USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN PRESENTDAY EDUCATION

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Abstract

The ‘Information and Communication Technology’, widely known as the ICT, is playing an increasingly fundamental part in classroom learning. ICT can be defined as a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.” It implies the technology which consists of electronic devices and associated human interactive materials that enable the user to employ them for a wide range of teaching - learning processes in addition to personal use. It includes computers, the internet, broadcasting technologies such as radio and television and telecommunication devices. It has been proved convincingly that ICT can be used to enhance the strategy of teaching and learning to the optimum benefit of students, the real beneficiaries of this enterprise.

Key Words: ICT, asynchronous learning, HEI.

Technology has become an integral part of modern life. It has slowly and steadily encroached upon every sphere of human affair. Technology has not only entered the field of education but has reformed as well as revolutionized the conventional conceptions about teaching, learning and evaluation. One may like it or not, technology is destined to play a pivotal role in today’s classroom. Earlier, a classroom was conceived to be a place offering traditional, one-way education devoid of innovation. The ‘Chalk and Talk’ method was the exclusive recourse for the teacher. Students played to perfection the role of patient listeners and silence in the classroom symbolizes the success of teaching! But the scenario has changed drastically in the recent times.
The ‘Information and Communication Technology’, widely known as the ICT, is playing an increasingly fundamental part in classroom learning. ICT can be defined as a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.” It implies the technology which consists of electronic devices and associated human interactive materials that enable the user to employ them for a wide range of teaching - learning processes in addition to personal use. It includes computers, the Internet, broadcasting technologies such as radio and television and telecommunication devices. ICT is a potentially powerful tool for extending educational opportunities to previously underserved constituencies—remote or rural population, groups traditionally excluded from education due to cultural or social reasons such as the downtrodden untouchables, the ethnic minorities, women and persons with various disabilities.

One defining feature of ICT is its ability to transcend time and space. ICT makes possible asynchronous learning, or learning characterized by a time lag between the delivery of instruction and its reception by learners. Online course materials, for example, may be accessed 24 × 7, in accordance with the need and demand of the user. ICT-based educational delivery (viz. educational programming broadcast over radio or television) also dispenses with the need for the learner and the instructor to be present in one physical location. Additionally, certain types of ICTs, such as teleconferencing technologies, enable instruction to be received simultaneously by multiple learners. Thanks to the ICT, teachers and learners no longer have to rely solely on printed books and other materials in physical media housed in academic libraries, available in limited quantity. With the advent of internet and the World Wide Web, a wealth of learning materials in almost every subject can be easily accessed from anywhere at any time.

It has been proved convincingly that ICT can be used to enhance the strategy of teaching and learning to the optimum benefit of students, the real beneficiaries of this enterprise. This primarily involves smart use of computer, browsing the web and learning with interactive whiteboards. A modern substitute to the age-old blackboard, the whiteboard works with a projector and computer. It can be used for a variety of activities such as software and multimedia demonstrations, presenting information and preparing digital notes for the convenience of the learners. The whiteboard makes it easier for the teacher to impart knowledge to students; it focuses the attention of the class, and helps to involve students directly in classroom activities. Teachers can explain the basic as well as advanced concepts in an effective manner and
students can also experiment with virtual situations in order to understand the evolution. For example, teachers can use the digital simulations and models to teach the movement of the particles that we cannot see with naked eyes. Besides that, technology can be used to improve teaching and learning and help our students be successful through the epistemic games. Through the epistemic games, students can learn how to use the important concept to solve the real world problems. Parental involvement is another factor that can improve the teaching and learning and help our students be successful. Nowadays, most parents have extremely busy schedules and cannot always help their child with homework. Through the technology, they can visit the website of the institute to keep themselves abreast of the recent in-campus developments, contact teachers via email and websites and can even check their child’s attendance and grades.

Responding to a new economic order in the shape of a knowledge economy where ICTs and globalization are twinned is a big challenge. Educational technology initiatives form part of institutional responses to the ongoing social, economic, political and technological changes. They are sometimes affected by the rapid pace of technological change and by developments within a new and emerging profession. The institutions imparting traditional education, for instance, often face challenges relating to poor infrastructure, scarcity of trained staff, limited access to professional networks, resource constraints, etc. The government and the apex funding agencies like the UGC need to cope up with these challenges.

Globalization and technological change processes that have accelerated in tandem over the past years have created a new global economy powered by technology, fueled by information and driven by knowledge. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. Today’s HEIs cannot remain mere venues for the transmission of a prescribed set of information from teacher to student over a fixed period of time. In fact, they must promote the acquisition of knowledge and skills that make possible continuous learning over the lifetime. Alvin Toffler defines an “illiterate” of the 21st century, not the one who cannot read and write, but the one who cannot “learn, unlearn & relearn” (BrainyQuote.com: 25 Jan. 2013).

ICT focuses on the acquisition, storage, manipulation, management, transmission or reception of data required for the educational purpose. For example, the information about students' records, their admissions, updates of their auricular and co-curricular activities. It deals with smooth exchange of information. It encompasses Hardware approach like use of machines
and materials. Software approach like use of methodologies and strategies of teaching learning and Systems approach that uses the management technology concerned with the systematic organization of the hardware and the software. Different software packages are available for the use in different department of education; e.g. library software, administration software, software related to managing the entire teaching learning process. It is the support material in the hands of the human resource aimed at enhancement of the quality of education. ICT in education thus comprises of the application of science of On-line, Offline learning with the help of the computer technology.

When used appropriately, ICT definitely helps expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by making teaching and learning an engaging, active process connected to real life. However, the effective integration of ICT into the educational system is a complex and multifaceted process that involves conscious and continuous advancement in technology, curriculum and pedagogy, institutional readiness to welcome changes, teacher competencies and long term financing. Against all odds, the ICT has undoubtedly proved to be a competent tool for educational change and reform.

In education, use of ICT has become imperative to improve the efficiency and effectiveness at all levels and in both formal and non-formal settings. Education even at school stage has to provide computer instruction. Profound technical knowledge and positive attitude towards this technology are the essential prerequisites for the successful citizens of the coming decades.

It can be used for the following purposes:
• To disseminate information in different subjects;
• To facilitate communication with the students;
• To use electronic gadgets to develop spatial awareness and psychomotor control;
• To use the online resource like email, chat, discussion forum to support collaborative writing and sharing of information;
• To facilitate video-conferencing or other form of teleconferencing to involve wide range of students from distant geographic areas;
• To process administrative and assessment data;
• To exchange and share ideas among teachers for the professional growth;
• To carry out internet-based research.

The most salient advantages of ICT in education can be listed down as follows:
• Easy and speedy access to information
• Availability of authentic and updated data
• Establishing connection between geographically dispersed regions
• Inculcating inquisitiveness and thinking ability in students
• Fostering global perspective among the students
• Respect for varied nature of human life and acculturation
• Facilitation of learning
• Catering to the individual differences
• Wider range of communication media
• Wider learning opportunities for students

To conclude, it can be stated that the application of ICT in education has proved to be a boon to the present generation of learners. It has provided many options to them to opt for the course of their choices. Many online courses are available for them as per their aptitude and liking. Students can evaluate their own progress through different quizzes, ready to use online tests. This can ensure fulfillment of the employment required in the job market thus minimizing the problem of unemployment. It can also provide more efficient and effective citizens to the society.

References: