies in smart classrooms. *Smart Learning Environments*, 10(1), 12.
- Tedre, M., Toivonen, T., Kahila, J., Vartiainen, H., Valtonen, T., Jormanainen, I., & Pears, A. (2021). Teaching machine learning in K–12 classroom: Pedagogical and technological trajectories for artificial intelligence education. *IEEE access*, 9, 110558-110572.
- Sămărescu, N., Bumbac, R., Zamfiroiu, A., & Iorgulescu, M. C. (2024). Artificial intelligence in education: Next-gen teacher perspectives. *Amfiteatru Economic*, 26(65), 145-161.
- Köprülü, F., Oyebimpe, A. O., Başarı, Ş., & Ayhan, S. B. (2023). Innovative effects of artificial intelligence on teacher education. *Conhecimento & Diversidade*, 15(40), 449-465.

TRANSGENDER EDUCATION IN INDIA: A REVIEW OF NATIONAL EDUCATION POLICY-2020 AND IMPLEMENTATION CHALLENGES**Dr. Vinayak Sopan More**

GVM's Dr Dada Vaidya College of Education, Ponda, Goa-403 401

Abstract

The National Education Policy (NEP) 2020 represents a significant policy reform aimed at transforming India's education system by emphasizing equity, access, and inclusion as central guiding principles. The present study therefore analyses the provisions of NEP-2020 with the objectives of examining policy provisions relevant to transgender education, identifying challenges in the implementation of transgender-inclusive educational reforms, and proposing measures to strengthen educational access and inclusion of transgender individuals in alignment with NEP-2020. The study adopts a qualitative descriptive research design based on policy document analysis. The National Education Policy-2020 document serves as the primary data source. The analysis is theoretically informed by Braun and Clarke's thematic analysis framework and interpreted through the Walt and Gilson Policy Triangle model, enabling examination of policy content, context, actors, and implementation processes. The policy text was systematically coded and analysed to identify themes related to equity, gender inclusion mechanisms, institutional reforms, and access pathways. Analytical techniques included thematic coding, thematic mapping, conceptual framework development, and policy gap analysis to interpret the relationship between policy provisions, implementation processes, and expected educational outcomes. The findings indicate that NEP-2020 incorporates transgender learners primarily within the broader SEDG framework and introduces policy mechanisms such as the Gender Inclusion Fund, promotion of safe and inclusive educational environments, equitable access and retention strategies, and the integration of gender sensitivity and constitutional values in curriculum and teacher preparation. These provisions establish a normative policy foundation for advancing transgender educational inclusion across school and higher education sectors. However, the analysis also reveals significant policy-practice gaps, including limited operational guidelines specifically addressing transgender educational needs, inadequate teacher preparedness regarding gender diversity, insufficient institutional support systems, and persistent socio-cultural stigma that may hinder effective policy implementation.

Keywords: Transgender Education, Inclusive Education Policy, Gender Inclusion Fund, Policy Gap Analysis, Educational Equity.

Introduction

Transgender individuals have historically been an integral part of Indian society, with their presence acknowledged and celebrated in ancient texts and mythology. The concept of

'tritiyaprakriti', or a 'third gender', is deeply embedded in Vedic and Puranic literature, where figures like Mohini, the female incarnation of Vishnu, and Shikhandi in the *Mahabharata* reflect the acceptance of gender diversity (Moumita Barman) (Michelraj 17). Lord Rama, a revered figure for his virtue and heroism, was exiled from his kingdom, and then he instructed his followers that the men and women should leave him. While men and women obeyed, the Hijra community, identifying as neither male nor female, chose to stay and wait for his return after fourteen years. Their unwavering loyalty earned them praise in later cultural narratives. During the Mughal era, transgender individuals held influential roles as political advisors and administrators, enjoying significant power and respect (Ariba). But, the colonial rule disrupted this societal acceptance, introducing discriminatory laws like the Criminal Tribes Act of 1871, which marginalized transgender communities in India, including hijras, khwajasaras, and kotis, by creating the category of 'eunuch' to refer to them for criminal activities (Gannon 5). Which continued even in post-independence India, the transgender community has faced discrimination, harassment, and persecution. This disruption underscores the complex legacy of transgender representation in India, highlighting the need for a critical review of their educational inclusion today to promote understanding and respect.

The inclusion of a "Transgender" category in the 2011 Indian census was a significant step towards acknowledging transgender individuals in official records. The census reported a transgender population of approximately 4.88 lakh, with a literacy rate of 56.07%—substantially lower than the general population's literacy rate of 74% (*Census 2011*). This disparity underscores the urgent need for inclusive policies to address the educational challenges faced by the transgender community. Data presented in the Lok Sabha in December 2019 further highlights the underrepresentation of transgender individuals in academia. Over five years, only 814 transgender students enrolled in Indira Gandhi National Open University (IGNOU), while central universities reported no transgender students or staff (*Lok Sabha Questions and Answers Archive*, December 2019). Similarly, the All India Survey on Higher Education (AISHE) 2018-19 did not include any mention of transgender individuals despite encompassing 37.4 million students enrolled in higher education across 993 universities and nearly 40,000 colleges (AISHE 2018-19).

At the school level, the UDISE+ 2019-20 report indicated that 61,214 transgender children were enrolled, with only 5,813 in Class 10 and 4,798 in Class 12. These statistics reveal systemic gaps in access to and retention of education for transgender individuals. This raises critical questions:

The formulation of the National Education Policy (NEP) 2020 was an extensive and consultative process initiated by the Ministry of Human Resource Development (MHRD). The process began in January 2015 with the formation of a consultation committee, which was subsequently discussed during the 63rd Central Advisory Board on Education (CABE) meeting in August 2015. This was followed by six zonal meetings across different regions of India, covering all states and union territories between September and October 2015. The grassroots consultations engaged stakeholders at various levels, including Gram Panchayats, Blocks, Urban Local Bodies, districts, and states, with results uploaded to a public survey platform.

To further strengthen the policy framework, the MHRD constituted a five-member committee led by Late Shri T.S.R. Subramanian on 31st October 2015, which submitted its report on 27th May 2016. Subsequently, a short-duration discussion was held in the Rajya Sabha on 10th August 2016, and the policy was deliberated again in the 64th CAGE meeting in October 2016. In November 2016, an 'Education Dialogue' was conducted with Members of Parliament.

To draft the policy, another committee was formed under the chairmanship of Padma Vibhushan Dr. K. Kasturirangan on 24th June 2017. This committee released the Draft NEP-2019 on 31st May 2019, made publicly accessible in 22 languages, including an audiobook version. A special CAGE meeting was held on 21st September 2019 to discuss the draft. Finally, after rigorous deliberations, the Union Cabinet approved the National Education Policy 2020 on 29th July 2020, introducing significant reforms to transform India's education system to meet global standards. Later, the COVID-19 pandemic and a series of Lockdowns nationwide slowed down the implementation process of NEP-2020.

The questions are: Does the state-of-the-art National Education Policy 2020 ensure transgender education? What challenges hinder the implementation of transgender inclusion and education? What early implementation stage measures can be taken for effective implementation? These questions form the foundation of this study, which seeks to critically evaluate the current education policy and explore pathways for meaningful inclusion of transgender individuals in India's education system.

Definitions of the terms

1. Transgender: The term *transgender* refers to individuals whose gender identity differs from the sex assigned to them at birth.

"a transgender person is defined as someone whose gender does not match the gender assigned to that person at birth and includes trans-man or trans-woman (whether or not such person has undergone sex reassignment surgery or hormone therapy or laser therapy or such other therapy), person with intersex variations, genderqueer and person having such socio-cultural identities as kinner, hijra, aravani and jogta"

-Article 2(k) Transgender Persons (Protection of Rights) Act, 2019

2. Transgender Education: Transgender education refers to the process of providing equitable access to learning opportunities for individuals who identify as transgender, addressing their unique social, psychological, and educational needs.

Objectives

1. To examine the National Education Policy 2020 for transgender education.
2. To identify the challenges in the implementation of transgender-inclusive educational reforms outlined in National Educational Policy-2020.
3. To propose measures for strengthening the inclusion and educational access of transgender individuals in aligned with National Education Policy 2020.

Research Design:

The present study adopted a qualitative document analysis approach to examine the provisions related to transgender education in the National Education Policy-2020 (NEP-2020). Policy

documents are considered authoritative sources for understanding government priorities, institutional frameworks, and reform strategies in education systems. Qualitative document analysis enables researchers to systematically interpret policy texts and identify themes, patterns, and policy intentions embedded within them. The National Education Policy-2020 document served as the primary data source for this study.

Analytical Framework

The study employed a two-stage analytical framework:

1. Thematic Analysis (Braun & Clarke, 2006) for identifying patterns and themes within the policy text.
2. Walt and Gilson's Policy Triangle Framework (1994) for interpreting policy dimensions in terms of content, context, actors, and process.

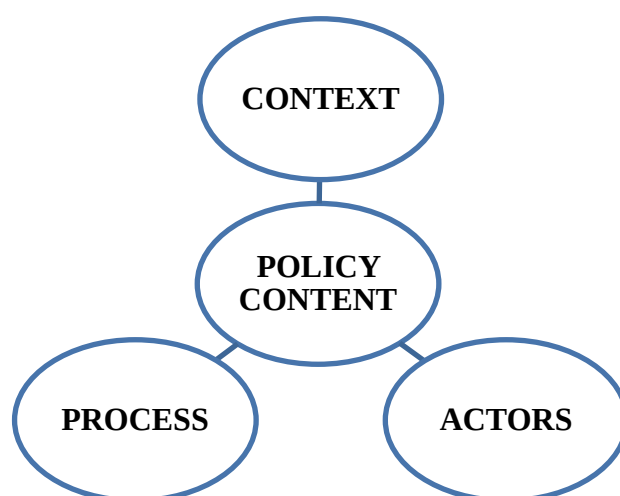
This combined approach allowed both textual interpretation of the policy document and systematic policy analysis within a broader governance context.

Thematic Analysis Procedure

The policy document was analysed following the six stages of thematic analysis proposed by Braun and Clarke:

1. Familiarisation with the Document: The NEP-2020 document was read repeatedly to gain an in-depth understanding of its structure and provisions related to inclusion and gender equity.
2. Initial Coding: Relevant statements concerning educational inclusion, gender equality, and support mechanisms for marginalized groups were identified and coded.
3. Searching for Themes: Similar codes were grouped into broader themes such as structural equity, gender inclusion mechanisms, inclusive institutional environments, and educational access pathways.
4. Reviewing Themes: The themes were refined by comparing them with relevant policy sections and paragraph references to ensure alignment with the policy text.
5. Defining and Naming Themes: Each theme was clearly defined and linked to specific policy provisions.
6. Reporting the Findings: The final themes were presented with corresponding NEP-2020 paragraph references and interpretative observations.

Policy Triangle Framework Following thematic coding, the findings were interpreted using the Walt and Gilson Policy Triangle Framework, which examines policies through four



analytical dimensions:

FIGURE 1: POLICY TRIANGLE FRAMEWORK BY WALT AND GILSON (1994)

TABLE 1: DIMENSIONS OF POLICY TRIANGLE FRAMEWORK BY WALT AND GILSON (1994)

Dimension	Analytical Focus in this Study
Content	Provisions in NEP-2020 related to gender inclusion and SEDGs
Context	Socio-cultural marginalization of transgender individuals in education
Actors	Government bodies, educational institutions, policymakers, and stakeholders
Process	Policy formulation and proposed implementation mechanisms such as the Gender Inclusion Fund

This framework enabled a deeper understanding of how policy provisions translate into institutional strategies for inclusion.

Scope and Limitation

The study focuses exclusively on policy text analysis of NEP-2020 and does not evaluate its implementation at institutional or field levels. Therefore, the findings reflect the policy intent and framework, while the practical challenges of implementation are addressed separately in the subsequent objectives of the study.

Data Analysis and Interpretation

The National Education Policy 2020 is a detailed document that discusses the issues and challenges that follow the measures and recommendations of the policy. In the process of addressing objectives 1, 2, and 3, researchers have found patterns of challenges and proposed measures and recommendations for transgender education within the policy. These measures and recommendations have the potential to bring about significant change, as represented as follows:

Analysis of Objective 1: The analysis was conducted in two systematic stages to ensure methodological rigour. In Stage I, a comprehensive review of the *National Education Policy*

2020 document was carried out to identify policy provisions that directly or indirectly relate to transgender education and inclusion. Relevant paragraphs were selected based on their emphasis on equity, socio-economically disadvantaged groups (including transgender learners), inclusive pedagogy, alternative learning pathways, and institutional support, such as the Gender Inclusion Fund outlined for supporting girls and transgender students (Ministry of Education, Government of India, 2023; see also NEP 2020 *Equitable and Inclusive Education* provisions).

In Stage II, a thematic analysis approach was employed. The identified provisions were subjected to open coding, followed by categorisation into meaningful sub-themes. Based on these sub-themes, structured observations were derived and interpreted in relation to the study objectives. This process enabled the development of analytical conclusions grounded in policy evidence.

Stage I Analysis: The NEP-2020 document does not treat transgender education as an isolated policy domain. Instead, transgender learners are included within the broader framework of Equitable and Inclusive Education and Socio-Economically Disadvantaged Groups (SEDGs).

1. Recommendations in NEP-2020 for Transgender Education and Inclusion in School Education:
 - i. The policy emphasizes providing equitable access to quality education for all children, including transgender students, as part of the focus on Socio-Economically Disadvantaged Groups (SDGs) (Para 6.8).
 - ii. Commitment to inclusive education to ensure that all students, regardless of gender identity, feel welcomed and supported in school environments (Para 4.8).
 - iii. Highlights the need for universal foundational literacy and numeracy to bridge learning gaps, particularly for children from disadvantaged backgrounds (Para 2.2).
 - iv. Proposes interventions like alternative education models and flexible learning pathways, such as Open and Distance Learning (ODL), which could benefit transgender individuals unable to attend regular schools (Para 3.5).
 - v. Calls for integrating gender sensitivity into the curriculum and pedagogy (Para 4.23).
 - vi. Encourages the development of inclusive learning materials and activities with respect for diversity and local contexts (Para 4.29).
 - vii. Mandates Teacher training programs for teachers to build capacity for addressing the unique needs of transgender students (Para 5.15).
 - viii. Recognizes higher dropout rates among SEDGs, including transgender individuals, and outlines strategies for retention and re-entry into formal education (Para 3.3).
2. Recommendations in NEP-2020 for Transgender Education and Inclusion in Higher Education:
 - i. NEP 2020 emphasizes equitable access to quality higher education for all, with special attention to SEDGs, including transgender individuals (Para 14.1).

- ii. To ensure SEDGs' inclusion in higher education, the policy proposes enhanced gender balance in admissions, financial assistance, scholarships, and outreach programs (Para 14.4.1(c), 14.4.1(f), and 14.4.1(g)).
- iii. The policy mandates making curricula more inclusive and increasing employability potential for all students, including transgender individuals (Para 14.4.2(e) and 14.4.2(f)).
- iv. Suggests setting up high-quality support centres at HEIs to provide academic and emotional support for students from disadvantaged backgrounds, including transgender students (Para 12.4).
- v. Recommends sensitization programs for faculty, counsellors, and students on gender identity issues to ensure transgender inclusion across academic and administrative aspects (Para 14.4.2(k)).
- vi. All HEI buildings and facilities are to be wheelchair-accessible and disabled-friendly, addressing the broader needs of inclusivity, which can be extended to transgender-friendly facilities like gender-neutral restrooms (Para 14.4.2(h)).
- vii. Promotes Open and Distance Learning (ODL) to provide flexible learning opportunities for students unable to access traditional HEIs, potentially benefiting transgender individuals facing societal or institutional barriers (Para 12.5).
- viii. Professional education is emphasized to develop critical, interdisciplinary thinking and practical skills (Para 20.1).
- ix. Calls for integrating inclusivity and public purpose ethics into the training of professionals, which applies to creating opportunities for transgender individuals in fields like healthcare, legal studies, and technical education (Para 20.4, 20.5, and 20.6).
- x. Highlights the need to ensure foundational literacy, numeracy, and lifelong learning for all adults, including transgender individuals, to enable them to pursue personal and professional growth (Para 21.1).
- xi. Envisions using shared educational spaces and ICT-equipped centres to extend opportunities to marginalized groups (Para 21.6).
- xii. Recommends including diverse cultural knowledge and practices in educational curricula, fostering respect for diversity and marginalized communities, including transgender individuals (Para 22.2).
- xiii. Suggests leveraging technology to improve accessibility and equity in education, potentially benefiting transgender individuals through online platforms like SWAYAM and DIKSHA (Para 23.3, 24.4).

Stage II Analysis:**TABLE 2: THEMATIC ANALYSIS OF NEP-2020 PROVISIONS RELATED TO TRANSGENDER EDUCATION**

Theme	Sub-themes / Policy Provisions	NEP-2020 Paragraph Reference	Analytical Observation
Structural Equity and Access Mechanisms	Recognition of Socio-Economically Disadvantaged Groups (SEDGs); targeted support for marginalized communities; equitable access to education	Para 3.3, 6.8, 14.1, 14.4.1 (c), (f), (g)	Transgender learners are implicitly included within the SEDG category. The policy stresses the need for equitable educational opportunities and structural reforms to address educational inequalities.
Gender Inclusion and Institutional Support	Establishment of Gender Inclusion Fund; financial and institutional support mechanisms for gender equality	Para 6.8, 6.9	The Gender Inclusion Fund is proposed to support gender-inclusive initiatives including the education of transgender learners and other gender-marginalized groups.
Inclusive and Safe Educational Environment	Development of inclusive school culture; respect for diversity; elimination of discrimination and harassment	Para 5, 6.2, 6.7	The policy emphasizes creating educational spaces where all learners feel safe, welcomed, and respected, which is particularly important for transgender students who often face stigma and exclusion.
Universal Access, Retention and Re-Entry Pathways	Reducing dropout rates; open schooling; flexible learning pathways; community engagement	Para 3.1, 3.3, 6.10	The policy proposes alternative educational pathways and retention strategies to ensure that marginalized learners who discontinue education can re-enter the system.
Values Education and Gender Sensitization	Integration of constitutional values, gender sensitivity, equality, empathy, and respect for diversity in curriculum	Para 4.23, 4.28	Curriculum reforms aim to promote gender sensitivity and respect for diversity, which can help foster social acceptance of transgender identities within educational institutions.

Analytical Conclusion for Objective 1

NEP 2020 provides a comprehensive normative framework supporting transgender inclusion across school and higher education. Its approach is systemic rather than fragmented, integrating access, pedagogy, infrastructure, and governance.

Thematic analysis indicates that transgender inclusion is implicitly embedded rather than explicitly operationalized, which may influence implementation clarity.

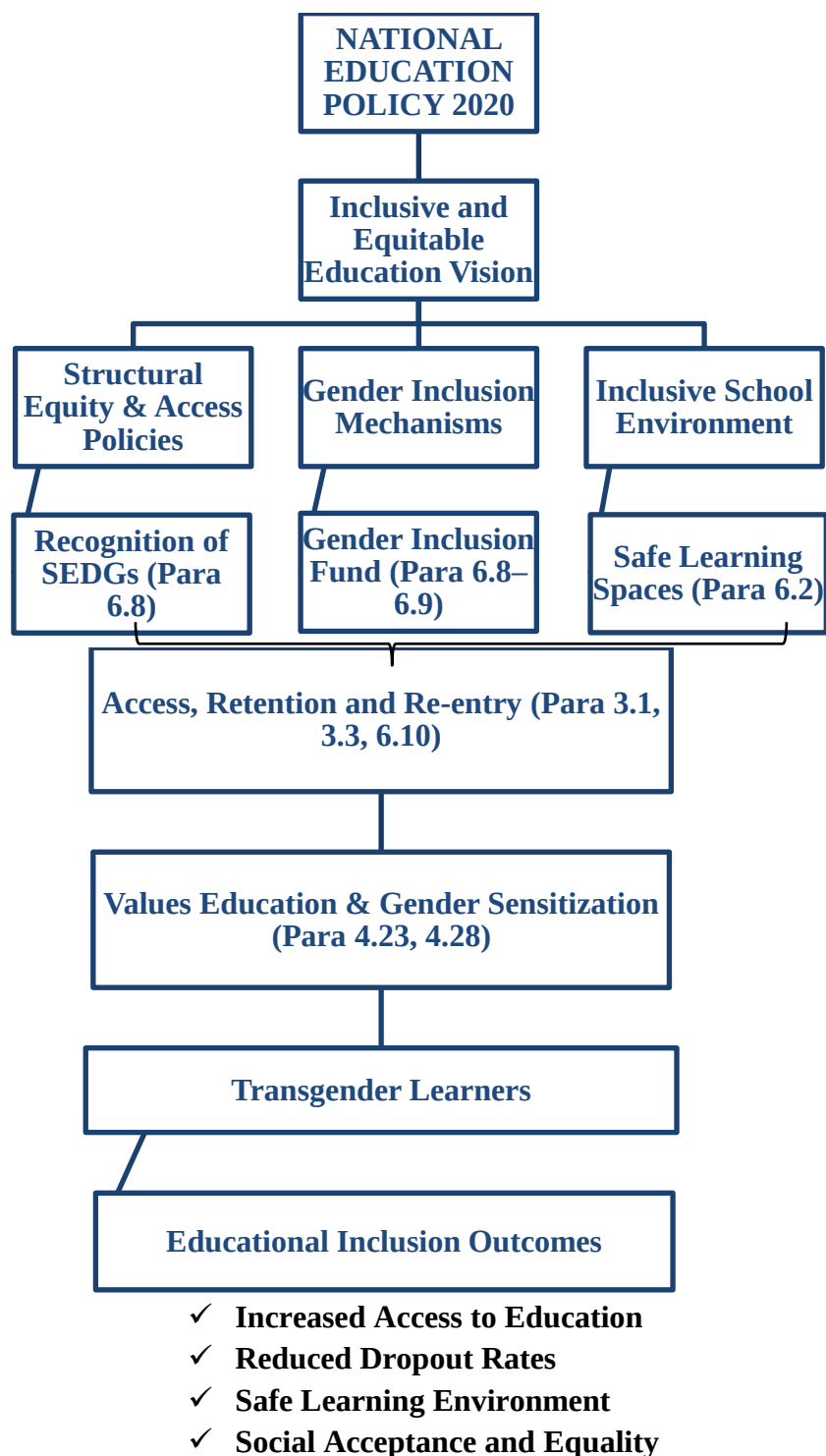


FIGURE 2: THEMATIC MAP OF NEP-2020 PROVISIONS FOR TRANSGENDER EDUCATION

Analysis of Objective 2: The Policy Gap Analysis Model as shown in figure 3 illustrates the Transgender Education under NEP-2020.

NATIONAL EDUCATION POLICY 2020 (Policy Intent)

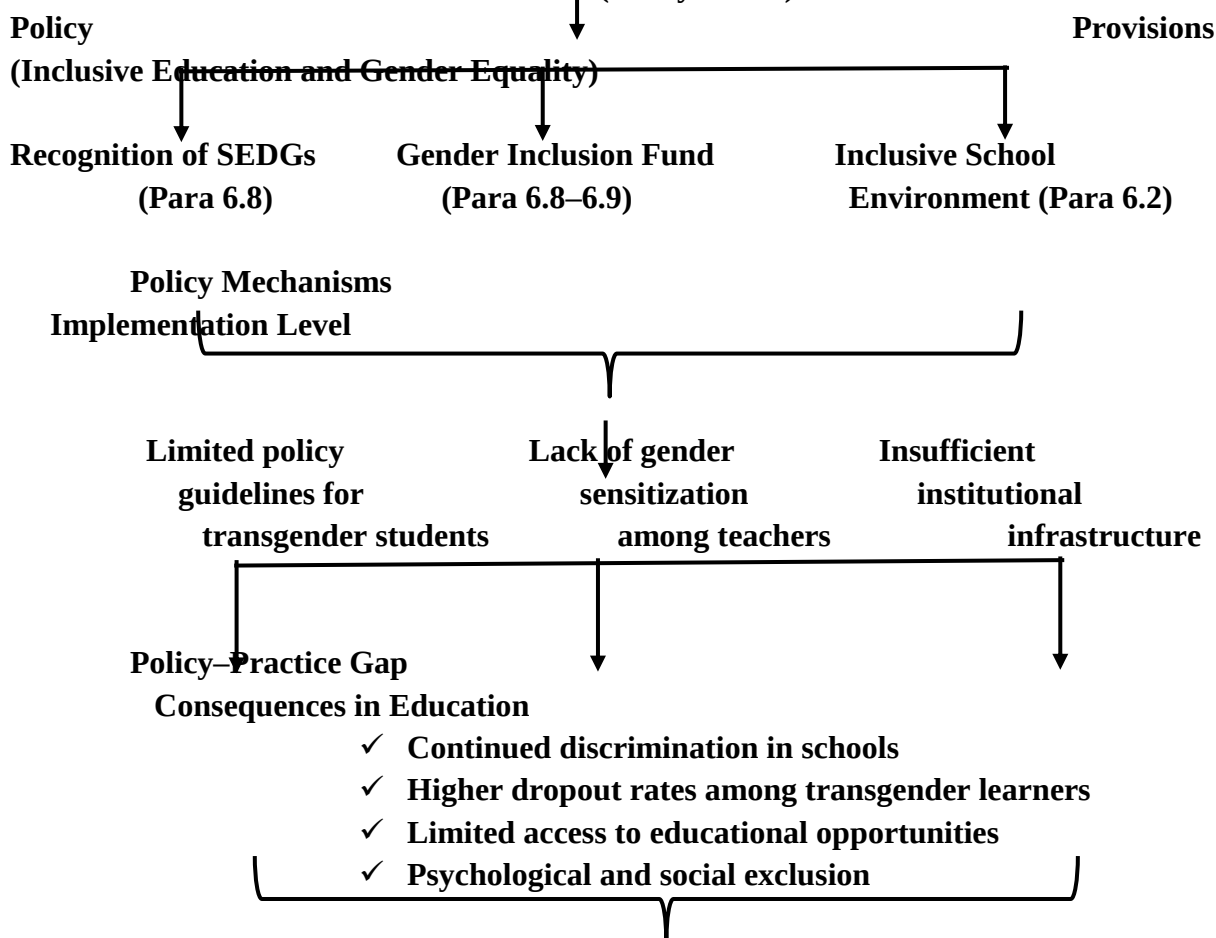


FIGURE 3: POLICY GAP ANALYSIS MODEL FOR TRANSGENDER EDUCATIONAL INCLUSION UNDER NEP-2020

1. Challenges in Execution of Transgender Education and Inclusion in School Education:

- i. Despite policy mandates, transgender students face discrimination and exclusion within school environments.
- ii. Lack of awareness among peers and educators perpetuates social isolation.
- iii. Many teachers lack training on gender sensitivity and transgender issues, leading to a hostile or unwelcoming environment (Para 5.13).
- iv. Schools often lack gender-neutral facilities, such as restrooms and changing rooms, essential for transgender students' comfort and safety (Para 6.9).
- v. Retention initiatives may not adequately account for the unique challenges faced by transgender students, such as familial rejection or economic constraints (Para 3.4).

2. Challenges in Execution of Transgender Education and Inclusion in Higher Education:

- i. Prejudice against transgender individuals remains prevalent among faculty, staff, and peers, limiting their participation in HEIs (Para 14.2).
- ii. Training and awareness programs on gender diversity are often inconsistent or absent, leading to unaddressed biases and lack of support for transgender students (Para 14.4.2(k)).
- iii. Scholarships and financial aid for SEDGs may not reach transgender students due to gaps in outreach or unclear inclusion mechanisms (Para 14.4.1(f) and Para 14.4.2(b)).
- iv. Gender-neutral restrooms and other transgender-friendly facilities are largely absent in HEIs (Para 14.4.2(h)).
- v. Lack of inclusive admissions processes may exclude transgender individuals from accessing higher education opportunities (Para 14.4.2(d)).
- vi. A lack of focused efforts on integrating transgender-specific needs into professional and adult education.
- vii. Limited representation of transgender individuals in professional education and technical training institutions.
- viii. Gaps in the availability of shared spaces or ICT-equipped centers that are inclusive of transgender individuals.
- ix. Lack of gender-sensitive curricula and resources in fields like legal education, healthcare, and adult learning programs.
- x. While technology is emphasized, the digital divide could disproportionately impact transgender individuals, limiting their access to online education and training platforms (Para 24.2).

Analysis of Objective 3

The following table gives a Policy Recommendation Matrix for Strengthening Transgender Education under NEP-2020. The matrix translates identified themes and policy gaps into actionable measures.

TABLE 3: POLICY RECOMMENDATION MATRIX FOR STRENGTHENING TRANSGENDER EDUCATION UNDER NEP-2020

Identified Theme	NEP-2020 Policy Provision	Observed Gap / Challenge	Proposed Measures	Expected Outcome
Structural Equity and Access	Recognition of Socio-Economically Disadvantaged Groups (SEDGs) (Para 6.8)	Transgender learners are broadly included under SEDGs but lack explicit operational guidelines	Formulate specific transgender education guidelines under NEP-2020; include clear admission policies and anti-	Improved access and policy clarity for transgender students

			discrimination protocols	
Gender Inclusion Mechanisms	Gender Inclusion Fund (Para 6.8–6.9)	Limited clarity on allocation and utilisation for transgender education initiatives	Allocate a dedicated portion of the Gender Inclusion Fund for transgender scholarships, counselling support, and educational infrastructure	Increased financial support and participation of transgender learners
Inclusive Educational Environment	Emphasis on safe and welcoming educational institutions (Para 6.2)	Persistence of stigma, bullying, and discrimination in educational institutions	Develop gender-inclusive school policies, anti-bullying guidelines, and grievance redressal mechanisms	Creation of safe and supportive learning environments
Teacher Preparedness and Sensitization	Integration of gender sensitivity and constitutional values in curriculum (Para 4.23, 4.28)	Limited teacher training on gender diversity and transgender issues	Introduce mandatory gender-sensitization and inclusive pedagogy training in teacher education programmes	Increased awareness and supportive classroom practices
Retention and Re-Entry Pathways	Flexible learning pathways and dropout prevention strategies (Para 3.1, 3.3, 6.10)	Transgender students often discontinue education due to social discrimination	Provide open schooling, bridge courses, and re-entry programmes specifically accessible to transgender learners	Reduced dropout rates and improved educational continuity
Institutional Support Systems	Inclusive education vision in school and higher education institutions	Lack of counselling and psychological support for transgender students	Establish institutional counselling services, gender support cells, and inclusive infrastructure	Improved well-being and retention of transgender students

The conceptual framework illustrates how policy provisions within NEP-2020 contribute to transgender educational inclusion through a structured process.

NATIONAL EDUCATION POLICY 2020 (Inclusive Education Framework)

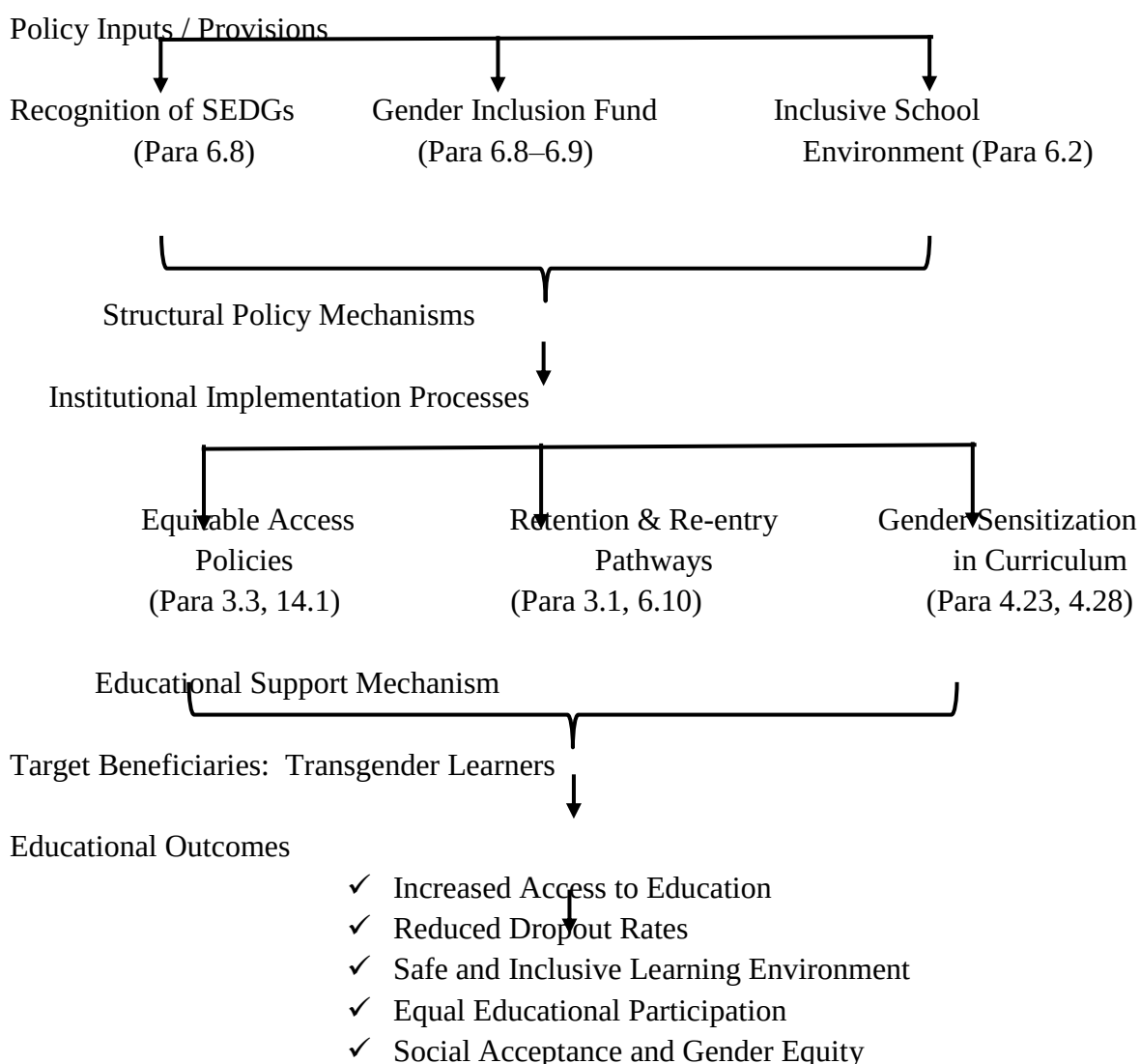


FIGURE 4: CONCEPTUAL FRAMEWORK FOR TRANSGENDER EDUCATIONAL INCLUSION UNDER NATIONAL EDUCATION POLICY-2020

Discussion And Conclusion

1. The analysis of the National Education Policy-2020 reveals that the policy places significant emphasis on equity, inclusion, and social justice within the Indian education system. The policy recognizes the importance of providing equal educational opportunities to marginalized communities and identifies Socio-Economically Disadvantaged Groups (SEDGs) as a key category requiring targeted support. Within this framework, transgender learners are acknowledged as a group that may face barriers to educational participation. The recognition of SEDGs (Para 6.8) reflects the policy's commitment to ensuring equitable access to education and reducing systemic inequalities within the education system.

2. One of the significant policy provisions identified in the analysis is the introduction of the Gender Inclusion Fund, intended to promote gender equity in education and support initiatives aimed at addressing gender-based disparities (Para 6.8–6.9). This provision has the potential to play a critical role in supporting transgender learners through scholarships, institutional support mechanisms, and inclusive educational programmes. In addition, the policy highlights the need to create safe, welcoming, and inclusive learning environments where every learner feels respected and valued (Para 6.2). Such provisions are particularly important for transgender students, who often experience discrimination, stigma, and harassment in educational institutions.
3. The policy also emphasizes universal access to education and reduction of dropout rates through measures such as flexible learning pathways, open schooling, and community engagement strategies (Para 3.1; 3.3; 6.10). These initiatives can be particularly beneficial for transgender learners who may have discontinued education due to social exclusion or institutional barriers. Furthermore, NEP-2020 advocates the integration of constitutional values such as equality, empathy, gender sensitivity, and respect for diversity into the curriculum (Para 4.23; 4.28). Such curricular reforms can contribute to creating a more inclusive educational culture and fostering greater acceptance of gender diversity within schools and higher education institutions.
4. Despite the inclusive vision reflected in NEP-2020, the analysis also reveals several policy-practice gaps that may hinder the effective implementation of transgender-inclusive education reforms. While transgender learners are included under the broader category of SEDGs, the policy does not provide detailed operational guidelines specifically addressing transgender educational needs. This lack of explicit policy direction may limit the effectiveness of implementation efforts at institutional and administrative levels. In addition, the success of inclusive education policies depends heavily on teacher preparedness and institutional awareness, yet there is limited emphasis on structured training programmes for educators to address issues related to gender diversity and transgender inclusion.
5. Another challenge relates to the availability of institutional support systems, including counselling services, gender-sensitive infrastructure, and grievance redressal mechanisms. Without such support structures, transgender students may continue to experience barriers within educational environments despite the presence of inclusive policy provisions. Furthermore, social stigma and discrimination against transgender individuals remain significant societal challenges that may affect the implementation of policy initiatives.
6. In light of these challenges, several measures can be proposed to strengthen transgender inclusion in education in alignment with NEP-2020. First, policymakers may consider developing specific guidelines or frameworks for transgender education within the broader SEDG category, ensuring that the unique educational needs of transgender learners are clearly addressed. Second, the Gender Inclusion Fund could be strategically utilized to support targeted programmes, including scholarships, inclusive

infrastructure, and counselling services for transgender students. Third, teacher education and professional development programmes should incorporate gender-sensitivity training to equip educators with the knowledge and skills required to create inclusive classroom environments. Additionally, educational institutions may establish gender support cells and anti-discrimination policies to safeguard the rights and well-being of transgender students.

In conclusion, the National Education Policy-2020 provides an important policy framework for promoting inclusive and equitable education in India. Although transgender learners are not addressed through a separate policy section, the policy's emphasis on equity, gender inclusion, and respect for diversity offers a foundation for advancing transgender educational inclusion. Effective implementation of these provisions, however, requires clear operational guidelines, institutional commitment, and sustained efforts to address social and cultural barriers. Strengthening these aspects will be essential for ensuring that the vision of inclusive education envisioned in NEP-2020 translates into meaningful educational opportunities for transgender learners in India.

