

## E-Learning perspectives in 21<sup>st</sup> Century

<sup>1</sup> Shyam Sundar, <sup>2</sup> Dr. Shamshir Singh Dhillon

<sup>1</sup> Research Scholar, Central University of Punjab, Bathinda, Punjab, India

<sup>2</sup> Assistant Professor, Central University of Punjab, Bathinda, Punjab, India

### Abstract

E-learning is fast emerging as the preferred solution for delivering online and virtual learning, regardless of barriers like geographic and socio-economic problems. Over the years, E-learning has also evolved into a full-fledged mode of delivering learning at the convenience of the learners. India is a country of social diversity. It's difficult to change the social background of students. The solution to this problem is web-based learning. This reflects the importance of e-learning in education with its extent and growth in India. Some of the major Indian institution and the target segments covered by the online education have also given much emphasis on importance of E-learning.

**Keywords:** E-learning, Perspectives, ICT

### Introduction

E-learning may be interpreted as being synonymous with the technology and tools used to deliver and extend learning, or it may signify the entire process of designing, developing and delivering learning through electronic and web-based media. In this article, E-learning is defined as the systematic process of design, development and delivering of learning intervention, using various information and communication technologies (ICT). E-learning course is a wide set of application and process, such as web-based learning, computer-based learning, virtual classrooms and digital collaboration. It includes delivering content via the internet/extranet (LAN, WAN), audio and video, satellite broadcast, interactive TV and CD-ROM (ASTD, 2001). Communication technology enables the use of the internet, e-mail discussion forms, and collaborative software. E-learning may also be used to support distance learning through the use of WAN's, may also be considered to be a form of flexible learning where just in time learning possible. Course can be tailored to specific needs and asynchronous learning possible. Where learning occurs exclusively online, this is called online education. It includes the synchronous and asynchronous learning. The first learning is students centered which uses online learning resources to increase the information sharing barring the limit of time and space. The second type of learning i.e. asynchronous learning make the students learn the same material time and again at difference time and place. It is opposite to the synchronous learning.

E-learning involving use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance is based on three criteria, which are as follows.

- It is a network and lends itself to instant updating, storage/retrieval, distribution and sharing of instruction or information.
- It is delivered to the learner via standard internet technology.
- It focuses on the broadcast medium of learning by accommodating different way of acquiring knowledge.

### Objectives of E-Learning

E-learning aims to provide excellent learning support to the students, which is as good as face to face teaching. This support will be available anywhere any time on the internet. Master trainers will prepare in advance, clear multimedia presentation in modular form on the web. These presentations will offer much better learning effectiveness and quality due to clarity of communication and interaction during discussion or tutorial with real teachers and fellow students. Textbooks written in self-instructional format, which are suitable for self-study, are still the primary media due to its convenience of use. In addition to this, E-learning is highly cost effective, without compromising with quality, hence, objectives of e-learning may be summarized as follows.

- Effective Learning
- Enhanced Quality
- Reduced Duration

### Related Terms of E-learning

Related terms of E-learning include distance education, online-education, distributed learning, internet-education, computer based training, computer-based training, computer-mediated communication, computer-assisted interaction, virtual-education, cyber learning, asynchronous learning and blended learning/multimedia instruction.

### i) Virtual Education

Virtual education is the use of information and communication technologies to deliver educational programs and course.

Farrell (1999) reports that "The label virtual is widely and indiscriminately used around the world and frequently used interchangeably with other labels such as open and distance learning, distributed learning, networked learning, web-based learning and computer learning."

- Distance Education (DE): - when a teacher and students are separated by physical distance, and technology i.e. voice, video, data and print often in concert with face to face communication, is used to bridge the instructional

gap. (Barry Wills 1995)

- Distributed Learning (DL):- where the learning environment exists among a dispersed student population, is structured according to learner need and tends to integrate traditional institutional functions, classroom and library. (Oblinger and Maruyama 1996)

### **ii) Computer -Assisted Instruction (CAI)**

A computer- assisted instruction program, the computer takes over from the teacher in providing the learner with drill, practice, and revision, as well as testing and diagnosis.

- Computer-Based Training (CBT) Training (of Humans) done by interaction with a computer. The programs and data use in CBT are known as “courseware”.
- Computer- Mediated Communication (CMC) that takes place through or is facilitated by computer. Example include using net and e-mail, put CMC also covers real time chat tools like video conferencing.

