EXPLORING NEWER TECHNOLOGIES IN DISTANCE LEARNING

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ABSTRACT

Education plays significant role in shaping the life of an individual and building a knowledge society. Disseminating knowledge among masses is major concern for teachers and policy makers over the years. It is particularly a challenge when it comes to the distance mode of education. Trained teachers helps in better management of education and delivery of knowledge. Teacher training programs aimed at skill development, curriculum transaction, evaluation, behavior modification through regular feedback. Teacher training program are concerned with development of the skill of human management, content delivery and evaluation of achievement of curriculum objectives. The technology helps teachers in utilizing modern accessories in their teachings to inculcate suitable skills and competencies among the students. Educational technology has changed the curriculum transaction drastically with the application of modern day gadgets and e- resources. Technology can motivate the students by gaining their attention and supporting their manual operations during high level learning. Technology can illustrate real world relevance through high level learning and engaging students through productive work. Educational technology can have software which supports instruction, production and administration. Technology can help students learn and sharpen their informational skills. The application of technology has many issues to ponder over such as societal, educational, cultural, equity, legal and ethical. New technology offers many opportunities and challenges before the teacher and the learner. It assists in building flexible learning environment, adaptable assessment option and supports people with disabilities to harness their skill and utilize their talent. Recent advancements in the technology and easy availability of gadgets have offered abundant opportunities to utilize them in the distance environment.

Keywords: *Print Technology, Web Technology, Audio Conferencing, New Technologies.*

INTRODUCTION

Distance learning is the process of transferring knowledge to learners (students) who are separated from the instructor (teacher) by time and/or physical distance .Distance learning" and "distance education" are terms used synonymously in education and learning technologies. It is deemed that distance learning has been a method of teaching and learning for many individuals for at least one hundred years (Moore & Kearsley, 1996) starting with print technology and the postal service (correspondence education) all the way up to the electronic communication that is used today. Distance education became significant because of if its divergence from the common centralized school model by bringing the school to the student instead of sending the student to the school. Distance education became successful because it filled a need generated by an increasing number of nontraditional students. The potential audience for distance education is much more varied and much larger than any educational establishment estimated. In the history of distance education there was different approaching levels, such as: correspondence education, educational radio, educational television etc.

The most important factor for quality distance education is advanced planning. In distance education strategic planning is not an option but a necessity. The planning process can be summarized in a five-step model:

- Analyzing the needs of the learner
- Designing instruction based on students' learning needs
- Developing instructional materials
- Implementing instructional sessions
- Evaluating the results systematically.

Seeing the invasion of technology in education fear of mechanization cropped up, Gates stated that people might fear that technology would "dehumanize" education. He added that if people could watch students living in different countries and exchanging information across the borders, they might rethink that technology would actually "humanize" education. Gates continued by stating "the same technological forces that will make learning so necessary will also make it practical and enjoyable. Corporations are reinventing themselves around the flexible opportunities afforded by information technology; classrooms will have to change as well."[Gates1995]

TECHNOLOGY AND DISTANCE EDUCATION

Technological advances have created a paradigm shift in education and the definition of distance learning, as

described by James Morrison (1996), who states that telecommunications, software, and the Internet eliminate walls and boundaries. In addition, he states that an increasing number of students want and need non-traditional, flexible schedules. Distance education is becoming a common practice as evidenced by the number of universities that offer distance education programs, the number of businesses offering distance learning and training programs, and the number of distance learning projects K-12 that are being created or are currently in use. (See **OERI** report) As distance learning continues to expand, educators must be ready to examine the issues generated by this paradigm shift. Distance education has gained tremendous recognition for its ability to accept and use new educational technologies, while traditional education has been resistant to change and is not structured to make complete use of the new developments. The computer-based technologies now available for use in educational programs provide current and quality instructional options for teachers and students [Steele1993].The various technologies used in distance learning can be roughly divided into four categories: print, audio (voice), computer (data), and video. Each has its own advantages and disadvantages. A distance learning program designed around a combination of technologies, depending on how best the student learns, is most effective.

PRINT TECHNOLOGIES

These include:

- The **primary source of instruction material** mailed to the students for reference as in correspondence courses
- **E-mails**, which can be used to ask questions or send assignments back to the teacher
- Text materials may take the form of **worksheets or study guides** that are used in conjunction with video or voice technologies

Print technologies are extremely portable, Cost effective and readily available and have High comfort level. However they lack interactions, have No audio/visual elements, require reading skills and suffer from time delay.

AUDIO TECHNOLOGIES

Audio or voice technologies offer cost-effective ways to enhance distance learning courses. These Are:

- **Voicemail** which allows students to leave messages for instructors regardless of the time, Allows instructors to leave messages for individuals or groups, Can be used to administer quizzes (this option requires

some programming) and Serves as an alternative to e-mail for those students who do not have a computer .
- **Audio Files and CDs** can be used to deliver lectures, panel discussions, or instructions for the distant learner. Audio is especially useful in courses that require the nuances of inflection, such as foreign languages, or those that are designed for non-readers.
- **Audio conferences are** relatively easy to set up and conduct; however, it may be difficult to maintain students' interest for long periods of time without visual elements. Therefore, audio conferences used for distance learning should be short, well-planned, and supplemented with visual materials that are distributed in advance.
- **Pod casting is** a method for making digital audio and video files available on the internet in such a way that others can set their computers to automatically download new episodes in a series as they are posted online. One of the most popular programs for subscribing to pod casts is Apple's I Tunes

WEB BASED LEARNING AND DISTANCE EDUCATION

It is our experience that increase of population and explosion of knowledge are not only affecting the pattern of human life but also inflicting their full impact of education. The population is increasing in geometrical proportion and new frontiers of knowledge are being opened up almost daily. The explosions of population and knowledge have raised the serious question of both quantities the quality of education. Educationists are of the opinion that the educational problems relating to quantity and quality could be tackled by the development of an educational technology. Therefore, there has been a rapid development all over the world in recent years in the development of communication technology in education at all levels with a purpose of extending educational facilities and upgrading instruction. The use of different technologies for home, business and education has increased tremendously in the past decade. There also are various education and training opportunities.