References

- Anderson, R. L., and T. A. Bancroft. *Statistical Theory in Research*. McGraw Hill Book Co., New York, 1952.
- Ariba. "Explained: A Brief History of India's Transgender Community." *The Indian Express*, 10 July 2023, <https://indianexpress.com/article/explained/explained-culture/starbucks-history-transgender-community-india-8616767/>.
- Asthana, Bipin, and R. N. Agarwal. *Measurement and Evaluation in Psychology and Education*. Vinod Pustak Mandir, Agra, 1987.
- Bisma, B., Nahida N., and F. A. Loan. "National Digital Library of India: An Overview." 2019, <https://core.ac.uk/download/590263950.pdf>.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa> <https://www.tandfonline.com/doi/abs/10.1191/1478088706qp063oa>.
- Bowen, G. A. (2009).** Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/QRJ0902027>
- Census 2011. "Transgender in India: Population, Literacy, and Employment." Census 2011 India, <https://www.census2011.co.in/transgender.php>.
- Department of School Education and Literacy (DoSEL). National Achievement Survey (NAS)-2021 Report Card. 25 May 2021, <https://nas.gov.in/report-card/2021>.
- Department of School Education and Literacy (DoSEL). "UDISE+ 2019-20: Unified District Information System for Education Plus." UDISE+ Reports, 2020.
- Dixon, W. J., and F. J. Massey. *Introduction to Statistical Analysis*. McGraw Hill Book Co., New York.
- Gannon, Shane. "Exclusion as Language and the Language of Exclusion: Tracing Regimes of Gender through Linguistic Representations of the 'Eunuch.'" *Journal of the History of Sexuality*, vol. 20, no. 1, 2011, pp. 1–27. JSTOR, doi:10.1353/sex.2011.0001.
- Glady, S. "NEP 2020 and Transgender Communities' Education." *Studies in the Cultural Diversities of India*, vol. 2, no. 2, 2023, pp. 15–25.

- https://www.arfjournals.com/image/catalog/Journals%20Papers/SCDI/2023/No%202%20%282023%29/2_Gladis%20S.pdf.
- Government of India, Ministry of Education. National Education Policy 2020. 29 July 2020, <https://www.education.gov.in/national-education-policy-2020-0>. Accessed 10 Jan. 2025.
- Ministry of Education, "National Education Policy, 2020." 7 Dec. 2021, <https://www.education.gov.in/national-education-policy-2020-1>. Accessed 2 Dec. 2024.
- Government of India. The Constitution of India. 26 Nov. 1949, <https://legislative.gov.in/constitution-of-india/>.
- Guilford, J. P. Fundamental Statistics in Psychology and Education. McGraw Hill Book Co., New York, 1965.
- Lok Sabha. "Data on Transgender Students in Academia." Lok Sabha Questions and Answers Archive, 3 Dec. 2019.
- Michelraj, M. "Historical Evolution of Transgender Community in India." Asian Review of Social Sciences, vol. 4, no. 1, 2015, pp. 17–19. doi:10.51983/arss-2015.4.1.1304.
- Ministry of Education, Government of India. "National Education Policy, 2020 Provides for Setting up a Gender Inclusion Fund (GIF) Especially for Girls and Transgender Students to Provide Them Equitable Quality Education." Press Information Bureau, 31 July 2023, https://www.education.gov.in/sites/upload_files/mhrd/files/PIB1944287.pdf.
- Ministry of Education. "All India Survey on Higher Education 2018-19." AISHE Reports, 2019.
- Ministry of Human Resource Development, Government of India. National Policy on Education (Modified in 1992). 31 Dec. 1992, <http://dsel.education.gov.in/dsel>.
- Ministry of Law and Justice, Government of India. The Constitution of India (Part-III) - Directive Principles of State Policy. 11 Dec. 2019, <https://www.mea.gov.in/Images/pdf1/Part4.pdf>.
- More, V. S. (2024). A Study of the Interplay of Emotional Intelligence and Peer Relationships Among Secondary School Girls in Ponda, Goa. Sanshodhank, (10), 128-131.
- Office of the Registrar General and Census Commissioner, India. Census of India 2011. Ministry of Home Affairs, Government of India, 2011.
- Press Information Bureau, Government of India. "Highlights of New Education Policy-2020." Press Release, 14 Sept. 2020, <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1654058>. Accessed 3 Dec. 2024.
- Press Information Bureau, Government of India. "National Education Policy 2020 Announced." Press Release, 29 July 2020, <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1642061>. Accessed 3 Dec. 2024.
- Registrar General and Census Commissioner of India. Census of India 2011: Population Enumeration. <https://www.censusindia.gov.in/>.
- Walt, G., & Gilson, L. (1994). Reforming the health sector in developing countries: The central role of policy analysis. Health Policy and Planning, 9(4), 353–370. <https://doi.org/10.1093/heapol/9.4.353>

**BRIDGING EDUCATIONAL GAPS FOR MARGINALIZED COMMUNITIES
THROUGH ARTIFICIAL INTELLIGENCE****Mr. Avinash G. Bhale***Centre for the Study of Social Inclusion , Shivaji university Kolhapur***Dr. Vidyanand S. Khandagale***Department of education, Shivaji University Kolhapur***Abstract**

Educational disparities among marginalized communities in India—specifically, Scheduled Castes (SC), Scheduled Tribes (ST), and economically disadvantaged groups—remain deeply entrenched due to historical, geographical, and systemic socio-economic barriers. Drawing on secondary data from recent educational frameworks, public surveys, and academic literature, this conceptual paper investigates how Artificial Intelligence (AI) interventions can be structurally designed to bridge these gaps. We evaluate the core systemic challenges, including severe language mismatches, regional resource scarcity, and acute institutional capacity constraints. We map specific technical frameworks—Natural Language Processing (NLP) for dialect localization, Intelligent Tutoring Systems (ITS) for mastery-oriented personalized learning, and predictive dropout analytics—against these barriers.

However, our analysis reveals a critical dialectic: without community-centred governance and localized training datasets, AI deployments run the real risk of reinforcing caste biases, linguistic hegemony and algorithmic surveillance. This study concludes by proposing an integrated policy-technical framework to guide the ethical and inclusive design of educational AI platforms to achieve authentic democratic parity.

Keywords: *Socio-Economic Inclusion, Educational Equity, Scheduled Castes, Scheduled Tribes, Artificial Intelligence, Decolonial AI Frameworks*

Introduction Education plays a crucial role in facilitating social mobility and democratization. However, historically marginalized populations in India encounter significant obstacles in accessing equitable and high-quality education, thereby perpetuating structural inequality. Research indicates pronounced regional and socioeconomic disparities, particularly in access to pre-primary education. Despite the National Education Policy, the 2020s objective of achieving universal high-quality early childhood education by 2030, inequalities persist. Children from Scheduled Castes and Scheduled Tribes, especially rural girls, exhibit lower enrolment rates than their urban, advantaged counterparts. This rural–urban disparity largely reflects household economic conditions and the educational level of the household head, illustrating how family background influences opportunities from the beginning (Choudhury et al., 2023). Educational mobility in India remains strongly intergenerational, with children's educational attainment closely linked to that of their parents, particularly fathers. Although this persistence has diminished, inequality remains deeply entrenched, and a "Great Gatsby Curve"

pattern reveals widening mobility gaps between advantaged and disadvantaged groups, thereby limiting upward mobility for marginalized populations. Macroeconomic growth and increased public education spending are correlated with improved mobility outcomes (Kishan & Rajverma, 2024). Caste and religion continue to be central structural determinants of educational and occupational mobility in India. Evidence demonstrates that caste and religious identities still influence access to top occupations and upward mobility. Dalits and Muslims encounter systemic barriers to educational resources and white-collar employment, necessitating educational inclusion and labour market reform (Ferry, 2022). Access to education is contingent upon quality and resources, not merely enrolment alone. Digital inequality restricts access to reliable Internet, devices, and remote learning (Duggi et al., 2025), while discrimination and implicit bias perpetuate exclusion (Green & Cross, 2023). Policies should aim to expand access, enhance quality, strengthen digital infrastructure, reduce rural-urban and caste-based disparities, and integrate education with vocational training to foster mobility and inclusion (Choudhury et al., 2023; Duggi et al., 2025; Ferry, 2022; Green & Cross, 2023; Kishan & Rajverma, 2024; Roshan & Rahman, 2025).

Caste-based exclusion, the isolation of Scheduled Tribes (ST), and economic barriers contribute to disparities in literacy, dropout rates, and learning outcomes. These inequities arise from social stratification and limited resources. Historical discrimination has resulted in the social exclusion of Scheduled Castes, restricting their access to quality educational institutions, thereby reducing literacy rates and increasing dropout rates. Scheduled Tribes in remote areas encounter obstacles, and curricula may not correspond to indigenous languages or traditions. Inadequate transportation, materials in dominant languages, and culturally insensitive pedagogies impede tribal engagement and retention (Sundararajan et al. 2013). Financial constraints further restrict disadvantaged groups' access to education, as poverty and educational expenses compel children to drop out or never enrol in schools. AI and machine learning have the potential to mitigate disparities through personalized adaptive learning tailored to diverse learner needs (Bello & Aubert, 2025; Reina-Parrado et al., 2025). However, AI-enhanced education may be unevenly distributed owing to the digital divide affecting SC, ST, and economically disadvantaged groups. Deficiencies in infrastructure, digital literacy, affordability, and policy support exacerbate these inequalities (Vesna 2025). Equitable AI deployment necessitates reliable infrastructure, culturally inclusive content, teacher training, affordability, community support, and policy measures to bridge these gaps. This analysis synthesizes findings from multidisciplinary studies, highlighting the complex intersectionality of social, economic, and technological factors that influence educational disparities among marginalized groups.

India's National Education Policy (NEP) 2020 seeks to transform education through inclusive reforms addressing socioeconomic realities and linguistic diversity; however, implementation faces infrastructure and social barriers. AI and ML can personalize learning and ease resource deficits but require cautious integration to avoid reinforcing bias and hierarchy. The NEP 2020 prioritizes multilingual education (MLE) and mother tongue-based instruction (MTI) up to Grade 5 to improve comprehension and inclusivity across India's population (Singh, 2025).

However, progress is slow because of monolingual ideologies, training, and resource constraints (Raj Devkota, 2026). In higher education, it promotes the inclusion of marginalized groups, including transgender individuals, through policies and services (C, 2024; Raj, 2024), envisioning a knowledge society that values local languages and addresses socio-economic and caste disparities (Dhurve, 2024). AI-enabled assessment and translation can widen access (-, 2025), but biased data may cause discriminatory grading (-, 2025; Bhavana et al., 2024); therefore, ethical frameworks, human oversight, and data protection are essential (Bhavana et al., 2024; Lockwood & Brown, 2024; Selvam & González Vallejo, 2025). Through collaboration, AI can support the NEP vision.

Educational challenges for Scheduled Castes (SC), Scheduled Tribes (ST), and low-income populations involve linguistic, economic, and institutional barriers to education. Integrating Artificial Intelligence (AI) within Universal Design for Learning (UDL) can address bottlenecks and strengthen inclusion. Tribal communities, with over 700 indigenous languages largely absent from state curricula, face language mismatches that foster alienation, failure, and disengagement from the educational system. AI-driven frameworks can use natural language processing and adaptive algorithms to develop multilingual and relevant content tailored to indigenous languages. By localizing the curriculum and embedding community knowledge, AI tools can reduce alienation and foster engagement in tribal populations (Lopez, 2025). For SC and economically disadvantaged groups, financial instability and child labor drive absenteeism and dropouts. AI within UDL can personalize learning for intermittent attendance, provide remediation, and identify at-risk students for interventions that improve their retention (Saborío-Taylor & Rojas-Ramírez, 2024). Rural and urban schools face neglect and resource shortages. AI can supplement teachers' capacity through tutoring and feedback (Lopez, 2025; Teles & Moreira, 2024). UDL removes barriers through multiple representations and engagement methods, whereas AI personalizes learning for diverse abilities and socioeconomic backgrounds (Priyadharsini & Sahaya Mary, 2024; Saborío-Taylor & Rojas-Ramírez, 2024). However, AI poses a risk of bias and privacy concerns. Mitigation requires community participation, transparent design, and data protection policies (Kohnke & Zaugg, 2025; Lopez, 2025). Integrated with UDL, AI offers a culturally responsive way to address persistent educational bottlenecks for disadvantaged groups (Kohnke & Zaugg, 2025; Lopez, 2025; Saborío-Taylor & Rojas-Ramírez, 2024).

Objectives of the study

1. To examine socio-economic barriers to equitable education for marginalized communities, Scheduled Castes (SCs), Scheduled Tribes (STs), and disadvantaged groups in India.
2. To analyze AI-driven technologies, including NLP, ITS, adaptive learning, and predictive analytics, to address inequalities and promote inclusion.
3. To develop a framework that integrates AI-enabled pedagogy, ethical governance, multilingual accessibility, community participation, and support for inclusion.

Research methodology

This study adopts a qualitative conceptual research design based on a systematic review and critical synthesis of secondary literature. Relevant peer-reviewed journal articles, government

policy documents, reports from international organizations, and scholarly publications on Artificial Intelligence, educational equity, and Marginalized communities were analyzed using thematic content analysis. The study synthesizes existing evidence to develop a conceptual framework illustrating how AI-driven educational interventions can promote inclusive and equitable learning while addressing challenges related to digital access, ethics, governance, and educational disparities. As a conceptual study, it does not involve primary data collection but provides a theoretical foundation for future studies.

Targeted AI architecture

The targeted AI architecture in educational contexts encompasses several critical components designed to deliver personalized, adaptive, and culturally relevant learning experiences. The integration of multilingual NLP translation, intelligent tutoring systems (ITS), and predictive early warning models forms a comprehensive framework that addresses diverse learner needs, supports mastery-based instruction, and proactively mitigates risks such as student dropouts.

Multilingual NLP Translation for Localization: AI-driven multilingual Natural Language Processing (NLP) technologies play a vital role in localizing educational content into tribal dialects and regional mother tongues. These systems leverage advanced NLP techniques to generate culturally and linguistically appropriate curriculum materials, enhancing accessibility and comprehension for learners from diverse linguistic backgrounds. By employing machine learning algorithms and linguistic data analytics, AI platforms can diagnose individual learning gaps and generate personalized exercises and feedback in native languages, thereby increasing engagement and inclusivity (Saddhono et al., 2024). Furthermore, catboats and interactive dialogue systems utilizing NLP offer learners immersive practice in reading, writing, and comprehension tailored to their mother tongue, assisting in both content mastery and language acquisition within multilingual classrooms (Akhter, 2025; Saddhono et al., 2024).

Intelligent Tutoring Systems (ITS) with Adaptive and Asynchronous Instruction: Intelligent Tutoring Systems (ITSs), powered by AI and machine learning, provide mastery-based, asynchronous instruction adapted to irregular learner schedules. ITS platforms use learner modelling, adaptive content delivery, real-time feedback, and performance analytics to create personalized learning trajectories that account for individual cognitive styles and pacing (Lalit et al., 2025; Rodrigues et al., 2025).

By integrating natural language processing, ITS can generate context-sensitive, personalized feedback that mimics one-on-one human tutoring, thereby improving conceptual understanding and problem-solving skills across domains such as chemistry and engineering education (Kumar, 2025; Troussas et al., 2023). These systems dynamically adjust instructional strategies based on continuous assessment of learner performance and engagement, offering scalable and flexible support that adapts to asynchronous learning environments and diverse schedules (Akintola et al., 2025; Chinnasamy et al., 2025).

Predictive Early Warning Models for Proactive Intervention: AI-driven predictive analytics is an essential component in identifying students at risk of dropping out or underperforming. Using systemic data and sophisticated machine learning models, such as random forests, gradient boosting, and deep learning ensembles, these early warning systems predict dropout

risks with high accuracy rates (85–95%), enabling timely and targeted human interventions (Cao & Mai, 2025).

These models utilize feature engineering and multimodal data integration to identify subtle patterns that are indicative of future academic difficulties. Real-time analytics platforms can trigger alerts for educators or counselors, allowing the initiation of tailored support strategies before disengagement escalates (Akintola et al., 2025; Cao & Mai, 2025). The ethical deployment of such systems involves careful consideration of data privacy, algorithmic fairness, and transparent decision-making frameworks to ensure equitable support across diverse learner populations (Akhter, 2025; Cao & Mai, 2025).

Architectural Overview: Integrated AI Components for Targeted Learning: The comprehensive architecture for targeted AI in education includes the following:

- **Multilingual NLP Modules:** To localize content into native dialects, supporting linguistic diversity, and culturally relevant pedagogy.
- **Intelligent Tutoring Systems:** Offering asynchronous, mastery-based, adaptive instruction that models learner knowledge and dynamically adjusts feedback and content delivery.
- **Early Warning Predictive Analytics:** Harnessing systemic educational data to forecast at-risk students and prompt timely interventions.

These components collectively foster a personalized and inclusive learning environment. For example, a multilingual ITS might deliver adaptive lessons in a student's tribal dialect while monitoring engagement and mastery, with predictive analytics alerting educators if a student's performance suggests a dropout risk. Human educators then receive actionable insights to provide contextual support, thereby blending AI-driven automation with proactive human intervention (Akhter, 2025; Cao & Mai, 2025; Lalit et al., 2025).

Ethical and Practical Considerations: Despite these technological advances, several challenges remain in the implementation of such architectures at scale. Ensuring data quality and integration from diverse sources is paramount to the robustness of predictive models (Cao & Mai, 2025). Additionally, systems must incorporate XAI frameworks to foster trust and transparency among educators and learners (Cao & Mai, 2025). Cultural sensitivity, privacy, and bias mitigation are critical, especially in multilingual and multicultural contexts, where algorithmic errors may exacerbate educational disparities (Akhter, 2025; Akintola et al., 2025).

Future Directions: This study aims to enhance targeted AI architectures by incorporating federated learning for collaboration, causal inference for intervention assessment, and refined emotionally intelligent tutoring for nuanced learner support (Cao & Mai, 2025; Lalit et al., 2025). Targeted AI architectures that combine multilingual NLP, intelligent tutoring, and predictive models provide a powerful solution for localized, adaptive, and proactive educational support. These frameworks enhance mastery-based instruction, accommodate irregular schedules, and enable early mitigation of dropout risks, contributing to more equitable educational systems across diverse settings. This synthesis draws on the literature demonstrating the design, efficacy, and challenges of such AI-enabled technologies (Akhter, 2025; Cao & Mai, 2025; Lalit et al., 2025; Rodrigues et al., 2025).

Systemic governance safeguards

Systemic governance safeguards in AI fundamentally revolve around two intertwined pillars: the use of representative local training data and strict algorithmic transparency. These core areas are critical for ensuring fairness, accountability, and trustworthiness in AI systems deployed across domains such as finance, healthcare, education, and public governance.

Representative Local Training Data: The use of representative training data is essential for mitigating algorithmic bias and delivering equitable outcomes. Biased training datasets, often lacking sufficient diversity or skewed by socioeconomic or demographic factors, can perpetuate discriminatory practices and widen societal inequalities. Ethical AI governance frameworks emphasize the following:

- **Inclusive Data Practices:** Actively incorporating diverse and locally relevant datasets helps prevent biases resulting from unrepresentative samples. For instance, financial services deploying AI for credit scoring or hiring must ensure that datasets reflect the demographic and socio-economic profiles of the populations served to avoid systemic discrimination (Agu et al., 2024; Bahangulu & Owusu-Berko, 2025).
- **Ethical Data Stewardship:** Robust governance models require provenance tracking to ensure transparency regarding data sources, consent, and privacy. This is especially crucial in sensitive sectors such as healthcare, where scalable yet fair data engineering must respect patient autonomy and justice (Adepoju & Adepoju, 2025).
- **Scalable and Contextual Data Engineering:** Implementing frameworks that allow federated learning and cross-jurisdictional interoperability supports data privacy while maintaining data representativeness within specific local contexts, thereby aligning AI system performance with local realities (Adepoju & Adepoju, 2025).

Strict Algorithmic Transparency: Transparency is a cornerstone of systemic governance that enables accountability and builds public trust. Transparent AI systems expose their decision-making processes in an interpretable and contestable manner, helping to mitigate the opacity issues intrinsic to complex AI algorithms.

- **Explain ability and Right to an Explanation:** Legal frameworks, such as the EU AI Act, mandate the explain ability of AI decisions to safeguard fundamental rights. However, implementing meaningful explanations presents technical and legal challenges, such as balancing intellectual property protection with operational transparency. Frameworks such as Transparency-Explain Ability Functionality and Tensions (TEFT) offer systematic approaches to unravel these complexities (Nannini, 2024).
- **Human-in-the-Loop (HITL) Mechanisms:** Incorporating human oversight enhances interpretability and reduces bias by enabling intervention in edge cases where AI may err. HITL frameworks have proven effective in sectors such

as healthcare triage and financial fraud detection, leading to improved fairness metrics and more accountable AI operations (Pasupuleti, 2025).

- **Algorithmic Accountability Beyond Transparency:** Transparency alone is insufficient to ensure fairness. Legal and ethical discourse increasingly argues for enforceable rights to contest automated decisions, allowing individuals to challenge, correct, and overturn harmful AI-driven outcomes. This requires institutional safeguards, including independent oversight, procedural due process, and public accountability mechanisms, to provide more comprehensive governance safeguards (Birahim, 2025).
- **Audits and Regulatory Compliance:** Regular algorithmic audits and compliance with regulatory frameworks, such as the GDPR, CCPA, and emerging AI-specific laws, ensure adherence to ethical principles. These practices detect and rectify biases, protect data privacy, and reinforce the trustworthiness of AI applications (Agu et al., 2024; Bahangulu & Owusu-Berko, 2025).

Integration of Representative Data and Algorithmic Transparency: Systemic governance demands a tight integration between data representativeness and algorithmic transparency:

- Ensuring that training datasets are both local and diverse directly complements fairness objectives by reducing bias at the source.
- Strict transparency allows stakeholders, including affected individuals, auditors, and regulators, to understand how data influence model decisions, fostering interpretability.
- Enhanced transparency paired with human-in-the-loop engagement empowers contestability, enabling redress of consequential decisions that impact lives (Birahim, 2025; Pasupuleti, 2025).

Practical and Ethical Implications Across Domains

- In education, ensuring student data privacy, mitigating bias, and applying fairness-aware, explainable AI guard against ethical pitfalls while fostering inclusive learning environments (Dhiman et al., 2025; Dutta, 2025).
- At the policy and regulatory levels, commitments to strict algorithmic transparency frameworks combined with enforceable contestability rights advance responsible AI governance beyond mere disclosure towards actionable fairness and accountability (Birahim, 2025; Nannini, 2024).

Conclusion:

This conceptual study examines the persistent educational disparities affecting India's Scheduled Castes, Scheduled Tribes, and economically disadvantaged groups (EDGs). It argues that historical discrimination, geographic isolation, poverty, digital inequality, and institutional capacity constraints continue to limit equitable access, retention, and learning outcomes despite reform ambitions such as the National Education Policy (NEP) 2020. Synthesizing secondary evidence from recent frameworks, surveys, and multidisciplinary scholarship, this paper situates inequity within the strong intergenerational persistence of education ("Great Gatsby Curve" dynamics), caste- and religion-linked barriers to elite

education and white-collar mobility, and rural–urban divides shaped by household resources and parental education. It highlights structural bottlenecks—especially severe language mismatch for tribal learners (with hundreds of indigenous languages largely absent from curricula), scarcity of teachers and learning resources in rural and urban-slum schools, and financially driven absenteeism, child labor, and dropout—and evaluates how AI can be intentionally designed to address them through an integrated architecture aligned with Universal Design for Learning: (i) multilingual natural language processing (NLP) for translation and dialect localization to create culturally relevant materials, support mother-tongue instruction, and enable Chabot-based practice; (ii) intelligent tutoring systems that deliver mastery-based, adaptive, and asynchronous instruction with learner modelling and real-time feedback suitable for irregular attendance; and (iii) predictive early warning analytics (e.g., random forests, gradient boosting, deep ensembles) that can forecast dropout risk with reported accuracy around 85–95% to trigger timely human support. Simultaneously, it foregrounds a central ethical dialectic: without community-centred governance, localized and representative training datasets, and robust safeguards, AI in education may reproduce caste bias, linguistic hegemony, discriminatory assessment, and intrusive surveillance, while exacerbating inequities via unequal infrastructure and digital literacy. This study therefore emphasizes governance requirements—ethical data stewardship with provenance and consent, privacy protection, explainable and transparent systems, human-in-the-loop oversight, enforceable contestability and due process, regular audits and regulatory compliance, and privacy-preserving approaches such as federated learning— and concludes with a policy–technical framework aimed at inclusive, culturally responsive AI that supports NEP goals while advancing democratic party rather than deepening structural exclusion.

Main text Times New Roman, 12 pt., justified. Articles should be 1.5 spaced and have 2.54 cm (1 inch) margins. Separate paragraphs by one empty line. All abbreviations and acronyms should be defined. To facilitate reader comprehension, abbreviations should be used sparingly/carefully. Article should be free from spelling and grammatical mistakes.

References

- T. (2025). *Artificial Intelligence for Education*. *International Journal for Multidisciplinary Research*, 7(1). <https://doi.org/10.36948/ijfmr.2025.v07i01.36493>
- Adepoju, D. A., & Adepoju, A. G. (2025). *Establishing ethical frameworks for scalable data engineering and governance in AI-driven healthcare systems*. *International Journal of Research Publication and Reviews*, 6(4), 8710–8726. <https://doi.org/10.55248/gengpi.6.0425.1547>
- Agu, E., Abhulimen, A., Obiki-Osafiele, A., Osundare, O., Adeniran, I., & Efunniyi, C. (2024). *Discussing ethical considerations and solutions for ensuring fairness in AI-driven financial services*. *International Journal of Frontline Research in Multidisciplinary Studies*, 3(2), 001–009. <https://doi.org/10.56355/ijfrms.2024.3.2.0024>
- Akhter, E. (2025). *AI IN THE CLASSROOM: EVALUATING THE EFFECTIVENESS OF INTELLIGENT TUTORING SYSTEMS FOR MULTILINGUAL LEARNERS IN SECONDARY EDUCATION*. *ASRC Procedia: Global Perspectives in Science and Scholarship*, 01(01), 532–563. <https://doi.org/10.63125/gcq1qr39>

- Akintola, A. S., Akintayo, M., Kadri, T., Oforgu, C. M., Michael, M., & Nwanna, M. (2025). Adaptive AI Systems in Education: Real-Time Personalised Learning Pathways for Skill Development. *Journal of Artificial Intelligence, Machine Learning and Data Science*, 3(1), 2489–2494. <https://doi.org/10.51219/jaimld/akinyemi-sadeeq-akintola/534>
- Bahangulu, J., & Owusu-Berko, L. (2025). Algorithmic bias, data ethics, and governance: Ensuring fairness, transparency and compliance in AI-powered business analytics applications. *World Journal of Advanced Research and Reviews*, 25(2), 1746–1763. <https://doi.org/10.30574/wjarr.2025.25.2.0571>
- Bhavana, S., Jayashree, K., & Rao, T. V. N. (2024). Navigating AI Biases in Education (pp. 135–160). Igi Global. <https://doi.org/10.4018/979-8-3693-5443-8.ch005>
- Birahim, S. A. (2025). Contesting the algorithm: advancing a right to challenge AI decisions under the GDPR for algorithmic fairness. *Transforming Government: People, Process and Policy*, 19(4), 895–913. <https://doi.org/10.1108/tg-05-2025-0148>
- C, P. (2024). Breaking Barriers: Higher Education Institutions and Transgender Empowerment under NEP-2020. *Edumania-An International Multidisciplinary Journal*, 02(04), 164–173. <https://doi.org/10.59231/edumania/9081>
- Cao, W., & Mai, N. (2025). PREDICTIVE ANALYTICS FOR STUDENT SUCCESS: AI-DRIVEN EARLY WARNING SYSTEMS AND INTERVENTION STRATEGIES FOR EDUCATIONAL RISK MANAGEMENT. *Educational Research and Human Development*, 2(2), 36–48. <https://doi.org/10.61784/erhd3042>
- Chinnasamy, P., Rani, R. M., Ayyasamy, R. K., Sujithra, L. R., Mounika, T., & Cherukuvada, S. (2025). Transforming Education With AI-Driven Intelligent Tutoring Systems (pp. 239–258). Igi Global. <https://doi.org/10.4018/979-8-3693-8292-9.ch011>
- Dhiman, T., Chauhan, V., Kumar, A., Vasantha, M., & Kumar, A. (2025). Ethical Crossroads: Navigating Data Privacy, Bias, Accountability and Sustainability in AI-Driven Education. *Open Access Journal of Multidisciplinary Research*, 1(3), 69–77. <https://doi.org/10.47760/oajmr.2025.v01i03.007>
- Dhurve, D. (2024). New Education Policy 2020 on Higher Education. *Journal of Advances and Scholarly Researches in Allied Education*, 21(2), 1–4. <https://doi.org/10.29070/w22mtp65>
- Dutta, A. (2025). ARTIFICIAL INTELLIGENCE IN STUDENT PRIVACY AND DATA SECURITY. *International Journal of Advanced Research in Computer Science*, 16(03), 146–151. <https://doi.org/10.26483/ijarcs.v16i3.7261>
- Kohnke, S., & Zaugg, T. (2025). Artificial Intelligence: An Untapped Opportunity for Equity and Access in STEM Education. *Education Sciences*, 15(1), 68. <https://doi.org/10.3390/educsci15010068>
- Kumar, S. (2025). Enhancing Conceptual Understanding in Chemistry Education Through AI-Powered Tutoring Systems. *Shodh Sari-An International Multidisciplinary Journal*, 04(02), 380–396. <https://doi.org/10.59231/sari7830>
- Lalit, L., Kumar, D. Y., Anu, A., Kumar, S., Khurana, D. D., & Mrinal, M. (2025). A Study On the Application of Machine Learning in Adaptive Intelligent Tutoring Systems. *International Journal of Environmental Sciences*, 772–780. <https://doi.org/10.64252/akj6b797>
- Lockwood, A., & Brown, J. (2024). Mitigating AI Bias in School Psychology: Toward Equitable and Ethical Implementation. *Centre for Open Science*. <https://doi.org/10.31234/osf.io/mh4rj>

- Lopez, S. (2025). *Integrating Artificial Intelligence in Regional Education: A Holistic Framework for Inclusive, Adaptive, and Community-Centric Learning*. *Electronic Journal of Social and Strategic Studies*, 06(01), 26–45. <https://doi.org/10.47362/ejsss.2025.6102>
- Nannini, L. (2024). *Habemus a Right to an Explanation: so What? – A Framework on Transparency-Explainability Functionality and Tensions in the EU AI Act*. *Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society*, 7, 1023–1035. <https://doi.org/10.1609/aies.v7i1.31700>
- Pasupuleti, M. K. (2025). *Human-in-the-Loop AI: Enhancing Transparency and Accountability*. *International Journal of Academic and Industrial Research Innovations(IJAIRI)*, 05(05), 574–585. <https://doi.org/10.62311/nesx/rphcr18>
- Priyadharsini, V., & Sahaya Mary, R. (2024). *Universal Design for Learning (UDL) in Inclusive Education: Accelerating Learning for All*. *Shanlax International Journal of Arts, Science and Humanities*, 11(4), 145–150. <https://doi.org/10.34293/sijash.v11i4.7489>
- Raj Devkota, K. (2026). *Resourcing linguistic diversity in the classroom: multilingual educational language policy entangled in monolingual ideologies in Nepal*. *Cambridge Journal of Education*, ahead-of-print(ahead-of-print), 1–19. <https://doi.org/10.1080/0305764x.2026.2655343>
- Raj, S. B. (2024). *Pathways to inclusive higher education: learnings from India's National Education Policy 2020*. *Nordic Journal of Studies in Educational Policy*, 11(1), 82–92. <https://doi.org/10.1080/20020317.2024.2382376>
- Rodrigues, B., Pinto, R., & Gonçalves, G. (2025). *A Systematic Literature Review of AI-Driven Intelligent Tutoring Systems in Engineering Education: Emphasizing Personalization, Feedback, and Student Monitoring*. *IEEE Access*, 13, 190152–190177. <https://doi.org/10.1109/access.2025.3626473>
- Saborío-Taylor, S., & Rojas-Ramírez, F. (2024). *Universal design for learning and artificial intelligence in the digital era: Fostering inclusion and autonomous learning*. *International Journal of Professional Development, Learners and Learning*, 6(2), ep2408. <https://doi.org/10.30935/ijpdll/14694>
- Saddhono, K., Suhita, R., Istanti, W., Kusmiatun, A., Kusumaningsih, D., & Sukmono, I. K. (2024). *AI-Powered Language Learning: Enhancing Literacy in the Digital Age*. 856–861. <https://doi.org/10.1109/aece62803.2024.10911149>
- Selvam, M., & González Vallejo, R. (2025). *Ethical and Privacy Considerations in AI-Driven Language Learning*. *LatIA*, 3, 328. <https://doi.org/10.62486/latia2025328>
- Singh, A. K. (2025). *From policy to practice: Challenges and pathway for advancing multilingual education through India's national education policy 2020*. *Policy Futures in Education*, 23(4), 746–765. <https://doi.org/10.1177/14782103251320532>
- Teles, R. O., & Moreira, F. T. (2024). *Integrating AI in Formative Assessment Under UDL Principles in Diverse Learning Environments* (pp. 95–122). *Igi Global*. <https://doi.org/10.4018/979-8-3693-6170-2.ch004>
- Troussas, C., Papakostas, C., Krouska, A., Mylonas, P., & Sgouropoulou, C. (2023). *Personalized Feedback Enhanced by Natural Language Processing in Intelligent Tutoring Systems* (pp. 667–677). *Springer Nature Switzerland*. https://doi.org/10.1007/978-3-031-32883-1_58

INCLUSIVE PRACTICES IN TEACHER EDUCATION FOR SUSTAINABLE DEVELOPMENT GOALS (SDGS)

Mr.Yogesh Khanderao Patil

Assistant Professor, Adhyapak Mahavidhyalaya, Pune ,09.

Dr.Vidyanand Sambhaji Khandagale

Assistant Professor, Department of Education, Shivaji University, Kolhapur

Abstract

Education is widely recognized as one of the most significant instruments for promoting social transformation, human development, and sustainable progress in the twenty-first century. Rapid globalization, environmental degradation, climate change, technological advancement, unemployment, poverty, migration, social inequality, and educational exclusion have created complex challenges for humanity across the globe. These emerging challenges have increased the importance of sustainable and inclusive educational practices capable of preparing responsible, democratic, and environmentally conscious citizens. In response to these global concerns, the United Nations adopted the Sustainable Development Goals (SDGs) in 2015 under the 2030 Agenda for Sustainable Development. Among the seventeen goals, Sustainable Development Goal 4 emphasizes the need to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Since teachers play a decisive role in shaping learners' values, attitudes, knowledge, and social behavior, teacher education has become a crucial instrument for achieving sustainable development. Inclusive practices in teacher education focus on preparing future teachers capable of addressing learner diversity and creating equitable, democratic, and learner-centered educational environments. Inclusive education emphasizes equality, accessibility, participation, social justice, human dignity, respect for diversity, environmental responsibility, and democratic citizenship. It seeks to remove barriers related to caste, class, gender, disability, language, religion, ethnicity, and socio-economic background so that every learner can participate meaningfully in the teaching-learning process. The present thematic paper critically examines the role of inclusive practices in teacher education for achieving Sustainable Development Goals. It discusses conceptual foundations, principles, pedagogical approaches, institutional responsibilities, challenges, and future directions related to inclusive teacher education. The paper highlights important inclusive pedagogical practices such as differentiated instruction, universal design for learning, multicultural education, cooperative learning, experiential learning, digital inclusion, and sustainability-oriented pedagogy. It also explains the relationship between inclusive teacher education and democratic values, social justice, environmental awareness, global citizenship, and lifelong learning. The paper further analyses major barriers affecting inclusive teacher education, including inadequate infrastructure, socio-cultural prejudices, lack of trained faculty, digital divide, policy implementation gaps, and insufficient practical exposure. The study concludes that inclusive teacher education is essential for building sustainable societies based on equality, peace, environmental consciousness, and human dignity. Teacher education institutions must therefore prepare teachers who can create inclusive classrooms and contribute effectively toward achieving the vision of sustainable development and inclusive global citizenship.

Keywords: *Inclusive Education, Teacher Education, Sustainable Development Goals, SDG 4, Equity, Diversity, Sustainability, Social Justice, Environmental Education.*

1. Introduction

The twenty-first century has witnessed unprecedented transformations in social, economic, technological, political, and environmental spheres. Globalization and technological advancement have created new opportunities for human development, yet they have simultaneously intensified inequalities, environmental degradation, unemployment, social exclusion, and cultural conflicts. Climate change, migration, poverty, illiteracy, gender discrimination, and unequal educational opportunities continue to affect millions of individuals across the world. These challenges have compelled nations and educational systems to reconsider the aims and objectives of education.

Education is no longer viewed merely as a means of literacy or academic achievement. It is increasingly recognized as an important instrument for social justice, democratic participation, environmental sustainability, human rights, peace, and sustainable development. Education develops knowledge, values, attitudes, and skills necessary for responsible citizenship and sustainable living. In this context, teachers play a decisive role because they shape the perspectives and values of future generations.

The United Nations adopted the Sustainable Development Goals (SDGs) in 2015 under the 2030 Agenda for Sustainable Development. These seventeen goals aim to establish peaceful, inclusive, equitable, and environmentally sustainable societies. Among them, SDG 4 specifically focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

Inclusive education has emerged as a significant educational philosophy emphasizing equal educational opportunities for all learners regardless of caste, class, religion, gender, language, ethnicity, disability, or socio-economic background. Inclusion recognizes diversity as a strength rather than a problem. It seeks to remove barriers to participation and learning and create educational environments where all learners feel respected, accepted, and supported.

Teacher education occupies a central position in achieving both inclusion and sustainability because teachers influence learners' attitudes, values, behaviors, and social understanding. Teacher education institutions therefore have a responsibility to prepare teachers capable of addressing learner diversity, promoting democratic values, encouraging environmental awareness, and creating inclusive classrooms.

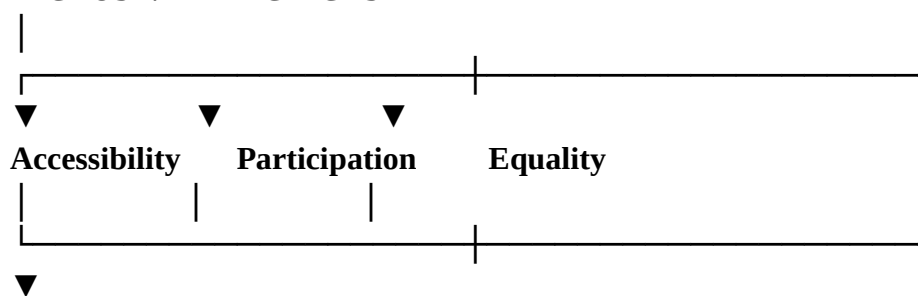
In India, inclusive teacher education has gained importance through initiatives such as the National Education Policy 2020, Rights of Persons with Disabilities Act 2016, Samagra Shiksha Abhiyan, and guidelines of the National Council for Teacher Education (NCTE). These policies emphasize equity, inclusion, experiential learning, and teacher professional development. The present thematic paper examines inclusive practices in teacher education for Sustainable Development Goals and explores their significance, principles, pedagogical approaches, institutional responsibilities, challenges, and future directions.

2. Concept of Inclusive Practices in Teacher Education

Inclusive practices refer to educational approaches, policies, teaching methods, and institutional arrangements designed to support the diverse learning needs of all students. Inclusive teacher education seeks to prepare prospective teachers who can recognize learner diversity and provide equitable educational opportunities to all learners.

Inclusive education is broader than merely integrating children with disabilities into mainstream classrooms. It includes social, cultural, linguistic, emotional, economic, and academic inclusion. Inclusive practices ensure that every learner feels valued and participates meaningfully in educational processes.

INCLUSIVE PRACTICES



Social Inclusion

Inclusive teacher education emphasizes democratic values, respect for diversity, social justice, and learner-centered pedagogy. It encourages future teachers to develop empathy, flexibility, and professional competencies necessary for addressing classroom diversity.

Teacher education institutions must prepare teachers capable of teaching students from different socio-economic, linguistic, cultural, and educational backgrounds, including children with disabilities, economically weaker learners, rural students, tribal communities, minority groups, and first-generation learners.

3. Sustainable Development Goals and Education

The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 provide a global framework for achieving sustainable development by 2030. These goals focus on environmental sustainability, social justice, economic development, peace, and human well-being.

Education occupies a central position in achieving all SDGs because it empowers individuals with knowledge, skills, values, and attitudes required for sustainable living. Among the seventeen goals, SDG 4 specifically emphasizes inclusive and equitable quality education.

SDG	Focus Area	Educational Relevance
SDG 4	Quality Education	Inclusive and equitable education
SDG 5	Gender Equality	Gender-sensitive education
SDG 10	Reduced Inequalities	Educational inclusion
SDG 13	Climate Action	Environmental awareness

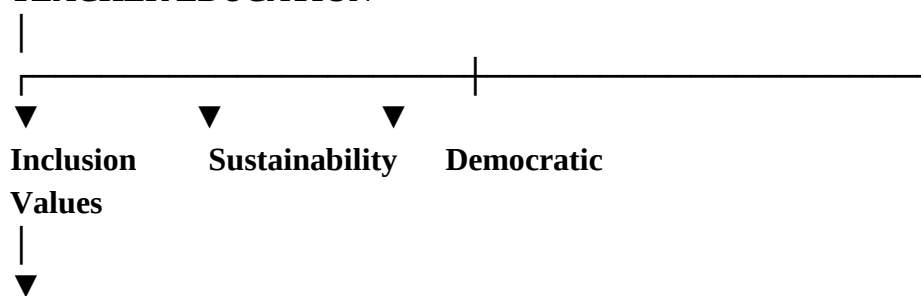
SDG 16 **Peace and Justice** Democratic citizenship

Education contributes significantly toward reducing poverty, promoting gender equality, strengthening democratic participation, protecting the environment, and developing global citizenship. Therefore, teacher education institutions must integrate SDGs into curricula, pedagogy, and institutional practices.

4. Relationship Between Teacher Education and Sustainable Development

Teacher education and sustainable development are closely interconnected because teachers shape learners' attitudes toward equality, justice, democracy, environmental protection, and social responsibility.

TEACHER EDUCATION



Sustainable Human Development

Teacher education prepares teachers who can:

- ✓ Promote constitutional values
- ✓ Encourage environmental responsibility
- ✓ Develop democratic classroom culture
- ✓ Foster equality and social justice
- ✓ Promote peaceful coexistence
- ✓ Encourage critical thinking and problem-solving

Thus, teachers become agents of sustainable transformation.

5. Importance of Inclusive Practices in Teacher Education

Inclusive teacher education contributes significantly toward achieving sustainable development.

5.1 Promotion of Equity and Social Justice

Inclusive practices ensure equal educational opportunities for all learners irrespective of social, economic, cultural, or physical differences. Teachers trained in inclusive pedagogy become sensitive toward issues related to discrimination, exclusion, and inequality. They promote equality, dignity, empathy, and respect within classrooms. Inclusive education also strengthens constitutional values and democratic principles essential for sustainable societies.

5.2 Development of Democratic Values

Inclusive classrooms encourage cooperation, dialogue, participation, and mutual respect. Teacher trainees learn democratic values through collaborative learning and participatory educational practices.

Democratic education promotes:

- Social harmony
- Peaceful coexistence
- Tolerance
- Human rights
- Global citizenship

These values are necessary for sustainable development.

5.3 Empowerment of Marginalized Groups

Teacher education programmes adopting inclusive practices help teachers support learners from marginalized communities such as tribal students, minority groups, economically weaker sections, migrant learners, and students with disabilities. Education empowers marginalized individuals by increasing educational participation, self-confidence, social mobility, and economic opportunities.

5.4 Promotion of Environmental Responsibility

Teacher education for sustainability plays a significant role in developing environmental awareness and responsible citizenship among future teachers. In the present era of climate change, environmental degradation, deforestation, pollution, and depletion of natural resources, it has become essential for teachers to promote sustainable lifestyles and environmental consciousness among learners. Teacher education programmes help prospective teachers understand the importance of ecological balance, biodiversity conservation, waste management, renewable resources, and environmental protection. Through sustainability-oriented pedagogy, teachers can motivate students to conserve natural resources, reduce pollution, protect biodiversity, practice proper waste management, and adopt eco-friendly lifestyles in their daily lives. Environmental education also encourages learners to develop scientific attitudes, social responsibility, and sensitivity toward nature and future generations. Thus, teacher education contributes directly to sustainable development, climate action, environmental protection, and the creation of environmentally responsible societies..

6. Principles of Inclusive Teacher Education

Inclusive teacher education is based on certain important principles that guide educational practices and institutional culture.

Principle	Meaning
Equality and Equity	Fair educational opportunities
Respect for Diversity	Diversity as educational strength
Participation	Active involvement of learners
Accessibility	Barrier-free learning environment
Collaboration	Partnership among stakeholders
Flexibility	Learner-centered pedagogy

These principles help create inclusive and democratic educational environments.

7. Inclusive Pedagogical Practices in Teacher Education

Inclusive pedagogical practices help teachers address learner diversity effectively and create equitable learning opportunities.

7.1 Differentiated Instruction

Differentiated instruction involves modifying teaching methods according to learners' needs, interests, and abilities. Teachers use flexible grouping, multiple teaching strategies, varied activities, and individualized support to address classroom diversity. This approach helps all learners participate meaningfully in educational activities.

7.2 Universal Design for Learning (UDL)

Universal Design for Learning provides flexible educational environments accommodating diverse learners.

UDL Component	Educational Purpose
Multiple Means of Representation	Different ways of presenting content
Multiple Means of Engagement	Motivating diverse learners
Multiple Means of Expression	Different forms of learner response

Teacher trainees should learn to prepare inclusive lesson plans based on UDL principles.

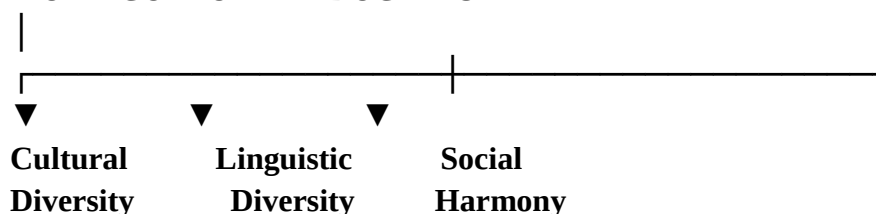
7.3 Cooperative Learning

Cooperative learning is an important inclusive pedagogical approach that promotes collaboration, participation, mutual respect, and social interaction among learners. Through activities such as group discussions, peer tutoring, team projects, and collaborative assignments, students learn to work together, share responsibilities, and support one another in the learning process. Such practices help in developing democratic values, communication skills, leadership qualities, and positive interpersonal relationships among learners.

7.4 Multicultural Education

Modern classrooms are increasingly multicultural and multilingual. Teacher education must therefore promote respect for cultural diversity and intercultural understanding.

MULTICULTURAL EDUCATION



Multicultural education reduces prejudice and promotes social harmony.

7.5 Experiential Learning

Experiential learning is an important approach in teacher education that enables teacher trainees to understand social realities through direct experiences and active participation. Activities such as community visits, environmental projects, service learning, school internships, and action research help prospective teachers connect theoretical knowledge with practical situations. These experiences develop empathy, social responsibility, critical thinking, problem-solving abilities, and a deeper understanding of learners' diverse needs and community issues.

7.6 Digital Inclusion

Technology has become an important component of inclusive education. Teacher trainees should learn to use assistive technologies, digital platforms, and ICT tools for inclusive

learning. Digital inclusion became especially important after the COVID-19 pandemic, which highlighted inequalities related to technological access.

8. Role of Teacher Educators

Teacher educators play a vital role in promoting inclusion and sustainability within teacher education institutions.

Their responsibilities include:

- Modeling inclusive practices
- Encouraging reflective thinking
- Promoting ethical and democratic values
- Creating participatory learning environments
- Supporting learner diversity
- Integrating sustainability concepts into teaching

Teacher educators must function as facilitators rather than authoritarian instructors.

9. Institutional Responsibilities

Teacher education institutions must create inclusive educational cultures through curriculum reforms, infrastructure development, faculty training, and community participation.

Important Institutional Areas

Area	Institutional Responsibility
Curriculum	Inclusion of SDGs and inclusive pedagogy
Infrastructure	Accessible classrooms and ICT facilities
Faculty Development	Training on inclusion and sustainability
Community Engagement	Social outreach programmes
Research	Action research on inclusion

Institutions should promote democratic participation and sustainability-oriented practices.

10. Challenges in Inclusive Teacher Education

Despite policy support, several barriers continue to affect inclusive teacher education.

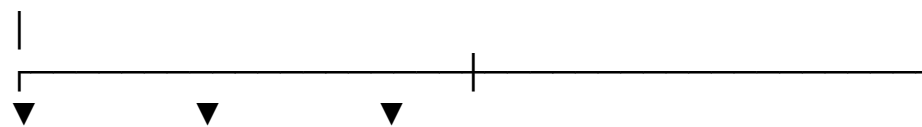
Challenge	Nature of Problem
Lack of Awareness	Limited understanding of inclusion
Inadequate Training	Insufficient practical exposure
Infrastructure Barriers	Lack of accessibility
Socio-Cultural Prejudices	Discrimination and stereotypes
Digital Divide	Unequal technological access
Overloaded Curriculum	Excessive theoretical orientation

Many teacher education programmes continue to emphasize theory more than practical inclusive competencies.

11. Digital Divide and Educational Exclusion

The digital divide became highly visible during the COVID-19 pandemic. Many learners lacked internet connectivity, digital devices, and ICT skills.

DIGITAL DIVIDE



Internet Access Digital Devices ICT Skills

This inequality affected inclusive educational opportunities, especially in rural and economically weaker regions.

Teacher education institutions must therefore promote digital accessibility and technological literacy.

12. Strategies for Strengthening Inclusive Teacher Education

12.1 Curriculum Transformation

Teacher education curriculum should be transformed according to the changing educational and social needs of the twenty-first century. Traditional teacher education programmes often focus more on theoretical knowledge than practical competencies related to inclusion and sustainability. Therefore, teacher education curricula must incorporate inclusive pedagogy, human rights education, sustainability education, environmental literacy, gender studies, and ICT integration. Such curriculum reforms help prospective teachers understand learner diversity, democratic values, environmental responsibility, and socially responsive teaching practices. Curriculum transformation also encourages critical thinking, problem-solving, experiential learning, and learner-centered pedagogy essential for inclusive and sustainable education.

12.2 Continuous Professional Development

Continuous professional development is essential for improving the competencies and adaptability of teachers in changing educational contexts. Teachers require regular training related to inclusive teaching methods, classroom management, digital pedagogy, assistive technologies, and environmental education. Professional development programmes help teachers remain updated with new educational policies, technological advancements, innovative teaching methods, and sustainability-oriented practices. Continuous learning also strengthens teachers' confidence, professional commitment, and ability to address diverse learning needs effectively within inclusive classrooms.

12.3 Technology Integration

Technology integration has become an important component of inclusive and sustainable education in the digital era. Educational institutions should ensure digital accessibility, adequate ICT infrastructure, affordable internet access, open educational resources, and assistive technologies for all learners. Technology can help remove barriers to learning by providing flexible and accessible educational opportunities to students from different social and geographical backgrounds. Digital tools, online platforms, and assistive technologies can significantly support learners with disabilities and students from remote areas. Therefore, technology should function as a tool for educational inclusion and empowerment rather than becoming a source of exclusion and inequality.

12.4 Collaborative Partnerships

Collaborative partnerships among schools, teacher education institutions, NGOs, government agencies, local communities, and environmental organizations are essential for strengthening inclusive educational initiatives. Such collaboration helps in sharing resources, expertise, and community support for inclusive and sustainable education. Community participation increases educational relevance and enables teacher trainees to understand social realities and local needs more effectively. Partnerships also encourage social responsibility, democratic participation, and collective action toward solving educational and environmental challenges. Through collaborative efforts, teacher education institutions can create stronger and more meaningful educational experiences for future teachers.

12.5 Research and Innovation

Research and innovation play a significant role in improving inclusive teacher education and sustainability-oriented educational practices. Teacher education institutions should encourage action research, innovation in pedagogy, sustainability projects, and community-based educational research. Research activities help teachers identify classroom challenges, develop effective teaching strategies, and improve educational practices according to learners' diverse needs. Innovation in pedagogy promotes creativity, critical thinking, and learner-centered approaches within educational systems. Educational research also contributes to policy development, curriculum improvement, and evidence-based decision-making necessary for inclusive and sustainable development.

13. Indian Perspective on Inclusive Teacher Education

India has made significant efforts toward promoting inclusive and sustainable education through various educational policies, constitutional provisions, and institutional reforms. Important initiatives such as the National Education Policy 2020, Samagra Shiksha Abhiyan, Rights of Persons with Disabilities Act 2016, Digital India Programme, National Curriculum Framework, and NCTE regulations have emphasized the importance of educational equity, inclusion, accessibility, and quality teacher preparation. These initiatives aim to ensure equal educational opportunities for learners from diverse social, cultural, linguistic, economic, and geographical backgrounds.

The National Education Policy 2020 particularly highlights the importance of equity and inclusion, holistic education, experiential learning, teacher professional development, multidisciplinary approaches, and technology integration in education. The policy recognizes teachers as the central pillars of educational transformation and stresses the need for preparing professionally competent, socially sensitive, and technologically skilled teachers. Teacher education institutions in India are therefore increasingly focusing on inclusive pedagogy, sustainability-oriented practices, environmental awareness, digital literacy, and learner-centered educational approaches to achieve the broader goals of sustainable and inclusive national development.

14. Conclusion-

Inclusive practices in teacher education are essential for achieving Sustainable Development Goals and building equitable, democratic, peaceful, and environmentally

sustainable societies. Teachers are the key agents of social transformation; therefore, teacher education must prepare them to address diversity, inequality, environmental challenges, and global citizenship issues.

Inclusive teacher education promotes equality, participation, empathy, democratic values, social justice, and environmental responsibility. It enables teachers to create classrooms where every learner feels respected, supported, and empowered. Such educational environments contribute significantly toward sustainable social, economic, and environmental development.

To achieve the vision of SDGs by 2030, governments, policymakers, educational institutions, communities, and teacher educators must work collaboratively to strengthen inclusive educational practices. Curriculum reforms, technological integration, faculty development, community participation, and policy implementation are essential for creating inclusive and sustainable educational systems.

Ultimately, inclusive teacher education is not merely an educational requirement but also a moral and social responsibility toward building a just, humane, democratic, and sustainable world.

References -

- Ainscow, M. (2020). *Promoting inclusion and equity in education*. Routledge.
- Booth, T., & Ainscow, M. (2015). *Index for inclusion*. Centre for Studies on Inclusive Education.
- Florian, L. (2014). What counts as evidence of inclusive education? *European Journal of Special Needs Education*, 29(3), 286–294.
- Government of India. (2016). *The Rights of Persons with Disabilities Act, 2016*. Government of India.
- Kumar, K. *समावेशक शिक्षणाची तत्वे व व्यवहार*. पुणे: विद्या प्रकाशन.
- Ministry of Education, Government of India. (2020). *National Education Policy 2020*. Government of India. National Education Policy 2020
- National Council for Teacher Education (NCTE)
- Sustainable Development Solutions Network
- Tilbury, D. (2011). *Education for sustainable development: An expert review of processes and learning*. UNESCO Publishing.
- UNESCO – Education for Sustainable Development
- UNESCO Inclusive Education Resources
- United Nations Sustainable Development Goals
- University Grants Commission (UGC)
- शिंदे, एस. (2019). *शाश्वत विकास आणि शिक्षण*. पुणे: निराली प्रकाशन.

TEACHER EDUCATION AND PROFESSIONAL DEVELOPMENT FOR INCLUSIVE EDUCATION

*** Dr. Chetna Pralhad Sonkamble**

**Head, Department of Education, Shivaji University, Kolhapur, 416004. MS. India*

Email-yaadni6@gmail.com

Abstract

The call for inclusive education on a global scale call for a paradigm shift in the way the educational system functions, with teachers being at the forefront of this shift. Inclusive education is more than just physically integrating students with special needs into mainstream classrooms; it involves the deliberate transformation of learning strategies and school cultures to ensure equal access and participation of all students. Therefore, the effectiveness of inclusive education is directly related to the quality of teacher education and professional development. This paper will discuss the important role of pre-service and in-service teacher education in creating inclusive learning environments. It will delve into theoretical frameworks such as Universal Design for Learning, discuss the common challenges faced in existing training programs, and discuss strategies to empower teachers with the skills and knowledge needed to support diverse student populations.

Keywords: *Inclusive Education, Teacher Education, Universal Design for Learning (UDL), Professional Development; Co-Teaching, Social Model of Disability, Professional Learning Communities (PLCs), Differentiated Instruction.*

Introduction

Inclusive education has transformed from a peripheral policy agenda to a basic human right, recognized internationally by instruments such as the United Nations Convention on the Rights of Persons with Disabilities. At its essence, inclusive education holds that all children, regardless of their physical, cognitive, social, or linguistic diversity, are entitled to equal access to quality learning in inclusive classrooms. Yet, the paradigm shift from special education in segregated settings to comprehensive inclusion cannot be realized by legislation alone; it demands a radical change in the instructional practices and school culture. The classroom teacher is at the forefront of this change.

Traditionally, general educators received training to teach standardized curricula to the "average" student, while special educators received training to provide individualized remediation. This dual approach to teacher training makes general educators feel inadequate, anxious, and ill-prepared to handle the realities of inclusive classrooms. Thus, the effectiveness of inclusive education is inextricably tied to the quality, depth, and continuity of teacher education and professional development. This paper examines the critical nexus between teacher education and inclusive education, and the need for systemic change. It

discusses the need to integrate theoretical constructs such as Universal Design for Learning (UDL) into teacher education programs, moving beyond token special education courses.

Moreover, it examines the shortcomings of the conventional, fragmented in-service professional development, promoting instead the concept of Professional Learning Communities (PLCs) and co-teaching. Through the exploration of these aspects, this paper makes it clear that the issue of training teachers for inclusion is not only about providing them with a box full of differentiated teaching strategies but also about developing a transformative mindset that recognizes the richness of diversity in the learning setting.

1. Theoretical Frameworks Guiding Inclusive Teacher Education

In order to better equip teachers for inclusive classrooms, the theoretical foundations of educational programs need to be rooted in strong theories that reject traditional and exclusionary approaches.

1.1 The Social Model of Disability

Traditional teacher education programs have implicitly been based on the medical model of disability, which considers learning differences as something that needs to be cured or corrected. However, contemporary teacher education programs based on inclusive education are rooted in the social model of disability. According to this model, disability is not a characteristic of the individual but the product of the interaction between the individual's impairment and the environment that is not very accommodating and is poorly designed. For teachers, this means moving away from "What is wrong with this student?" and asking "What is wrong with my curriculum, instruction, or classroom environment, and how can I change that?"

1.2 Universal Design for Learning (UDL)

UDL is an essential paradigm for inclusive education that needs to be incorporated into every teacher education program. Based on the architectural concept of universal design, UDL proposes that learning spaces need to be deliberately designed to include as many learners as possible from the outset, thereby reducing the need for retroactive modifications.

Teachers who are trained in UDL are taught to use the following three principles:

- **Multiple Means of Engagement:** Engaging learners through their interests, providing them with suitable challenges, and motivating them.
- **Multiple Means of Representation:** Representing information and content in multiple ways (such as visual, auditory, and hands-on) to suit different cognitive and sensory needs.
- **Multiple Means of Action and Expression:** Giving learners multiple options to show what they know, going beyond the conventional standardized tests.

2. The Current State of Pre-Service Teacher Education

Pre-service education is the first step in the development of an educator's pedagogical identity. Unfortunately, traditional teacher preparation programs have struggled to prepare candidates for the realities of inclusive classrooms.

2.1 The "Add-On" Approach vs. Infusion

Traditionally, pre-service education has considered inclusive education a secondary subject that can be covered in a single required course, such as "Introduction to Special Education." This type of disjointed instruction sends a message that inclusive education is a secondary concern rather than a core part of general education.

Best practices in education today promote an "infused" or integrated curriculum. In this type of curriculum, concepts of inclusive education, differentiation, and UDL are embedded in all methods courses, whether it is math, science, or language arts. Teacher candidates are taught that teaching a diverse population of students is the norm, not the exception.

2.2 The Importance of Clinical Practicums

Theoretical knowledge needs to be connected to practical application. Preservice teachers tend to express high levels of anxiety and low levels of self-efficacy beliefs about their capacity to teach students with disabilities. Structured clinical experiences, in which preservice teachers are placed in inclusive classrooms with high-functioning students and experienced mentor teachers, are essential. These experiences enable preservice teachers to observe differentiated instruction in action, engage in co-teaching strategies, and directly interact with students, thus dispelling preconceived notions and developing pedagogical confidence.

3. Challenges in In-Service Professional Development

Although pre-service education provides the foundation, in-service professional development is necessary for practicing teachers to hone their skills and keep up with the changing needs of students. Unfortunately, the conventional approach to professional development is often inadequate for bringing about lasting change in inclusive education practices.

3.1 The "One-Size-Fits-All" Workshop Model

A great deal of the inservice training that is currently taking place is based on short-term, disjointed workshops. Specialists present top-down information in a "sit-and-get" type of presentation, leaving teachers with theoretical ideas but no direction on how to apply these ideas to specific classroom situations.

3.2 Time and Resource Constraints

Teachers work in extremely demanding contexts. The implementation of inclusive strategies involves a significant amount of collaborative planning time, which includes consultation with special educators, development of differentiated materials, and analysis of student data. When time is not allocated to support the implementation of PD initiatives, teachers suffer from initiative fatigue and burnout.

3.3 Attitudinal Barriers

One of the most difficult issues in PD is dealing with attitudes. Teachers may have conscious or unconscious beliefs about the abilities of students with severe disabilities, or they may believe that inclusion will take away from the education of non-disabled students. PD cannot just be about technical skills. It has to provide a safe space for teachers to explore and reflect on their own belief systems.

4. Effective Strategies for Transforming Professional Development

To move past these challenges, professional development needs to be transformed into a continuous, collaborative, and context-driven process.

4.1 Professional Learning Communities (PLCs)

Moving from solo teaching to collaborative learning is essential. PLCs are groups of teachers who meet on a regular basis to share knowledge, examine student work, and work together to solve instructional challenges. In the context of inclusion, a PLC could be a team of general

educators, special educators, speech therapists, and school psychologists working together to develop accessible unit plans.

4.2 Co-Teaching as Embedded PD

Co-teaching, where the general educator and special educator teach together in the same room and with the same students, is one of the best examples of embedded professional development. When done properly, co-teaching offers the opportunity for professionals to learn from each other on a daily basis. The general educator knows the content very well, and the special educator knows how to scaffold, accommodate, and manage behavior. By observing each other and planning together, both educators can expand their teaching repertoires.

4.3 Mentoring and Coaching

Ongoing instructional coaching is the connection between the theory of PD and practice. While observation is evaluative, coaching is formative. An inclusion coach can observe a teacher, give feedback, model a differentiated lesson, and assist the teacher in reflecting on the effectiveness of inclusive practices. This is essential for teachers to deal with the unique challenges in their classrooms.

5. The Role of Whole-School Culture and Leadership

Teacher education and professional development do not occur in a vacuum; they are heavily influenced by the institutional context. The success of any PD initiative for inclusive education is entirely dependent on school leadership and whole-school culture.

School administrators, especially school principals, are the gatekeepers of inclusion. If the school administration thinks of inclusion as a matter of compliance with the law and not as a moral and educational mandate, then the PD programs will come to a standstill. School principals need to create a whole-school environment of shared responsibility, where every student is "our student" and not "my student" or "your student."

In addition, the systemic support must also include:

- **Strategic Scheduling:** Developing master schedules that enable common planning time for general and special educators.
- **Resource Allocation:** Providing assistive technology and flexible seating in the classroom.
- **Policy Alignment:** Aligning school-wide policies on discipline, assessment, and grading to be equitable and aligned with inclusive philosophies.

Conclusion

In light of the above, the achievement of truly inclusive education systems is, at its core, contingent upon the rigorous, continuous, and culturally responsive preparation of educators. As has been illustrated throughout this paper, the mere movement of students with diverse needs into mainstream classrooms without a parallel shift in teacher preparation is little more than a gesture of physical proximity and not truly inclusive in nature. The bifurcation between general and special education preparation programs must be overcome. Pre-service teacher preparation programs must move from special education introductory courses to fully infused programs. By incorporating frameworks like Universal Design for Learning into all pedagogical instruction, future teachers can come to understand the idea that designing for the

margins is ultimately an inclusive practice that will benefit all students. However, the current state of professional development for in-service educators needs a radical transformation. The current model of episodic, top-down professional development has been ineffective in promoting the kind of deep and lasting change required for inclusive practice. Instead, professional development that is collaborative and job-embedded is necessary. This includes practices such as co-teaching and the active use of Professional Learning Communities, which can distribute the cognitive load of instructional planning and allow general and special educators to tap into their complementary expertise on a daily basis.

Moreover, the success of such initiatives is largely dependent on the support of school leaders who emphasize inclusive values, provide sufficient time for planning, and promote a whole-school approach to shared responsibility. Ultimately, preparing teachers for inclusive education goes beyond the mere development of differentiated teaching practices. Rather, it requires a fundamental ideological transformation—a commitment to the absolute recognition of the dignity and capability of every single student. By aligning teacher education and professional development with inclusive education, teachers are empowered to break down systemic barriers. Only through such investment in our teachers can we keep the promise of an excellent education for all.

References

- Ainscow, M., & Sandill, A. (2010). *Developing inclusive education systems: The role of organisational cultures and leadership*. *International Journal of Inclusive Education*, 14(4), 401-416.
- Florian, L., & Black-Hawkins, K. (2011). *Exploring inclusive pedagogy*. *British Educational Research Journal*, 37(5), 813-828.
- Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). *The Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale for measuring pre service teachers' perceptions about inclusion*. *International Journal of Inclusive Education*, 15(1), 50-69.
- Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). *Co-teaching: An illustration of the complexity of collaboration in special education*. *Journal of Educational and Psychological Consultation*, 20(1), 9-27.
- McLeskey, J., Waldron, N. L., Spooner, F., & Algozzine, B. (Eds.). (2014). *Handbook of effective inclusive schools: Research and practice*. Routledge.
- Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. CAST Professional Publishing.
- Oliver, M. (1990). *The politics of disablement: A sociological approach*. St. Martin's Press.
- UNESCO. (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. World Conference on Special Needs Education: Access and Quality, Salamanca, Spain.
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities*. Treaty Series, 2515, 3.
- Holmqvist, M., & Lelinge, B. (2021). *Teachers' collaborative professional development for inclusive education*. *European Journal of Special Needs Education*, 36(5), 819-833.

CULTURALLY RESPONSIVE PEDAGOGY AND UNIVERSAL DESIGN FOR LEARNING: REVIEWING THE CONTEXTUAL FRAMEWORKS FOR INCLUSIVE CLASSROOM

***Dr.Shuchismita Deb**

Email: shuchismita66@gmail.com

****Dr.Vidyanand S. Khandagale Assistant Professor**

Department of Education Shivaji University Kolhapur Email-vsk_edu@unishivaji.ac.in

Abstract

In the 21st century modern and traditional method of teaching, shows a significant difference in teaching techniques, assessment strategies, and student involvement, Embracement of contemporary pedagogies a transformative shift in education. With the help of this review explore the conceptual framework and importance of culturally responsive teaching, universal design for learning (UDL), assessment for learning, and differentiated instruction within the context of 21st-century education. This studies identifies that the problem of implementing inclusive pedagogies and suggesting the effective solutions, with the help of data from journals, books, and online sources. The findings suggested that teaching approaches accepting cultural diversity, assessment for learning, and inclusive education profoundly improve student learning, retention capacity and academic achievement. To secure the successful implementation of inclusive education, the study focused on the necessity of overcoming barriers like insufficient teacher training, poor funding, inadequate resources, and a lack of modern technology. Ultimately, the review suggests that providing regular professional development, integrating educational technology, and ensuring sufficient classroom resources to increase inclusive pedagogical practices.

Keywords: Culturally Responsive Pedagogy(CRP), Universal Design for Learning(UDL), Inclusive Education, Equity, Differentiated Instruction, Multimodal Learning.

INTRODUCTION

To create an academically significant curricula which stresses on inclusivity, and rich in choice has become a current demand for educators to continuous adoption of two foundational frameworks: Culturally Responsive Pedagogy (CRP) and Universal Design for Learning (UDL). While CRP, pioneered by Ladson-Billings (1995), focuses on empowering students to achieve academic success while maintaining their cultural integrity, UDL—developed by David H. Rose and CAST—derived from the insight into the brain’s learning network to design flexible environments that support diverse learning needs through varied representation and engagement. Together, these concepts provide a meaningful approach to curriculum development that ensures both cultural relevance and instructional accessibility. Research by Chita-Tegmark et al. (2012) and Grier-Reed and Williams-Wengerd (2018) suggests that merging UDL with culturally relevant to creates a more equitable "pedagogy of the classroom."

By integrating these paradigm, instructors can move beyond a one-size-fits-all model or transmission model to design learning experiences that could enhance linguistic and cultural identities of all students, ultimately enhancing more effective educational outcomes.

Review of Related Literature :

.Cressey, J. (2020). Universal Design for Learning:(UDL) Culturally Responsive or (CRP) in Teacher Education. Indicates that how integrating culturally responsive pedagogy and Universal Design for Learning (UDL) increase accessibility and make education equalize. It focuses on UDL as a framework for curriculum planning, and culturally responsive pedagogy addresses structural unfairness such as ableism and racism. Teachers as facilitator act as a vital role to instigate these concepts for upcoming elementary teachers, which enables them to develop inclusive pedagogical methods that deliver to diverse learners through the use of education technology tools The study indicates that lack of equal standard UDL framework and improper use of digital tools to make CRP based classroom.

Diana Xiomara Estrada Alarcon's(2024) study,"Educating for All," highlights the power of inclusive teaching. By analyzing over 400 diverse learners, it shows that combining Universal Design for Learning (UDL) and culturally responsive methods helps all students excel. Finally, it calls on academic institutions to launch large-scale observations to turn these inclusive tactics into systemic classroom practice.

Mayasari et al. (2025) demonstrate that integrating Universal Design for Learning (UDL) with digital technology establishes a foundation for inclusive education, rather than merely acting as assistive technology. The study highlights challenges regarding teacher attitudes, policy, and equitable access while promoting technology for creating flexible, adaptive learning environments.

Zhang, J. (2025). Addressing Coordination and Conflict in Multicultural Elementary Classrooms through Culturally Responsive Teaching and Universal Design for Learning suggested that combining Universal Design for Learning (UDL) and Culturally Responsive Teaching (CRT) enrich inclusivity ,improving coordination and reducing conflicts among diverse student populations .However lack of unified framework to in utilizing educational setting , Teacher training programs inadequately incorporate CRT and UDL, as a result lack of training educators unprepared to identify the scarcity of multicultural classrooms. further research in cross-cultural contexts to explore how these frameworks can be adapted and implemented globally. The role of technology in supporting inclusive education through CRT and UDL remains unresolved, highlighting a gap in understanding how digital tools can enhance multicultural education.

Naja, K., & Hameed, Dr. A. (2024). A Conceptual Study on Effective Teaching Strategies for Inclusive Classrooms suggested that merging Universal Design for Learning (UDL) framework with culturally responsive pedagogy (CRP) enhance and achievement in the classroom and make it inclusive for the diverse background. Although it reveals that deficit of exact methods which empirically evaluated, Teacher facing different types of situation to implement in classroom situations and lack of positive behaviour on inclusivity.

.Taylor, K. (2016). The impact of Universal Design for Learning through Cooperative Learning and Project- Based Learning on an Inclusive Classroom. The study reveals that the combine effect of Universal Design for Learning (UDL) and Cooperative Learning (CL) promotes diversification, involvement and teamwork in inclusive classrooms, allowing all students, including person with disabilities, to access curriculum effectively and enhance their academic performance and social skills. Although lack of exploration of UDL principles, and limitations of the methodology indicates need robust research.

Using UDL principles increase students achievements and Culturally responsive pedagogy promotes diversity as strength rather than problem. Culturally Responsive Pedagogy (CRP)& Universal Design for Learning(UDL) framework when Teachers planning for making an effective instruction.

Housel, D. A. (2020). When co-occurring factors impact adult learners: emphasises that traditional training are narrow type and it overlooked the contemporary demand and realities, whereas combine effect of UDL&CRP support student-centric approach and enhance intrinsic motivation, but identify the research gap in adequate training programme related to UDL and CRP.

Taylor, K. (2016). The Effect of Universal Design for Learning through Cooperative Learning and Project- Based Learning on an Inclusive Classroom-with this study indicates that UDL framework serves as promoter to increase project based Learning (PBL) and Cooperative Learning (CL) in an inclusive classroom setup.

Doran (2015) discusses the Universal Design for Learning (UDL) framework, emphasizing its role in creating linguistically accessible instruction for culturally and linguistically diverse learners, and provides practical strategies to enhance language accessibility in the classroom. Creating a gap understanding how interdisciplinary approaches can enhance instruction for CLD learners.

Ginsberg (2005) discusses how cultural experiences significantly influence student responses in classrooms. It discuss about the importance of cultural diversity to spread out intrinsic motivation among learners and make a Motivational Framework for Culturally Responsive Teaching, integrating concepts from various disciplines to create engaging learning experiences. The article highlights that effective teaching strategies must be diverse which tailored to meet the needs of all students, fostering motivation and equity in educational setting. However, need for further exploration and need more comprehensive studies.

Rose, D. H., Meyer, A., & Hitchcock, C. (2006). The universally designed classroom: Accessible curriculum and digital technologies, by Harvard Education Press. The book suggested that UDL as a framework highly beneficial for everyone those who are involve with inclusive education like teacher, administrator, scholars, policymakers, parents ,special educator etc.

Tongkaew et al. (2026) define an "inclusive mind-set" in design as a framework for supporting diverse abilities, particularly through Universal Design for Learning (UDL). The study emphasizes that a lack of conceptual clarity and the absence of Culturally Responsive Pedagogy (CRP) hinder practical implementation in education.

Housel, D. A. (2020). When co-occurring factors impact adult learners: emphasises that traditional training are narrow type and it overlooked the contemporary demand and realities, whereas combine effect of UDL&CRP support student-centric approach and enhance intrinsic motivation, but identify the research gap in adequate training programme related to UDL and CRP.

Spencer, S. A. (2011).with his Universal Design for Learning: Assistance for Teachers in Today's Inclusive Classrooms suggested that Universal Design for Learning or UDL is an active engaging tool for the diverse classroom, it reduced behaviour problems, increased metacognitive knowledge, and improved access to the curriculum for struggling learners.

K. James, (2018). "Universal Design for Learning (UDL) as a Structure for Culturally Responsive Practice," provide a comprehensive overview about UDL framework effective to implement Culturally responsive Practices to shift teaching learning process one size fits for all to diverse classroom practices.

Padía, L. B., Cioè-Peña, M., & Phuong, J. (2024) emphasis that by using Culturally Sustaining Pedagogies as a framework, the authors combine personal and academic stories to revealed and question the "extractive" nature of medical training. Their ultimate plan is to create a new, non-extractive models for training healthcare professionals, establishing a framework for how this pedagogy applies to medical education.

Roberts, T. M. (2000)with his doctoral dissertation explore that speech language pathology programme faced difficulty and ALIGN program at Syracuse University exemplifies efforts to support Black, Indigenous, and People of Color (BIPOC) students by integrating academic skill-building, peer mentoring, and networking opportunities, which have shown positive impacts on students' academic skills and sense of community. This approach highlights the importance of creating inclusive educational frameworks that cater to the diverse needs of minority students in SLP programs. However, to make it more effective need comprehensive training.

Price, J., & Fox, A. (2023)Discuss about transformative praxis, is a practical application for social change and development This approach is highly related to critical pedagogy enhance inclusivity .The study indicates that the role of technology as a mediator to make CRP&UDL significant. To enhance this programme must provide reflexion on the design and technology rich activity that promote inclusion as accept and respect.

J. Century and L. Weisberg, (2023)stated on the ultimate goal is to significantly communicate and expand knowledge about CRP and UDL, which is quite difficult in present scenario and suggests that make this practice understandable for diverse learners.

Conceptual Background of CRP and UDL(Culturally Responsive Pedagogy and Universal Design For Learning:---

Culturally Responsive Pedagogy (CRP) and Universal Design for Learning (UDL) serve as the twin pillars of a modern, inclusive educational environment. CRP, as defined by Gay (2018) and Ladson-Billings (1995), moves beyond traditional instruction by using students' unique cultural ethnicities and experiences as essential tools for academic success. This approach demands that educators maintain high expectations for all learners, develop their own cultural

competence, and actively weave student heritage into the curriculum to ensure learning is both meaningful and pluralistic (Paris & Alim, 2017).