### **iii) Cyber-Learning**

Cyber learning is an innovative approach to higher education on the internet. Student takes courses from home, office or other convenient location at times that fit their schedule.

- Asynchronous Learning Networks (ALN):- The ALN counter defines asynchronous learning networks as “people networks for anytime, anywhere learning.” ALN combines self-study with substantial, rapid, asynchronous interactivity with others.

## **Types of E- learning**

### **i) Asynchronous Learning**

In this type of learning, the students can learn from e-mail support given by the faculty and discussion board where in students and faculty collaborates on non-real time to impart learning.

- Blog post-used for articles, questions and discussion.
- Learners basically blog post to everyone in the class or section at once.
- Web Forums- also called discussion forums or bulletin boards. They are probably the most common form of interaction in online course.
- New groups-Public Forums that use the system
- BBS- A computer bulletin board that you dial and use like a web forum email file transfer.

### **ii) Synchronous Learning**

Again virtual learning classroom is similar to the real classroom in the traditional learning in many ways. However, it also differs in some ways offering significant advantages to the students. The teacher and students can simultaneously explore the vast information repository of internet.

- Chat room can be either moderated by an instructor or unmoderated for class use.
- Shared whiteboards allow class member to write on the same digital whiteboard.
- Application sharing the same program and file can be shared for demonstration or collaboration.
- Teleconferencing could be used to deliver instructor audio, or for collaboration.
- Video conferencing either from expensive high quality, dedicated system or from less reliable desktop version.

### **iii) Virtual Classroom**

This is to extend the traditional classroom structure by moving it beyond the physical campus to learning spreading across different geographical regions. It is helpful for those who pursue their learning in the distance mode and the course is entirely online. They would benefit from real-time interaction which other learner and faculty through the internet. This is a new frontier in e-learning and is still evolving.

### **iv) CD-ROM and kiosk-based learning**

Beside the CD-ROM and DVD that can be played on computers and television, e-learning can also be designed and delivered through touch-screen kiosks. This is useful when there is no dependence on the internet and when the content has a long shelf-life or deals with generic topics. Since kiosks require simple user interaction for accessing information, it meets the learning needs of an audience with low literacy levels.

### **v) Blended Learning**

This refers to the blending of multiple modes of delivering learning. It is also known as hybrid learning. Based on the design of e- learning, blended learning can have a mix of different environments such as the classroom, the Web and the virtual classroom. In this type of learning, one can make use of different delivery technologies and tools such as mobile phones, handheld devices, laptop or desktop computers and televisions. As with any form of e-learning, it is designed to overcome constraints of time and location by making use of various technologies. It provides opportunities for direct interaction with experts. It can be used for ‘self-paced’ learning and to supplement the classroom.

### **vi) Online Learning**

This involves the use of courseware that is delivered over the Internet to learners at a variety of locations, where the primary interaction between the learner and the experiences of their learning occurs via networked computer technology. Increasingly, learning management systems are beginning to serve as the basis for building online programs wherein the learning experience is entirely mediated through a digital interface.

### **vii) Mobile and Ubiquitous learning**

This makes e-learning flexible by doing away with desktop dependency and by leveraging ubiquitous networks and portable digital devices, such as laptop computers, PDAs, MP3 players, gaming devices and mobile phones . Since these devices are very handy, one can use them by combining informal and formal learning experiences.

## **E-learning perspective in India**

Globally e-learning has successfully established itself as an alternative and a supplement to classroom-based learning. The American society for training and development (ASTD) notes that technology-mediated training and education- e-learning- represents an increasing percentage of the training and education industry.

Through it is in a nascent stage in India, the e-learning market looks promising, with tremendous potential for growth. It was expected to reach US\$ 360 million in 2008 and the e-learning

outstanding business is expected to grow at 15% annually for the next ten years.

In the Indian context, the main driver for using e-learning in the academic domain emerges from the need to cater to an increasing number of colleges in the country. As per the 2001 census, the number of college for general education had risen from 7400 to 7900; growth literacy in the country was 64.81% (NMEICT mission document).

### Initiatives in India in E-learning

India launched a national mission on education by (ICT) in February 2009; it will provide internet connection to twenty thousand colleges and other institutions. The UNESCO is offering to contribute his share in the e-learning material prepared by India under this national mission.

