



Information technology: A basic component for teaching, learning and research

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Abstract

Information Technology has become the heyday of the educational world. To contribute effectively, efficiently and responsibility to the nation and global community, the educationists and policy makers have to inculcate an e-educational ambience which will generate a community of e-students and e-teachers who will be able to build a vibrant multicultural learning environment founded on the value based academic principles. The present paper is an attempt to outline that the information technology is the fundamental and basic component of Teaching, Learning and Research. Nobody can deny the significance of Information Technology in this techno savvy world as a person without it feels himself or herself technologically illiterate.

Keywords: information technology, nation and global community, teaching, learning, research

Introduction

Information Technology has become the breath of Modern Education System which cannot survive without its usage and applicability. This era of change has brought a significant effect on the way how teachers, students and researchers perform in their professional and vocational field. The traditional approach towards teaching methods has been challenged by these new and emerging technologies and the way to impart education through books is passing under the serious negotiation.

“It is not about the technology; it’s about sharing knowledge and information, communicating efficiently, building learning communities and creating a culture of professionalism in schools. These are the key responsibilities of all educational leaders.” – Marion Ginapolis

The knowledge pool is becoming wider and broader with the help of e-education, e-classroom and e-study materials. Information technology is playing vital role in the curriculum designing, higher education and research area. The online data, books, journals, publications have attempted to uproot the limited and narrow style of class based teaching. The present paper will deal the benefits of IT in these three areas particularly.

- 1) Teaching
- 2) Learning
- 3) Research

It has become appallingly obvious that our technology has exceeded our humanity–Albert Einstein

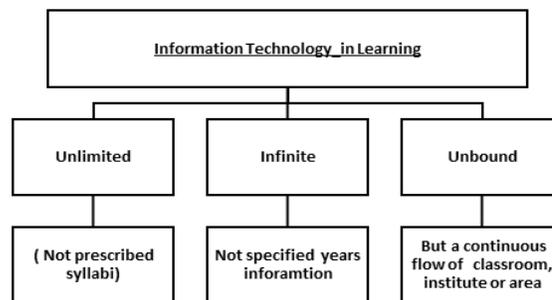
Role of IT in Learning

“We need to embrace technology to make learning more engaging. Because when students are engaged and they are interested, that’s where learning takes place. We need technology in every classroom and in every student and teacher’s hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world.” - David Warlick

Learning is not limited and pertained to classroom teaching. The rapid communication and increased access to IT at institute, at work and even at home have made learning a

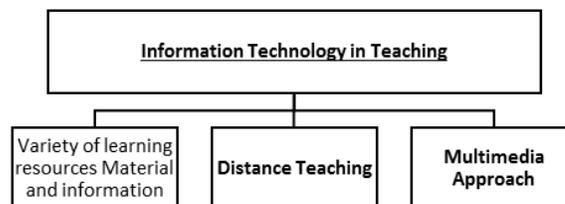
lifelong activity – a continuous process of information, examination and evaluation.

Information Technology has brought tremendous change in the learning process over the night. Now learning has become “Anywhere, Anything Learning” rather than limited learning. It has made access to the open universities, open education programmes and open courseware. It has deconstructed the idea of centralized learning based on the old methods of specified courses, books, classes and teachers. In this era of computer and www networks the pace of learning is too fast and rapid that anyone can sit in a room at home and study irrespective of time and place, one can study whether it is a day or night, whether he or she is in India or Australia. So time, distance and space are now those icebergs which have been melted due to the heat of IT.



Role of Information Technology in Teaching

In the field of Teaching, IT has equipped the teachers with the paraphernalia of Audio-visual aids. Now the Teachers are using smart boards, PPTs, Audio-Visual aids making their teaching methods most effective and impressive.



It has brought a revolutionary change in the methodology of teaching. Now the teachers access more updated and well informative resources rather than to be dependent on some handful of books and specified curriculum. They can enhance their teaching skills on the anvil of computers. There is boundless treasure opened to them and they can disseminate this treasure of education with the help of audio and visual aids. Now computers, laptop, and other e-resources have become the most integral part of their teaching bag. A teacher without this bag and baggage of IT is being looked upon as techno illiterate. They are supposed to impart education with the usage of multimedia technologies to communicate their ideas, design and teach their projects and assignments accordingly.