Complementing this is the UDL framework, which focuses on the structural design of the learning environment to accommodate cognitive and physical diversity. Grounded in learning science, UDL utilizes three core principles—of engagement, representation, and action/expression—to strip away academic barriers and provide flexible pathways for students to interact with information (Meyer, Rose, & Gordon, 2014). When these two frameworks intersect, they move the classroom toward true educational equity; by offering adaptable instruction that honours both the cultural background and the specific learning needs of the student, educators can significantly drive student motivation and achievement (CAST, 2018; Novak & Thibodeau, 2016).

Significance of the Study

The study focuses on the barriers of inclusive classroom practices and how the combine effect of UDL& CRP, helps to make the diversify classroom interactive for the teacher and students. The research findings helps to develop inclusive institutional practices, teacher training programs, and assure strongly academic rights for students who are marginalized by one-size-fits-all or traditional teaching learning methods.

Objectives of the study

1. To identify barriers that can create hinder in adoption of inclusive classroom and how CRP&UDL is beneficial to make inclusive classroom.
2. To develop a suggestive framework with integrating of UDL&CRP to make diverse classroom effective.

Methodology:

This study has been based on secondary sources of data like books, journals, conference proceeding ,and so on. Conceptual analysis was used in this study to access the present situation ,issues prospects of UDL&CRP in making inclusive classrooms effective, and providing suggestive framework .

Theoretically Framework of the study:

Optimizing Educational Accessibility and Enhancing Social Equity.:

To create an inclusive and equitable classroom, educators can synthesize Universal Design for Learning (UDL) and Culturally Responsive Pedagogy (CRP). While CRP focuses on validating students' cultural and linguistic identities to promote motivation and a sense of belonging (Hammond, 2015), UDL prioritizes accessibility by offering content through various audio visual, and kinaesthetic modalities (Meyer et al., 2014). Together, these frameworks empower learners to co-design their educational journeys based on their unique styles and lived experiences.

True equity in education ensures that every student has a substantive opportunity to succeed, regardless of their background or physical ability. CRP achieves this by strengthening student identities and challenging the systemic biases often found in traditional curricula (Ladson-Billings, 2014). Meanwhile, UDL proactively removes structural barriers by designing instruction that accommodates diverse abilities from the very beginning (CAST, 2018). By

integrating these two models, schools create a truly inclusive environment where all students—particularly those from historically underrepresented groups—are given tools to grow academically.

Integration: Strategies in Curriculum Design toward Inclusion

Modern educational systems are continuously evolving toward inclusive frameworks that prioritize diverse conceptual development, ensuring all students—regardless of their location or background—receive equitable and acceptable learning opportunities. To maintain this progress, it is essential to integrate contemporary theories like Universal Design for Learning (UDL) and Culturally Responsive Teaching (CRT) directly into curriculum design. This synthesis of theory and practice transforms abstract concepts into actionable strategies that effectively address a wide spectrum of learning qualities, cultural histories, and physical abilities (Meyer et al., 2014). Ultimately, this synergy empowers educators to foster an effective pedagogy where every student can access information, engage deeply, and achieve meaningful academic growth.(UNESCO).

Enhancing Inclusion through Diverse Instructional Approach

Multimodal learning is a cornerstone of inclusive curriculum design, as it provides diverse pathways for students to process information. Research suggests that educational outcomes improve significantly when instruction engages multiple sensory channels—such as visual, auditory, kinesthetic, and textual—rather than relying on a single method (Bouchey, Castek, & Thygeson, 2021). By integrating tools like interactive simulations, digital media, and hands-on laboratory work, educators allow students to explore complex concepts through the learning styles that best suit their individual needs (Mayer, 2009).

Beyond general engagement, these multimodal strategies are vital for improving accessibility for students with disabilities. Providing transcripts for audio, sign language interpretation for presentations, and text optimized for screen readers ensures that learners with visual or hearing impairments can fully participate in the curriculum (CAST, 2018). Ultimately, by prioritizing multimodal teaching practices, educators foster a more equitable and motivating environment that accommodates the unique requirements of every learner.

Versatile Assessments for Supporting Diverse Learners

Traditional standardised tests has ferosity to neglect the diverse strengths and talents of students, thus accounting for disparities in educational attainment (Brookhart, 2013). Teachers can implement responsive assessment choices aligned with UDL principles and differentiated instruction. As a result of these considerations, types of assessment such as portfolios, project evaluations, and self-evaluation allow students to demonstrate the needs and their awareness of things in a manner that best suits their capabilities and preferences (Guskey & Jung, 2011). In such situations, these forms of assessment are closer to a fuller picture, but cultivate students critical thinking skills and creativity. Permit them to flaunt their skills with various assessments-through oral reporting, written reports, and cyber tales-also provides equal playing grounds for every single one of them.

Challenges and Opportunities in Inclusive Pedagogy

There are some challenges that are prominent to develop and implement inclusive pedagogy. These are –

Some Barriers that Teachers Encounter in the Implementation of Inclusive Models

Research indicates that many educators feel not properly to support students with disabilities; for example, studies in Ethiopia and Nigeria have shown that training programs often fail to provide the practical skills needed for diverse classrooms, leading to teacher resistance and poor instructional quality (Zelalem, 2021; Ohiri et al., 2024). Beyond pedagogical skills, a critical shortage of resources and infrastructure further stymies progress. Many schools lack essential physical accessibility and assistive technologies, which directly impacts both student achievement and teacher efficacy (Iyanuoluwa, 2023). Finally, deep-seated cultural norms and negative societal attitudes toward disability continue to serve as barriers, often resulting in the social and academic exclusion of learners within educational environments (Ohiri et al., 2024).

Policy Specification

To be truly effective, inclusive education policies must be developed in partnership with the specific stakeholders and environmental factors that influence their success. Rather than just advocating for inclusion in theory, these policies need to serve as practical roadmaps—offering clear procedural guidance and securing the necessary funding to turn inclusive ideals into classroom realities.

Teacher Training

Although comprehensive training is essential for equipping educators with inclusive pedagogical skills, current programs are often criticized for prioritizing abstract theory over hands-on application. To address this gap, teacher education should shift toward experiential learning. By providing direct exposure to diverse student populations and practical instruction on inclusive techniques, training programs can effectively reshape teacher attitudes and build the self-efficacy required to manage diverse classrooms confidently.

Resource Distribution

To ensure inclusive education make effective, institutions must prioritize the strategic allocation of resources, ranging from functional logistical frameworks and accessible infrastructure to essential operating systems that support a diverse student body (Iyanuoluwa, 2023). A critical component of this investment involves providing assistive technologies and maintaining facilities to ensure the learning environment remains supportive and equitable (Ebersold & Meijer, 2016). In the modern educational era the success of an inclusive curriculum is measured by its flexibility and responsiveness to the varied needs of learners. As Batool et al. (2023) suggest, such a curriculum is designed to empower every student in higher education to achieve specific learning outcomes by offering materials that are universally accessible and usable.

Theoretical Connection Between UDL & CRP

UDL's three core networks (representation, action and expression, engagement) provide a structural scaffold that culture-specific pedagogy fills with asset-based, identity-affirming

content and practices. The fusion is both pragmatic and theoretical: UDL offers design mechanics while culturally responsive frameworks supply epistemic and ethical commitments.

- Structural fit UDL specifies multiple means of representation, expression, and engagement; culturally responsive pedagogy supplies culturally meaningful forms of those means and content selection
- Critical and transformative grounding Culturally sustained approaches and critical design emphasize decentring normative assumptions and require educator reflexivity and positionality work within UDL design cycles
- Intersectionality and language theory linking Practices such as translanguaging connect language-as-resource theories with UDL's multimodal representation, explicitly addressing intersecting identities and disabilities
- Research and operationalization Component-based and rubrics-focused approaches help translate combined UDL+CRP constructs into measurable classroom practices while highlighting implementation barriers and supports needed at the institutional level

Benefits of Student Outcomes:

Embedding culture-specific pedagogy within UDL expands access, supports multilingual and disabled learners, and increases belonging through identity-affirming, multimodal opportunities. Evidence across design and practice studies shows these combinations reduce barriers and foster more equitable participation.

- Increased access Multimodal and flexible UDL-aligned supports reduce barriers to content for students from diverse linguistic and cultural backgrounds .
- Improved engagement Culturally relevant materials and authentic modes of participation boost relevance and motivation, enhancing classroom participation and task persistence
- Stronger belonging and identity affirmation Intentional mirrors-and-windows content and asset-based framing foster inclusion and belonging for learners whose identities are often marginalized
- Better support for intersectional needs Integrating translanguaging and culturally responsive UDL practices helps emergent multi-linguals labelled as disabled by honouring full communicative repertoires and learning strengths
- Barrier reduction for learning implementation Combining CRT/CRP with UDL addresses classroom-level barriers but requires institutional supports and teacher development to be effective

Suggestive Framework that could be helpful in Inclusive setup with the help of UDL&CRP

Integration Strategies

Culture-specific pedagogy can be operationalized within UDL by selecting culturally meaningful content, expanding representation and expression options, and redesigning assessments to honour learners' linguistic and cultural repertoires. Practical strategies emphasize educator inquiry and reflective design cycles to centre learners' identities and translate those insights into multimodal, technology-supported learning pathways. **Strategy** What does it How it align with Culturally sustaining content and mirror Usestexts, examples,

and tasks that reflect students' cultures and provide windows into others' experiences to validate identity and prior knowledge Aligns with UDL representation by making material relevant and asset-based for diverse learners Multimodal multilingual representation Incorporates multiple modes (audio, visuals, translanguaging) to present concepts and allow varied comprehension routes Strengthens UDL representation and engagement, supporting emergent multilinguals through translanguaging practice Flexible assessment and talent development Flexible assessment and talent development Maps to UDL action and expression and promotes inclusive talent development across cultures Collaborative design and teacher identity work Uses backward-design-like inquiry cycles and educator reflection to surface cultural assets and redesign activities for belonging Operationalizes UDL planning processes and centers instructor positionality in design decisions

Conclusion

Inclusive education ensures that every student, based on their personal background or individual abilities, is provided with an equitable opportunity to succeed. By integrating

Culturally Responsive Pedagogy (CRP) with Universal Design for Learning (UDL), educators can create a powerful synergy that combines cultural sensitivity with instructional flexibility. While significant obstacles like limited resources and a lack of professional training often hinder progress, these challenges can be overcome through a dedicated focus on teacher development and systemic policy reform. Ultimately, the way UDL and CRP complement one another serves as a vital framework for fostering equity and providing balanced opportunities within increasingly diverse modern classrooms.

Suggestions

Professional Development: Provide educators with ongoing training in Culturally Responsive Pedagogy (CRP) and Universal Design for Learning (UDL) to build inclusive instructional competencies.

Curriculum & Resources: Diversify learning materials and institutional resources to ensure they are flexible enough to reflect varied student backgrounds and needs.

Infrastructure & Investment: Increase funding for assistive technologies, accessible materials, and physical classroom modifications to support diverse learners.

Policy Integration: Mandate inclusive education by embedding CRP and UDL principles directly into national teaching standards and educational policies.

Community Engagement: Foster collaborative partnerships between schools, parents, and community organizations to create a supportive environment that respect and accept students' cultural identities.

References

- Tongkaew A, Lomberg C, Valgeirsdottir D. *Inclusive mindset in design: Unpacking concepts and implications*. *Design Science*. 2026;12:e19. doi:10.1017/dsj.2026.10058
- Zhang, J. (2024). *Addressing Coordination and Conflict in Multicultural Elementary Classrooms through Culturally Responsive Teaching and Universal Design for Learning*. <https://doi.org/10.61173/s3db0375>
- Naja, K., & Hameed, Dr. A. (2024). *A Conceptual Study on Effective Teaching Strategies for Inclusive Classrooms*. 03(09), 690–696. <https://doi.org/10.70333/ijeks-03-09-038>
- Taylor, K. (2016). *The Influence of Universal Design for Learning through Cooperative Learning and Project- Based Learning on an Inclusive Classroom*. https://scholar.umw.edu/cgi/viewcontent.cgi?article=1134&context=student_research

- .Batoool, S. H., Bullard, J., Campbell-Meier, J., Fourie, I., Jimenez, A., & Rutter, S. (2023). *Global perspectives on inclusive curricula: Places, practices and pedagogy. Proceedings of the Association for Information Science and Technology*, 60(1), 742-746.
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7-74.
- Bouchey. B., Castek, J. & Thygeson, J. (2021). Multimodal learning. *Innovative learning environments in STEM higher education*, 3(5), 35-45). https://doi.org/10.1007/978-3-030-58948-6_3
- Chita-Tegmark, M., Gravel, J. W., Serpa, M. de L. B., Domings, Y., & Rose, D. H. (2012). *Using the Universal Design for Learning framework to support culturally diverse learners. Journal of Education*, 192(1), 17–22. doi.org [1, 2, 3]
- Brookhart, S. M. (2013). *How to create and use rubrics for formative assessment and grading.* ASCD.
- CAST. (2018). *Universal design for learning guidelines version 2.2.* Retrieved from <https://udlguidelines.cast.org/> Chita-Tegmark, M., Gravel, J. W., Serpa, M. D. L. B., Domings, Y., & Rose, D. H. (2012). *Using the Universal Design for Learning framework to support culturally diverse learners. Journal of Education*, 192(1), 17-22.
- Ebersold, S., & Meijer, C. (2016). Financing inclusive education: Policy challenges, issues, and trends. in *Implementing Inclusive Education, Issues in Bridging the Policy-Practice Gap.* 2(8), 37-62. Emerald Group Publishing Limited.
- Felder, R. M., & Silverman, L. K. (1988). Learning and teaching styles in engineering education. *Engineering Education*, 78(7), 674-681.
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.
- Grier-Reed, T., & Williams-Wengerd, A. (2018). Integrating universal design, culturally sustaining practices, and constructivism to advance inclusive pedagogy in the undergraduate classroom. *Education Sciences*, 8(4), 167.
- Guskey, T. R., & Jung, L. A. (2011). *Grading and reporting in a standards-based environment: Implications for students with special needs.* Corwin Press.
- 18 .Hammond, Z. (2015). *Culturally responsive teaching and the brain: Promoting authentic engagement and rigor among culturally and linguistically diverse students.* Corwin.
- Herald Sun. (2025). *The 'radically inclusive' school helping neurodiverse students excel.* <https://www.heraldsun.com.au/victoriaeducation/saints-college-fitzroy-north-is-helping-neurodiverse-students-excel-in-their-studies/news-story/62b3b1228f7bdad68367197f11d2dbc2>
- Doran, P. R. (2015). Language accessibility in the classroom: How UDL can promote success for linguistically diverse learners. *Exceptionality Education International*, 25(3), 1–12. doi.org [1, 2]
- Ginsberg, M. B. (2005). Cultural Diversity, Motivation, and Differentiation. *Theory Into Practice*, 44(3), 218–225. <http://www.jstor.org/stable/3497001>
- Housel, D. A. (2020). When co-occurring factors impact adult learners: Suggestions for instruction, preservice training, and professional development. *Adult Learning*, 31(1), 6-16.
- J. Century and L. Weisberg, (2023) “Growing Knowledge about Using Culturally Responsive Pedagogy and Universal Design for Learning in Computer Science Education,” pp. 11–13, doi: 10.1109/respect60069.2023.00013. make it in APA7TH.

- Iyanuoluwa, F. (2023, May 24). *Challenges to inclusive education in Nigeria*. Schools Compass Blog. <https://schoolscompass.com.ng/blog/2023/05/24/challenges-to-inclusive-education-in-nigeria/>
- James, K. (2018). *Universal Design for Learning (UDL) as a structure for culturally responsive practice*. *Northwest Journal of Teacher Education*, 13(1), 4.
- Ladson-Billings, G. (1995). *Toward a theory of culturally relevant pedagogy*. *American Educational Research Journal*, 32(3), 465- 491. Ladson-Billings, G. (2014). *Culturally relevant pedagogy 2.0: a.k.a. the remix*. *Harvard Educational Review*, 84(1), 74–84.
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University press.
- Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. CAST Professional Publishing .
- Novak, K., & Thibodeau, T. (2016). *UDL in the cloud: How to design and deliver online education using universal design for learning*. CAST Professional Publishing.
- Ohiri, S. C., Okonkwo, J. T., & Kanayo-Egwuonwu, N. S. (2024). *A critical analysis of teachers' insights into the implementation of inclusive education practices in Owerri Education Zone 1 of Imo State*. *Shanlax International Journal of Arts, Science and Humanities*, 8, 63-87.
https://www.researchgate.net/publication/382070163_Effectiveness_of_Implementing_Inclusive_Education_Challenges_and_Opportunities_in_Culturally_Diverse_Classrooms
- Paris, D., & Alim, H. S. (2017). *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world*. Teachers College Press.
- Ralabate, P. K., & Nelson, L. L. (2017). *Culturally responsive design for English learners: The UDL approach*. CAST Professional Publishing.
- Rose, D. H., Meyer, A., & Hitchcock, C. (2006). *The universally designed classroom: Accessible curriculum and digital technologies*. Harvard Education Press.
- Santangelo, T., & Tomlinson, C. A. (2012). *Teacher's use of formative assessment to guide instructional decision making*. *Journal of Educational Psychology*, 104(3), 640-652.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). ASCD.
- Tosuncuoglu, I. (2018). *Importance of assessment in ELT*. *Journal of Education and Training Studies* 6(9), 163-170. <https://doi.org/10.11114/jets.v6i9.3443>
- UNESCO IITE. (2025). *Innovative technologies for inclusive education: A review of best practices from global resource centers*.
<https://iite.unesco.org/publications/technologies-for-inclusive-education-a-review-of-best-practices/>
- UNESCO. (2023, September 26). *Promoting access to education for students with disabilities through inclusive technologies*. *Global Education Monitoring Report*.
<https://www.unesco.org/gem-report/en/articles/promoting-access-education-studentsdisabilities-through-inclusive-technologies>.
- Watkins, A., De Vroey, A., & Symeonidou, S. (2016). *Educating all teachers for inclusion*. In *Implementing Inclusive Education: Issues in Bridging the Policy-Practice Gap*, 3(4), 63-87 Emerald Group Publishing Limited. <https://doi.org/10.1108/S1479-36362016000008005>
- Zelalem, B. (2021). *Developing teachers' competency for inclusive education in Ethiopia*. *African Journal of Disability*, 10, 1-9.

- Anyanwu, L., & Olaitan, D. A. (2026). *Culturally responsive pedagogy and universal design for learning: For building inclusive and accessible curriculum for diverse learners*. The Hague University of Applied Sciences; Wittenborg University of Applied Sciences.
- Cressey, J. (2020). *Universal Design for Learning: Culturally Responsive UDL in Teacher Education* (pp. 137–158). IGI Global. <https://doi.org/10.4018/978-1-7998-1770-3.CH008>
- Diana Xiomara Estrada Alarcón,+1(25 Oct 2024)Educating for All:key to Inclusive and Equitable Teaching .
- Mayasari, L. I., Dulyapit, A., Yunitasari, S. E., & Syam, A. R. (2025). INTEGRATING UNIVERSAL DESIGN FOR LEARNING AND DIGITAL TECHNOLOGY: ADVANCING INCLUSIVE EDUCATION IN THE 21ST CENTURY. *Irfani*, 21(2), 768-782.
- Spencer, S. A. (2011). *Universal Design for Learning: Assistance for Teachers in Today's Inclusive Classrooms*. *Interdisciplinary Journal of Teaching and Learning*, 1(1), 10-22.
- Padía, L. B., Cioè-Peña, M., & Phuong, J. (2024) *emphasis the Mending the intersectional gap: Supporting emergent multilinguals labeled as disabled through translanguaging and universal design for learning*. *Theory Into Practice*. Advance online publication. <https://doi.org/10.1080/00405841.2024.2355843>
- Roberts, T. M. (2000). *Inclusion for speech-language pathology minority graduate students* [Doctoral dissertation, Portland State University]. PDXScholar. doi.org [1]
- Price, J., & Fox, A. (2023). *Transformative praxis: A critical design framework for belonging and inclusion in technology-rich learning spaces*. *Journal of Teaching and Learning with Technology*, 12(1), 55-71.

INCLUSIVE EDUCATION POLICIES AND SYSTEMS IN HIGHER EDUCATION IN INDIA

Ramesh Appa Sawant

Krantismruti Junior College of Education, Satara,

Research Scholar, Department of Education Shivaji University, Kolhapur,

E-mail- sawantra1980@gmail.com

Abstract

Inclusive education in higher education is a milestone of social justice and equitable development student, particularly in a diverse democracy in India. This research paper examines the evolving scope of inclusive education policies and systems within Indian higher education. It provides a comprehensive analysis of the constitutional and legislative framework, with a primary focus on the transformative National Education Policy (NEP) 2020 and the recently notified University Grants Commission (UGC) Equity Regulations 2026. Study analyses key opportunities for transformation, such as technological advancements and the new regulatory push for accountability. By reviewing current literature, policy documents, and recent governmental data, this paper concludes that while India has made significant strides in establishing a policy architecture for inclusion, the critical challenge lies in its effective and uniform implementation across all higher education institutions to ensure that equity.

Keywords: *Inclusive Education, Higher Education, NEP 2020, UGC Equity Regulations 2026, Social Justice, Accessibility.*

Introduction: -

India's higher education system, one of the largest in the world with over 4.5 crore students. It is not only for economic prosperity but also a powerful instrument for social transformation and the cultivation of democratic values. The concept of inclusive education within this sphere extends beyond the enrolment of students from diverse backgrounds; it fundamentally concerns the creation of an ecosystem where every learner, irrespective of caste, gender, socio-economic status, disability, can participate. It is a societal imperative aimed at dismantling systemic barriers and fostering a just society.

higher education in India has been characterized by exclusion, with disparities persisting between different social groups long after independence. Recognizing this, the Indian state has continuously evolved its policy framework to address these inequities. The constitutional mandate for equality, legislative acts like the Rights of Persons with Disabilities (RPwD) Act, 2016, has the groundwork for this evolution. However, the most significant and comprehensive analysed by the National Education Policy (NEP) 2020, which places 'Equitable and Inclusive Education' at the very core of its vision. High Court's Core Ruling (Karnataka HC, Aug 2025): The court ruled that it cannot compel a State Government to adopt the NEP. Education is on the Concurrent List, giving states significant autonomy. A policy cannot be forced unless its

non-implementation violates specific Fundamental or Statutory Rights. This came from a PIL challenging Karnataka's decision to stall NEP implementation.

This vision is now being operationalized through new regulatory system, most notably the University Grants Commission (UGC) Promotion of Equity in Higher Education Institutions Regulations, 2026. This paper aims to analyse these policies, understand the systemic challenges to their implementation, and evaluate the opportunities that lie ahead in India's to build a inclusive higher education system.

Objectives: -

The primary objectives of this research paper are as follows:

1. To analyse the key policy provisions and legislative frameworks governing inclusive education in Indian higher education, with focus on NEP 2020 and the UGC Equity Regulations 2026.
2. To identify and discuss the major challenges and barriers—infrastructural, pedagogical aspect of inclusive education.
3. To highlight the opportunities and transformative strategies, including technological integration and regulatory in inclusion education.
4. To evaluate the effectiveness of the current education system of inclusive education in India.

Research Data Analysis: -

This section analysed findings from policy documents, government reports, and academic commentary to provide a detailed analysis of the state of inclusive education in India.

1. The National Education Policy (NEP) 2020:

NEP 2020 acts as the overarching equity and inclusion fundamental principles for the higher education system. Its key directives for inclusion include:

- A. Universal Access: The policy aims to increase the Gross Enrolment Ratio (GER) in higher education to 50% by 2035, with a specific focus on including Socio-Economically Disadvantaged Groups.
- B. Multidisciplinary Institutions: It mandates the establishment of large, multidisciplinary universities and colleges in or near every district by 2030.
- C. Language: Promoting Indian local languages as a medium of instruction to break down barriers for first-generation learners.
- D. Gender: NEP 2020 approaches gender as a priority, leading to targeted schemes like seats in IITs and NITs, which have significantly female enrolment. Female Ph.D.
- E. Technology for Access: the platforms like SWAYAM for online and distance learning education who cannot access traditional institutions.

UGC (Promotion of Equity in Higher Education Institutions) Regulations, 2026:

If NEP 2020 provides the vision, the UGC Equity Regulations 2026 Key provisions include:

- A. Equal Opportunity Centres (EOCs): Every HEI must establish an EOC as the for equity, tasked with monitoring policy implementation and addressing grievances.
- B. Preventive Measures: Institutions must conduct mandatory orientation programs and require all students and staff to commitment to equality principles.

This regulatory shift is complemented by other initiatives, such as the Viksit Bharat Shiksha Adhishthan (VBSA) Bill, 2025, which proposes a unified regulatory education system.

2. Challenges to Implementing Inclusive Education

policy framework, significant ground-level challenges in inclusive Education

Infrastructure: A primary barrier, especially for students with disabilities, is the lack of basic accessibility features of infrastructure.

A. Teacher Training and Pedagogical integration of inclusive Education: Educators lack training in inclusive pedagogies. Standardized curricula frequently fail to account for different learning styles and needs.

B. Economic and Digital Devices: Economic access limit access to quality education, technologies, and even basic need. digital devices, barriers existing inequities.

Conclusion: - The inclusive higher education in India is a complex but important in education system. The nation has moved understanding of inclusion to approach. The policy approach by the transformative NEP 2020 and UGC Equity Regulations 2026, provides a foundation for this education system. These policies address multiple dimensions of caste and gender to disability and economic status accessible infrastructure. There haven't been many specific court rulings directly on NEP 2020's "inclusive education" provisions. However, the Karnataka High Court did pass a significant judgment in August 2025 that affects how NEP is implemented, and the Supreme Court also clarified inclusive higher education.

A govt. policy is only as good as its implementation. The challenges of infrastructural, attitudinal barriers, and teacher training, in Indian higher education the gap between policy. faculty must adopt inclusive pedagogies, students must involve in education, and regulatory bodies must ensure in higher education.

References: -

Ministry of Education. (2023, September 13). *Access to Quality Education and Governance - Higher Education*. Government of India.

Modh, B. (2026, February 22). *Viksit Bharat Shiksha Adhishtan Bill 2025: Rethinking inclusion in the pursuit of excellence*. ET Education.

Thakur, R. R., & Saxena, N. (2025, May 5). *Inclusive education in India: Challenges and opportunities*. ET Education.

Ministry of Education. (2025, March 19). *Steps taken to ensure equal access to education for women*. Press Information Bureau, Government of India.

Raj, S. B. (2025). *Pathways to Inclusive Higher Education: Learnings from India's National Education Policy 2020*. *Nordic Journal of Studies in Educational Policy*, 11(1), 82-92.

Ashoka University. (2025, August 7). *"Inclusion Must Be the Norm, Not an Exception in Education"*: Shri Rajesh Aggarwal, Secretary DEPwD at OLS Conclave 3.0.

Bansal, S. (2025, July 29). *NEP 2020 turns five: A look at India's journey of education transformation*. India Today.

ROLE OF SOCIAL MEDIA IN TRANSFORMING EDUCATION UNDER NEP 2020: OPPORTUNITIES AND CHALLENGES

Mrs. Sunita Yadav

Ph.D. Research Scholar, Department of Sociology Shivaji University, Kolhapur

Dr.P.M.Mane

Professor, Department of Sociology, Shivaji University, Kolhapur

Abstract

The National Education Policy (NEP) 2020 has brought about important changes to the Indian education system. It aims to make education more inclusive, flexible, and suitable for the digital age. Simultaneously, social media has become an important part of students' daily lives and is influencing how they learn. This study examines how social media is shaping education under the NEP 2020. It focuses on both the benefits and challenges. This study is based on secondary data from research articles, policy reports, and recent studies published between 2020 and 2026. The findings show that social media supports collaborative learning, increases student engagement, and improves information access. However, it also creates problems such as distraction, misinformation, digital inequality and mental health concerns.

The study concludes that social media fits well with the goals of NEP 2020, but its success depends on digital literacy, proper guidance and responsible use. If used carefully, it can help create a more inclusive and modern educational system in India.

Keywords: Social Media, NEP 2020, Digital Education, Collaborative Learning, Digital Literacy

1. Introduction

Education in India has consistently evolved in response to social and technological advancements. The introduction of the National Education Policy (NEP) 2020 represents a significant initiative aimed at enhancing the educational framework. This policy emphasizes the importance of making learning more adaptable, student-centered, and accessible. A prominent feature of NEP 2020 is the integration of digital technology into education. Technology has transcended its role as a supplementary tool to become an integral component of teaching and learning processes. Concurrently, the rapid expansion of social media has transformed modes of communication and learning. Platforms initially designed for social interaction are now utilized for knowledge dissemination, discussions, and educational activities.

The role of social media in transforming education under India's National Education Policy (NEP) 2020 is emergent as a vital vector for facilitating the policy's ambitious goals, offering both significant opportunities and notable challenges. The NEP 2020 emphasizes digital transformation and integration of technology in the education system, aligning with the

increasing role of social media platforms as tools for learning, collaboration, and knowledge dissemination. Social media empowers students and educators by providing:

- **Enhanced Access and Inclusivity:** Social media platforms enable the creation and sharing of educational content beyond traditional classroom boundaries, supporting NEP's vision for inclusivity and equity. They facilitate community engagement and support for marginalized groups, offering opportunities for peer learning, mentorship, and awareness raising about educational schemes and resources, thus complementing digital learning platforms (Mangat, 2024).
- **Collaborative and Multidisciplinary Learning:** Aligning with NEP's focus on multidisciplinary and flexible education, social media fosters collaborative knowledge building and interdisciplinary dialogue, making learning more dynamic and personalized (Narkhede et al., 2025).
- **Teacher Capacity Building:** Social media offers access to a wide array of professional development resources and communities of practice, which is crucial given the challenges of capacity building highlighted for educators expected to deliver diverse subjects and skills outlined in NEP 2020 (Kulal et al., 2024).
- **Promotion of Multilingual Education:** Considering NEP's stress on mother tongue and local language instruction, social media can function as a medium for disseminating multilingual educational resources and fostering linguistic inclusivity at scale, potentially addressing some implementation barriers in this domain (Singh, 2025).
- **Engagement and Motivation:** Interactive social media tools can enhance student engagement through forums, live sessions, and multimedia content, facilitating more immersive and motivating learning experiences, thus supporting the holistic development goals of NEP 2020 (Narkhede et al., 2025).

Despite these opportunities, several challenges constrain the optimal use of social media in transforming education under NEP 2020:

- **Digital Divide and Infrastructure Gaps:** Many marginalized and rural populations face limited or unreliable digital infrastructure, adversely affecting equitable access to social media-based learning opportunities, counteracting NEP's inclusivity objectives (Mangat, 2024).
- **Teacher Training and Readiness:** Successful integration of social media requires educators to be proficient not only in subject matter but also in digital pedagogies and content moderation, a capability that is currently insufficient and demands systematic training and support (Kulal et al., 2024).
- **Quality and Credibility of Content:** The informal nature of social media can lead to the dissemination of inaccurate or low-quality educational content. NEP's emphasis on quality assurance mechanisms must extend to online platforms to safeguard educational standards and trust (Narkhede et al., 2025).
- **Language and Cultural Barriers:** While social media has potential for multilingual engagement, uneven availability of resources in diverse Indian languages and cultural sensitivities may limit its reach, complicating the implementation of NEP's multilingual education policy (Singh, 2025).

- Privacy and Equity Concerns: The use of social media raises issues around data privacy, digital safety, and equitable participation, particularly for vulnerable groups such as transgender students and marginalized communities targeted for empowerment under NEP 2020 (C, 2024).

Harnessing social media effectively for NEP 2020's transformation agenda requires addressing these challenges through:

- Investments in Digital Infrastructure: Ensuring robust internet connectivity and affordable digital devices in underprivileged regions to bridge the digital divide (Mangat, 2024).
- Capacity Building Frameworks: Designing professional development programs focused on digital literacy and pedagogical innovation for educators to integrate social media as a teaching and learning tool proficiently (Kulal et al., 2024).
- Content Regulation and Quality Assurance: Establishing standards and oversight to validate and curate educational content shared on social media, linking with formal curricula adaptation as envisaged by NEP (Narkhede et al., 2025).
- Localized and Multilingual Digital Content Creation: Promoting community participation and collaboration in creating culturally relevant educational media in regional languages through social media channels (Singh, 2025).
- Inclusive Policies to Protect and Empower: Embedding data privacy safeguards and inclusive digital policies to foster safe, equitable, and empowering online educational environments for all learners, including marginalized sections (C, 2024).

In conclusion, social media holds transformative potential to accelerate the implementation of NEP 2020's goals of a more inclusive, flexible, and technology-driven education system in India. However, realizing this potential necessitates concerted efforts to overcome infrastructural, pedagogical, and socio-cultural challenges through targeted policy measures and stakeholder collaboration.

Contemporary students are increasingly active participants in their learning processes, engaging in the exchange of ideas and collaborative learning through these platforms. In this context, it is crucial to examine the impact of social media on education within the framework of NEP 2020. While social media offers numerous advantages, such as enhanced access and engagement, it also presents challenges, including potential distractions and disparities in access. This study explores both the positive and negative implications of social media in education and proposes strategies for its effective utilization.

Objectives of the Study

The present study aimed to understand how social media influences education in the context of NEP 2020. The objectives of this study are outlined as follows:

1. To examine the role of social media in the education system under NEP 2020. This study attempts to understand how students and educators use these platforms as part of the learning process.
2. To understand the impact of social media on learning, this study analysed whether it improves student engagement, access to information, and academic performance.

3. To identify both the benefits and challenges associated with the use of social media in education. While social media offers several advantages, it also creates issues such as distraction and misuse that need to be examined.
4. To study the importance of digital literacy in the effective use of social media. This study examined how awareness and skills in using digital tools influence learning outcomes.
5. To suggest possible improvements for better use of social media in education. Based on these findings, this study aims to provide practical recommendations.

2. Research Methodology

The present study examines the role of social media in transforming education under the framework of the National Education Policy (NEP) 2020. The study adopts a descriptive and analytical research design to understand the opportunities and challenges associated with the use of social media in education. A descriptive approach helps in explaining the present situation and emerging trends, while the analytical approach enables interpretation of the impact of social media on teaching and learning processes.

The study is primarily based on qualitative analysis using secondary sources of data. The required information has been collected from peer-reviewed research journals, books, edited volumes, government publications, policy reports, and credible online sources. Important reports and documents published by organizations such as UNESCO, OECD, UGC, and the Ministry of Education have also been referred to in order to ensure authenticity and reliability. The literature reviewed for the study mainly covers the period from 2020 to 2026, which corresponds with the implementation phase of NEP 2020 in India.

A purposive sampling method was used for the selection of literature and documents relevant to the topic. Only those studies that focused on social media, digital education, online learning, educational technology, student engagement, digital literacy, and NEP 2020 were included in the analysis. The researcher systematically reviewed national and international studies to understand the changing role of social media in education and its relationship with digital transformation under NEP 2020.

The process of data collection involved identifying relevant keywords such as “Social Media and Education,” “NEP 2020,” “Digital Learning,” “Educational Technology,” and “Online Learning.” Research articles, reports, and policy documents related to these themes were carefully examined. The collected information was then classified into different themes such as opportunities of social media, challenges in digital learning, student engagement, accessibility, teacher preparedness, and digital literacy.

The collected data were analyzed using thematic and content analysis methods. The researcher compared findings from various studies to identify common patterns, emerging trends, and major issues related to the use of social media in education. Special attention was given to understanding both the positive and negative dimensions of social media usage. The findings were interpreted in a descriptive manner and presented with supporting tables and explanations for better understanding.

The scope of the study is limited to understanding the role of social media in the Indian education system within the context of NEP 2020. The study mainly focuses on digital learning practices, opportunities for collaborative and flexible learning, and challenges such as digital divide, misinformation, distraction, lack of digital literacy, and unequal access to technology.

The research also highlights the importance of teacher preparedness and institutional support in the effective use of social media for educational purposes.

However, the study has certain limitations. Since the research is based entirely on secondary data, it does not include field surveys, interviews, or primary data collection from students and teachers. The findings depend upon the availability and reliability of published literature and reports. In addition, the rapidly changing nature of digital technology and social media platforms may influence future trends differently. Despite these limitations, the study provides a meaningful understanding of the relationship between social media and educational transformation under NEP 2020.

3. Review of Literature

Social Media in Education

Globally, social media applications are increasingly employed as tools for enhancing professional development and collaborative learning among educators and students alike. For instance, physical educators internationally have reported that social media use enhances their knowledge, pedagogical skills, and access to professional communities, contributing positively to teaching and student learning experiences. However, they also face challenges such as managing vast amounts of content, navigating varying online cultures, and risks related to context collapse where private and professional boundaries blur (Carpenter & Harvey, 2020). In higher education, studies from contexts such as Palestine have demonstrated that social media, particularly platforms like Facebook groups, positively influence students' academic performance by increasing perceived satisfaction, learning impact, and performance perception. This emphasizes social media's role as an effective instructional networking platform (Sabah, 2022). Furthermore, in language learning internationally, social media platforms such as YouTube, WhatsApp, Facebook, Instagram, and Twitter have been harnessed successfully to improve essential skills like reading, writing, vocabulary, and motivation. These platforms enable language learners to engage with content creatively and critically, although they require ongoing optimization and integration into formal curricula (Ariantini et al., 2021; Nasution, 2022).

From a teacher education perspective, social media is used to build professional online presence and learning networks, facilitating content sharing, discussion, and collaboration. However, ethical considerations emerge, necessitating differentiated scaffolding for learners based on their confidence levels and fostering awareness about safeguarding online reputations while leveraging social media's educational potential (Forbes, 2017). Studies in contexts such as Australian social work international placements also underscore how reflective learning, aided by social media and technology, supports student development and skill enhancement in international educational environments (Pawar, 2016). In India, the adoption of social media in education is rapidly growing, particularly in higher education settings such as business

schools, although it remains less exploited compared to global trends. Many Indian colleges and universities have started incorporating social media into their pedagogical approaches, recognizing its potential to transform learning into a more interactive and technology-driven process. However, challenges persist in effectively aligning social media tools with curricular goals to maximize student engagement and learning outcomes (Bharucha, 2018). India's educational complexities are compounded by socio-economic diversity and multilingualism. Research focusing on primary education reveals that low socio-economic status remains a key factor limiting learning outcomes. Projects aimed at raising outcomes among multilingual children highlight the intricate challenges of educational achievement in India's diverse linguistic landscape. While social media could facilitate multiliteracy and multilingual engagement, addressing methodological challenges is critical to ensure its effective implementation in this context (Tsimpli et al., 2019). The rising penetration of mobile phones among nearly a billion users in India offers a vast opportunity for social media to transform education, especially by bridging socio-economic divides and expanding access to learning resources. Despite these advantages, infrastructure limitations, digital literacy, and curriculum integration issues continue to restrict the widespread and effective use of social media as an educational tool (Bharucha, 2018).

