E-Learning dependability on Information, Communication and Technology

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Abstract:

The use of information and communication technology i.e. ICT in education is a comparatively new experience.ICT is defined as a set of human interactive tools, electronic devices and resources used for communication. ICT services and features variously support teaching, learning and a sort of activities in education.ICT makes the use of information technology and communication technology. In this paper we are discussing education methodology incorporate with ICT.E-learning through ICT is an upcoming era of teaching learning process.

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INTRODUCTION:

A new global economy is created because of globalization and technological transition which is powered by technology, fuelled by information and driven by knowledge. Objective of educational institutions is significantly impacted with the arrival of new global economy. As you know the half-life of information prolong to minimize and access to information keeps on growing exponentially, schools cannot survive merely transforming a pre-designed set of information from teacher to student .Rather school must encourage the attainment of knowledge and skills that makes possible continuous learning over lifetime. Information and communication technologies (ICTs) – which include radio and television as well as newer digital technologies such as computers and internet have been proven commanding tools of educational transform i.e. we are using ICT in e-learning[1]. When different ICT used aptly,it can help to expand access to education, reinforce the relevance of education to the increasingly digital workplace and raise educational quality by helping make teaching and learning into an active practice linked to real life.

E-Learning refers to the use electronic media and ICT in education which facilitate people to learn anytime and anywhere. E-learning is broadly encompassing of all forms of educational technology in learning and teaching. E-Learning is broadly synonymous with online education, virtual education, technology enhanced learning, mobile learning etc. E –learning can take account of training, the delivery of just- in- time information and direction from experts. In the real world, people have jobs to do and resources are limited. To overcome the limitations of time, distance and resources the learning program will need the power of technology. To prop up different learning needs, you will require different e-learning methods like asynchronous e-learning which include self-paced courses and discussion groups, synchronous e-learning: audio and video conferencing, chat, shared whiteboard application sharing etc. and learning management systems: learning content management systems and knowledge management.

USE OF ICT IN EDUCATION

ICT in education includes any hardware and software technology and processes such as audio and video tape, satellite TV and computer based training etc. that contribute in the educational information processing. In the context of present era, the focal point of ICT is computer technology with its hardware like, personal computer machine, infrastructure essential for setting up Internet facility and also software like CD-ROM including various programmed packages, e-learning strategies. ICT in education is any technology that deals with the attainment, management and exchange of information or data required for educational purpose. With the encroachment of ICT, education does not remain restricted within the four walls of educational institutions. Students who are living in different parts of the world can learn together by using online and offline resources which would result in stirring learning experience. By using ICT in education means there is improvement in educational technology or ICT has become vital for improving the efficiency and effectiveness at all levels in both formal and non-formal settings[1]. Because of ICT in education, access of information is possible within seconds by connecting to the internet and surfing through web pages. Updated data is easily available because of use of ICT. Applications of latest ICT in education has provided many options to the learners for choosing the course of their own interest and aptitude. Deep technical understanding and positive stance towards this technology are the essential prerequisites to the successful citizens of the coming decade.

Components of ICT-IT, CT

IT "Information technology" is making use of hardware and software for efficient management of information for social, economic and cultural upliftment. It is very much useful for allocation of resources, professional development of teachers, distance education and research etc.[1]

CT

"Communication technology" is the activity of designing, constructing and maintaining communication system. Communication between individuals or groups is made possible with this technology. it is useful for the physically absent pupils at the same place.
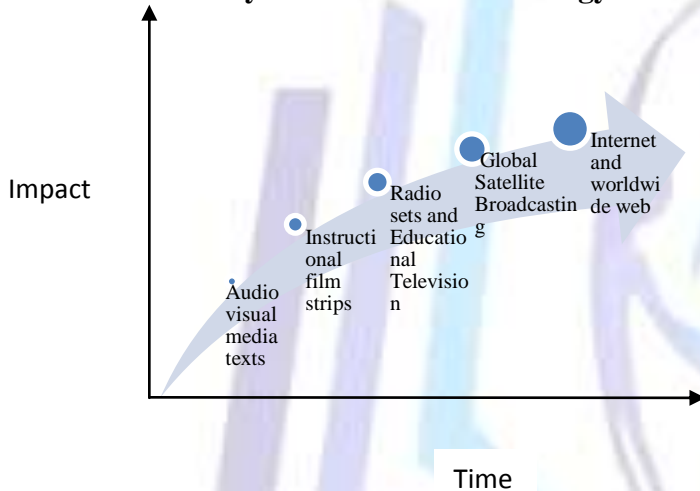
CONCEPT OF EDUCATIONAL TECHNOLOGY

The term "technology", implies the application of science to art. We evolve a technology called "technology of instruction" by applying the science of learning and communication to teaching. In modern education, two forces, one is physical science and electronics and the other is behavioural science operated on the process of instruction and these forces have contributed to the evolution and growth of educational technology.

