IMPACT OF INFORMATION TECHNOLOGY ON TEACHING-LEARNING PROCESS

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Abstract

Technology has a vital role in everywhere. But with the advent of computers in education, it becomes easier for teachers to impart knowledge and for students to acquire it. The usage of technology has made the process of teaching and learning all the more enjoyable. Today the changes brought about by new technology had a significant effect on the life of people living in every corner of the globe. Traditional process of teaching and learning in education has been replaced by new and emerging technologies. Information Technology is having a major impact on all areas of education- curriculum, methods of teaching, classroom learning etc. Rapid communication with increased access of Information Technology (IT) in home, work place and educational institutions has make education a life-long process. Information technology helps in promoting opportunities of knowledge sharing throughout the world. These can help teachers and students in gaining up-to-date information and knowledge. For effective teaching and learning right information is necessary. Information technology is a set of tools that can help the right people with the right information at the right time. This paper highlights the importance of IT in educational sector, impact of IT on classroom teaching, advantages and disadvantages of IT.
Keywords: impart knowledge, Information Technology (IT)

1. Introduction

Education technology means the use of all kind of modern media and materials for maximising the learning experiences. Education technology is suggested by expert as one of the potential means of impairing education effectively and efficiently. Previously, teachers used to teach in rigid, formal and stereo-typed ways. Education was then conceived as the process of transmitting knowledge and ideas. Student used to get by heart whatever was given by the teacher or textbook. They often could not understand what was taught and were expected to reproduce at the time of examination. Pupils were silent audience and could not make any logical queries or independent thinking of their own. Today, the student is not considered as an empty vessel to be filled in by facts and figures. They are now expected to use so many media and materials and to get learning experience from all sides. Education is regarded as a process of interaction and interpersonal communication. The modern teacher has to help, to guide and facilitate the learner's development. The teacher has to inspire and motivate the young leaners and assist the adult learners in their quest for knowledge and skills.

History of Use of Technology in Education

Educational technology could be traced back to the emergence of very early tools, e.g., paintings on cave walls. But usually its history starts with the introduction of educational films (1900s) or Sidney Presser's mechanical teaching machines in the 1920s. V79.2 7 The first large scale usage of new technologies can be traced to US WWII training of soldiers through training films and other mediated materials. Today, presentation-based technology, based on the idea that people can learn through aural and visual reception, exists in many forms, e.g., streaming audio and video, or PowerPoint presentations In the 1990s, there are a variety of schools that have Computer-based learning (CBL) system. They are frequently based on constructivist and cognitivist learning theories, these environments focused on teaching both abstract and domain-specific problem solving learning. The 2000s emergence of multiple media and ubiquitous technologies which gave a new impulse to

situated learning theories favouring learning-in-context scenarios. Students are now growing up in a digital age where they have constant exposure to a variety of media.

Why technology is used in Education Industry? Economists identify three factors that lead to growth which is based on increased human capacity.

Capital deepening- the ability of the workforce to use equipment that is more productive than earlier versions

- **Higher quality labour** - a more knowledgeable work force that is able to add value to economic output Technological innovation - the ability of the workforce to create, distribute, share and use of the new knowledge. These three productivity factors serve as the basis for three complementar y, somewhat overlapping, approaches that connect education policy with economic development.

- **The Technology literacy approach**-Increasing the extent to which new technology is used by students, citizens and the work force by incorporating technology skills into the school curriculum.

- The Knowledge deepening approach -Increasing the ability of students, citizens, and the workforce to use knowledge to add value to society and the economy by applying it to solve complex,real-world problems.

- The Knowledge Creation approach -Increasing the ability of students, citizens, and the workforce to innovate, produce new knowledge, and benefit from this new knowledge."Our aim was to encourage far higher levels of active student engagement, where knowledge is obtained by sharing, problem-solving and creating, rather than by passive listening. This classroom enables both active engagement and equal access" by lead researcher, Liz Burdon Britain's Durham University (2012).

Technology as tools of Teaching

- There are various types of technologies currently used in classrooms. Among these are:

- **Computer in the classroom:** Having a computer in the classroom is an asset to any teacher. With a computer in the classroom, teachers are able to demonstrate a new lesson, present new material, illustrate how to use new program**,and show new information on websites.**

- **Class blogs and Wikipedia:** There are a variety of Web 2.0 tools that are currently being implemented in the classroom. Blogs allow for students to maintain a running dialogue, such as a journal, thoughts, ideas, and assignments that also provide for student comment and reflection. Wikipedia, an online encyclopaedia, are more group focused to allow multiple members of the group to edit a single document and create a truly collaborative and carefully edited finished product.

- **Wireless classroom microphones:** Noisy classrooms are a daily occurrence, and with the help of microphones, students are able to hear their teachers more clearly. Students learn better when they hear the teacher clearly.

- **Mobile devices:** Mobile devices such as tablet or smart phone can be used to enhance the experience in the classroom by providing the possibility for professors to get feedback.