Comparative Insights Benefits: In India and internationally, social media enhances learning, professional development, language acquisition, and collaboration. Platforms used globally are relevant in India, fostering motivation and creative, critical thinking skills. **Challenges:** Globally, challenges include managing content volume, context collapse, ethical use, and balancing entertainment with education. In India, these are compounded by socio-economic disparities, multilingual settings, digital divides, and curricular alignment issues. **Professional Development:** Internationally, social media supports building professional networks and continuous learning for educators, a trend starting in Indian higher education but limited by infrastructural and policy constraints. **Pedagogical Integration:** Internationally, methods of integrating social media into education are more established, while India needs deliberate efforts to embed social media within curricula for impact. In conclusion, while social media's educational potential is increasingly recognized worldwide—including in India—the extent and effectiveness of its use vary considerably. International examples highlight sophisticated applications and reflective practices, whereas Indian contexts point to rapid growth tempered by infrastructural and socio-economic challenges. Addressing these will be key to harnessing social media's full promise for education in India and globally (Bharucha, 2018; Carpenter & Harvey, 2020; Nasution, 2022; Sabah, 2022; Tsimpli et al., 2019).

Global Studies on Social Media

The global body of research on social media usage in higher education reveals a multifaceted impact that encompasses academic performance, student motivation, learning behavior, and institutional practices. These studies collectively illustrate that social media is an increasingly integral aspect of the modern educational landscape, offering both opportunities and challenges.

Social Media as a Collaborative Learning Environment: Research conducted in Palestine focusing on undergraduate students highlights that social media platforms, particularly Facebook groups, when utilized as instructional networking tools, positively influence learning outcomes. Students reported increased satisfaction with their learning experiences and perceived improvements in academic performance. The study applied structural equation modeling to show that educational usage of social media enhanced students' perception of their academic success and satisfaction with learning, emphasizing its value as a collaborative tool in higher education contexts (Sabah, 2022).

Enhancing Teaching and Learning in Universities: The COVID-19 pandemic accelerated the adoption of social media as a core component of distance education globally. A qualitative study found that social media use by higher education institutions promotes the educational process by motivating students, encouraging active participation, and fostering community connections. This adaptation helped universities maintain educational continuity during disruptions. However, the research also identified obstacles and areas for future inquiry, underscoring the need to better understand how social media can be optimized to support teaching and learning (Papademetriou et al., 2022).

Impact on Academic Performance and Usage Patterns: Studies from different regions, including Saudi Arabia and Vietnam, provide nuanced insights into the relationship between social media use and academic outcomes. For instance, a study among medical students in Medina showed that while some students addicted to social media perceived benefits in their grades, overall, those with higher academic achievement were less likely to be addicted. This suggests a complex interplay where social media can be both a supporting tool and a potential distraction depending on usage patterns (Alshanqiti et al., 2023).

Similarly, research in Vietnam investigated the motives behind social media use and their impact on GPA. Entertainment motives showed a direct positive effect on grades, whereas time spent on social media mediated negative impacts, especially where socialization motives increased usage time detracting from academic focus. This work highlights the importance of encouraging academic purposes in social media use and managing time to optimize performance (Cuong et al., 2025).

Student Perspectives on Social Media in Education: The inclusion of social media in teaching strategies affects not only academic achievement but also students' motivation and goal orientation. A study exploring student attitudes confirmed that social media fosters educational engagement and enhances motivation by making learning more interactive and connected to real-world communication tools. This shift addresses critiques of traditional impersonal teaching methods by enabling more dynamic and social learning experiences (Cooke, 2015).

Institutional and Cultural Considerations: Beyond individual student outcomes, social media usage in higher education intersects with professional practices and global cultural dynamics. For example, adopting social networking tools in Oman illustrates how students use platforms like YouTube, Facebook, and blogs to complement traditional classrooms, thereby encouraging a shift in teaching and learning styles influenced by Web 2.0 technologies. This study underscores benefits such as enhanced access to educational resources, while also addressing challenges that may arise (Al-Mukhaini et al., 2014).

Moreover, cross-cultural studies emphasize the role of social media in broader educational and economic contexts, such as social commerce and cultural intelligence development among international students. This research highlights how social media facilitates not only learning but also intercultural competence, which is vital in increasingly globalized education systems (Hu & Zhu, 2022).

Summary and Implications

- **Positive Outcomes:** Social media fosters collaborative learning, increases student motivation, and can enhance perceived academic performance and learning satisfaction (Cooke, 2015; Papademetriou et al., 2022; Sabah, 2022).
- **Complex Relationship with Academic Performance:** While social media can support academic achievement, excessive or non-academic use may detract from it. Time management and purpose-driven use are critical factors (Alshanqiti et al., 2023; Cuong et al., 2025).
- **Challenges and Risks:** Negative impacts on learning behavior and psychological adjustment have been observed, warranting awareness and effective strategies to mitigate these risks (Abbas et al., 2019).
- **Cultural and Institutional Dynamics:** Adoption and effectiveness of social media in higher education vary across cultural contexts and require consideration of local educational practices and student needs (Al-Mukhaini et al., 2014; Hu & Zhu, 2022).

In conclusion, global studies on social media usage in higher education present a complex yet promising picture. Social media, when integrated thoughtfully, can enrich teaching and learning experiences, promote community, and improve academic outcomes. However, optimizing these benefits requires attention to usage motives, time allocation, cultural factors, and challenges inherent to digital communication in academic environments. Further research is needed to develop best practices that maximize social media's educational value while minimizing potential drawbacks (Alshanqiti et al., 2023; Papademetriou et al., 2022; Sabah, 2022).

NEP 2020 and Digital Education

The National Education Policy (NEP) 2020 represents a comprehensive reform of India's education system, with a significant emphasis on inclusivity, equity, and digital transformation, particularly within higher education. Several research studies have examined the adoption, challenges, and potential of NEP 2020 in the Indian context, including its implications for digital education.

Inclusivity and Equity in Higher Education under NEP 2020: Research analyzing NEP 2020's impact on marginalized communities highlights substantial challenges in implementing the policy's inclusivity goals. A qualitative case study focused on districts in Punjab found that financial barriers, inadequate digital infrastructure, and limited linguistic support continue to restrict access for marginalized students. While scholarship schemes under NEP 2020 are positively viewed, their accessibility is complex and limited. Additionally, the curriculum is criticized for being elitist, and support mechanisms for marginalized groups are insufficient. Implementation suffers from inadequate educator training, bureaucratic delays, and lack of awareness. However, community involvement, proactive local governance, and the adoption

of digital learning platforms emerged as factors that could enhance policy effectiveness (Mangat, 2024).

A broader view recognizes NEP 2020 as transformative, aiming to establish India's education system as globally competitive and equitable. Comparative studies of inclusion in the Nordic countries versus India reveal ongoing challenges but also opportunities to learn from international practices to improve equity and inclusivity in higher education. The policy's vision focuses on extending high-quality education access and addressing the underrepresentation of historically marginalized groups through systemic reforms (Raj, 2024). Digital Education and Technology Integration: Digital education figures prominently in NEP 2020's agenda, aiming to leverage technology for enhanced learning and accessibility. Several studies emphasize the integration of technology and online education platforms as critical to fulfilling the policy's objectives, especially under conditions such as the COVID-19 pandemic that accelerated digital learning adoption.

One research study on English language pedagogical enhancement under NEP 2020 used quantitative methods involving 200 students to assess the impact of digital interventions in higher education. Findings indicated a high impact of digital strategies on teaching and learning, highlighting technology's role in innovative pedagogy. This aligns with NEP's transformative vision of utilizing digital tools for curriculum redesign, promoting interdisciplinary education, and expanding educational reach (Yadav & Yadav, 2023).

Further, strategic implementation studies underscore the necessity of technology adoption, including digital education infrastructure, integration of online and blended learning modes, and upskilling educators for digital competencies. Recommendations stress the importance of capacity building and resource development to ensure effective technology use within academic institutions (Aithal & Aithal, 2020; Narkhede et al., 2025).

Implementation Challenges and Strategies: The transformation envisioned by NEP 2020 requires overcoming practical challenges in policy execution. Studies document barriers such as limited digital infrastructure in rural and marginalized regions, inadequate teacher training focused on digital pedagogy, bureaucratic inertia, and financial constraints. Stakeholder engagement—including educators, administrators, students, and communities—is identified as vital for successful implementation. Regular monitoring and adaptive strategies are advised to ensure policy aims translate into practice effectively (Mangat, 2024; Vaithianathan et al., 2024).

Assessment reforms are also a focal point, with research reflecting on NEP 2020's vision to link assessment with dynamic learning processes rather than static evaluations. This shift complements digital education methods by facilitating continuous and personalized assessment through technological platforms (Khunyakari & Takker, 2025).

Important Themes Connecting NEP 2020 and Digital Education in India

- Equity through Digital Access: Digital platforms are recognized as tools to bridge educational divides but remain limited by infrastructure inequities, necessitating focused investment and policy support for marginalized populations (Mangat, 2024).

- **Educator Capacity Building:** Effective use of digital education demands comprehensive teacher training programs emphasizing digital literacy and pedagogical skills for technology integration (Aithal & Aithal, 2020; Kulal et al., 2024).
- **Multilingual and Culturally Responsive Digital Content:** With India's linguistic diversity, NEP 2020 advocates mother tongue-based instruction supported by digital resources. However, implementation faces challenges such as resource gaps and societal preferences favoring English, affecting digital content development and acceptance (Singh, 2025).
- **Strategic Roadmaps and Critical Success Factors (CSFs):** Research employing frameworks such as institutional theory and innovation diffusion identifies critical success factors for digital transformation aligned with NEP 2020 goals. These include policy coherence, infrastructural investments, stakeholder engagement, and continuous feedback mechanisms to foster flexible, inclusive, and technology-driven education systems (Narkhede et al., 2025).
- **Holistic Education through Digital Pedagogies:** NEP's vision of multidisciplinary and vocational education can be enhanced using digital tools that support flexible learning pathways and broaden access to diverse content and skills training (Kulal et al., 2024; Narkhede et al., 2025).

Conclusion

Empirical and conceptual studies on NEP 2020 within the Indian context highlight its ambitious vision to transform education by emphasizing inclusivity, equity, and digital education. Although challenges remain—such as infrastructural gaps, training inadequacies, and socio-cultural barriers—digital education emerges as a crucial enabler for realizing the policy's goals. Greater investments in digital infrastructure, teacher capacity, culturally appropriate multilingual resources, and stakeholder engagement are necessary to actualize NEP 2020's vision of an equitable and technology-enabled education system. Continued research and policy refinements informed by implementation experiences will be vital in navigating this transformative journey (Mangat, 2024; Narkhede et al., 2025; Yadav & Yadav, 2023).

Social Media in India

Research on social media in India spans diverse themes ranging from disaster management and business interactions to mental health impacts among adolescents, workplace performance, and the COVID-19 pandemic. The studies collectively reveal both opportunities and challenges posed by social media usage within the Indian context.

Social Media and Disaster Management in India: One significant domain of research focuses on the use of social media for disaster management. Studies have explored the barriers as well as enablers of social media adoption in disaster scenarios in India. Barriers include regulatory issues, software limitations, physical constraints, authenticity concerns, cultural factors, and demographic challenges. Meanwhile, enablers are identified as rising mobile penetration, increased democratic participation, higher living standards, two-way real-time communication capabilities, global reach, quicker decision-making, absence of space-time constraints, and lower information costs. The research emphasizes that leveraging social media reporting and

communication can enhance effective decision-making during disasters, thereby improving management outcomes in the Indian context (Singla & Agrawal, 2022).

Business Channel Effects and Social Media Usage: Research also investigates social media's effects across business interactions among suppliers, retailers, and consumers. A contagion effect has been documented whereby social media usage by suppliers positively influences retailers, which in turn affects customer engagement. This cascading effect enhances brand performance, retailer results, and consumer-retailer loyalty. Moderating factors such as brand reputation and service ambidexterity influence the strength of these contagion effects. These findings highlight the strategic value of promoting social media adoption across the business supply chain to improve overall performance (Rapp et al., 2013).

Social Media Behavior and Predictive Modeling in India: Data-driven studies applying machine learning techniques have advanced understanding of social media engagement in India. By analyzing demographic attributes (age, gender, education, location) and engagement metrics (followers, posts, usage time), researchers identified key predictors of social media user status categories such as students, self-employed individuals, working professionals, and those on sabbatical. Comparative evaluation of multiple regression models demonstrated that Gradient Boosting algorithms provide high accuracy in predicting user engagement levels on platforms like WhatsApp, Facebook, and Instagram. This line of research informs targeted engagement strategies and contributes to the growing field of social media behavioral analytics in India (Selvakumar et al., 2025).

Impact on Mental Health of Indian Adolescents: Mental health impacts of social media usage have been examined among Indian adolescents aged 14 to 23 years. Excessive use correlates with heightened stress, anxiety, and depression. Behaviors such as compulsive scrolling, particularly at night, disrupt sleep and negatively affect physical and mental wellness. While social media facilitates connectivity and self-expression through platforms like Facebook, Instagram, and YouTube, overuse poses risks of online harassment and other psychosocial problems. These findings underscore the urgent need for further research to elucidate social media's complex role in adolescent mental health and to design effective interventions for promoting wellbeing (Taddi et al., 2024).

Academic Performance and Interpersonal Relations: Among medical and paramedical students in East India, social media use is pervasive, with most students utilizing it for academic purposes. A majority perceive social media as positively impacting their academic performance. However, effects on interpersonal relationships are mixed, with students reporting both positive and negative influences in nearly equal measure. This suggests a nuanced impact of social media, where academic benefits coexist with potential social challenges (Lahiry et al., 2019).

Workplace Social Media Use and Social Cyberloafing: Enterprise social media use in workplaces has been investigated with respect to its effect on employee behavior, particularly social cyberloafing. Work-related and social-related uses of public and private social media impact employees' job engagement and emotional exhaustion differently, and these in turn influence cyberloafing behavior. Gender differences moderate these effects, indicating the

complexity of managing social media use in Indian workplaces. Importantly, social media use can boost job engagement but also carry risks of distraction and emotional fatigue depending on usage context (Ma et al., 2023). Furthermore, work-related social media use positively influences employees' work performance, often mediated by extra-role behaviors, suggesting that regulated social media usage policies might benefit organizational productivity (Dantas et al., 2022).

Social Media Usage During the COVID-19 Pandemic: The COVID-19 pandemic brought both positive and negative consequences stemming from social media use in India. On the positive side, social media provided avenues for healing and social affiliation during periods of isolation. Contrarily, the pandemic period saw increased sharing of unverified information and signs of addictive relapse behavior in social media usage. Demographic factors such as gender, age, marital status, and education, along with cultural dimensions like power distance and collectivism, significantly influenced patterns of social media behavior and perceptions of information reliability. These insights are valuable for policymakers aiming to harness social media's benefits while mitigating its adverse effects during crises (Alshare et al., 2022).

In sum, research on social media in India reveals a multifaceted landscape marked by significant benefits for disaster response, business performance, education, and social support, balanced against challenges like mental health risks among youth, workplace distractions, misinformation, and cultural influences on usage patterns. Continual examination of both the enabling and constraining aspects of social media in this context is essential to inform effective policy and practice.

Research Gaps

The review of literature reveals that social media has emerged as a powerful educational and communication tool globally and within India. Existing studies have highlighted its role in collaborative learning, academic networking, language development, student engagement, and professional development. However, despite the growing body of literature, several important research gaps remain insufficiently explored, particularly in relation to higher education, marginalized communities, and the implementation of digital education policies such as the National Education Policy (NEP) 2020 in India.

One of the major research gaps identified is the limited availability of context-specific studies examining the educational use of social media within Indian higher education institutions, especially in rural and semi-urban regions. Most global studies have been conducted in technologically advanced and urban educational settings where access to digital infrastructure, internet connectivity, and digital literacy is relatively higher. In contrast, India presents a highly diverse educational environment shaped by socio-economic inequalities, multilingualism, caste dynamics, rural-urban disparities, and unequal access to technology. Although studies acknowledge infrastructural and digital divide issues, there is insufficient empirical research investigating how these structural inequalities influence the educational effectiveness of social media among students from marginalized and disadvantaged backgrounds. Existing literature largely focuses on urban universities and professional institutions, leaving rural colleges and state universities underrepresented.

Another significant gap is the lack of comprehensive research exploring the integration of social media within formal curriculum frameworks under NEP 2020. While many studies discuss the transformative potential of digital education and technology-enabled learning, there is limited evidence regarding how social media platforms are systematically incorporated into teaching-learning processes in alignment with NEP 2020 objectives. Research has not adequately examined whether social media tools are being utilized merely for communication and information sharing or as pedagogically meaningful instruments for collaborative learning, critical thinking, creativity, multilingual learning, and inclusive education. Furthermore, there is inadequate investigation into how institutional policies, teacher preparedness, and curriculum design influence the educational adoption of social media platforms in Indian higher education.

The literature also reveals a considerable gap regarding the preparedness and digital competencies of educators in effectively integrating social media into academic practices. While several international studies highlight the role of teachers in building professional learning networks and facilitating online learning communities, Indian studies provide limited insights into faculty attitudes, technological readiness, pedagogical challenges, and ethical concerns associated with social media use in classrooms. There is a lack of focused research on teacher training, digital pedagogy, and institutional support mechanisms required for meaningful social media integration in higher education institutions. Particularly absent are studies examining how educators negotiate challenges such as misinformation, online harassment, distraction, privacy concerns, and balancing academic and non-academic uses of social media.

A further research gap concerns the relationship between social media usage and academic performance in the Indian educational context. Existing studies present mixed findings, with some emphasizing positive impacts on motivation, engagement, and collaborative learning, while others point to addiction, distraction, psychological stress, and reduced concentration. However, there is insufficient longitudinal and comparative research investigating how different patterns of social media use affect students' academic achievement over time. Most studies rely on cross-sectional surveys and self-reported perceptions rather than measurable educational outcomes. There is also limited exploration of how factors such as frequency of use, purpose of use, type of platform, socio-economic status, gender, discipline of study, and digital literacy mediate academic performance.

The review additionally highlights inadequate research on the socio-cultural dimensions of social media usage in Indian education. India's multilingual and multicultural context presents unique opportunities and challenges for digital learning, yet very few studies investigate how social media supports multilingual education, local knowledge systems, cultural inclusion, and regional language learning. Existing literature acknowledges linguistic diversity but does not sufficiently examine how students from different linguistic and social backgrounds interact with educational content through social media. Research is particularly lacking on whether social media platforms reinforce existing inequalities by privileging English-language content

and digitally privileged groups, thereby marginalizing students from vernacular and rural backgrounds.

Another major gap exists in understanding the experiences of marginalized communities—including Scheduled Castes, Scheduled Tribes, Other Backward Classes, minorities, transgender students, and economically weaker sections—in accessing and using social media for educational purposes. NEP 2020 strongly emphasizes equity and inclusion, yet there is minimal empirical research examining whether social media-based learning environments are truly inclusive and accessible to marginalized learners. The literature rarely addresses caste-based digital exclusion, gendered access to technology, affordability of internet services, accessibility challenges for students with disabilities, or the social barriers affecting participation in digital learning spaces. Consequently, there is a pressing need for intersectional research that investigates how social inequalities shape digital educational experiences.

The literature also demonstrates a gap in research related to the ethical and psychological implications of educational social media use among students. Although studies on mental health impacts among adolescents and youth indicate increased anxiety, stress, sleep disruption, and social comparison behaviors associated with excessive social media use, limited research specifically focuses on higher education students in India within academic contexts. There is insufficient exploration of cyberbullying, digital addiction, misinformation exposure, online identity construction, privacy concerns, and emotional wellbeing in relation to educational usage of social media. Existing studies tend to separate educational benefits from psychological consequences instead of examining the interconnected nature of these experiences.

Moreover, the majority of existing studies emphasize popular social media platforms such as Facebook, WhatsApp, Instagram, and YouTube, while emerging educational technologies and newer digital platforms remain underexplored. There is little research on how innovative tools such as collaborative learning applications, academic networking platforms, AI-enabled social learning environments, and educational content creation platforms contribute to teaching and learning processes in Indian higher education. Similarly, limited attention has been paid to how students critically evaluate digital information, develop media literacy skills, and engage in responsible online citizenship within educational spaces.

A methodological gap is also evident in the existing body of literature. Most studies rely heavily on quantitative survey methods, descriptive analyses, or perception-based frameworks. There is a shortage of qualitative and mixed-methods research that deeply explores students' lived experiences, classroom practices, institutional cultures, and the socio-political dimensions of digital learning. Longitudinal studies examining long-term impacts of social media integration on learning outcomes, employability, professional development, and social inclusion are also scarce. Comparative studies between rural and urban institutions, public and private universities, and marginalized versus privileged student populations remain limited.

Additionally, there is insufficient policy-oriented research evaluating the implementation effectiveness of NEP 2020 concerning digital education and social media integration. While policy documents advocate technology-driven inclusive education, empirical evidence

assessing the actual ground-level implementation of these recommendations is limited. Existing research does not adequately examine institutional readiness, budget allocation, infrastructure availability, administrative support, or policy monitoring mechanisms. There is also limited investigation into how higher education institutions formulate social media policies, ethical guidelines, and digital governance frameworks for educational use.

Another critical gap lies in the absence of interdisciplinary approaches linking social media, education, social inclusion, digital citizenship, mental health, and employability. Most studies examine these dimensions separately, leading to fragmented understanding. Given that social media simultaneously shapes academic learning, professional networking, cultural participation, identity formation, and psychological wellbeing, there is a need for holistic frameworks that capture the interconnected realities of digital education in contemporary India. Finally, while global literature increasingly recognizes reflective learning, collaborative engagement, and professional networking through social media, Indian studies have yet to fully explore the transformative potential of social media for democratic participation, critical pedagogy, and inclusive knowledge creation. There remains limited research investigating how social media can empower students from marginalized communities to participate in academic discourse, share local knowledge, engage in social activism, and develop critical digital consciousness. This gap is particularly important in the context of NEP 2020, which envisions an equitable, inclusive, multidisciplinary, and technology-enabled education system.

In conclusion, the review of literature indicates that although substantial research exists on social media and digital education globally and in India, several critical gaps persist. These gaps relate to inclusivity, rural and marginalized contexts, pedagogical integration, digital inequalities, teacher preparedness, mental health impacts, multilingual education, policy implementation, and long-term educational outcomes. Addressing these research gaps is essential for developing a deeper understanding of how social media can contribute to equitable, inclusive, and effective higher education in India within the broader framework of NEP 2020 and digital transformation.

Data Analysis and Interpretation

This section analyses the data collected from secondary sources to understand how social media influences different aspects of education. The findings are presented in the form of tables, followed by an interpretation.

Table 1: Impact of Social Media on Learning

Parameter	Positive (%)	Negative (%)
Access to Resources	78%	22%
Collaboration	72%	28%
Engagement	69%	31%
Time Management	34%	66%
Academic Performance	48%	52%

Interpretation

The data presented in Table 1 highlights both the constructive and adverse effects of social media on students' learning experiences. The findings indicate that social media has emerged as a powerful educational tool in certain areas, while simultaneously creating challenges that may negatively affect academic discipline and performance.

The highest positive response is observed in the parameter "Access to Resources," where 78% of respondents reported beneficial effects of social media, while only 22% expressed negative views. This suggests that students widely utilize social media platforms to access educational materials, online lectures, research articles, e-books, tutorials, and academic discussions. Platforms such as YouTube, WhatsApp groups, Telegram channels, Google Classroom, and LinkedIn learning communities have expanded students' opportunities for self-learning beyond traditional classroom boundaries. The finding demonstrates that social media has significantly improved the availability and accessibility of information, particularly for students in remote or resource-limited areas. However, the negative responses also indicate concerns regarding misinformation, unreliable sources, and distraction caused by excessive or non-academic content.

Similarly, the parameter "Collaboration" reflects a strong positive impact, with 72% respondents agreeing that social media enhances collaborative learning. Social networking applications allow students to communicate easily with peers, teachers, and academic communities. Group discussions, collaborative assignments, peer learning, and exchange of study materials have become more efficient through digital platforms. Social media supports cooperative learning environments where students can clarify doubts, share ideas, and engage in collective problem-solving activities. Nevertheless, 28% negative responses reveal that online collaboration may sometimes reduce face-to-face interaction, create dependency on virtual communication, or lead to unequal participation in group activities.

The parameter "Engagement" also shows a predominantly positive trend, with 69% respondents indicating that social media increases learner engagement. Interactive content such as educational videos, infographics, quizzes, live sessions, podcasts, and discussion forums helps maintain student interest and motivation. Social media platforms often provide dynamic and visually appealing learning experiences, making educational content more engaging than conventional teaching methods. Students may feel more connected to learning processes through active participation in online communities and discussions. However, 31% negative responses suggest that excessive social media use can also divert attention away from studies, reduce concentration levels, and encourage superficial learning habits.

In contrast, the parameter "Time Management" reveals a significantly negative impact of social media on students. Only 34% respondents reported positive effects, while a substantial 66% viewed social media as harmful to effective time management. This finding indicates that students often struggle to balance academic responsibilities with social media usage. Excessive time spent on entertainment, chatting, gaming, scrolling through feeds, and non-academic activities can reduce study hours and productivity. Social media addiction and continuous notifications may interrupt concentration and create procrastination tendencies among learners.

The result highlights one of the major challenges associated with digital learning environments, where students may find it difficult to regulate their online behavior and maintain academic discipline.

The parameter “Academic Performance” presents a nearly balanced but slightly negative outcome, with 48% respondents perceiving positive effects and 52% perceiving negative effects. This finding suggests that the influence of social media on academic achievement remains complex and mixed. On one hand, educational content, collaborative learning, and easy access to information can support better academic understanding and performance. On the other hand, distractions, reduced study time, lack of focus, and excessive entertainment consumption may negatively affect examination scores and academic outcomes. The close difference between positive and negative responses indicates that the impact of social media on academic performance largely depends on how students utilize these platforms. Purposeful and controlled usage may contribute positively, whereas excessive and unregulated use may hinder academic success.

Overall, the table demonstrates that social media plays a dual role in education. It acts as an important medium for knowledge sharing, collaboration, and learner engagement, while also posing serious concerns related to time management and academic performance. The findings imply that educational institutions, teachers, and parents should encourage responsible and academic-oriented use of social media. Students should be guided in developing digital literacy, critical thinking, and self-regulation skills to maximize the educational benefits of social media while minimizing its negative consequences. The analysis further suggests the need for structured policies and awareness programs that promote balanced and productive social media usage in educational settings.

Challenge	Percentage (%)
Digital Divide 64%	
Lack of Digital Literacy	55%
Teacher Training Issues	49%

Interpretation

Table 2 presents the major challenges associated with the use of social media in education. The findings reveal that although social media offers numerous educational opportunities, several structural, technological, and pedagogical barriers limit its effective integration into teaching and learning processes. The data highlights three major challenges: the digital divide, lack of digital literacy, and teacher training issues.

The most significant challenge identified in the study is the “Digital Divide,” reported by 64% of respondents. This indicates that unequal access to digital technologies, internet connectivity, smartphones, laptops, and other online learning resources remains a major obstacle in the educational use of social media. The digital divide is particularly visible among students from rural, economically weaker, and marginalized communities who may lack reliable internet services or digital devices. In many regions, unstable network connectivity and high data costs further restrict students’ ability to participate in online learning activities and educational interactions on social media platforms. This inequality creates a gap between students who

have access to digital resources and those who do not, ultimately affecting educational inclusion and equal learning opportunities. The finding emphasizes that technological advancement alone cannot ensure educational development unless issues of accessibility and affordability are adequately addressed.

The second major challenge identified is the “Lack of Digital Literacy,” reported by 55% of respondents. Digital literacy refers to the ability to effectively use digital technologies, evaluate online information critically, and engage responsibly in digital environments. The data suggests that a considerable number of students and educators face difficulties in navigating educational technologies and utilizing social media productively for academic purposes. Many learners may possess basic technical skills for entertainment-oriented social media use but may lack competencies related to online research, information verification, academic communication, digital ethics, and cyber safety. Similarly, educators may struggle with integrating social media into teaching methodologies effectively. Lack of digital literacy can increase vulnerability to misinformation, plagiarism, cyberbullying, privacy breaches, and misuse of online platforms. This challenge highlights the urgent need for digital competency development programs within educational institutions to ensure that both students and teachers can use social media safely, critically, and effectively for learning purposes.

The third challenge highlighted in the table is “Teacher Training Issues,” identified by 49% of respondents. This finding indicates that many teachers may not receive sufficient professional training to integrate social media and digital technologies into classroom teaching effectively. Traditional teaching methods often dominate educational systems, while rapid technological changes require educators to continuously update their pedagogical and technical skills. Some teachers may experience difficulties in designing interactive online learning activities, managing virtual classrooms, using educational applications, or monitoring students’ academic engagement on social media platforms. Inadequate training may also create resistance among educators toward adopting digital learning approaches. Furthermore, the absence of institutional support, technical assistance, and professional development opportunities may limit teachers’ confidence and readiness to utilize social media as an educational tool. This issue directly affects the quality and effectiveness of digital learning experiences provided to students.

The overall analysis of Table 2 demonstrates that the successful integration of social media into education depends not only on technological availability but also on social inclusion, digital competence, and institutional preparedness. The findings suggest that educational inequalities continue to shape students’ access to digital learning opportunities. Without proper digital infrastructure, many learners remain excluded from the benefits of social media-based education. At the same time, insufficient digital literacy and lack of teacher preparedness reduce the educational effectiveness of these platforms.

The results imply that policymakers and educational institutions must adopt a comprehensive strategy to overcome these challenges. Efforts should focus on improving digital infrastructure, expanding affordable internet access, and providing technological support to disadvantaged students and institutions. Additionally, digital literacy programs should be incorporated into

school and university curricula to equip learners with critical digital skills. Teacher training programs should also be strengthened through workshops, professional development courses, and continuous technical support to help educators effectively integrate social media into teaching and learning processes.

In conclusion, while social media has the potential to transform education by enhancing communication, collaboration, and access to knowledge, its successful implementation requires addressing persistent challenges related to digital inequality, digital literacy, and teacher preparedness. A balanced and inclusive approach is essential to ensure that social media contributes positively to educational development and does not deepen existing social and educational disparities.

Discussion

The findings of the present study reveal that social media has become an influential component of modern educational practices, offering both opportunities and challenges in the teaching–learning process. The analysis demonstrates that social media significantly contributes to improving access to educational resources, collaboration among learners, and student engagement, while simultaneously creating concerns related to time management, academic performance, digital inequality, and technological preparedness.

One of the major findings of the study is the positive role of social media in enhancing access to educational resources. A large proportion of respondents perceived social media as an effective medium for obtaining academic information, online lectures, tutorials, research materials, and learning support. This finding aligns with contemporary educational theories that emphasize open and flexible learning environments supported by digital technologies. Social media platforms have expanded opportunities for self-directed learning and knowledge sharing beyond the traditional classroom. Particularly in higher education, students increasingly rely on platforms such as YouTube, WhatsApp, Telegram, and online discussion forums for academic assistance and collaborative learning. The findings suggest that social media has the potential to democratize knowledge by making learning materials more accessible to wider sections of society. However, the study also indicates that unrestricted access to online information may expose students to misinformation, unreliable content, and distractions, highlighting the need for digital literacy and critical evaluation skills.

The study further reveals that social media positively supports collaborative learning and learner engagement. Students reported that digital platforms facilitate communication, peer interaction, group discussions, and exchange of study materials. Such findings support constructivist perspectives of learning, where knowledge is developed through interaction, participation, and collaborative experiences. Social media allows learners to actively participate in educational discussions and build virtual learning communities that encourage knowledge sharing and cooperative problem-solving. Interactive features such as videos, quizzes, podcasts, and live sessions also enhance learner motivation and engagement. These results indicate that social media can make learning more participatory, student-centered, and interactive compared to conventional teaching methods. Nevertheless, excessive dependency

on online communication may reduce face-to-face interaction and create superficial learning patterns, which may affect the depth and quality of academic engagement.

Despite these positive contributions, the study highlights significant concerns regarding time management and academic performance. The findings indicate that excessive use of social media negatively affects students' ability to manage their study schedules effectively. Continuous notifications, entertainment-oriented content, online gaming, and excessive scrolling may lead to procrastination, reduced concentration, and loss of productive study time. This finding supports previous research suggesting that uncontrolled social media usage may contribute to academic distractions and lower educational achievement. The nearly balanced responses regarding academic performance demonstrate that the educational impact of social media depends largely on the nature and purpose of its usage. Students who utilize social media for academic communication, research, and learning activities may benefit educationally, while those primarily engaged in entertainment-related activities may experience negative academic outcomes. Therefore, the study suggests that social media itself is neither entirely beneficial nor harmful; rather, its impact is shaped by students' digital behavior, self-regulation, and patterns of usage.

The discussion also highlights important structural and institutional challenges affecting the effective integration of social media into education. The digital divide emerged as the most significant barrier identified by respondents. Unequal access to smartphones, computers, internet connectivity, and digital infrastructure continues to exclude many students, especially those from rural, economically disadvantaged, and marginalized communities. This finding reflects broader social inequalities that influence educational opportunities in the digital age. The study indicates that technological innovations alone cannot ensure educational inclusion unless issues of accessibility, affordability, and infrastructure are adequately addressed. In regions with poor internet connectivity or limited digital resources, students remain unable to fully participate in online learning environments, thereby widening educational disparities.

Another critical issue identified in the study is the lack of digital literacy among students and educators. Although many individuals use social media regularly, they may lack the competencies required to use these platforms critically, ethically, and academically. Insufficient digital literacy can increase exposure to misinformation, plagiarism, cyberbullying, and privacy risks. The findings suggest that digital competence should be considered an essential educational skill in contemporary society. Educational institutions must therefore integrate digital literacy programs into curricula to help students develop skills related to information evaluation, responsible online behavior, cyber safety, and academic use of digital technologies.

Teacher training issues also emerged as an important challenge in the study. Many educators may not possess adequate technical and pedagogical skills to effectively integrate social media into teaching practices. Traditional teaching approaches still dominate many educational institutions, while rapid technological transformation requires teachers to continuously update their digital competencies. Lack of professional development opportunities, technical support, and institutional guidance may reduce teachers' confidence in adopting innovative digital

teaching methods. The findings indicate that successful integration of social media into education requires not only student readiness but also teacher preparedness and institutional support mechanisms.

Overall, the discussion demonstrates that social media has a dual and complex role in education. On one hand, it enhances accessibility, communication, collaboration, and engagement, thereby supporting innovative learning opportunities. On the other hand, it creates challenges related to distraction, academic discipline, digital inequality, and technological preparedness. The findings imply that educational institutions, policymakers, teachers, and parents must adopt a balanced approach toward social media usage in education. There is a strong need for policies promoting responsible digital behavior, digital literacy, inclusive technological access, and continuous teacher training. Such measures can help maximize the educational benefits of social media while minimizing its negative consequences. The study ultimately emphasizes that the future effectiveness of social media in education depends on how successfully educational systems address issues of inclusion, regulation, digital competence, and ethical technology use.

Recommendations

Based on the findings of this study, several measures can be suggested to improve the effective use of social media in education under NEP 2020.

1. Introduce digital literacy programs: There is a strong need to develop digital literacy among students and teachers. Students should be taught how to use social media for academic purposes, identify reliable sources of information, and avoid misinformation. Simultaneously, teachers should be trained to guide students in using these platforms effectively. Digital literacy should be included as an essential part of the curriculum, rather than being treated as an optional skill.
2. The following are the rules for using ChatGPT: Educational institutions should establish clear guidelines for using social media for learning. These rules should define acceptable behavior, proper usage for academic purposes, and limitations to avoid its misuse. Clear policies can help maintain discipline and ensure that social media is used as a learning tool, rather than as a source of distraction.
3. Encourage balanced use: Students should be encouraged to maintain a balance between the academic and non-academic use of social media. Awareness programs can be conducted to highlight the importance of time management and the risks associated with excessive usage. Promoting habits such as limited screen time and focused study hours can help students use social media more productively and effectively.
4. Improving the Internet and infrastructure: One of the major challenges identified in this study was the lack of access to digital resources. Efforts should be made to improve Internet connectivity, especially in rural and underdeveloped areas. Providing affordable devices and ensuring reliable access to digital platforms will help reduce the digital divide and make education more inclusive for all students.
5. Regularly train teachers play a key role in integrating social media into learning processes

Regular training programs should be organised to help teachers understand how to use these platforms effectively for teaching. This includes using social media to share study materials, conduct discussions, and engage students in interactive learning activities.

10. Conclusion

Social media has emerged as an important element in the educational landscape, especially in the context of the NEP 2020, which emphasises digital and flexible learning. It has the potential to improve access to educational resources, promote collaboration among students, and make learning more engaging and interactive for students.

At the same time, this study highlights that the use of social media is not without challenges. Issues such as distraction, excessive usage, and unequal access to technology continue to affect its effectiveness in the classroom. These challenges must be addressed to fully realise the benefits of social media in education.

These findings suggest that a balanced and well-regulated approach is essential. Proper guidance from teachers, awareness among students, and supportive institutional policies can help minimise negative effects. Strengthening digital infrastructure and promoting digital literacy are also important steps.

In conclusion, social media can play a meaningful role in transforming education if used carefully and responsibly. When supported by appropriate policies and practices, it can contribute to building a more inclusive, accessible, and future-ready education system, in line with the vision of NEP 2020.