Various trends and increasing electronic options provided to education, training and human recourses development professionals many opportunities for reaching new audiences or old audiences in new ways through distance education. Although the term distance education has been in existence for at least 100 years (Rumble, 1986) education for all and education for each, as per one's requirements and demands, sums up the philosophy of Distance education. The various barriers in the way of distance education can be overcome with the help of technologies. Educational technologies bridge geographical and transactional distance between teachers

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and learners and provide unique opportunities to meet the rapidly increasing demand for learning throughout life in the resource scarce environments. One of the most widely used technology now a day for the distance education is web based learning. Web based communication is seen by many as the key technological innovation of the last decade of the 20th century. Web based communication has attracted the attention of educators and trainers to the idea of distance education in a way that no earlier technology managed to do. The explosive growth of this technology is applied in designing and delivering instructional programs and in facilitating learner-instructor and learner-learner interactions in web-based delivering of distance education used based learning is a major sub-component of the term 'e-learning'. With which instruction is delivered. It seeks to serve learners at some distance from their learning facilitation. It attempts to serve learners interacting with the learning source and thus it reduces the barriers of time and space to learning. There are different (formats) categories of web based learning i.e. how and when a learner encounters and undertakes the content (Robert H. Jackson, 2004):

➢ **Asynchronous format (Directed study format)** In it, learners rely on some structured plan that directs the learners through learning experiences without real-times interaction from an instructor self-study self study may be supplemented by asynchrony interaction with the instructor, for instance through email, voice mail, comments, from threaded discussions.

➢ **Synchronous format (live, real time learning)** In it learners rely on the instructor. Here, some commonly shared experience or event, generally occurring in real time with highly interactive and structurally dynamic, is led by the instructor.

➢ **Small group collaboration (SGC)** is an informal context defined as that informal education. That goes on in learners to learner gathering in hallways and libraries between classes and informally digests and shares their learning experience. Small group collaborative activity may utilize asynchronous task such as email, threaded discussion group, list servers as well as use of synchronous task such as telephone, text chat etc.

Software tools in web-based learning (Robert H. Jackson, 2004)

➢ **Authoring tools**: These are multimedia creation tools.

➢ **Advance collaboration tools** (Real-time virtual classroom) is a software product that facilitates the synchronous real-time delivery of content or interaction by the web.

➢ **Asynchronous delivery** took used to embrace a wide range of learning management. Within a Learning Management system, learners generally are provided an integrated view of all their active coursework and assignments in a "syllabus" spanning multiple courses and that provides comprehensive assessment and goals tracking.

➢ **Computer Managed Instructions** are open system one can attach third party courses and they tend to focus on self-paced courses.

➢ **Integrated infrastructure or internet infrastructure system**: It accommodates a mix of self paced, virtual and live classroom training Examples are top class, virtual U, Web courses in Box, Generation 21, Mentor ware, Web CT and Web Manton.

Challenges for online web based learning

➢ **Technological aspects**: In the online system the teachers are expected to use the internet and associated technologies. They should be properly trained in technology so that they have the potential to meet the learning needs of students in the new ways.

➢ **Development of online course** material is a complex process involving many pedagogical and technological considerations

➢ **Evolution of tasks and responsibilities**: The online education may odd new tasks to professional responsibilities of the teachers to become more compatible with a new landscape of online education it becomes imperative for the teacher to attend their traditional tasks associated with teaching.

➢ **Student assessment**: Web based learning poses a challenge to teachers as to how to assess the students learning.

➢ **Issue of Copyright**: The most difficult problem, which the web based teacher face, is the use of materials. The issue of copyright makes the teachers anxious.

➢ **Time Pressures**: Teachers involved in web based education have to undertake various adjustments and the greatest has to be done in personal time.

Organizational Challenges

➢ Teachers should be introduced to distance education materials and online teaching skills during their pre-service teacher training.

➢ The online teacher should have the ability to teach from a variety of physical locations. The issue of

working conditions, and especially working locations, is the most sensitive topic, which will emerge.

➢ Online education exists with in a 'competitive environments'. The online schools seek students from across the world and hence the competition is also globally.

CONCLUSION

Distance education technology is evolving and exponential gains in technology continue to create increasing opportunities for innovation. Therefore, what is current today is obsolete tomorrow. To that end, there is a need for a conceptual model that withstands the changes in technology, economy, and the environment. Today, distance education is trying to imitate the classroom. In few instances, such as Sesame Street, where educators and media specialists experimented with forms native to distance education results have been spectacular. This generation of faculty can be designers of a unique effective and quality-driven form of teaching and learning. In many instances, it will resemble classroom instruction. In other instances it will be very different. To sum up, education technology plays a vital role in different forms and level of education, preferably in distance and open learning. For the qualitative improvement of education system teacher should use different ICT's in teaching learning process.

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