- **Interactive Whiteboards:** An interactive whiteboard that provides touch control of computer applications. These enhance the experience in the classroom by showing anything that can be on a computer screen. This not only aids in visual learning, but it is interactive so the students can draw, write, or manipulate images on the interactive whiteboard.

- **Digital video-on-demand:** Digital video eliminates the need for in-classroom hardware and allows teachers and students to access video clips immediately by not utilizing the public Internet.

- **Online media:** Streamed video websites can be utilized to enhance a classroom lesson

- **Online study tools:** Tools that motivate studying by making studying more fun or individualized for the student.

- **Digital Games:** The field of educational games and serious games has been growing significantly over the last few years. The digital games are being provided as tools for the classroom and have a lot of positive feedback including higher motivation for students. There are many other tools being utilized depending on the local school board and funds available at their disposal.

2. Objectives: The present study has the following objectives

Obj.1: To know the importance of Information Technology in educational sector.
Obj.2: To know the impact of Information Technology on classroom teaching.

3. Methodology: The data of this qualitative study was collected from secondary source like different research

journals, books, websites etc.

Findings: According to the objectives of the study findings are discussed below

Obj.1 : To know the impor tance of Infor mation Technology in educational sector. Today IT serves as a useful tool in enhancing the teaching skills and learning ability. Audio-visual education can be easily provided with the help of IT. Computer is a useful tool in all areas of teaching- learning. Multi-media technologies are used in schools, colleges to communicate ideas between students and teachers. Today technology-base education is attainable at the universities of developed countries. Smart schools have made a leap in virtual learning. On-line learning and remote training are among new education forms in the new century. By evolving the learning environments at the beginning of 21 st century, individuals and societies put heavy responsibility on the shoulder of educational institutions and their traditional structures by their increasing need of education. Today various informational and communicational technologies have the ability of facilitating the education and learning process. Also there is evidence stating that information technologies provide effective and inflexible methods for professionally developing teachers. Now a day IT facilitates group teaching. Students are using mobile, recording, play back system, motion pictures, film-strips, television, audio-tapes, records, teaching machines, computers and video-discs to communicate and displaying information.

Obj. 2: To know the impact of Information Technology on classroom teaching.
IT has a very significant influence on classroom-learning. Most of the schools now a day's deliver knowledge and information with teaching aids like slide projector, over-head projector and LCD projector. Sometimes audio-visual tapes, floppy disks and CD-ROMS are also used by teachers to provide instruction on various disciplines. Computers play a major role in creating learning material. Besides this, other types of information such as clipart, animation, graphics, music, voice and live interaction makes the classroom teaching very effective. The use of multi-media computer serves a fruitful purpose for training individual student. Compared to TV it helps to control the response of instruction transfer process according to the grasping capacity of the learners so as to make purposive and situation specific interface with the available information package. This creates an identical condition to the classroom on computer monitor without engaging a teacher and the given package can be browsed again and again by the learner to match with his or her own learning process. Today billions of students are using internet. Through Google, MSN or Yahoo students can get various kinds of information with sudden click of a mouse. Internet has reduced the cost of buying books. It enables students to download books and learning materials from different websites, along with movies, games, pictures and so on which assist in their all round development. Besides these, the internet provides useful opportunities for students to access electronic libraries, e-book catalogues, scientific documents, and academic works. It also helps teachers, professors, research scholars to publish their articles, journals on websites. Launching the internet in the classrooms allows teachers to use on-line resources, educational videos, programs, visual aids and so on. Internet also serves the opportunity of virtual classrooms which is a web-based environment that allows students to participate in life training events without the need to travel. Students listen lectures, ask questions, and receive feedback just as they do in conventional classroom. Student can perform it from anywhere if he or she has internet connection. Thus it also serves the purpose distance education. The Internet in general and the World Wide Web in particular are important enablers of both formal and informal education. Information Technology has brought about revolutionary changes in the education of children with special needs. Modern computer technology has opened the gates f or classroom communication, education of the children like visual impaired, hearing impaired, learning disabled, etc. It enables children with visual impairment to use Braille computers to take notes and tests in the class and prepare assignments and paper at home. A special apparatus named Cranmer Abacus helps them to learn number concepts and perform calculations.

4. Conclusion

In today's fast changing world, most of the jobs involve the use of computers and advanced technologies. We all need to be computer savvy to keep in pace with the moving world. We live in a technologically advanced world where it has become necessary for us to be familiar with the latest technologies and inventions. So, computer technology has become an integral part of school and college curriculum.

References:

[1] Kozak, S. (2005). The role of information technology in the profit and cost efficiency improvements of the banking sector, Journal of Academy of Business and Economics, February,2005.

[2] Lucey,T.(2005). Management information systems. 9 th Edition, London.

[3] Milne, A. (2006). What is in it for us? Network effects and bank payment innovation, Journal of Banking & Finance,30(6): 1613-1630.

[4] Oliner, S. and Sichel, D. (2000). The Resurgence of growth in the late 1990s: Is information technology the story?,Journal of Economic Perspectives 14, 3-22.

[5] Aggarwal, A. (2000). Web-Bsed Learning and Teaching Technologies: Opportunities and Challenges.London; Idea Group Publishing.