References

- Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). *The Impact of Social Media on Learning Behavior for Sustainable Education: Evidence of Students from Selected Universities in Pakistan*. *Sustainability*, 11(6), 1683. <https://doi.org/10.3390/su11061683>
- Aithal, P. S., & Aithal, S. (2020). *Implementation Strategies of Higher Education Part of National Education Policy 2020 of India towards Achieving its Objectives*. *International Journal of Management, Technology, and Social Sciences*, 5(2), 283–326. <https://doi.org/10.47992/ijmts.2581.6012.0119>
- Al-Mukhaini, E. M., Al-Qayoudhi, W. S., & Al-Badi, A. H. (2014). *Adoption Of Social Networking In Education: A Study Of The Use Of Social Networks By Higher Education Students In Oman*. *Journal of International Education Research (JIER)*, 10(2), 143–154. <https://doi.org/10.19030/jier.v10i2.8516>
- Alshanjiti, A., Alharbi, O., Ismaeel, D., & Abuanq, L. (2023). *Social Media Usage and Academic Performance Among Medical Students in Medina, Saudi Arabia*. *Advances in Medical Education and Practice*, 14, 1401–1412. <https://doi.org/10.2147/amep.s434150>
- Alshare, K. A., Moqbel, M., & Merhi, M. I. (2022). *The double-edged sword of social media usage during the COVID-19 pandemic: demographical and cultural analyses*. *Journal of Enterprise Information Management*, 36(1), 197–220. <https://doi.org/10.1108/jeim-07-2021-0292>
- Ariantini, K. P., Suwastini, N. K. A., Adnyani, N. L. P. S., Dantes, G. R., & Jayantini, I. G. A. S. R. (2021). *Integrating Social Media into English Language Learning: How and to What Benefits According to Recent Studies*. *NOBEL: Journal of Literature and Language Teaching*, 12(1), 91–111. <https://doi.org/10.15642/nobel.2021.12.1.91-111>
- Bharucha, J. (2018). *Exploring education-related use of social media: business students perspectives in a changing India*. *Education + Training*, 60(2), 198–212. <https://doi.org/10.1108/et-07-2017-0105>

- C, P. (2024). *Breaking Barriers: Higher Education Institutions and Transgender Empowerment under NEP-2020*. *Edumania-An International Multidisciplinary Journal*, 02(04), 164–173. <https://doi.org/10.59231/edumania/9081>
- Carpenter, J. P., & Harvey, S. (2020). Chapter 2: *Perceived Benefits and Challenges of Physical Educators' Use of Social Media for Professional Development and Learning*. *Journal of Teaching in Physical Education*, 39(4), 434–444. <https://doi.org/10.1123/jtpe.2020-0002>
- Cooke, S. (2015). *Social teaching: Student perspectives on the inclusion of social media in higher education*. *Education and Information Technologies*, 22(1), 255–269. <https://doi.org/10.1007/s10639-015-9444-y>
- Cuong, T. V., Khai, N. T., Oo, T. Z., & Józsa, K. (2025). *The Impact of Social Media Use Motives on Students' GPA: The Mediating Role of Daily Time Usage*. *Education Sciences*, 15(3), 317. <https://doi.org/10.3390/educsci15030317>
- Dantas, R. M., Aftab, H., Aslam, S., Majeed, M. U., Correia, A. B., Qureshi, H. A., & Lucas, J. L. (2022). *Empirical Investigation of Work-Related Social Media Usage and Social-Related Social Media Usage on Employees' Work Performance*. *Behavioral Sciences*, 12(8), 297. <https://doi.org/10.3390/bs12080297>
- Forbes, D. (2017). *Professional Online Presence and Learning Networks: Educating for Ethical Use of Social Media*. *The International Review of Research in Open and Distributed Learning*, 18(7). <https://doi.org/10.19173/irrodl.v18i7.2826>
- Hu, S., & Zhu, Z. (2022). *Effects of Social Media Usage on Consumers' Purchase Intention in Social Commerce: A Cross-Cultural Empirical Analysis*. *Frontiers in Psychology*, 13(119875), 837752. <https://doi.org/10.3389/fpsyg.2022.837752>
- Khunyakari, R., & Takker, S. (2025). *Reflections on the Vision of Assessment in NEP 2020*. *Social Change*, 55(1), 124–141. <https://doi.org/10.1177/00490857241303293>
- Kulal, A., N, A., Dinesh, S., Bhat, D. C., & Girish, A. (2024). *Evaluating the Promise and Pitfalls of India's National Education Policy 2020: Insights from the Perspectives of Students, Teachers, and Experts*. *Sage Open*, 14(4). <https://doi.org/10.1177/21582440241279367>
- Lahiry, S., Choudhury, S., Chatterjee, S., & Hazra, A. (2019). *Impact of social media on academic performance and interpersonal relation: A cross-sectional study among students at a tertiary medical center in East India*. *Journal of Education and Health Promotion*, 8(1), 73. https://doi.org/10.4103/jehp.jehp_365_18
- Ma, L., Zhang, X., & Yu, P. (2023). *Enterprise social media usage and social cyberloafing: an empirical investigation using the JD-R model*. *Internet Research*, 34(3), 939–959. <https://doi.org/10.1108/intr-04-2021-0239>
- Mangat, P. K. (2024). *INCLUSIVITY IN HIGHER EDUCATION: ANALYSING THE IMPLEMENTATION OF NEP 2020 FOR MARGINALIZED COMMUNITIES IN INDIA*. *ShodhKosh: Journal of Visual and Performing Arts*, 5(1). <https://doi.org/10.29121/shodhkosh.v5.i1.2024.1990>
- Narkhede, G., Pasi, B., Dhamak, P., Mahalle, P., & Ambhore, N. (2025). *In the pursuit of educational excellence: investigating CSFs for implementing NEP 2020 to redefine the higher education ecosystem*. *Journal of Applied Research in Higher Education*, 18(2), 372–393. <https://doi.org/10.1108/jarhe-09-2024-0454>
- Nasution, A. K. P. (2022). *Social Media Used In Language Learning: Benefits And Challenges*. *Journal of Linguistics, Literature, and Language Teaching (JLLLT)*, 1(2), 59–68. <https://doi.org/10.37249/jlllt.v1i2.396>
- Papademetriou, C., Anastasiadou, S., Konteos, G., & Papalexandris, S. (2022). *COVID-19 Pandemic: The Impact of the Social Media Technology on Higher Education*. *Education Sciences*, 12(4), 261. <https://doi.org/10.3390/educsci12040261>
- Pawar, M. (2016). *Reflective Learning and Teaching in Social Work Field Education in International Contexts*. *British Journal of Social Work*, 47(1), 198–218. <https://doi.org/10.1093/bjsw/bcw136>

- Raj, S. B. (2024). *Pathways to inclusive higher education: learnings from India's National Education Policy 2020*. *Nordic Journal of Studies in Educational Policy*, 11(1), 82–92. <https://doi.org/10.1080/20020317.2024.2382376>
- Rapp, A., Beitelspacher, L. S., Grewal, D., & Hughes, D. E. (2013). Understanding social media effects across seller, retailer, and consumer interactions. *Journal of the Academy of Marketing Science*, 41(5), 547–566. <https://doi.org/10.1007/s11747-013-0326-9>
- Sabah, N. M. (2022). The Impact of Social Media-Based Collaborative Learning Environments on Students' Use Outcomes in Higher Education. *International Journal of Human-Computer Interaction*, 39(3), 667–689. <https://doi.org/10.1080/10447318.2022.2046921>
- Selvakumar, V., Reddy, N. K., Tulasi, R. S. V., & Kumar, K. R. (2025). Data-Driven Insights into Social Media Behavior Using Predictive Modeling. *Procedia Computer Science*, 252, 480–489. <https://doi.org/10.1016/j.procs.2025.01.007>
- Singh, A. K. (2025). From policy to practice: Challenges and pathway for advancing multilingual education through India's national education policy 2020. *Policy Futures in Education*, 23(4), 746–765. <https://doi.org/10.1177/14782103251320532>
- Singla, A., & Agrawal, R. (2022). Social media and disaster management: investigating challenges and enablers. *Global Knowledge, Memory and Communication*, 73(1/2), 100–122. <https://doi.org/10.1108/gkmc-12-2021-0206>
- Taddi, V. V., Kohli, R. K., & Puri, P. (2024). Perception, use of social media, and its impact on the mental health of Indian adolescents: A qualitative study. *World Journal of Clinical Pediatrics*, 13(3), 97501. <https://doi.org/10.5409/wjcp.v13.i3.97501>
- Tsimpli, I., Mukhopadhyay, L., Treffers-Daller, J., Alladi, S., Marinis, T., Panda, M., Balasubramanian, A., & Sinha, P. (2019). Multilingualism and multiliteracy in primary education in India: A discussion of some methodological challenges of an interdisciplinary research project. *Research in Comparative and International Education*, 14(1), 54–76. <https://doi.org/10.1177/1745499919828908>
- Vaithianathan, V., Shastri, D. S., Nandakumar, V., Misba, M., Kumar, P., & Boopathi, S. (2024). NEP Policy Implementation Strategies in Education in India (pp. 325–356). Igi Global. <https://doi.org/10.4018/979-8-3693-3587-1.ch013>
- Yadav, M. S., & Yadav, M. K. (2023). Implicit Impact of English Language Pedagogical Enhancement Policies in Higher Education Under the Indian NEP 2020: Challenges, Curriculum, Approaches, Opportunities, and Implementations. *American Journal of Education and Technology*, 1(4), 1–12. <https://doi.org/10.54536/ajet.v1i4.1117>

CRITICAL ANALYSIS OF EDUCATIONAL NGO IN PROMOTING STAKEHOLDER ENGAGEMENT AND COMMUNITY PARTICIPATION: A CASE STUDY

Miss. Vaishnavi Sanjay Sutar

(B.Ed. - M.Ed.) Part I, Semester II, Department of Education, Shivaji University Kolhapur.

Email- vaishnavisutar104@gmail.com

Dr. Chetana P. Sonklamble

Head and Guide Department of Education, Shivaji University Kolhapur.

Mr. Anand Nagappa Biradar

(B.Ed. - M.Ed.) Part I, Semester II, Department of Education, Shivaji University Kolhapur.

Email- anandbiradar912@gmail.com

Abstract

This study focuses on the NGO M.A.N.A.S (Man and Nature's Association for Sustainability) to critically analyse the role of educational NGOs in promoting stakeholder engagement and community participation through a case study approach. The study explore the role of M.A.N.A.S. in delivering sex education to adolescents, focuses on its methods, stakeholder engagement, challenges, and community support. Data collected through primary method such as interviews and observations. The NGO employs a structured yet flexible, age appropriate curriculum and interactive teaching methods, which enhance student participation and understanding. The finding indicate generally support from teachers, while parental and community acceptance remains mixed due to cultural taboos and social stigma. Key challenges faced by NGO are limited staff, financial constraints, and resistance from conservative communities. Despite this barriers, the NGO significantly contributes to adolescents' awareness, confidence and responsible behaviour.

Keywords: Stakeholder, NGO, Community Participation

Introduction

Education is essential for societal development, as it equips individuals with knowledge, skills, values, and confidence (UNESCO, 2015). Student development extends beyond academic performance to include emotional growth, social skills, communication ability, critical thinking, and overall personality development. In areas where schools lack resources, educational NGOs play a significant role in supporting and improving the educational system (World Bank, 2018).

Educational NGOs collaborate with schools, parents, teachers, and the local community to make education a shared responsibility. Many NGOs focus on child-centered learning, life skills, health awareness, digital literacy, and leadership development to support holistic student growth. They employ strategies such as meetings, workshops, awareness programs, and community activities to involve stakeholders in the educational process (UNICEF, 2012).

Stakeholder engagement is crucial for the success of educational initiatives. NGOs organize parent meetings, teacher training workshops, student activities, and community awareness campaigns to foster cooperation and shared responsibility among participants (World Bank, 2018).

Community support is vital for the sustainability and lasting impact of NGO-led programs. Without strong community participation, even well-designed educational programs may not achieve the desired outcomes (UNICEF, 2012).

Review Of Literature

Non-Governmental Organizations (NGOs) have become key players in education, particularly in developing countries where government systems face limitations in access, equity, and quality. Research indicates that NGOs often work to support marginalized and underprivileged communities by improving access to schooling and enhancing learning opportunities.

Ahmad (2022) this study explored the role of NGOs in improving education in Pakistan, detailing their contributions to increasing access to education, especially for marginalized groups, providing infrastructure assistance, and implementing community awareness programs to strengthen the education system. The author notes a lack of systematic evaluation to measure the long-term impact and sustainability of NGO-led initiatives, despite their positive contributions.

Wango, Oluga, and Rarieya (2024) the study examined the impact of multi-stakeholder partnerships on educational outcomes in East Africa. Their research highlights how collaboration between NGOs, government agencies, teachers, parents, and community members improves resource sharing and accountability in schools, leading to more sustainable and effective educational programs. However, they also acknowledge that coordination challenges and differing stakeholder interests may affect the smooth functioning of these partnerships.

A systematic literature review in Procedia Computer Science (2024) the study analysed stakeholder management and communication strategies in NGOs, emphasizing that effective communication, transparency, and regular feedback are essential for successful project implementation. The review notes that NGOs that actively involve stakeholders in planning and decision-making achieve better outcomes and stronger community trust, while poor communication and a lack of structured engagement strategies can reduce stakeholder satisfaction and limit project success.

The INFLIBNET The study discussed the role of NGOs and community-based organizations (CBOs) in school governance. The research explains how NGOs participate in school management committees, support accountability mechanisms, and encourage community involvement in decision-making, which strengthens transparency and democratic practices in school administration. However, it also mentions that limited authority and dependence on government policies sometimes restrict the full impact of NGOs in governance structures.

An article by Laws Learned explored NGO advocacy in educational reform, detailing how NGOs build networks with communities, policymakers, and institutions to promote inclusive education policies. The study emphasizes the important role NGOs play in amplifying

marginalized voices and influencing policy changes. The article also points out that advocacy efforts might run into political roadblocks and a lack of institutional backing, which could limit how effective they are.

The Global Campaign for Education highlights the collaborative role NGOs play internationally in promoting quality education for everyone. The study explains how global coalitions unite civil society organizations to shape education policies and champion educational rights, emphasizing that collective advocacy amplifies the impact of NGOs on global education agendas. However, it also notes that coordinating diverse international stakeholders can be complex and challenging.

Objectives of the Study

1. To explore how educational NGOs contribute to student development.
2. To identify the challenges faced by educational NGO.
3. To examine the stakeholder (students, teachers, parents) engagement strategies employed by NGOs.
4. To understand the degree of community support for NGO-led programs.

Research Methodology

This study uses a qualitative case study approach to investigate the role of educational NGOs in enhancing student development and community support. The case study method was chosen to gain a thorough understanding of the NGO's operations, challenges, and engagement strategies.

Sample of the study

A sample of founder and Volunteers of the NGO is selected.

Data Collection

The present study data are collected through a interview questionnaire designed by researcher.

Data Collection Procedure

The data is collected through in-person interview method.

Data Analysis

This study focuses on understanding the role of NGOs in school development and community engagement. Data was gathered from the NGO founder and teachers.

Non-governmental organizations (NGOs) are vital in tackling social issues that are often overlooked or inadequately addressed by formal systems. In education and adolescent development, NGOs act as catalysts for awareness, change, and empowerment, particularly within marginalized and vulnerable communities. One crucial area of intervention is sexuality education for adolescents, which continues to meet social resistance, cultural taboos, and institutional obstacles.

This analysis is based on an in-depth interview with a representative from an NGO primarily focused on adolescent sexuality education. Operational since 2018, the NGO works closely with adolescents, parents, teachers, and community members in urban slums and rural areas. The interview offers rich qualitative insights into the NGO's work, the challenges it faces, the level of community support it receives, and the strategies it uses to sustain and expand its interventions.

This paper aims to critically analyse the NGO's role and operations under four main themes.

1. Nature of NGO Work

1.1 Focus on Adolescent Sexuality Education

The NGO's primary focus is to provide comprehensive, age-appropriate sexuality education to adolescents. This includes discussions about the physical and emotional changes during adolescence, menstruation and menstrual hygiene management, consent, relationships, personal boundaries, and safe behaviours. The NGO stresses that sexuality education is not just about biological information but about helping adolescents understand their bodies, emotions, rights, and responsibilities.

The interview reveals that both boys and girls are included in these programs, although the sessions may vary based on age, gender, and social context. Special attention is paid to topics often considered taboo, such as menstruation, sexual health, and online exposure to explicit content. The NGO uses a non-judgmental and rights-based approach when discussing these sensitive issues.

1.2 Target Groups

The NGO works with various stakeholders, including:

- Adolescents (both boys and girls)
- Parents
- Teachers
- School authorities
- Community members

By involving multiple stakeholders, the NGO aims to build a supportive environment around adolescents rather than focusing solely on the children. The interview emphasizes that isolated interventions with students are not enough, as adolescents are deeply influenced by family norms, school environments, and community values.

1.3 School-Based and Community-Based Interventions

Most of the NGO's work takes place in schools, which provide structured access to adolescents. However, the NGO also operates in community spaces, particularly in urban slums where school attendance may be irregular.

Sessions are conducted over a longer period rather than as one-off workshops. The NGO believes that sustained engagement is vital for creating meaningful change. Follow-up sessions allow facilitators to address questions, track behavioral changes, and reinforce key messages.

1.4 Capacity Building and Training

Another key aspect of the NGO's work is capacity building. Teachers are trained to handle sensitive topics and answer students' questions confidently and empathetically. Parents are educated to understand adolescent development and the importance of open communication.

The NGO also invests in training its facilitators, who undergo thorough preparation to ensure they can handle emotionally charged discussions, resistance, and ethical concerns. The interview suggests that building human capacity is as important as delivering content.

2. Challenges Faced by the NGO

Despite its valuable work, the NGO faces numerous challenges at social, institutional, and organizational levels.

2.1 Social and Cultural Resistance

One of the most significant challenges is societal resistance to sexuality education, as highlighted in the interview. Many parents and folks in the community see sexuality education as something inappropriate or even harmful. A lot of people think that talking about these topics will ruin young people's minds or get them starting sexual activity too early.

Cultural norms often make it hard to talk openly about sexuality, especially with teenagers. This leads to feeling awkward, people pushing back, and sometimes completely rejecting the NGO's programs. The interviews show that even parents who are well-educated often have strong fears and wrong ideas about it.

2.2 Parents' Hesitation and Lack of Trust

Getting parents on board is a hit or miss thing. Some parents understand why sexuality education is important, but many don't want their kids to be involved. The NGO often has to spend a lot of time trying to convince parents about what the program is for and how it can help.

Parents tend to focus on just getting by economically, rather than on education and development, particularly in poorer communities. Because of this, kids might not come to sessions regularly, and it's hard to keep them involved for the long haul.

2.3 Community-Level Challenges

At the community level, there isn't a strong sense of everyone owning the program together. The interviews reveal that communities often expect NGOs to just "fix" problems, without local people really getting involved. Issues like how teenagers behave, exposure to porn, or early relationships are recognized, but people rarely take responsibility together to address them.

Conflicts within the community, local politics, and disputes among leaders make it even harder to work together. In some cases, community leaders might go against what the NGO is doing because they're misinformed or afraid of losing their grip on the community's views.

2.4 Funding Constraints and Sustainability

Funding is another big problem. Sexuality education doesn't give quick, obvious results, which makes it less appealing to donors. Changes in behavior and attitudes happen slowly and are hard to measure.

The interviews point out the pressure to show "impact" within short project timeframes. Limited funding limits the scale and how long programs can last. Small numbers of participants also make it harder to sustain the programs, since donors often prefer projects that reach more people.

2.5 Human Resource Challenges

Keeping trained facilitators around is a constant struggle. Working in sensitive areas like sexuality education takes a lot of emotional strength and dedication. People often burn out because of the emotional toll, low pay, and resistance from the community.

The NGO has to keep investing in training new people, which takes up time and resources. When experienced facilitators leave, it affects the quality and consistency of the program.

2.6 Challenges within the School System

Schools can be both helpful and a hindrance. Some schools actively support the NGO, while others pull back because of pressure from parents or changes in administration. Teachers often have a lot on their plate and don't feel confident talking about sexuality-related topics.

The interviews suggest that even when schools initially agree to work together, it becomes difficult to keep things going because of how schools are structured and their changing priorities.

3. Community Support and Participation

3.1 Nature of Community Support

Community support for the NGO's work is limited and inconsistent. While some individuals - like open-minded parents, teachers, or local volunteers offer support, there isn't strong engagement from the community as a whole.

Communities often prioritize things they can see and touch, like infrastructure, jobs, and financial help, over education and emotional support. Sexuality education is seen as less important.

3.2 Awareness versus Ownership

The interviews show that people are aware of issues facing teenagers, but they don't really take ownership of them. Community members might recognize problems like early exposure to explicit content or risky behaviors, but they're hesitant to actively help find solutions.

There's a tendency to pass the buck, expecting NGOs or schools to handle sensitive matters without the community getting involved.

3.3 Gradual Positive Shifts

Despite these challenges, the interviews also highlight some positive changes happening slowly. Regular engagement has led to some parents and teachers becoming more open-minded. Success stories and seeing teenagers become more confident help to increase acceptance.

Individual donors and supporters occasionally contribute to the NGO's work, showing growing trust and recognition.

4. Strategies Adopted by the NGO

To deal with these complex challenges, the NGO uses several adaptive strategies.

4.1 Holistic and Ecosystem-Based Approach

The NGO takes a holistic approach by involving students, parents, teachers, and community members. This ecosystem-based strategy recognizes that teenagers' behavior is influenced by many things.

By working at different levels, the NGO aims to create supportive environments rather than just doing isolated interventions.

4.2 Continuous Engagement

Instead of just doing one-off workshops, the NGO focuses on long-term engagement. Having multiple sessions over a longer period helps to reinforce learning and build trust. Follow-ups allow facilitators to address any new concerns that come up.

4.3 Context-Specific and Flexible Methods

Sessions are adapted based on age, gender, cultural background, and where people live. Urban and rural settings need different ways of communicating and different examples. Interactive methods like discussions, activities, and visual aids are used to encourage participation.

4.4 Non-Judgmental Communication

A key strategy is to be non-judgmental and empathetic. Teenagers are encouraged to ask questions openly. Facilitators avoid preaching and instead focus on helping them make informed decisions and understand the law.

4.5 Capacity Building and Leadership Development

Training teachers and facilitators ensures that the program can continue. By empowering local people, the NGO reduces its reliance on outside staff. In-house training strengthens the organization's capabilities and makes the program more consistent.

Findings

This case study set out to explore the role of an NGO providing sex education to adolescents, including its methods, community involvement, and the difficulties encountered during implementation. The data collected through interviews, on-site observations, and conversations with stakeholders has revealed several key findings.

First and foremost, the study demonstrates that the NGO is vital in providing sex education to adolescent students, especially those in rural and urban slum areas. Many schools either briefly address or completely avoid topics like puberty, menstrual hygiene, reproductive health, consent, and personal safety due to societal sensitivities. As a result, adolescents often lack proper guidance and turn to peers or unreliable sources for information. The NGO bridges this gap by offering accurate, scientific, and age-appropriate knowledge, significantly contributing to the holistic development of adolescents.

Secondly, the research highlights that the NGO uses a curriculum that is both structured and adaptable, tailored to the age and psychological maturity of the students. Sessions for younger adolescents primarily cover the physical changes of puberty and menstrual hygiene management. Discussions for older students include reproductive health, emotional changes, gender respect, consent, and sexual abuse prevention. This age-specific approach ensures the information is appropriate and not overwhelming. This flexibility allows facilitators to adjust the content to suit the students' needs and comfort levels, boosting effectiveness.

Another notable finding concerns the NGO's teaching methods, which are interactive and participatory, moving away from traditional lectures. They frequently use workshops, group discussions, visual aids, and Q&A sessions. Some schools hold separate sessions for boys and girls to foster a safer learning environment and reduce hesitation. Students can also use anonymous question boxes to ask sensitive questions without fear. While initial shyness is

common, students gradually become more open and confident during the sessions. This suggests that the right methodology is crucial for successful sex education programs.

The study also reveals that stakeholder support varies depending on the context. Teachers generally offer positive support and assist in organizing sessions, recognizing the importance of adolescent education and valuing the NGO's contribution. ASHA workers also provide support for certain health awareness programs. However, school management's responses differ based on community attitudes. While some schools actively invite the NGO, others are hesitant or decline due to concerns about social criticism and potential damage to their reputation. This reflects how cultural norms influence institutional decisions.

Community participation emerges as one of the most complex issues. In some areas, parents appreciate programs about menstrual hygiene and adolescent health, particularly when they see the benefits for their children. However, many communities still consider sex education a taboo, with parents feeling uncomfortable discussing such topics, sometimes fearing it might encourage inappropriate behavior among adolescents. This resistance stems from a lack of awareness and traditional beliefs. Due to this limited parental support, the program's overall reach and effectiveness are restricted, highlighting the need to improve community awareness. Another key finding relates to the challenges the NGO faces, one of the most significant being limited staff. Operating with a small team makes it challenging to consistently cover a large number of schools. Team members often juggle multiple responsibilities, including planning, conducting sessions, and outreach, and frequent travel to different schools adds to their physical and mental workload. This shortage limits expansion and regular follow-up activities.

Financial constraints also pose a major challenge. Like many NGOs, this organization relies on external funding, donations, and project-based grants. These limited resources affect the preparation of teaching materials, transportation, and expansion into new areas. Financial instability can also compromise the long-term sustainability of the programs, pointing to the need for stronger financial support and resource mobilization.

Social stigma and cultural barriers are identified as critical challenges. Openly discussing sexual and reproductive health is often discouraged in conservative communities, with fear of social judgment deterring both parents and schools from fully supporting such initiatives. Some schools declined the program for fear of damaging their reputation, clearly demonstrating that the issue is not a lack of need but a lack of acceptance.

Despite these challenges, the study indicates that the NGO's work has a positive and meaningful impact, with students showing increased awareness of menstrual hygiene, puberty changes, and personal safety. Girls are reporting greater self-assurance and less apprehension surrounding menstruation. Boys are developing a more nuanced understanding of physical and emotional changes, fostering increased gender sensitivity and respect. Additionally, awareness sessions focused on the distinction between safe and unsafe touch are bolstering child protection and overall safety.

Teachers have noted a rise in confidence and maturity among students actively participating in these sessions. Students are now asking questions more freely and demonstrating a stronger grasp of personal boundaries. This suggests that when sex education is delivered thoughtfully

and appropriately, it doesn't lead to negative consequences but, instead, encourages responsible behavior.

Another significant finding highlights that the NGO's comprehensive approach is not only deepening individual knowledge but also enhancing social awareness. By actively involving teachers, parents, and community members, the organization is striving to cultivate a supportive ecosystem for adolescents. While community support may vary, consistent awareness efforts are gradually contributing to the reduction of stigma.

In general, the data indicates that the NGO is tackling an issue that is both socially relevant and educationally vital. The positive results observed among students underscore the effectiveness of employing structured, interactive, and sensitive methods in sex education. However, achieving long-term success depends on enhancing community awareness, expanding the workforce, and ensuring sustainable funding.

Discussion

The analysis demonstrates that NGOs working in sensitive areas like sexuality education operate within complex social ecosystems. Their success depends not only on well-designed programs but also on skillfully managing cultural norms, institutional hurdles, and community dynamics. Although they face obstacles such as resistance, funding limitations, and inconsistent community support, these NGOs can achieve significant long-term impact through adaptable strategies and consistent engagement.

Conclusion

Based on the findings of this case study, we can confidently assert that the NGO plays a crucial role in advancing adolescent sex education within underserved communities. The organization effectively addresses a critical gap in the formal education system by tackling sensitive subjects that are often overlooked. By imparting scientific knowledge regarding puberty, reproductive health, menstrual hygiene, and personal safety, the NGO significantly contributes to the comprehensive development of teenagers.

The study confirms that sex education extends beyond mere biological instruction; it encompasses emotional awareness, self-confidence, gender respect, and protection from abuse. The NGO's interactive and student-focused approaches foster a secure and encouraging learning environment. Students benefit from accessing clear information, reducing confusion, and developing a stronger understanding of personal boundaries. The gradual increase in student confidence serves as a testament to the program's effectiveness.

However, the study also reveals that social stigma remains a significant obstacle. Entrenched cultural beliefs and traditional attitudes create hesitancy among parents and school administrators. Fear of social criticism sometimes prevents institutions from openly embracing these programs. Furthermore, limited staffing and financial constraints restrict the NGO's ability to broaden its scope.

Despite these challenges, the NGO's dedication and positive impact are undeniable. The support demonstrated by teachers and healthcare professionals indicates a growing recognition of the importance of adolescent education. By implementing enhanced community engagement strategies, fostering stronger collaboration among stakeholders, and securing stable financial

resources, the NGO holds the potential to expand its reach and create a more profound social impact.

In conclusion, the case study firmly establishes that adolescent sex education is an indispensable element of overall education and social development. The NGO's work is socially relevant, educationally meaningful, and developmentally beneficial. By equipping adolescents with knowledge and awareness, the organization is actively contributing to the creation of a more informed, confident, and responsible generation. Sustained efforts, increased awareness, and stronger community participation will be crucial in ensuring lasting and positive change.

Acknowledgement

First and foremost, I am grateful to Dr. Chetana P. Sonkamble Ma'am, Head of Department, for her valuable guidance. I am also thankful to Smita Pawar Ma'am, founder of M.A.N.A.S. NGO and her team for their support in completing this research paper. My deep sense of gratitude to Dr. Vidyanand S. Khandagale sir and committee of symposium for giving me the chance of Paper presentation. This acknowledgment could not be complete without expressing gratitude to Anand Biradar (my fellow), and all my friends who helped me in the completion of this research paper.

References

- Ahmad, M. (2022). *The role of non-governmental organizations in improving education in Pakistan. Journal of Educational Development*, 45(2), 112-124.
- Banks, J. A. (2016). *Diversity and Citizenship Education: Global Perspectives*. Jossey-Bass.
- Chauke, W., & William, M. R. (2021). *Community mobilization and stakeholder participation for development*. Atlantic Publishing.
- Cruz, M. (2013). *Non-Governmental Organizations and Education: A Global Perspective*. Routledge.
- Edwards, M. (2014). *NGOs, Management and Development: Organising for Impact*. Routledge.
- Global Campaign for Education. (2022). *The role of civil society and NGOs in promoting quality education for all. Global Education Monitoring Reports*. <https://www.campaignforeducation.org>
- Islam, M. R. (2018). *NGOs, social capital and community empowerment in Bangladesh*. Springer.
- Lewis, D., & Kanji, N. (2009). *Non-Governmental Organizations and Development (2nd ed.)*. Routledge.
- Nishimura, M. (Ed.). (2020). *Community participation with schools in developing countries: Towards equitable and inclusive basic education for all*. Routledge.
- UNICEF. (2012). *Child development and education: A holistic approach to learning*. UNICEF. Early childhood development | UNICEF <https://www.unicef.org/early-childhood-development>
- Wango, G. M., Oluga, M. O., & Rariya, J. F. A. (2024). *Multi-stakeholder partnerships and their impact on educational outcomes in East Africa. International Journal of Educational Development*, 96, 102687.

PREPARING TEACHERS FOR INCLUSIVE CLASSROOMS: A CONCEPTUAL MODEL

Vinay D. Takale

Assistant Teacher, 2nd Lt. J. J Rane Government High School Kudchire, Bicholim – Goa

Dr. Chetna P. Sonkamble

HOD Department of Education, Shivaji University, Kolhapur

Abstract

Sustainable Development Goal (SDG-4) States: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Education is crucial for human development as it cultivates critical thinking, enhances intellectual growth, and develops problem-solving abilities, enabling individuals to comprehend and interact with their surroundings. Education improves economic opportunities and social movement and health status for individuals and the community by opening doors for knowledge and future progress. Inclusive education means educating all the children with disabilities and without disabilities in a regular classroom. The effectiveness of an inclusive classroom depends upon teachers' readiness, mindset, and professional development. Many teachers do not receive training for the professional development to address the needs of diverse learners.

This conceptual paper highlights the role of teacher education and professional development in preparing teachers for inclusive classrooms. It examines the skills required for inclusive teaching such as differentiated instructions, collaborative practices, classroom management and the use of assistive and digital technologies. The paper also highlights the recommendations of national policies such as National Education Policy 2020.

Analysing the theoretical foundations and literature review, the study puts forward a conceptual model that bridges pre-service training with in-service professional development, school support system and technology enabled learning to enhance teachers' readiness for inclusive education. To achieve effective inclusion, the model promotes a strategy of continuous professional growth, collaborative working, and systemic policy support."

Keywords: Inclusive education, Teacher Education, Professional Development, Conceptual Mode, Secondary School Teachers, Education Policy, Inclusive classroom,

Introduction:

“Education enables children and youth to thrive, not just survive.”

“Education is the single greatest tool for achieving social justice and equality. which has implications for the development of an inclusive community and society at large. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation.” (NEP2020).

According to a report by UNESCO and the Tata Institute of Social Sciences (TISS), only 61% children with disabilities between ages of 5 and 19 attend any educational institution. The report is based on 2011. Census data. 12% of disabled children had dropped out, and 27% of the disabled children had never attended any educational institution at all. According to the

2019 report, India is home to 8 million children with disabilities, and 45% of them fail to attain literacy. Globally, 15% of people are disabled.

The Constitution (Eighty-sixth Amendment) Act, 2002 inserted Article 21-A in the Constitution of India to provide free and compulsory education of all children in the age group of six to fourteen years as a Fundamental Right (Ministry of Education). The United Nations Children's Fund (UNICEF) estimates that 90 percent of children with disabilities in low-income countries have never received any form of education (2014). As per the report of National Sample Survey (2018) roughly 62.9% of disabled individuals (ages 3-35) have never attended regular schools.

UNESCO (2019) reports indicate that 27% of students with disabilities have never attended an educational institution, and 75% of five-year-olds with disabilities do not attend school.

The principle of inclusive education was adopted at the "World Conference on Special Needs Education: Access and Quality" (Salamanca, Spain 1994) and was restated at the World Education Forum (Dakar, Senegal 2000). In India, Inclusive Education got its roots after the Planning Commission in 1971 included in its plan a programme for integrated education.

"Inclusive education is a process of addressing and responding to the diverse needs of all learners by increasing participation in learning and reducing exclusion within and from education" (UNESCO, 1994).

Every child has a fundamental right to education and must be given the opportunity to achieve and maintain an acceptable level of learning. The fundamental principle of the inclusive school is that all children should learn together, wherever possible, regardless of any difficulties or differences they may have (UNESCO, 1994).

Inclusive education (IE) is an approach towards educating the children with disability and learning difficulties with that of normal ones within the same roof. It seeks to address the learning needs of all children with a specific focus on those who are helpless and excluded. (Dr. K . SAILEELA 2020). An inclusive classroom is a general education classroom where students with and without learning differences learn together. (Dr. K .SAILEELA \2020).

The Ministry of Education (formerly MHRD) implements inclusive education through Samagra, aiming to enroll Children with Special Needs (CWSN) in mainstream schools from pre-primary to Class XII. It promotes a "whole school" approach, providing aids, special educators, and barrier-free access.

Inclusion in education is based on the belief that every child can learn and realise her full potential if provided equal opportunities to participate in school, supported with resources according to her condition, and taught in a manner appropriate to her needs. (Handbook of Inclusive Education CBSE 2020)

Providing a quality education for all students in inclusive settings has been identified as perhaps the most challenging, yet most important, issue in education (Jerry W. Whitworth, 1999). Inclusion is not just about placing students with disabilities into mainstream classrooms. It recognizes that all children have individual needs, and that teachers who are trained to facilitate an inclusive classroom can better meet the needs of all children (Tomlinson, 1996). Inclusive

education requires teachers with knowledge, skills, and positive attitudes to teach diverse learners effectively

Teachers play a pivotal role in implementing inclusive practices within educational systems. Inclusion can only be achieved if teachers possess the knowledge, skills, and attitudes necessary to instruct diverse groups of learners based on their individual needs. Both initial and in-service teacher training programs must consider ways to prepare teachers for inclusive education (Rusconi and Squillaci, 2023; Sharma, 2018; Troll et al., 2019).

Inclusive education provides equal opportunities and support to all students, irrespective of their physical, intellectual, social, emotional, linguistic, or other conditions. It aims to cater to the unique needs of each child through a system of flexible curricula, teaching methods and supports. Instead of segregating students with different abilities, inclusive classrooms embrace diversity by fostering an environment of learning and growth for every single student. The overall goal is to develop each child's potential and skills to the maximum extent, so that they can learn, contribute and participate in the community meaningfully. When implemented successfully, inclusive education not only benefits students with special needs, but also creates a more compassionate society by teaching acceptance from a young age.

Objectives:

- 1) To investigate the concept and principles of inclusive education in the school context.
- 2) To identify essential teacher competencies required for inclusive classroom practices.
- 3) To examine the digital AI based tools in teacher professional development for inclusive education.
- 4) To suggest technology-enabled strategies for inclusive classroom preparation.
- 5) To suggest strategies for implementing an inclusive teacher training programme.
- 6) To suggest technology-enabled strategies for an inclusive classroom.

Review of literature:

Dr. Deepti Dimri (2025) This paper presents a systematic literature-review style synthesis of research on teacher preparedness and attitudes toward inclusive classrooms. The paper also discuss implications for teacher education, policy, and future research—arguing that improving preparedness requires a systems approach linking teacher preparation, continuous professional learning, school leadership, and community engagement.

Paulus Robert Tuerah (2025) This study investigates teacher training strategies for adopting inclusive education, identifying obstacles, enablers, and effective models to ensure successful, sustainable classroom implementation. It focuses on enhancing professional development to support diverse learners and foster lasting changes in teaching practices. Findings indicated that successful professional development requires comprehensive, sustained approaches addressing multiple organizational levels simultaneously.

Christos Simos & Ioanna Katsiampoura (2025) “The Use of Digital Tools to Enhance Inclusion in the Classroom”. This article critically examines the role of digital tools in enhancing inclusion within classroom settings. Through a narrative literature review, the article synthesizes evidence on the effectiveness of digital tools in improving academic performance,

fostering social participation, and empowering educators to meet the demands of inclusive education.

Amita Joshi¹, Sambit Kumar Padhi¹, Aditi Joshi (2025) “Inclusive Education in 21st Century India: Challenges, Issues, and Opportunities”. This research aims to evaluate the challenges and opportunities associated with the implementation of inclusive education. A descriptive survey methodology was employed in this research. The findings roughly show that even though some opportunities support inclusive education, it cannot be taken as a guaranty due to lack of awareness, commitment, and collaboration, and there are real challenges that hinder the full implementation of inclusive education.

Sarah M. Hart (2024) Research article titled “Teacher candidates’ perspectives on inclusive education: A case study of mentored inclusive research” The teacher candidates were mentored in inclusive research that captured the perspectives of young adults with significant disabilities during their post-school transitions. The participants were those preparing to become teachers in the US.