“There can be infinite uses of the computer and of new age technology, but if teachers themselves are not able to bring it into the classroom and make it work, then it fails.” - Nancy Kassebaum.

Now the days have come when the traditional institutes with teacher-student ratio, classrooms and books are being replaced very fast by the teachers community working on internets, keyboards and smart boards. The system of notes making on copies and books is being altered by MS Wordpad and Notepad. Even the offices in these institutes are replete with computers and type writing alongwith manuscripts have become obsolete and out of fashion now. Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road-Stewart Brand.

Teachers are using multimedia abundantly to make their teaching more effective and applicable. Audio visual education including use of devices and materials in preparations, records, audio tapes, transparencies on projectors, PPT on topics are being prepared by the modern day teachers. A lot of Research has been conducted to reveal the fact that audio visual education has increased the growth and development index among students, as they prefer this mode of teaching more than the ancient methods of teaching because it has been proven scientifically that visuals cast and leave a permanent and more consistent mark on our memory than hearing from teacher. So, this model of teaching based on two modalities of vision and hearing is much more recommendable not only in the primary wings but also in higher education also.

The role of distance teaching and learning has opened up the new possibilities, both on individual level and on institutional level, the expansion of learning, making it a part time effort. This term Distance education and teaching can be understood under various heads such as individual study, external study, practical study and the most common correspondence study. The students who are deprived of the boon of regular teaching due to their circumstantial ambience acquire this opportunity which saves their cost on travel, books and also saves their precious time.

“Learners in the internet age don't need more information. They need to know how to efficiently use the massive amount of information available at their fingertips – to determine what's credible, what's relevant, and when its useful to reference.” - Anna Sabramowicz

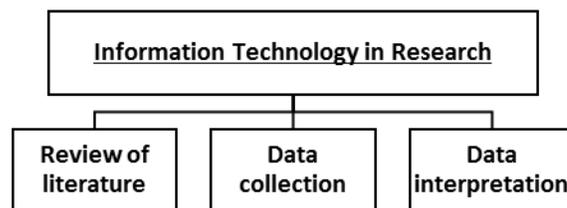
The programme of e-education and e-classes have also brought a significant change in the field of education and especially meant for those students who are bereft of education due to their geographical remoteness, family

circumstances and individual disability. Thus in the field of teaching various modes, new technologies, innovative strategies are going to be designed and framed. The day is not far away, when Indian teachers and students will be recognized on the world platform and get their due.

“Education is evolving due to the impact of the Internet. We cannot teach our students in the same manner in which we were taught. Change is necessary to engage students not in the curriculum we are responsible for teaching, but in school. Period” – April Chamberlain

Role of IT in Research

This information technology is most indispensable, especially, in the field of research. The basic nature of computer as a problem solver machine serves a lot for the global generation. It has always assisted to solve the problems faced by mankind. A Researcher cannot think of without computer, be it in the field of language, literature, Arts, Medical and all the Multidisciplinary fields. IT has become the main search engine for the Research purposes. The computers assist the researcher in the different phases of their research projects.



To the researcher, the use of IT has enabled to do away with marathon task of library visiting and exploring matter by providing the facility of internet through which the libraries of the whole world can be explored while sitting at home. It seems like miracle of fairy tales or of some wonderland. The Review of literature on any topic of research has become relevantly easier and cheaper. A basic understanding of the computer helps a person to appreciate the utility of this powerful tool.

First we thought the PC was a calculator. Then we found out how to turn numbers into letters with ASCII — and we thought it was a typewriter. Then we discovered graphics, and we thought it was a television. With the World Wide Web, we've realized it's a brochure—Douglas Adams

To the researcher, the use of computer to collect data, to analyze complex data and to interpret it has made complicated research designs practical, more innovative and more effective. Thus IT has by now has become an indispensable part of research students in the physical and behavioural sciences as well as in the humanities. Thus IT has become the most significant tool of education and development in every segment in 21st century.

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