Indira Gandhi National Open University started project of the E-Gyankosh, a national digital repository of learning resources in 2006. The library and documentation division of IGNOU has started national open and distance learner's library and information Network (NODLINET) is one such recent initiative take up by IGNOU to provide a podium for libraries and information centers of the open an distance learning system. IGNOU has developed program inter university consortium for technology enabled flexible education and development (IUC-TEFED) which work as a nodal point to undertake all types of collaborates Involving open and distance learning, new knowledge creation and E-learning appropriate technology.

Consortium for Education Communication (CEC) Established by UGC in 1993. CEC was launched by learning object repository (LOR) which is an open coursework initiative having educational resources in different subject like Archeology, Biology, Botany, chemistry, commerce, computer science, Economics, Education, English, Fine Art etc. The users have the facility to browse the LOR by using various options such as topic, subject, learning object, keywords etc. The number of education programs has increased to 1000 programs per year from 25 in the beginning. The CEC runs a 24 hour higher education channel known as Vyas channel on Gyandarshan which is now also available on direct to home (DTH). National channel also telecasts these programs for 30 minutes daily.

Effective initiative of by National Council of Education Research and Training (NCERT) is that it has published school level online textbooks so that e-learning can reach to maximum number of school students. It is making school textbooks freely available on the internet for student and teachers through its website. This portal provides easy navigation to textbook chapter by title, subject of the book for a particular class. The textbook available are written in English, Hindi and Urdu. (Sharma. G.K, Majumder, 2008).

UGC-INFONET provides electronic access to scholarly literature available over the internet in all areas of learning to the university sector in India. The UGC plans to link all Indian universities research and development institute together with a strong internet network (NKN) which will ensure smooth and quick dissemination of information and will be a big step towards educational development in the country (UGC).The agreement was signed between the US and India in July 2006 between six leading American universities representing the US and the Indian Space Research organization (ISRO). The department of science and technology (DST) along with

Amrita Vishva vidhyapeeth representing India will participate in a project designed to enhance higher education and research in India through a satellite E-learning network. The beneficiary institutions are IITs, NITs, BIT Ranchi and few other prestigious institutions across the country.

Another project National Program on Technology Enhanced Learning (NPTEL) provides web-based training, which is being funded by the Ministry of Human Resource Development (MHRD). This was first conceived in 1999, to pave the way for introducing multimedia and used technology to enhance learning of basic science and engineering concept and was launched in September 2006. The 06 major engineering disciplines have been covered in this project so free at the undergraduate (B.E/B.Tech.) level. The broad aim of the project NPTEL is to facilitate the competitiveness of Indian industry in the global markets through improving the quality and reach of engineering education. The operational objective of NPTEL is to make high quality learning material available to students of engineering institution across the country by exploiting the advances in information and communication technology.

### Conclusion

The main focus of this paper was to discuss the various aspects of E-learning and emerging trends of e-learning in India. This was done by reviewing our vision for E-learning, understanding how it is supported by various government and non-government organizations. This was done with the help of example from academic, corporate and vocational training. E-learning has the advantage of being open flexibility and easily dissemination. When it is blended according to the needs of the learner, its productivity will reach great heights, thereby empowering the community and the nation as a whole towards the path of progress and development.

### References

1. Dubey, Madhuri. Effective E-learning design, development and delivery. University press (India) private Ltd. Himayanagar Hyderabad (A.P.), 2011.
2. Imran, Sheikh Mohd. Trends and issues of E-learning in Lis- education in India: pragmatic perspective, Brazilian journal of information science. 2012; 6(2):26-45.
3. Kumar, Vijay MS. Open Educational resources in India's national development. Open learning: the journal of open distance e-learning. 2009; 24(1):77-84.
4. Singh, Shamshir, Kaur, Ranjit. E-learning:concept and initiatives in the India. International journal of applied research. 2015; 1(11):111-113.
5. Visvanathan G, Gangadharn, Selven SK. Panneer. Technology in education. Random Publication Daryaganj, New Delhi, 2014.  
[www.mhrd.gov.in/technology-enabled-learning-o](http://www.mhrd.gov.in/technology-enabled-learning-o)
6. [www.inflibnet.ac.in](http://www.inflibnet.ac.in)
7. [www.nptel.ac.in/resources.php](http://www.nptel.ac.in/resources.php)
8. [www.ugc.ac.in](http://www.ugc.ac.in) Access 2010. UGC-InfoNet. 2002. Available
9. [www.ignou.ac.in](http://www.ignou.ac.in)IGNOU IUC Report. 2008. Available>. Access: Nov. 29.