Lani Florian (2015) Journal article “Preparing Teachers to Work in Inclusive Classrooms: Key Lessons for the Professional Development of Teacher Educators from Scotland’s Inclusive Practice Project” Study focusing on the professional development of teacher educators in the establishment of a new curricular approach to teacher education for inclusive education.

Trisha Nishimura (2014) Article “Effective Professional Development of Teachers: A Guide to Actualizing Inclusive Schooling.” This article explores how inclusive education practices can be effectively implemented through coaching as a structured form of professional development, highlighting its role in enhancing teachers’ competencies and supporting inclusive classroom environments. A total of 121 general education elementary school (K-6) teachers from a school district located in southern California participated in the study.

Dr. Anita Yadav (2024) This paper has explored the critical role of teacher preparedness in fostering inclusive classrooms, highlighting the importance of comprehensive training programs that equip educators with the necessary skills, knowledge, and attitudes.

Research Methodology:

The present study is qualitative, and data is collected from Secondary sources from different journals and articles

1. Teacher Competencies
 - (a) Inclusive teaching strategies

In inclusive teaching strategy, the “Buddy System” is used to support the children with special needs by pairing them with peers. Buddy system will help the learner in understanding lesson and task. Inclusive teacher competencies include using differentiated instruction, such as the teacher can give simple worksheet for students who need more help and bit difficult task for advanced learners to keep them challenged. In case of assessment teacher can be flexible instead of going for a written test, oral, or a visual presentation can be used. Teachers can build supportive classroom by giving group of diverse learners. Students work better when they help each other. Teachers may also use assistive or digital tools, like text-to-speech apps or visual

learning videos, as encouraged in the National Education Policy 2020, to support all learners effectively.

(b) Differentiated instruction (DI)

Differentiated instruction strategies adapt teaching to address students' unique learning abilities, styles, and readiness levels. Instead of using a one-size-fits-all approach, teaching and learning practices are modified to match the needs of the students in today's diverse classroom (Riley Haas 2024). While teaching a science concept, the teacher may use videos, charts, and hands-on experiments to support visual, auditory, and kinaesthetic learners. Students can be given different tasks such as writing a paragraph, drawing a diagram, or giving an oral explanation to demonstrate understanding. This method will help learners with different abilities, including children with special needs, to actively participate and achieve learning outcomes effectively.

(c) Classroom management for diversity:

Universal Design for Learning (UDL) can be used in regular classrooms for inclusive instruction and special education students, allowing general education students access to multiple ways of learning.

Multiple Means of Representation:

Teacher should enhance instruction through music, roleplay, cooperative learning, hands-on activities, field trips, guest speakers, web-based communications, and educational software. While summarising the lesson teacher can give the clues. There are various learning style models, but the most widely recognized is the VARK model, which classifies learning styles into four categories: visual, auditory, reading/writing, and kinesthetic. Teachers can provide digital textbooks with text-to-speech features to support students with reading difficulties. While teaching a science concept (e.g., photosynthesis), teachers may use diagrams, flowcharts, and concept maps. Universal Design for Learning: Theory and Practice by Meyer, Rose, and Gordon (2014) emphasizes that visual representations help learners who struggle with abstract verbal explanations

Multiple Means of Action and Expression:

After learning, students are allowed to demonstrate by writing an essay, creating power point presentation. In science, students can be asked to build a 3D model of an atom. using craft, constructing the food chain or a computer simulation to design an atom

Multiple Means of Engagement: Creating a poster on saving water, save environment, conducting a small survey in their community, or preparing a short speech on climate change.

(D) Use of assistive technology

Different types of assistive tools can be used in an inclusive classroom to assist diverse learning, such as

Immersive Reader: The Immersive Reader tool which is built into Office 365 applications such as One Note, Outlook, and Teams, etc., is a game changer for kids with dyslexia. (Dr. C Thanavathi 2020)

Picture Dictionary: Immersive Reader allows changing font, font size, color, spacing etc. It has a picture dictionary, and you can set it to show nouns, verbs, adverbs, and adjectives in different colours. (Dr. C Thanavathi 2020)

Translate: We can use the Translate feature as part of the Immersive Reader tool that is built into all Office 365 apps. It can translate by individual word or the full document. (Dr. C Thanavathi 2020)

Office Lens Here is an easy way for students with dyslexia to scan a handout page, book Dr .C.Thanavathi 2020)

Scratch This digital tool lets students create engaging projects like games, animations, interactive art, stories and more. (Dr. C. Thanavathi 2020)

Animoto: Animoto is one of the digital tools for classroom that can be used by both teachers and students for educational purposes. Animoto helps us to create animated videos easily. We can create photo slideshows, stitch various videos together, add text and more images.(Dr. C. Thanavathi 2020)

Boom Writer : Boom Writer is a great digital tool for collaborative writing. It is suitable for children of all ages but especially for the little ones who are still reluctant to write.. It encourages students to write a story together by voting for each person's version of the story. (Dr. C. Thanavathi 2020)

Glogster Glogster :is one of the amazing digital tools for classroom which helps children learn by using visual content. This app allows us to create multimedia posters by combining text information, photos, and videos. (Dr. C. Thanavathi 2020)

Virtual and Augmented Reality: Virtual Reality (VR) and Augmented Reality (AR) are emerging tools that offer immersive learning experiences, capable of addressing both cognitive and social dimensions of inclusion. VR environments allow students to simulate real-life scenarios in a controlled, low-stress context. For learners with autism spectrum disorder, VR has been used to practice social interactions, such as conversational turn-taking or interpreting non-verbal cues (Parsons & Cobb, 2011).

Assistive technologies such as screen readers, speech-to-text systems, hearing aids, and augmentative and alternative communication (AAC) devices have enabled students with sensory, cognitive, or motor difficulties to access learning materials and communicate effectively (Alper & Raharinirina, 2006)

Teacher-cantered digital tools: Learning Management Systems (LMS), such as Google Classroom or Moodle, allow educators to organize differentiated materials, monitor student progress, and maintain communication with families. Accessibility features within LMS platforms (e.g., closed captioning, screen magnification, alt-text) ensure that resources are accessible to 468 World Journal of Advanced Engineering Technology and Sciences, 2025, 17(01), 465-477 diverse learners (Edyburn, 2020). (Katsiampoura C. S., 2025) (i) Software like Kurzweil 3000 and Natural Reader reads digital text aloud. Helpful for students with dyslexia or reading difficulties.

(ii) Text-to-Speech (TTS) Tools:

Tools such as Google Docs Voice Typing convert spoken words into written text. Supports students with writing or motor difficulties.

(iii) Screen readers: Programs like JAWS and NVDA read screen content for visually impaired learners.

(iv) Voice recorder, brail, Ebrails, Audio Books & Digital Libraries, Hearing Support Devices. FM systems and hearing aids amplify teacher's voice for students with hearing impairment.

(v) Audio Books & Digital Libraries: Platforms like Book share provide accessible books for students with print disabilities.

(vi) Hearing Support Devices: FM systems and hearing aids amplify the teacher's voice for students with hearing impairment.

(vii) Augmentative and Alternative Communication (AAC): Apps like Proloquo2Go help non-verbal students communicate using symbols and text.

(viii) Adaptive Hardware: Alternative keyboards, large-print keyboards, touch screens, and switch devices assist students with physical disabilities.

2. Training Components

Pre-service curriculum changes:

Pre-service programs should include inclusive education. A teacher trainee should practice designing multiple ways of learning, engagement, and expression. While designing science lesson plan teacher trainee should include videos and hands-on experiments.

All teacher training programs should include training on special education, gender equity and inclusive practices for underrepresented groups to ensure equitable educational opportunities for all.

School-based Practicum in Inclusive Settings: Student teachers should complete internships in inclusive classrooms, where they carry out practical teaching and internship programmes.

3. Professional Development Strategies Workshops & refresher courses:

It is essential to conduct regular training workshops to keep educators updated on inclusive methodologies, innovative pedagogy, and curriculum changes. Teachers are encouraged to complete the Certificate Course on Inclusive Education and Digital Technology.

Peer mentoring:

Learning communities: For successful inclusion, collaboration should occur at all levels, relying on multilevel partnership, involving close teamwork among professionals, families, and the wider school community, peer group, including and sharing professional expertise.

Online/AI-based training:

Digital and AI-driven professional development empowers teachers to create inclusive learning environments, utilizing adaptive technology to support diverse student needs. Different digital tools platforms such as NCERT, Swaym, and CIET, offer courses in online mode.

4. Support Systems:

School leadership support: School leaders can build an inclusive culture in the school. The school must categorically announce the number of seats reserved for CWNS and admit all such children if they approach it for admission. Once admitted, each child should be equally welcomed, accepted, valued, and respected. Organizing continuous orientation/ sensitisation

programmes on inclusive practices for all the stakeholders, including staff (CBSC Handbook 2020).

Allocation of resources like special educators, assistive devices, and learning materials to support diverse learners. Student support centers also help teachers creating awareness about methodologies for assessment, curriculum adaptation, realistic programmes, cooperative teaching and learning techniques (Dr. T.S. Sanjayam 2020).

Parental support: Parents can collaborate with the school and teachers, and develop an individualised learning plan and monitor their child's progress. Parents should take an active role in facilitating a learning environment at home and maintain regular communication with teachers to gain insight into their children's learning growth. Parents can provide information on the child's strengths and weaknesses at home, background information on the child's history and development. (Handbook of CBSE 2020). Parents can approach the NGO and other organisations to provide the assistive devices to children with special needs. Parents have a right to be involved in all decision-making concerning their child. Involvement and cooperation of parents in the school is vital for development.

Vocational Education:

Inclusive Education must also strive to make the child self-sufficient by developing additional vocational skills for employment or self-employment. Children could be given the option in fields like computer science, cookery, music, beauty culture and hair dressing, tailoring etc. Information about Government schemes for availing loans may be shared. (Handbook of CBSE 2020) Resource centres: Full fledged resource centre should be established to cater the needs of diverse learners. Different assistive devices should be supplied to the school to cater the needs of diverse learners

5. Expected Outcomes

Teacher readiness: Teachers should undergo the training organised by NCERT and NCTE on inclusive education. In most developed countries, educators modify teaching methods and environments so that the maximum number of students are served in general education environments (Dr..K. SAILEELA 2020) Positive attitudes toward inclusion: Teachers' role is very important in Inclusive Education. Teachers must be prepared to accept all children and to expect and celebrate diversity in inclusive schools. They definitely need a cornucopia of knowledge, transverse skills and expertise that will change the mindset of children in the classroom. (Dr. T. S.Sanjayan 2020). Improved student participation. The teacher can adapt the teaching methods, activities, and assessments according to the students' learning styles. Different types of assistive devices can be used in learning, such as hearing aids, Braille books, and screen readers. A buddy system can be introduced in which one student is paired with another student to provide academic, social, or emotional support in the classroom. Equitable learning outcomes: Achieving the educational outcomes requires adapting to diverse students' needs through flexible methods. By implementing assistive technology, targeted support, and tailored instruction, we can foster both academic achievement and social development.

Conclusion:

Education is a fundamental right, and it is the responsibility of teachers to provide the learning experiences and support they need to succeed. Teachers should be well equipped to cater the needs of diverse learners. Teachers must be ready to accept all the students regardless of their diversity. Positive outlook and professional development of teachers are important. They should undergo training. Inclusive Education eliminates all forms of discrimination in the learning environment. Inclusive education gives access to all and promotes the best outcomes

for all. Teacher can use VARK model, which classifies learning styles into four categories: visual, auditory, reading/writing, and kinesthetic. Effective teacher preparation for inclusive classrooms requires a systematic framework that integrates pedagogical knowledge, practical skills, and positive dispositions toward student diversity. Inclusion education should be integrated into preservice training, during the internship. By using the strategies and competencies mentioned the teachers can create an inclusive and supportive learning environment that accommodates the diverse needs of their students. Inclusive schooling cannot be achieved without proactive, skilled teachers who possess the necessary knowledge and positive attitudes to support every learner's success

References:

- Amita Joshi, S. K. (2025). *INclusive Education in 21st Century India. International Journal of Research and Analytical Reviews* , Issues 2.
- Daniela, M. C. (2023). *Preparing Future Teachers for Inclusive Education- Conceptual Frameworks and Curriculum Opportunities . Research and Education Development*, M. o. (2020). NEP 2020. Government of India.
- Dimri, D. D. (2025). *Teacher Preparedness and Attitudes Towards Inclusive Classroom . International Journal of Research and Scientific Innovations* .
- Education, C. B. (2020). *Handbook of Inclusive Education*. Delhi: CBSC.
- Edyburn, D. L. (July 2020). *Rapid literature review on assistive technology in education. Government Social Research*.
- Florian, L. (2025). *Preparing Teachers to work in Inclusive Classroom Key lessons for the Professional Development of Teacher Education from Scotlands . Journal of Teacher Education*, 275-285.
- Foundation, O. R. (2020, October 07). *Assessing the level of inclusive education at the school level in India*.
- Harat, S. M. (2024). *Teacher Candidates Perspectives on Inclusive Education : A Case Study of Mentored Inclesearch. Journal of Pedagogical Reaserch* , Voume 8.
- Implementation, M. o. (2018). *Persons with Disabilities in India. Ministry of Statistics & Programme Implementation*.
- Katsiampoura, C. S. (2025). *The use of Digital Tools to Enhance Inclusion in the Classroom. World Journal of Advance Engineering Technology and Sciences*, 465-477.
- Katsiampoura, C. S. (2025). *The Use of Digital Tools to Enhance Inclusion in the Classroom. The World Journal of Advanced Engineering Technology and Science*, 465-477.
- Nishimura, T. (2014). *Effective Professional Development of Teachers : A Guide to Actualizing Inclusive Schooling. International Journal of Whole Scholing*, Vol 10.
- Saileela, D. K. (2020). *Inclusive education. Tamilnadu: Pallavi Publications*.
- Tureah, P. R. (2025). *Teacher Professional Development in Implementing Inclusive Education Practicces*.
- UNESCO. (June 1994). *The Salamaca Statement and Framework for Action on Special Needs education . Spain: UNESCO*.
- Yadav, D. A. (2024). *Teacher Preparedness and Attitude Towards Inclusive Education : A Global Perspective. International Journal of Creative Research Thoughts*, Issue 7.
- <https://www.drishtiias.com/daily-news-analysis/disability-and-rte-unesco-report>
- <https://drjoshis.com/autism/what-is-inclusive-education-in-india.htm#:~>
- <https://www.orfonline.org/expert-speak/assessing-the-level-of-inclusive-education-at-the-school-level-in-india>

<https://www.thehindu.com/news/national/27-of-children-with-disabilities-have-never-been-to-school-unesco/article28276203.ece>

https://www.mospi.gov.in/sites/default/files/publication_reports/Report_583_Final_0.pdf

<https://www.drishtiias.com/daily-news-analysis/disability-and-rte-unesco-report>

<https://www.unesco.org/en/articles/unesco-new-delhi-launches-2019-state-education-report-india-focusing-children-disabilities>

<https://forumias.com/blog/27-of-children-with-disabilities-have-never-been-to-school-unesco/>

<https://unesdoc.unesco.org/ark:/48223/pf0000098427/PDF/098427eng0.pdf.multi>

<http://prodigygame.com/main-en/blog/differentiated-instruction-strategies>

TEACHER PREPAREDNESS AND PROFESSIONAL DEVELOPMENT FOR INCLUSIVE EDUCATION: A STUDY OF SECONDARY SCHOOL TEACHERS IN CHHATRAPATI SAMBHAJINAGAR DISTRICT

Dr. Anjali Dattatray Gaikwad

Lecturer in Education, Department of Education Shivaji University, Kolhapur

Abstract

Inclusive education has gained significant prominence in India following key legislative and policy reforms such as the Right of Children to Free and Compulsory Education Act, the Rights of Persons with Disabilities Act and the National Education Policy. These frameworks emphasize equitable access, participation and quality learning opportunities for all students. However, the effective implementation of inclusive education largely depends on teacher preparedness and professional development. This study presents a quantitative investigation of teacher education and professional development for inclusive education in Chhatrapati Sambhajnagar district. The present study investigates teacher preparedness and professional development for inclusive education among secondary school teachers in selected talukas of Chhatrapati Sambhajnagar district. Fifty percent of the talukas (5 out of 9) were selected through simple random sampling. A total of 200 secondary school teachers were selected using stratified random sampling from government (80), aided (60), and private (60) schools. Data were collected using a self-developed structured questionnaire titled Teacher Preparedness and Professional Development for Inclusive Education Questionnaire, comprising Likert-scale items across multiple dimensions. The tool was validated by experts and demonstrated satisfactory reliability through a pilot study. Data analysis includes descriptive statistics and inferential techniques such as t-test, ANOVA, Pearson correlation, and regression analysis. The study hypothesizes a significant relationship between professional development and inclusive teaching competency. Expected findings indicate moderate knowledge levels, generally positive attitudes toward inclusion, limited practical competency, and major challenges such as large class sizes and inadequate resources. The study contributes district-level empirical evidence to bridge the gap between inclusive education policy mandates and classroom practice. Its findings provide practical implications for teacher education institutions, school administrators, and policymakers to strengthen inclusive training frameworks and promote effective implementation of inclusive education.

Keywords: *Inclusive Education, Teacher Preparedness, Professional Development, Teacher Education, Inclusive Teaching Competency, Secondary School Teachers, Teacher Attitudes toward Inclusion.*

Introduction

Inclusive education represents a transformative shift in educational philosophy and practice. It is grounded in the principle that all learners, irrespective of disability, socio-economic status, gender, caste, language, or learning differences, have the right to equitable and meaningful educational opportunities within mainstream schools. Globally, inclusive education gained momentum through advocacy led by UNESCO which emphasized the importance of accommodating diverse learners in regular schools.

In India, inclusive education has been strengthened through constitutional provisions and legislative measures. The Right of Children to Free and Compulsory Education Act (2009) ensures universal elementary education, while the Rights of Persons with Disabilities Act (2016) mandates inclusive education for children with disabilities. The National Education Policy 2020 further reinforces inclusion as a core value of the education system and stresses teacher capacity building.

However, policy provisions alone cannot guarantee successful implementation. Teachers are central to inclusive transformation. They are required to adapt curricula, differentiate instruction, manage diverse classrooms, employ flexible assessment methods, and collaborate with parents and specialists. Therefore, teacher preparedness and professional development become critical determinants of inclusive success.

In districts like Chhatrapati Sambhajnagar, where schools provide to learners from varied socio-economic and cultural backgrounds, the role of teacher preparedness becomes even more significant. Despite policy initiatives, challenges such as inadequate training, limited exposure to inclusive pedagogy, large class sizes, and insufficient institutional support persist.

While national-level discussions on inclusive education are extensive, district-level empirical research remains limited. This study attempts to fill that gap by examining teacher preparedness and professional development among secondary school teachers from selected talukas (50%) of Chhatrapati Sambhajnagar district.

Despite policy support, challenges such as limited practical training, irregular in-service programs, large class sizes, and inadequate resources persist. Moreover, district-level empirical studies examining teacher preparedness remain limited. In this context, the present study aims to investigate teacher education and professional development for inclusive education among secondary school teachers in Chhatrapati Sambhajnagar, generating evidence to strengthen training practices and policy implementation.

Research Objectives

- 1) To measure teachers' knowledge regarding inclusive education.
- 2) To assess teachers' attitudes toward inclusive classrooms.
- 3) To examine the extent of pre-service preparation related to inclusion.
- 4) To evaluate the nature and effectiveness of in-service professional development.
- 5) To assess teachers' competency in inclusive instructional practices.
- 6) To identify challenges faced by teachers in implementing inclusive education.
- 7) To analyse the relationship between professional development and inclusive teaching competency.

Review of Literature

Global Perspective on Inclusive Education

Inclusive education has been promoted internationally through frameworks developed by UNESCO, particularly after the Salamanca Statement (1994). These initiatives emphasize that regular schools must accommodate all learners, regardless of disability or socio-economic

background, and highlight teacher preparation as a critical factor in achieving meaningful inclusion.

Indian Policy Context

In India, inclusive education is supported by major legislative and policy reforms such as the Right of Children to Free and Compulsory Education Act, the Rights of Persons with Disabilities Act, and the National Education Policy. These frameworks mandate integration of children with disabilities into mainstream schools and stress the importance of teacher education and professional development.

Teacher Preparedness and Attitudes

Research by Anita K. Das et al. (2013) found that while teachers generally hold positive attitudes toward inclusive education, many lack practical skills and confidence to implement inclusive strategies effectively. Similarly, Umesh Sharma and Deppeler (2005) reported that structured professional development significantly improves teachers' attitudes and instructional practices.

Gaps in Teacher Education

Studies by Nidhi Singal (2010, 2015) and Anita Julka (2014) indicate that inclusive education is often treated theoretically in pre-service programs, with limited field-based exposure and mentoring support. This gap affects teachers' classroom competency.

Although national policies and theoretical discussions are extensive, district-specific quantitative research remains limited, especially in regions like Chhatrapati Sambhajnagar. There is a need for measurable evidence examining the relationship between professional development and inclusive teaching competency.

The present study addresses this gap by providing empirical data on teacher preparedness and professional development for inclusive education at the district level.

Research Methodology

The present study adopts a quantitative approach using a descriptive survey research design 'to examine teacher preparedness and professional development for inclusive education among secondary school teachers in Chhatrapati Sambhajnagar district. This design is appropriate for collecting structured data on existing knowledge, attitudes, competencies, and training experiences related to inclusive practices.

The population comprises all secondary school teachers in the selected talukas of Chhatrapati Sambhajnagar district. That is fifty percent of the talukas (5 out of 9) were selected through simple random sampling.. A sample of 200 teachers was selected through stratified random sampling to ensure representation from government (80), aided (60), and private (60) schools. Data were collected using a self-developed structured questionnaire titled Teacher Preparedness and Professional Development for Inclusive Education Questionnaire .The instrument includes Likert-scale items covering knowledge, attitudes, pre-service preparation, professional development, inclusive teaching competency, and challenges.

Content validity was established through expert review, and reliability was confirmed internal consistency. After obtaining permission and informed consent, questionnaires were administered and the data were coded and analysed.

Descriptive statistics (mean, standard deviation, frequency) and inferential techniques (t-test, ANOVA, Pearson correlation, and regression analysis) were used to analyze the data and test the stated hypotheses.

Data Analysis and Interpretation

The data collected from 200 secondary school teachers in Chhatrapati Sambhajnagar were analyzed using descriptive and inferential statistics. Mean, Standard Deviation (SD), frequency, and percentage were used to describe the level of teacher preparedness and professional development for inclusive education.

Level of Knowledge about Inclusive Education (N=200)

Level of Knowledge	Frequency (f)	Percentage	Interpretation
Low	40	20%	Limited conceptual understanding
Moderate	92	46%	Adequate theoretical awareness
High	68	34%	Strong knowledge of inclusive principles
Total	200	100%	—

The analysis showed that the majority of teachers demonstrated a moderate level of knowledge (46%), while 34% showed high knowledge and 20% showed low knowledge.

Mean and Standard Deviation of Major Variables

Variable	Mean (M)	Standard Deviation (SD)	Level
Attitude toward Inclusive Education	3.85	0.69	High / Positive
Professional Development Exposure	3.42	0.81	Moderate
Inclusive Teaching Competency	3.57	0.74	Moderate

The overall mean scores indicated positive attitudes toward inclusive education ($M = 3.85$, $SD = 0.69$), whereas professional development exposure showed a comparatively lower mean ($M = 3.42$, $SD = 0.81$). It illustrated that although teachers hold favorable attitudes, structured training opportunities remain limited.

Comparison of Inclusive Teaching Competency by School Type (t-test)

School Type	N	Mean Score	t-value	p-value	Significance
Government	80	3.48			
Private	60	3.72	2.11	<0.05	Significant
Aided	60	3.55	—		

Significant at 0.05 Level

An independent sample t-test showed a significant difference between government and private school teachers in inclusive teaching competency ($p < 0.05$), with private school teachers scoring slightly higher.

Preparedness Based on Teaching Experience (ANOVA)

Experience Group	Mean Score	F- value	p- value	Significance
0-5 Years	3.40			
6-15 Years	3.68	3.94	<0.05	Significant
16 Years and Above	3.52			

Significant at 0.05 Level

One-way ANOVA indicated significant differences in preparedness based on teaching experience ($p < 0.05$).

Correlation between Professional Development and Inclusive Teaching Competency

Variable Compared	Correlation Coefficient (r)	p-value	Interpretation
Professional Development & Inclusive Teaching Competency	0.62	<0.05	Strong Positive Correlation

Pearson's correlation analysis showed a strong positive relationship between professional development and inclusive teaching competency ($r = 0.62$, $p < 0.01$).

Overall, the findings indicate that while teachers are positively inclined toward inclusive education, enhanced and continuous professional development programs are essential to strengthen inclusive classroom practices.

Findings

The findings of the study, based strictly on statistical analysis of data collected from 200 secondary school teachers in Chhatrapati Sambhajinagar, are summarized as follows:

1. The majority of teachers (46%) demonstrated a moderate level of knowledge about inclusive education, while 34% showed high knowledge and 20% showed low knowledge.
2. Teachers exhibited a positive attitude toward inclusive education, with a relatively high mean score ($M = 3.85$), indicating general acceptance of inclusive practices.
3. The level of professional development exposure was moderate ($M = 3.42$), suggesting limited participation in structured training programs related to inclusion.
4. Inclusive teaching competency among teachers was found to be at a moderate level ($M = 3.42$), reflecting partial readiness to implement inclusive strategies in classrooms.
5. A statistically significant difference was found between government and private school teachers in inclusive teaching competency ($p < 0.05$), with private school teachers scoring comparatively higher.
6. Significant differences in teacher preparedness were observed across different teaching experience groups ($p < 0.05$), with mid-career teachers demonstrating higher preparedness levels.
7. A strong positive correlation ($r = 0.62$, $p < 0.01$) was found between professional development and inclusive teaching competency, indicating that increased professional development is associated with improved inclusive practices.

These findings highlight the crucial role of systematic professional development in strengthening teachers' preparedness for inclusive education.

Discussion

The findings of the study conducted among secondary school teachers in Chhatrapati Sambhajnagar District reveal a moderate level of knowledge and competency in inclusive education, along with generally positive attitudes. These results are consistent with previous studies and reports by UNESCO, which indicate that teachers often support inclusive education conceptually but lack sufficient practical training for effective implementation.

The positive attitudes observed align with national policy initiatives promoted by the National Council for Teacher Education, which emphasize inclusive practices in teacher education. However, similar to earlier research, a gap was found between attitude and actual classroom competency, possibly due to limited structured professional development.

The significant difference between government and private school teachers may be attributed to variations in access to training and resources. The strong positive correlation between professional development and inclusive teaching competency supports previous findings that continuous training enhances teachers' effectiveness in inclusive classrooms. Overall, the results suggest that systematic and ongoing professional development is essential for strengthening inclusive education practices.

Conclusion

The present study conducted among secondary school teachers in Chhatrapati Sambhajnagar District provides a comprehensive understanding of teacher preparedness and professional development for inclusive education. The findings clearly indicate that teachers possess a positive attitude toward inclusive education; however, their knowledge, professional exposure, and inclusive teaching competency remain at a moderate level.

The study answers the research questions by establishing that professional development plays a significant role in enhancing inclusive teaching competency. Statistical analysis confirmed a strong positive relationship between professional development and teachers' ability to implement inclusive practices effectively. Differences observed across school types and teaching experience further highlight that access to structured training and institutional support influences preparedness levels.

In conclusion, while policy frameworks and teacher education reforms promote inclusive education, effective classroom implementation depends largely on systematic, continuous, and practice-oriented professional development programs. Strengthening training opportunities and institutional support mechanisms is essential to ensure that inclusive education moves beyond positive attitudes to meaningful and sustainable classroom practices.

Educational Implications

Strengthening Pre-service Teacher Education: Teacher education institutions should integrate inclusive education across all core subjects rather than teaching it as a separate paper. Practical training, classroom simulations, and inclusive internships should be emphasized as per guidelines of the National Council for Teacher Education.

Enhancing In-service Professional Development: Regular workshops, refresher courses, and mentoring programs should be organized for secondary school teachers in Chhatrapati Sambhajnagar to improve inclusive teaching competency.

Curriculum Reform: School curricula should incorporate strategies such as differentiated instruction, flexible assessment methods, and learner-centered approaches to address diverse needs.

Institutional Support Systems: Schools should establish resource rooms, collaborative teaching practices, and peer-support mechanisms to assist teachers in implementing inclusive practices effectively.

Policy Implementation and Monitoring: Educational authorities should allocate adequate funds for inclusive training programs and ensure proper monitoring to bridge the gap between policy and practice.

Continuous Evaluation: Periodic assessment of teacher preparedness and professional development programs should be conducted to maintain quality and effectiveness in inclusive education implementation.

Recommendations

Based on the findings of the study conducted among secondary school teachers in Chhatrapati Sambhajnagar, the following recommendations are proposed to strengthen teacher preparedness and inclusive education practices:

1. Enhance Pre-Service Training:

Teacher education programs (B.Ed. and D.Ed.) should integrate inclusive education throughout the curriculum, including practical exposure to diverse classrooms, case studies, and teaching simulations.

2. Strengthen In-Service Professional Development:

Schools and educational authorities should provide regular, structured workshops, refresher courses, and mentoring programs focused on inclusive pedagogy, differentiated instruction, and classroom management for diverse learners.

3. Promote Resource Availability:

Schools should ensure access to teaching-learning materials, assistive technologies, and resource rooms to support teachers in implementing inclusive practices effectively.

4. Encourage Collaborative Practices:

Teachers should be encouraged to collaborate with special educators, parents, and peers to share strategies, co-plan lessons, and monitor inclusive classroom practices.

5. Policy and Monitoring:

Educational authorities should allocate sufficient funding for inclusive education programs, monitor the implementation of teacher training initiatives, and ensure accountability for achieving inclusion goals.

6. Focus on Attitude and Awareness:

Programs aimed at sensitizing teachers about the benefits of inclusive education and promoting positive attitudes toward students with diverse needs should be emphasized.

7. Continuous Evaluation:

Regular assessment of teacher competencies, training effectiveness, and classroom practices should be conducted to identify gaps and improve professional development programs.

These recommendations aim to bridge the gap between policy intentions and classroom realities, ensuring that inclusive education becomes a practical and sustainable practice across schools in Chhatrapati Sambhajanagar District.

References

- Das, A. K., Kuyini, A. B., & Desai, I. (2013). *Inclusive education in India: Are the teachers prepared?* *International Journal of Inclusive Education*, 17(4), 1–16. <https://doi.org/10.1080/13603116.2012.693400>
- Government of India. (2009). *The Right of Children to Free and Compulsory Education Act, 2009*. Ministry of Law and Justice.
- Government of India. (2016). *The Rights of Persons with Disabilities Act, 2016*. Ministry of Social Justice and Empowerment.
- Government of India, Ministry of Education. (2018). *Samagra Shiksha: Integrated scheme for school education*. Author.
- Government of India, Ministry of Education. (2019). *UDISE+ report*. Author.
- Government of India, Ministry of Education. (2020). *National Education Policy 2020*. Author.
- Government of India, Ministry of Education. (2023). *National Curriculum Framework for School Education*. National Council of Educational Research and Training.
- Govinda, R., & Bandyopadhyay, M. (2010). *Social exclusion and school participation in India*. National University of Educational Planning and Administration.
- Jha, M. M. (2002). *Inclusive education for all: Schools without walls*. Heinemann.
- Julka, A. (2005). *Inclusive education in India*. National Council of Educational Research and Training.
- Julka, A. (2014). *Teacher education for inclusive education*. National Council of Educational Research and Training.
- National Council for Teacher Education. (2009). *National curriculum framework for teacher education*. Author.
- National Council for Teacher Education. (2014). *Norms and standards for teacher education programmes*. Author.
- National Council of Educational Research and Training. (2005). *National curriculum framework 2005*. Author.
- Nambissan, G. B. (2006). *Equity in education?* *Economic and Political Weekly*, 41(10), 101–108.
- Rehabilitation Council of India. (2015). *Revised course curriculum for special education programmes*. Author.
- Sharma, U., & Deppeler, J. (2005). *Integrated education in India: Challenges and prospects*. *Asia Pacific Journal of Teacher Education*, 33(2), 179–195. <https://doi.org/10.1080/13598660500122152>
- Singal, N. (2010). *Doing disability research in India*. *International Journal of Inclusive Education*, 14(4), 373–388. <https://doi.org/10.1080/13603110802504959>
- Singal, N. (2015). *Education of children with disabilities in India and Pakistan: An analysis of developments since 2000*. *Prospects*, 45(3), 345–359. <https://doi.org/10.1007/s11125-015-9353-3>
- Sarva Shiksha Abhiyan. (2011). *Framework for implementation*. Ministry of Human Resource Development

INCLUSIVE EDUCATION IN A GLOBALISED ERA: A THEORETICAL STUDY**Sarika S Patil***Department of Education, Shivaji University, Kolhapur.***Abstract**

Inclusive education has become a central concern for education systems across the world, especially in the context of rapid globalisation. It is now understood not only as a strategy for including learners with disabilities, but as a broader commitment to educational justice, participation, and respect for diversity. This theoretical paper explains inclusive education in a globalised era by bringing together key ideas from sociocultural theory, ecological systems theory, Universal Design for Learning, critical pedagogy, and intersectionality. It discusses how global policies, digital technologies, migration and linguistic diversity, and neoliberal market pressures reshape the meaning and practice of inclusion. The paper also identifies important tensions, such as balancing global rights with local cultures, standardisation with flexibility, and individual adjustments with systemic change. Finally, it presents implications for policy makers and teacher educators in the Indian context, and argues that inclusive education should be seen as a long-term social justice project that connects global aspirations with local realities.

Keywords: *Inclusive education; globalisation; sociocultural theory; ecological systems; Universal Design for Learning; critical pedagogy; intersectionality.*

Introduction

In recent years, globalisation has changed the nature of education through increased migration, digital connectivity, economic competition, and cultural exchange. In this changing context, inclusive education has moved from a narrow focus on disability to a wider concern with who belongs in mainstream schooling and whose knowledge is recognised.

International frameworks such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and Sustainable Development Goal 4 call for “inclusive and equitable quality education for all.” At the same time, each country and region has its own history, language, culture and resource conditions, so inclusive education cannot be implemented in a uniform way everywhere.

This paper is **theoretical**, not empirical. It aims to clarify conceptual foundations of inclusive education in a globalised era, and to draw out implications for policy and teacher education, particularly relevant for Indian higher education and school systems.

Objectives of the study

The main objectives of this study are:

1. To explain the major theoretical perspectives that support inclusive education beyond a narrow disability-centric model.

2. To analyse how globalisation reshapes ideas of difference, belonging, and access in education.
3. To identify key tensions and challenges in implementing inclusive education under global and local pressures.
4. To suggest implications for education policy and teacher education programmes in the Indian context.

3. Foundations of inclusive education

The segregation to multiple ways of knowing - Earlier special education models treated ability as a fixed, measurable quality of individuals and often placed “different” learners in separate schools or classes. This model assumed a single normal pattern of development and understood difference mainly as deficit.

Contemporary inclusive education draws more on constructivist and interpretivist approaches, which see knowledge as socially constructed and culturally situated, and recognise that learners bring different languages, cultures, bodies and experiences to the classroom. These differences can enrich collective learning when curriculum, pedagogy and assessment are designed to welcome multiple ways of knowing.

Sociocultural theory

Vygotsky’s sociocultural theory emphasises that learning happens through social interaction and through the use of cultural tools such as language. Concepts like the zone of proximal development and scaffolding show that learners can achieve more with appropriate support than they can alone.

From this view, many learning difficulties are not only inside the learner but also in the gap between teaching methods and the support available. Inclusive education therefore involves designing interactions and supports that help all learners, including those with disabilities and other marginalised identities, to participate meaningfully.

Ecological systems theory

Bronfenbrenner’s ecological systems theory explains that development is influenced by several interconnected levels: classroom and family (microsystem), their interconnections (mesosystem), wider institutions and policies (exosystem), cultural values and ideologies (macrosystem), and changes over time (chronosystem).

Inclusive or exclusive experiences in schools are produced through the interaction of all these levels. For example, classroom practice depends on teacher preparation, school leadership, community attitudes, funding structures and cultural beliefs about disability and difference. In a globalised world, international organisations and global technology platforms can also be seen as an additional “global” layer influencing local practice.

Universal Design for Learning (UDL)

Universal Design for Learning proposes that curricula and environments should be designed from the start to respond to learner diversity, rather than retrofitting supports after barriers appear. It calls for multiple means of representation, multiple means of action and expression, and multiple means of engagement.

UDL shifts attention from “fixing” learners to removing barriers in the environment and curriculum. Digital technologies can support UDL through flexible formats, text-to-speech, captions and adaptive learning pathways, but these tools must be used critically and equitably.

Critical pedagogy

Critical pedagogy views education as a political process that can either reproduce or challenge social inequalities. It encourages teachers and learners to develop critical consciousness about structures of oppression and to engage in dialogical, problem-posing education.

Applied to inclusive education, critical pedagogy asks whether reforms simply insert marginalised learners into existing structures or transform those structures to value diversity genuinely. It highlights how ableism, racism, classism, sexism and linguistic domination can persist inside schools even when inclusive language is used.

Intersectionality

Intersectionality explains that learners experience overlapping identities such as disability, gender, caste/class, language, and migration status, and that these identities interact to produce specific patterns of advantage or disadvantage.

Within inclusive education, intersectionality reminds us that “students with disabilities” are not a homogeneous group. A disabled learner from a marginalised caste, minority language or rural background may face different barriers from a disabled learner who is from a dominant or urban group. Policies and practices must therefore attend to multiple identities together, not only to disability.

4. Globalisation and inclusive education

Globalisation has created strong international frameworks that promote inclusive education, such as the UNCRPD and the education-related Sustainable Development Goals. These frameworks provide rights-based language and indicators that encourage states to move towards inclusive systems.

However, some scholars warn that translating complex realities into numerical indicators can simplify local conditions and pressures. There is also a danger that models developed in the Global North are copied into the Global South without enough adaptation to local contexts, which can reproduce epistemic and policy inequalities.

Digital technologies

Digital technologies offer both new opportunities and new risks for inclusion. Assistive technologies such as screen readers, captioning, and communication devices can make learning materials more accessible for a wide range of learners. Online platforms can reach learners who cannot easily attend physical schools.

At the same time, unequal access to devices, connectivity and digital skills produces digital divides that map onto existing social inequalities. Algorithmic systems used for assessment or personalised learning may carry hidden biases, so technology must be designed and used with ethical and inclusive considerations.