The "technology of education" is evolved when the interaction of physical science with education along with the traditional aids, tools and hardware's such as paper, ink, books, radio, films and modern hardware like computer, space satellites and language laboratories etc [1].

"Educational technology" is use of technology in education which means the use of equipment to imply the concept of technology for improving the effectiveness of learning. It is the application of IT & CT in education. Today, technology of education is being developed with the aim not only of making education more widely accessible, but also of improving the quality of education which is already available.

History of Education Technology with ICT:

The 19th century paved in the arrival of effective technological development including the production of textbooks, use of blackboards and improvements in writing implements like pen and ink. Photography was invented, giving a way to a movement called "Visual Instruction". In the beginning of 20th century, visual media was broadly accepted. Then moved towards the publication of audio-visual media texts.[2] Audiovisual education became a top movement during the period immediately following World War I. After the decade of world war, filmstrips, motion pictures, audio recordings, and radio programming started to be broadly integrated in educational settings. Classroom began to utilize of film and 16-mm projectors lent an aura of modernization to classrooms, becoming symbols of progressive teaching practices. Radio and television have been used widely as educational tools in 20th century. There are three common approaches direct class teaching, school broadcasting and general educational programming to the use of radio and TV broadcasting in education. To provide the education over the globe, satellites are used and this satellite technology began with activities that started in mid of 20th century such as INTELSAT. Early bird was the first communication satellite lunched for INTELSAT to the development of communication globally. Satellite provides many services in the area of communication. Satellite provide a transfer data from one point on the globe to another which may be in the form of a phone call, an internet signal ,a television signal or a radio broadcast. Satellite based communication technology can provide improvements to both formal and informal educational opportunities.[5]

In late 20th century the development of the Internet i.e. as one of the mode of ICT has become a factor of global significance. The Internet in Education to investigate main aspects of Internet usage in education and, consequently, to develop an information system, accumulating data in the domain. The advantages provided by the Internet in organization of cooperation are predestined by the very nature of the Network. As it is known, the World Wide Web was formed as an environment specifically designed for collaborative work on the documents by collectives of researchers territorially remote from each other. The further development of Internet technologies has given an opportunity for joint use and editing of textual materials, schedules, audio and video-sequences. In 21st century we will be making use of virtual reality, digital text books and m-learning through ICT [3].

ANALYSIS:

Textual Era	Digital Era
Video conferencing is not possible.	Video conferencing can be used for teaching purpose.
Virtual classroom is not possible	There is use of virtual classroom for teaching.
The use of White board is not done.	White board is used in this.
Teaching through blackboard is less interactive method.	Teaching through electronic media is very innovative and interactive method.
Knowledge sharing is localized.	Knowledge sharing is globalised.
Traditional teaching method gives just knowledge.	Smart class or online class gives knowledge as well as increases the curiosity about the subject.
Resources are limited.	A number of resources are available
One teacher can give lecture only at one place at a time.	By using virtual reality concept, one teacher can give the lecture at a number of places.
Through reading, it takes time to build the concepts.	Learning through video helps to understand the concept easily.
There is no connection between the scholars of different countries.	Scholars can collaboratively research on new problems at one platform.
Workload is more on the teachers.	Less workload on teachers.
No existence of such technologies	Diversion of learning is shifting to M-Learning.

Future scope of learning: Learning is shifting from e-learning to m-learning then to ubiquitous learning i.e. u-learning. Mobile learning refers to the use of mobile or wireless devices for the purpose of learning when you are on the move while u-learning involves learning in an environment where "all the students have access to a variety of digital devices and services including computers connected to the internet and mobile computing devices, whenever and wherever they need them". The physical devices will be disappeared and learning becomes dynamic or flexible in future.[4]

Conclusion:

In this paper, we introduced the concept of ICT i.e. information and communication technology and their use in e-learning. We also described the history of educational technology with ICT. From the analysis, we conclude that there is no existence of learning without digital media. It is a foremost requirement of today's era.

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