Migration, language and culture

Global migration has increased cultural and linguistic diversity in many school systems. Inclusive education must therefore address language, culture, refugee status and other bases of marginalisation in addition to disability.

Culturally responsive pedagogy treats learners' cultural and linguistic backgrounds as assets and incorporates diverse knowledge into curricula. Multilingual education can support both home languages and official or global languages, but it requires trained teachers, appropriate materials and supportive policies, which are often limited in practice.

Neoliberal reforms and marketisation

Neoliberal reforms introduce market principles into education through school choice, competition, standardised testing and private provision. While these are often promoted as ways to improve efficiency or raise quality, they may also increase inequalities and reduce commitments to social solidarity.

From an inclusive education perspective, such policies can discourage schools from enrolling learners who need more support, as they may be seen as "risk" for performance indicators. This creates tension between inclusion as a public good and education as a private commodity.

5. Key tensions in implementing inclusive education

Inclusive education in a globalised era involves managing several ongoing tensions:

- **Universal rights vs local cultures:** Rights-based frameworks emphasise inclusion for all, but implementation must respect local cultures, community perspectives and indigenous knowledge systems.
- **Standardisation vs flexibility:** Common standards and assessments support accountability, but strict uniformity can limit the flexibility needed to respond to learner diversity and local conditions.
- **Technology opportunities vs digital divides:** Technologies can expand access, but they can also deepen inequalities if not accompanied by investment in infrastructure and inclusive design.
- **Individual adjustment vs systemic change:** Providing individual accommodations is important, yet long-term inclusion requires changes in school structures, teacher education, resource allocation and social attitudes.

These tensions do not have simple solutions; they require continuous reflection, dialogue and context-specific responses.

6. Implications for policy

For policy makers in India and similar contexts, the theoretical discussion suggests several directions:

1. **Rights-based but context-sensitive policy:** Policies should affirm inclusive education as a right while allowing flexibility for context-specific models that respect local cultures and languages.
2. **System-level planning:** Inclusion should be built into curriculum frameworks, assessment policies, funding mechanisms and school accountability systems, not treated as a separate special education programme.

3. **Investment in infrastructure and technology:** To realise the inclusive potential of digital tools, policy must address infrastructure gaps, ensure affordable connectivity, and promote accessible design standards.
4. **Support for multilingual and culturally responsive education:** Policies should encourage development of multilingual resources and culturally relevant pedagogy, particularly in regions with high linguistic and cultural diversity.
5. **Participatory policy processes:** Disabled persons, marginalised communities, teachers and students should be involved in designing and reviewing inclusive education policies, in line with UNCRPD principles.

7. Implications for teacher education

Teacher education institutions have a crucial role in preparing educators for inclusive practice:

1. **Integrating inclusion across the curriculum:** Inclusive education should be mainstreamed into all courses, not confined to one optional paper.
2. **Preparing teachers for diversity:** Pre-service and in-service programmes should build competencies in handling diverse classrooms, including disability, language, culture, gender and socio-economic differences.
3. **Developing skills in UDL and differentiated instruction:** Teacher education should emphasise practical strategies for Universal Design for Learning, flexible assessment and classroom organisation.
4. **Cultivating critical and reflective practice:** Teachers need to reflect on their own beliefs and biases and understand how power and exclusion operate in schools, drawing on critical pedagogy and intersectionality.
5. **Encouraging collaboration:** Training should promote collaborative work among teachers, special educators, counsellors, families and community organisations to support inclusion at multiple levels.

8. Conclusion

This theoretical paper has discussed inclusive education in a globalised era through multiple lenses: sociocultural theory, ecological systems theory, Universal Design for Learning, critical pedagogy and intersectionality. Together, these perspectives show that inclusion is not only about classroom techniques or individual adjustments, but about broader questions of knowledge, relationships, systems and power. Globalisation brings both opportunities and challenges for inclusive education through international policy frameworks, digital technologies, increased migration and neoliberal reforms. Policy makers and educators must negotiate tensions between universal rights and local realities, standardisation and flexibility, technological promise and digital inequalities, and individual supports and structural change. For India and similar contexts, inclusive education can be understood as a long-term social justice project that seeks to build education systems where all learners, across multiple identities, can belong, participate and succeed. Achieving this goal requires coherent policy, responsive teacher education, adequate resources and ongoing critical reflection grounded in the theoretical insights discussed here.

Reference

- Advani, L. (2002). *Education: A Fundamental Right of Every Child Regardless of His/Her Special Needs*. *Journal of Indian Education*.
- Julka, A. (2014). *Including Children with Special Needs: Primary Stage*. NCERT.

- Agarwal, S., & Kumar, A. (2021). *Inclusive education in India: Challenges, opportunities and policy perspectives*. *University News*, 59(14), 21–27.
- Department of Empowerment of Persons with Disabilities. (2016). *Rights of Persons with Disabilities Act, 2016*. Ministry of Social Justice and Empowerment, Government of India.
- Government of India. (2009). *The Right of Children to Free and Compulsory Education Act, 2009*. Ministry of Law and Justice.
- Government of India. (2020). *National Education Policy 2020*. Ministry of Education.
- Ministry of Education. (2022). *National Curriculum Framework for School Education (NCF-SE) 2022*. Government of India.
- National Council of Educational Research and Training. (2005). *National Curriculum Framework 2005*. NCERT.
- National Council of Educational Research and Training. (2023). *National Curriculum Framework for School Education 2023*. NCERT.
- National Council of Educational Research and Training. (2006). *Position Paper: National Focus Group on Education of Children with Special Needs*. NCERT.
- Rehabilitation Council of India. (2020). *Revised Teacher Education Framework for Inclusive Education*. RCI.
- University Grants Commission. (2021). *Guidelines for Accessibility and Inclusive Education in Higher Education Institutions*. UGC.
- Das, A., Kuyini, A. B., & Desai, I. P. (2013). *Inclusive education in India: Are the teachers prepared?* *International Journal of Special Education*, 28(1), 27–36.
- MHRD. (2018). *Samagra Shiksha: An integrated scheme for school education*. Ministry of Human Resource Development, Government of India.

INCLUSIVE EDUCATION POLICY AND SYSTEMS**Sanjay Shivaji Chavan***Research Student, Department of Education, Shivaji University, Kolhapur**E-mail: chavansanjay6183@gmail.com***Dr. Sushil Kumar***Professor Smt. Putalaben Shaha College of Education,**Sangli, E-mail: sushilk186@gmail.com***Abstract**

Inclusive education is a transformative approach that aims to provide equitable and quality education to all learners regardless of their socio-economic background, disability, gender, language, ethnicity, or learning differences. It emphasizes participation, accessibility, and equal opportunity within mainstream educational systems. This research paper critically examines inclusive education policies and systems with special reference to global frameworks and the Indian context. The study analyzes policy evolution, legislative provisions, systemic structures, implementation mechanisms, challenges, and future directions. The paper highlights the importance of inclusive pedagogical practices, teacher preparedness, infrastructure development, and policy monitoring for achieving Sustainable Development Goal 4 (Quality Education). The findings suggest that while inclusive education policies exist at national and international levels, effective implementation requires systemic reforms, capacity building, and socio-cultural transformation.

Keywords: Inclusive Education, Education Policy, Special Needs Education, Educational Equity, RTE Act 2009, NEP 2020, Universal Design for Learning, Educational Inclusion Systems, SDG 4, Disability Rights

Introduction

Inclusive education has emerged as a fundamental principle in modern educational philosophy and policy. It is rooted in the belief that education is a basic human right and must be accessible to all individuals without discrimination. Traditionally, education systems separated children with disabilities or special needs into special schools. However, contemporary approaches emphasize integration and inclusion within mainstream classrooms.

The concept gained global momentum after the UNESCO Salamanca Statement (1994), which advocated education for all children in regular schools. Inclusive education ensures that differences among learners are respected and accommodated through flexible curriculum, adaptive teaching methods, and supportive systems.

In the Indian context, inclusive education has gained policy support through legislations such as the Right of Children to Free and Compulsory Education Act and the Rights of Persons with Disabilities Act. More recently, the National Education Policy 2020 emphasizes equitable and inclusive education as a core objective.

This research examines how inclusive education policies are structured, implemented, and evaluated within education systems.

Objectives of the Study

1. To examine the conceptual framework of inclusive education.
2. To analyze international and national inclusive education policies.
3. To evaluate the structure of inclusive education systems.
4. To identify challenges in implementation.
5. To suggest strategies for strengthening inclusive education systems.

Research Methodology

This study is based on qualitative and descriptive research methods. Secondary data has been collected from policy documents, government reports, UGC-CARE listed journals, books, and international educational frameworks. Comparative analysis has been used to examine global and Indian inclusive education systems.

Conceptual Framework of Inclusive Education

Inclusive education is based on:

- Equity and Equality
- Social Justice
- Human Rights Approach
- Universal Design for Learning (UDL)
- Child-centered pedagogy

It shifts from a medical model of disability to a social model, where barriers are removed from the system rather than fixing the learner.

Inclusive education is fundamentally based on the principles of equity and equality, and it is deeply connected with social justice and the human rights approach. Equality ensures that every learner is given the same opportunities to access education, while equity recognizes that different students have different needs and therefore require varied levels of support to achieve similar learning outcomes. Inclusive education goes beyond mere physical placement of children with disabilities or marginalized backgrounds in regular classrooms; it seeks to remove barriers related to disability, gender, caste, language, socio-economic status, and culture. From a social justice perspective, inclusive education challenges discrimination, exclusion, and systemic inequalities within the education system. It promotes fairness, participation, and respect for diversity. The human rights approach views education as a basic and inalienable right of every child, not a privilege. It emphasizes dignity, non-discrimination, and equal participation, aligning with international human rights frameworks and national constitutional values. Thus, inclusive education aims to transform schools into supportive, flexible, and learner-centered environments where every child feels valued, respected, and empowered to reach their full potential.

International Policy Framework UNESCO Salamanca Statement (1994)

Promoted inclusive schools as the most effective means to combat discrimination.

The UNESCO Salamanca Statement (1994) is one of the most significant international documents promoting inclusive education worldwide. Adopted at the World Conference on

Special Needs Education held in Salamanca, this statement emphasized that every child has a fundamental right to education and must be given the opportunity to achieve and maintain an acceptable level of learning. It strongly affirmed that schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic, or other conditions. The Salamanca Statement introduced the principle that ordinary schools with an inclusive orientation are the most effective

means of combating discriminatory attitudes, building inclusive societies, and achieving education for all. It called upon governments to adopt inclusive education as a matter of law and policy, to enroll all children in regular schools unless there are compelling reasons for doing otherwise, and to provide appropriate support services to meet diverse learning needs. The framework highlighted the importance of child-centered pedagogy, flexible curricula, teacher training, community involvement, and collaboration among stakeholders. It marked a major shift from the medical model of disability to a rights-based and social model approach, recognizing diversity as a normal aspect of human development. The Salamanca Statement continues to influence global education policies and remains a foundational document in the advancement of inclusive and equitable quality education worldwide.

UN Convention on the Rights of Persons with Disabilities (2006)

Recognizes inclusive education as a legal right.

Sustainable Development Goal 4

Ensures inclusive and equitable quality education for all.

Inclusive Education Policy in India Right to Education Act (2009)

Ensures free and compulsory education for children aged 6–14.

The Right to Education (RTE) is a fundamental human right that ensures every child has access to free, compulsory, and quality education without discrimination. It is based on the principle that education is essential for the full development of human personality, dignity, and social participation. At the global level, the right to education is recognized under Article 26 of the Universal Declaration of Human Rights and further strengthened by various international conventions. In the Indian context, the Right of Children to Free and Compulsory Education Act was enacted in 2009 and came into force in 2010, making education a fundamental right under Article 21A of the Constitution of India. This Act guarantees free and compulsory education to all children between 6 and 14 years of age. It emphasizes equity, inclusion, and non-discrimination, ensuring that children from disadvantaged and economically weaker sections receive equal educational opportunities. The Act also sets norms for infrastructure, teacher qualifications, pupil-teacher ratios, and school management to maintain quality standards. The Right to Education plays a crucial role in promoting social justice, reducing inequalities, empowering marginalized communities, and strengthening democratic values. By recognizing education as a legal entitlement rather than a privilege, it aims to create an inclusive society where every child can develop their potential and contribute meaningfully to national development.

Rights of Persons with Disabilities Act (2016)

Expands categories of disabilities and mandates inclusive schooling.

The Rights of Persons with Disabilities Act (RPwD Act, 2016) is a landmark law in India that strengthens and expands the rights and protections available to persons with disabilities. Enacted to align Indian law with the principles of the Convention on the Rights of Persons with Disabilities (UNCRPD), this Act replaces the earlier 1995 legislation and adopts a rights-based rather than a charity-based approach toward disability. One of its major features is the expansion of recognized disabilities from 7 to 21 categories, including conditions such as autism spectrum disorder, cerebral palsy, intellectual disability, specific learning disabilities, multiple sclerosis, and acid attack victims. The Act emphasizes equality, dignity, and non-discrimination, ensuring that persons with disabilities enjoy the same rights as others in areas such as education, employment, healthcare, political participation, and access to justice. In the field of education, it mandates inclusive education and requires government and private institutions to provide reasonable accommodation, individualized support, and barrier-free access. It also reserves 4% of government jobs and 5% seats in higher educational institutions for persons with benchmark disabilities. The Act provides for accessibility standards in public buildings, transportation, and information and communication technology to promote independent living. Additionally, it establishes regulatory bodies at central and state levels to monitor implementation and safeguard rights. Overall, the Rights of Persons with Disabilities Act, 2016 represents a significant shift toward social justice, empowerment, and full participation of persons with disabilities in all aspects of social, economic, and political life in India.

National Education Policy (2020)

Emphasizes Gender Inclusion Fund, Special Education Zones, and barrier-free access.

Structure of Inclusive Education Systems

Inclusive systems include:

- Curriculum Adaptation
- Individualized Education Plans (IEPs)
- Resource Rooms
- Special Educators
- Teacher Training Programs
- Assistive Technologies

Role of Teachers in Inclusive Systems

Teachers are central to inclusive education. Required competencies:

- Differentiated Instruction
- Classroom Management
- Collaborative Teaching
- Continuous Assessment

Teacher training institutions must incorporate inclusive pedagogy.

Role of Teachers in Inclusive Education Systems

Teachers play a central and transformative role in building effective inclusive education systems. Inclusive education is not only about placing children with diverse needs in regular classrooms, but about ensuring their meaningful participation, learning, and overall

development. Teachers act as facilitators, mentors, and change agents who create a supportive and respectful classroom environment where diversity is valued rather than viewed as a challenge.

One of the primary roles of teachers in inclusive education is to adopt child-centered and flexible teaching strategies. They must recognize that learners differ in abilities, learning styles, socio-economic backgrounds, languages, and interests. Therefore, teachers need to use differentiated instruction, multisensory methods, cooperative learning, and continuous assessment techniques to address diverse learning needs.

Preparing individualized educational plans (IEPs) for children with disabilities and providing reasonable accommodations are also important responsibilities.

Teachers also play a vital role in promoting equity and social justice within the classroom. They must prevent discrimination, bullying, and exclusion by fostering a culture of empathy, respect, and collaboration among students. By encouraging peer support and teamwork, teachers help develop positive attitudes toward diversity and inclusion.

Professional competence and continuous training are essential for inclusive practices. Teachers need knowledge about special education, assistive technologies, classroom management, and legal provisions related to inclusion. Collaboration with special educators, parents, counselors, and community members further strengthens inclusive systems.

Moreover, teachers serve as advocates for the rights of all learners. They ensure that every child receives equal opportunities to participate, express themselves, and achieve their potential. In this way, teachers are not just instructors but key pillars in transforming schools into inclusive, equitable, and democratic learning communities.

Infrastructure and Accessibility

Inclusive systems require:

- Barrier-free buildings
- Ramps and elevators
- Braille materials
- Sign language interpreters
- Digital accessibility tools

Challenges in Implementation

1. Lack of trained teachers
2. Inadequate infrastructure
3. Social stigma
4. Policy-practice gap
5. Limited funding
6. Large classroom sizes

Comparative Analysis (India and Global Context)

Developed countries focus on assistive technology and teacher training, while developing countries struggle with infrastructure and policy implementation gaps.

Findings

- Policies are progressive but implementation is uneven.

- Teacher preparedness remains a major challenge.
- Monitoring mechanisms are weak.
- Community awareness significantly influences success.

Recommendations

1. Strengthen teacher education programs.
2. Increase budget allocation.
3. Develop monitoring frameworks.
4. Encourage community participation.
5. Promote inclusive digital technologies.

Conclusion

Inclusive education is not merely a policy requirement but a social transformation agenda. Effective inclusive education systems demand collaborative efforts among policymakers, educators, parents, and communities. Sustainable implementation requires structural reforms, accountability mechanisms, and continuous professional development.

Achieving inclusive education aligns with global human rights commitments and ensures that no child is left behind.

References

- UNESCO. (1994). *Salamanca Statement on Principles, Policy and Practice in Special Needs Education*. Paris: UNESCO.
- Government of India. (2009). *Right of Children to Free and Compulsory Education Act*.
- Government of India. (2016). *Rights of Persons with Disabilities Act*.
- Ministry of Education. (2020). *National Education Policy 2020*. United Nations. (2015). *Sustainable Development Goal 4*.

A PRISMA BASED SYSTEMATIC LITERATURE REVIEW ON INCLUSION OF DIGITAL COMPETENCY IN EDUCATION

Ms. Shruti Sudhir Kumbhar

*Research Scholar, Department of Education Shivaji University
Kolhapur*

Dr. V. S. Khandagale

Research Guide, Department of Education Shivaji University Kolhapur

Abstract

The present study systematically reviews the literature on digital competency, Digital Competency Inventory (DCI), and the inclusion of digital competency in education. A Systematic Literature Review (SLR) was conducted using the PRISMA 2020 framework. Relevant studies published between 2013 and 2025 were identified through searches in Scopus, Web of Science, ERIC, Google Scholar, SpringerLink, ScienceDirect, UNESCO reports, and OECD publications. After screening and eligibility assessment, 58 studies were included for qualitative synthesis. The review reveals that digital competency is a multidimensional construct comprising information literacy, communication and collaboration, digital content creation, problem-solving, digital safety, ethical technology use, and competencies related to emerging technologies such as artificial intelligence. The findings further indicate that the integration of digital competency in education has become essential for digital transformation, lifelong learning, workforce readiness, and effective participation in digital societies. The review also identifies a growing need for systematic assessment of digital competency through scientifically developed Digital Competency Inventories.

The study highlights a significant gap in the availability of comprehensive and contextually relevant Digital Competency Inventories capable of assessing digital competency across multiple dimensions. The present study synthesizes literature on digital competency, its educational inclusion, and the need for Digital Competency Inventory development within a single PRISMA-based review.

Keywords: Digital Competency, Digital Competency Inventory, Digital Literacy, Educational Technology, Artificial Intelligence, PRISMA, Systematic Literature Review

INTRODUCTION

The twenty-first century has witnessed unprecedented technological advancement that has transformed educational, professional, social, and economic systems worldwide. Digital technologies have fundamentally altered the ways in which individuals access information, communicate, learn, create knowledge, solve problems, and participate in society. The increasing use of online learning platforms, mobile technologies, cloud computing, artificial intelligence (AI), social media, and digital information systems has generated new opportunities for innovation and learning while simultaneously creating new demands for digital skills and competencies.

In contemporary society, participation in educational and professional activities increasingly depends on the ability to use digital technologies effectively, critically, responsibly, and creatively. Consequently, digital competency has emerged as a fundamental

twenty-first-century competency. Ferrari (2013) conceptualized digital competency as the confident, critical, and responsible use of digital technologies for learning, work, and participation in society. Similarly, Redecker (2017) emphasized that digital competency includes information literacy, communication and collaboration, digital content creation, safety, and problem-solving.

International organizations have repeatedly highlighted the importance of digital competency for educational transformation and lifelong learning. UNESCO (2023) identifies digital competency as essential for responsible engagement with digital technologies and artificial intelligence, while the Organisation for Economic Co-operation and Development (OECD, 2021) recognizes digital skills as critical competencies for future workforce participation, innovation, and sustainable social development. In India, the National Education Policy (2020) emphasizes technology integration, digital learning, and digital literacy as central components of educational reform. The growing significance of digital competency has also generated increasing interest in systematic assessment of digital readiness. Educational institutions, policymakers, and researchers require reliable mechanisms for identifying existing competency levels, developmental needs, and competency gaps. This has led to the emergence of Digital Competency Inventories as structured assessment tools designed to measure digital knowledge, skills, attitudes, and readiness across multiple dimensions.

Despite extensive research on digital literacy, educational technology, and technology integration, the literature remains fragmented across different conceptual frameworks and assessment approaches. Considerable variation exists in how digital competency is defined, measured, and incorporated into educational systems. Therefore, a systematic synthesis of existing evidence is necessary to understand the conceptual foundations of digital competency, the role of Digital Competency Inventory, and the relationship between digital competency and its inclusion in education. The present study employs a PRISMA-based Systematic Literature Review to synthesize current knowledge regarding digital competency and its integration within educational contexts.

RESEARCH METHODOLOGY

Research Design

The study adopted a Systematic Literature Review (SLR) methodology guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) framework (Page et al., 2021). PRISMA provides a transparent and rigorous procedure for identifying, screening, selecting, and synthesizing relevant literature.

Data Sources

Secondary data were collected from the following academic databases and scholarly sources:

Scopus

Web of Science

ERIC

Google Scholar

Springer Link Science

Direct UNESCO

Publications OECD

Reports

Search Strategy

The literature search was conducted using combinations of the following keywords: Digital

Competency

Digital Competence

Digital Literacy

Digital Skills

Digital Readiness

Digital Competency Assessment

Digital Competency Inventory

Technology Integration

Digital Education

Artificial Intelligence in Education

Educational Technology

Inclusion Criteria and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
published between 2013 and 2025.	duplicate records.
peer-reviewed journal articles, reports, or scholarly publications.	conference abstracts without full papers.
available in full-text format.	editorials, blogs, newsletters, or opinion pieces.
written in English.	focused solely on technical software development without educational relevance.
addressed digital competency, digital literacy, digital skills, digital competency assessment, educational technology, or technology integration.	Didn't address digital competency or educational applications.
included educational implications or educational contexts.	not available in full text.

PRISMA Screening Process

Table 1. PRISMA Flow Summary

PRISMA Stage	Number of Records
Records identified through database searching	80
Additional records identified through other sources	15
Total records	95
Duplicate records removed	10
Records	85
Records excluded	53
Full-text articles assessed for eligibility	32
Full-text articles excluded	2
Studies included in qualitative synthesis	30

Source: Own elaboration

Characteristics of Selected Studies Included in the Systematic Review (N = 30)**Table 2. Characteristics of Selected Studies**

Sr. No	Author	Year	Country / Region	Study Focus
1	Ng	2012	Australia	Conceptualization of digital literacy and digital competency
2	Ferrari	2013	European Union	Development of DigComp Framework
3	Voogt, Erstad, Dede & Mishra	2013	International	21st-century competencies and digital learning
4	Means, Toyama, Murphy, Bakia & Jones	2014	USA	Effectiveness of online and blended learning
5	Kampylis, Punie & Devine	2015	European Union	Digital-age learning framework
6	Ilomäki, Paavola, Lakkala & Kantosalo	2016	Finland	Digital competency as an educational concept
7	Luckin, Holmes, Griffiths & Forcier	2016	United Kingdom	Artificial Intelligence in education
8	Redecker	2017	European Union	DigCompEdu framework
9	van Laar, van Deursen, van Dijk & de Haan	2017	Netherlands	Digital skills and workforce competencies
10	UNESCO	2018	International	ICT Competency Framework
11	Law, Woo, de la Torre & Wong	2018	International	Global framework for digital literacy
12	Spante, Hashemi, Lundin & Algers	2018	Sweden	Digital competency and digital literacy review

13	Zawacki-Richter, Marín, Bond & Gouverneur	2019	International	AI applications in higher education
14	Holmes, Bialik & Fadel	2019	International	AI and future learning environments
15	Tomczyk	2020	Poland	Digital safety competencies
16	Ministry of Education, Government of India	2020	India	National Education Policy and technology integration
17	OECD	2021	International	Digital education outlook
18	UNESCO	2021	International	Future of education and digital learning
19	Europea Commission	2022	European Union	DigComp 2.2 framework
20	Mohamed	2022	International	AI integration in mathematics education
21	UNESCO	2023	International	Generative AI in education and research
22	Li	2024	China	AI-supported educational innovation
23	Chiu	2024	Hong Kong	Digital competency and educational technology
24	Bond, Khosravi, De Laat, Bergdahl & Negretti	2024	International	Digital transformation in education
25	Mishra & Koehler	2016	USA	TPACK framework and technology integration
26	Erstad	2015	Norway	Digital learning and educational practices
27	Punie & Redecker	2017	European Union	Digital competence policy framework
28	Siddiq, Hatlevik, Olsen, Throndsen & Scherer	2016	Norway	Assessment of digital competence

29	Hatlevik	2017	Norwayh	Development of digital competence
30	Carretero, Vuorikari & Punie	2017	European Union	DigComp implementation and assessment

Source: Compiled by the researcher from selected studies included in the systematic review

CONTENT ANALYSIS

Evolution and Conceptualization of Digital Competency

The concept of digital competency has undergone significant transformation over the past three decades. Early discussions primarily focused on **computer literacy**, which referred to the ability to operate computers and use basic software applications. As internet technologies became widespread, the concept evolved into **digital literacy**, emphasizing information retrieval, evaluation, and communication through digital media (Ng, 2012). The publication of the European Commission's DigComp Framework marked a significant milestone in the conceptual development of digital competency. Ferrari (2013) defined digital competency as the confident, critical, and responsible use of digital technologies for learning, work, and participation in society. This perspective expanded the concept beyond technical proficiency and incorporated cognitive, social, and ethical dimensions.

Subsequently, Redecker (2017) and the European Commission (2022) further refined the concept by identifying five key domains: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. These frameworks recognized digital competency as a multidimensional construct necessary for functioning in contemporary digital societies. Recent developments in artificial intelligence, machine learning, and generative AI have further expanded the scope of digital competency. UNESCO (2023) argues that individuals must develop competencies related to AI literacy, data ethics, algorithmic awareness, and responsible engagement with intelligent technologies. Consequently, digital competency is now understood as a dynamic and evolving construct that extends beyond traditional technology use and encompasses critical engagement with emerging digital environments.

Digital Competency Frameworks and Dimensions

The literature reveals the existence of several influential frameworks designed to conceptualize and assess digital competency. Among these, the DigComp Framework developed by the European Commission remains one of the most widely adopted models. UNESCO's ICT Competency Framework emphasizes digital knowledge, pedagogical integration, technology application, and ethical technology use (UNESCO, 2018). OECD (2021) identifies digital skills as essential competencies required for participation in the knowledge economy and future workforce environments.

The reviewed studies consistently indicate that digital competency is multidimensional. Van Laar et al. (2020) identified critical thinking, creativity, communication, collaboration, information management, and problem-solving as key components of twenty-first-century digital skills. Ng (2012) further categorized digital competency into technical, cognitive, and

socio-emotional dimensions. The convergence of these frameworks suggests that digital competency involves not only technological proficiency but also the ability to critically evaluate information, collaborate effectively, create digital content, and navigate digital environments safely and ethically.

Inclusion of Digital Competency in Education

The integration of digital competency into education has become a global priority. Educational institutions are increasingly expected to prepare individuals for participation in digitally connected societies and technology-driven workplaces. UNESCO (2021) emphasizes that digital competency should be embedded within educational curricula to promote equitable access to knowledge and lifelong learning opportunities. Similarly, OECD (2021) highlights the role of digital competency in supporting employability, innovation, and economic development.

The National Education Policy (2020) in India advocates the integration of technology and digital learning to enhance educational quality and accessibility. The policy recognizes digital literacy and digital competency as essential elements of educational transformation. Means et al. (2014) reported that online and blended learning environments can positively influence learning outcomes when learners possess adequate digital competencies. Therefore, the inclusion of digital competency in education is not merely a technological initiative but a strategic effort to prepare individuals for lifelong learning and participation in digital societies.

Digital Competency Assessment and Inventories

As digital competency becomes increasingly important, systematic assessment has emerged as a critical concern for educators, policymakers, and researchers. The literature indicates that effective competency development requires reliable and valid assessment mechanisms capable of identifying existing competency levels and developmental needs. Several assessment tools have been developed to measure digital literacy, technology readiness, and digital skills. However, many existing instruments focus on limited dimensions or specific contexts. Some assess technical proficiency, while others emphasize information literacy or technology adoption.

The review reveals significant variation in assessment approaches, resulting in challenges related to comparability, validity, and contextual applicability. Consequently, there is a growing demand for comprehensive Digital Competency Inventories capable of assessing multiple dimensions of digital competency simultaneously. The literature suggests that such inventories can support educational planning, training programmes, policy implementation, and future research. Furthermore, comprehensive assessment tools can provide valuable insights into competency gaps and guide interventions aimed at enhancing digital readiness.

Digital Competency and Emerging Technologies

The emergence of artificial intelligence has introduced new dimensions to digital competency. AI-powered tools are increasingly being integrated into educational systems to support personalized learning, adaptive assessment, learning analytics, and intelligent tutoring systems. Holmes et al. (2019) argue that effective participation in AI-supported learning environments requires competencies beyond traditional digital literacy. Individuals must be

capable of understanding AI-generated outputs, evaluating algorithmic recommendations, and addressing ethical concerns related to AI technologies.

Similarly, UNESCO (2023) emphasizes the importance of AI literacy as a critical component of digital competency. AI literacy involves understanding the capabilities and limitations of AI systems, recognizing algorithmic bias, protecting privacy, and engaging responsibly with intelligent technologies. The reviewed studies indicate that future digital competency frameworks and inventories must incorporate competencies related to AI awareness, data ethics, and responsible technology use. Failure to address these emerging dimensions may limit the relevance of digital competency assessment in rapidly evolving technological environments.

DISCUSSION

The findings of this systematic review demonstrate that digital competency has evolved into a comprehensive twenty-first-century competency essential for participation in educational, professional, and social contexts. The reviewed literature consistently indicates that digital competency extends beyond technical skills and encompasses cognitive, social, ethical, and technological dimensions. The review further reveals a strong relationship between digital competency and educational transformation. Educational systems worldwide increasingly recognize the importance of preparing individuals to function effectively within technology-rich environments. Consequently, digital competency has become an essential educational outcome rather than merely a supplementary skill.

Another significant finding concerns the growing complexity of digital environments. The emergence of artificial intelligence, big data, and digital ecosystems requires individuals to possess higher-order competencies related to critical thinking, ethical reasoning, and technological adaptability. This observation supports UNESCO's (2023) assertion that digital competency frameworks must continuously evolve to address emerging technological realities. Perhaps the most significant finding of the present review relates to the assessment of digital competency. Although numerous frameworks and competency models exist, the literature reveals a lack of comprehensive, standardized, and contextually adaptable assessment instruments. Existing measures often vary considerably in scope, dimensions, and methodological approaches.

This finding highlights the need for the development of scientifically validated Digital Competency Inventories capable of providing reliable assessment across multiple competency domains. Such instruments can support educational planning, policy formulation, competency development initiatives, and evidence-based decision-making.

RESEARCH GAP

The systematic review reveals that substantial research has been conducted on digital competency, digital literacy, educational technology, artificial intelligence, and technology integration. Numerous frameworks have been proposed to conceptualize digital competency, and educational systems increasingly recognize its importance. However, comparatively fewer studies have focused on the development and validation of comprehensive Digital Competency Inventories capable of systematically assessing digital competency across multiple domains.

Existing assessment instruments often differ in theoretical foundations, dimensions assessed, scoring procedures, and contextual applicability.

Furthermore, the rapid evolution of digital technologies and artificial intelligence has generated new competency requirements that are not adequately represented in many existing assessment tools. Consequently, there remains a need for a reliable, valid, and contextually relevant Digital Competency Inventory capable of measuring contemporary digital competency comprehensively.

LIMITATIONS OF THE REVIEW

The review was limited to studies published in English.

Only literature published between 2012 and 2025 was considered.

The review focused primarily on educational implications of digital competency.

Some relevant studies may not have been indexed in the selected databases.

FUTURE RESEARCH DIRECTIONS

Development of comprehensive Digital Competency Inventories.

Validation of Digital Competency Inventories across diverse contexts.

Integration of AI literacy within digital competency assessment frameworks.

Longitudinal studies examining digital competency development.

Cross-cultural validation of digital competency assessment tools.

Investigation of digital competency and lifelong learning outcomes.

Development of digital competency benchmarks for educational systems.

Exploration of emerging technologies and their implications for competency assessment.

CONCLUSION

The present PRISMA-based systematic literature review synthesized evidence regarding digital competency, Digital Competency Inventory, and the inclusion of digital competency in education. The findings demonstrate that digital competency has emerged as a multidimensional and indispensable competency required for effective participation in contemporary digital societies. The review highlights the increasing integration of digital technologies and artificial intelligence within educational systems and underscores the necessity of developing competencies related to information literacy, communication, collaboration, content creation, problem-solving, digital safety, ethical technology use, and AI awareness.

Despite the existence of several digital competency frameworks, the literature reveals a continuing need for comprehensive and scientifically validated Digital Competency Inventories capable of systematically assessing digital competency across multiple domains. Such assessment instruments can contribute significantly to educational planning, policy development, competency enhancement initiatives, and evidence-based decision-making.

The findings of this review therefore provide a strong theoretical and empirical foundation for future research focusing on the development and validation of Digital Competency Inventories. In an increasingly technology-driven world, the availability of reliable assessment tools will play a crucial role in supporting digital readiness, educational transformation, and lifelong learning.

Bibliography

- Bond, M., Khosravi, H., De Laat, M., Bergdahl, N., & Negretti, R. (2024). A meta systematic review of artificial intelligence in education: A call for increased focus on pedagogy and digital competence. *Computers and Education: Artificial Intelligence*, 5, 100171. <https://doi.org/10.1016/j.caeai.2023.100171>
- Carretero, S., Vuorikari, R., & Punie, Y. (2017). DigComp 2.1: The digital competence framework for citizens with eight proficiency levels and examples of use. Publications Office of the European Union. <https://doi.org/10.2760/38842>
- Chiu, T. K. F. (2024). Digital competence and technology-enhanced learning in the era of artificial intelligence: A systematic review. *Education and Information Technologies*, 29(2), 1457–1482. <https://doi.org/10.1007/s10639-023-11999-2>
- Erstad, O. (2015). Educating the digital generation: Exploring media literacy for the twenty-first century. *Nordic Journal of Digital Literacy*, 10(1), 56–71.
- European Commission. (2022). The digital competence framework for citizens (DigComp 2.2): With new examples of knowledge, skills and attitudes. Publications Office of the European Union. <https://doi.org/10.2760/115376>
- Ferrari, A. (2013). DIGCOMP: A framework for developing and understanding digital competence in Europe. Publications Office of the European Union.
- Hatlevik, O. E. (2017). Examining the relationship between students' ICT self-efficacy and digital competence. *Computers and Education*, 118, 107–119. <https://doi.org/10.1016/j.compedu.2017.11.015>
- Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial intelligence in education: Promises and implications for teaching and learning. Center for Curriculum Redesign.
- Ilomäki, L., Paavola, S., Lakkala, M., & Kantosalo, A. (2016). Digital competence—An emergent boundary concept for policy and educational research. *Education and Information Technologies*, 21(3), 655–679. <https://doi.org/10.1007/s10639-014-9346-4>
- Kampylis, P., Punie, Y., & Devine, J. (2015). Promoting effective digital-age learning: A European framework for digitally competent educational organisations. Joint Research Centre, European Commission.
- Law, N., Woo, D., de la Torre, J., & Wong, G. (2018). A global framework of reference on digital literacy skills for indicator 4.4.2. UNESCO Institute for Statistics.
- Li, Y. (2024). Artificial intelligence-supported educational innovation and digital competence development: Emerging perspectives from educational research. *Educational Technology Research and Development*, 72(1), 101–118.
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence unleashed: An argument for AI in education*. Pearson Education.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2014). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record*, 115(3), 1–47.
- Ministry of Education, Government of India. (2020). National Education Policy 2020. Government of India.
- Mohamed, M. A. (2022). Artificial intelligence applications in mathematics education: A systematic review. *International Journal of Educational Technology*, 19(2), 34–52.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>
- Organisation for Economic Co-operation and Development. (2021). 21st-century readers: Developing literacy skills in a digital world. OECD Publishing. <https://doi.org/10.1787/a83d84cb-en>
- Organisation for Economic Co-operation and Development. (2021). OECD digital education outlook 2021: Pushing the frontiers with artificial intelligence, blockchain and robots. OECD Publishing. <https://doi.org/10.1787/589b283f-en>

- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- Punie, Y., & Redecker, C. (2017). European framework for the digital competence of educators: DigCompEdu. Publications Office of the European Union.
- Redecker, C. (2017). European framework for the digital competence of educators: DigCompEdu. Publications Office of the European Union.
- Siddiq, F., Hatlevik, O. E., Olsen, R. V., Throndsen, I., & Scherer, R. (2016). Taking a future perspective by learning from the past: A systematic review of ICT literacy assessment studies. *Educational Research Review*, 19, 58–84. <https://doi.org/10.1016/j.edurev.2016.05.002>
- Spante, M., Hashemi, S. S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education*, 5(1), 1519143. <https://doi.org/10.1080/2331186X.2018.1519143>
- Tomczyk, Ł. (2020). Skills in the area of digital safety as a key component of digital literacy among teachers. *Education and Information Technologies*, 25(1), 471–486. <https://doi.org/10.1007/s10639-019-09980-6>
- UNESCO. (2018). ICT competency framework for teachers (Version 3). UNESCO.
- UNESCO. (2021). Reimagining our futures together: A new social contract for education. UNESCO Publishing.
- UNESCO. (2023). Guidance for generative AI in education and research. UNESCO.
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2020). Determinants of 21st-century digital skills and digital competence: A systematic literature review. *Computers in Human Behavior*, 72, 577–588. <https://doi.org/10.1016/j.chb.2017.03.010>
- Voogt, J., Erstad, O., Dede, C., & Mishra, P. (2013). Challenges to learning and schooling in the digital networked world of the twenty-first century. *Journal of Computer Assisted Learning*, 29(5), 403–413. <https://doi.org/10.1111/jcal.12029>
- Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education: Where are the educators? *International Journal of Educational Technology in Higher Education*, 16(39), 1–27. <https://doi.org/10.1186/s41239-019-0171-0>