

## **E-LEARNING AND E-CONTENT CREATION IN INDIA THROUGH BLENDED LEARNING**

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### **ABSTRACT**

In an e-learning environment, the learning process is more self-paced and self-motivated. This kind of experience is quite different from what learners might experience in traditional teaching and learning environments. Learners, on the one hand, have more control and flexibility in their learning, but on the other hand, they need to take more responsibility for their own learning. In this knowledge explosion society to bring effectiveness in dissemination of information, development of creative contents and incorporation of innovative information and communication, technologies play a higher role at all levels of the education system. Teaching plays a vital role in the formal education system. In spite of established sound theories of teaching, it still continues to be a challenging task. Teaching-centre and group oriented methods of instruction hardly provide for individual differences of the learners. The term like e-learning and e-content are often used to describe an educational program that uses technology such as computer or internet. This term is commonly used by the software industry. For the upcoming digital generation to create a digital teaching- learning environment, mastering ICT skills and utilizing ICT is of outmost importance in every educator's profession (Molly Lee, 2005). It is a combination of text, audio, video, images, animation with visual effects that is delivered via internet, satellite broadcast or mobile technology. Increased preservation, reduced learning time are other benefits to students. This article outlines one of the digital technology that is e-learning, its significance and e-pedagogies.

**KEYWORDS:** E-Learning, E-Content & Digital Technology

### **INTRODUCTION**

In this knowledge explosion society to bring effectiveness in dissemination of information, development of creative contents and incorporation of innovative information and communication, technologies play a vital role at all levels of the education system. For the upcoming digital generation to create a digital teaching- learning environment, mastering ICT skills and utilizing ICT is of outmost importance in every educator's profession (Molly Lee, 2005). It is a combination of text, audio, video, images, animation with visual effects that is delivered via internet, satellite broadcast or mobile technology.

E-content has become a very valuable and powerful tool of education in this contemporary education system; it is the newest method of instruction that can be used to create an information rich society where everyone, irrespective of caste, religion, race, region, gender etc., are empowered to create, receive, share and utilize information and knowledge for their economic, social, cultural and political upliftment and development. The use of e-content has transformed teaching in several ways. Learning can be engaging and even addictive for social network and Google generation students.

E-learning is a process and E-content is a product. This approach of teaching has become an answer to the complicated modern, social, economic condition and an exploding population. An E-content package can be used as a teacher in the virtual classroom situation using E-content, the time and finance involved in the teaching process can be minimized.

### **E-LEARNING AND BLENDED E-LEARNING**

E-Learning offers students and teachers the opportunity to engage in electronically mediated interaction with each other and with learning materials. Learning resources are largely made available electronically, either online or via CD ROM. Participants can access designated websites or conduct their own search of the internet. Interaction between learners and teachers and among learners is achieved using individual e-mail and its group variants e.g., list servers and computer-mediated conferencing.

*Face-to-face or on-campus learning* is learning through a physical interaction between teacher and student at the same place and/or at the same time (i.e., in a classroom / on-campus).

- **Online Learning:** A term describing learning that takes place online and thus requires connection to the Internet.
- *E-Learning* refers to the appropriate use of ICT to enhance the learning - and can thus take place on campus or in any other context.
- **Mobile Learning:** E-learning through mobile devices such as smart phones or tablets. More specifically, mobile learning activities can be designed to make use of a student's immediate context and surroundings, for example, offering information about an artist while visiting an art gallery.

### **NATURE AND CHARACTERISTICS OF E-LEARNING**

- E-Learning is a generic term used to refer computer enhanced learning.
- Its use should be strictly limited to "online learning" carried out through the Internet or web-enabled technology.
- It conveys broader meaning than the term 'computer-based learning' and 'computer-aided instruction'.
- It is broader in its meaning than that conveyed through the simple terms like "on-line learning" or "on-line education" (that may call for the absolute web-based learning without any follow-up, communication and interaction between the teacher and students).
- It should not be taken as synonymous with audio-visual learning, multimedia learning, distance education or distance learning. It is true that the audio-visual and multi-media technology and distance education programs rest heavily nowadays on the use of the Internet and web services provided through the computers, yet these are not identical but complementary.
- It should be made absolutely clear that the use of the term e-learning should be restricted to the type of learning carried out, facilitated or supported through web-enhanced instructions and the Internet-based communication like e-mail, audio and video conferencing, mail list, live chats, and telephony. As a result, all types of non-Internet and non-web technology should not be included in the domain of e-learning. Taking a clear stand on this issue Santheesh Kumar and Sagy John (Kumar and John, 2008) write,

Though the computer is used for instruction and learning, the non-Web technology does not come under e-learning. The entire computer-based instruction like computer-assisted instruction computer-managed instruction, integrated learning systems, multimedia interactive video, virtual reality, artificial intelligence, etc. Which are not delivered through the internet but are still used for learning and instruction cannot be included in an e-learning. However, these techniques, when delivered via the Internet for instruction and learning, become e-learning.

### **THE CONTEMPORARY CONCEPT OF E-LEARNING**

The concept and the mechanism of e-learning are very much associated with the use of the internet and web-technology delivered to the end users, say students, via computers or laptops. However, there still remain certain doubts about the true nature and functioning of the term.

- The learners are found to make use of a variety of recorded CDs and DVDs for gaining the desired information and learning experiences in their concerned subjects. Should it be included in the category of e-learning or not?
- Lately there is an emergence development in the shape of mobile learning (m-learning). It has the advantage of allowing learners to be “on the move” while learning. As a result, you may reap the benefits of the recorded information/ lectures or connect yourself with the internet and web pages while driving, jogging or doing some other work. This technique calls for the services of mobile (cell) phones, PDA (Palm Device Assistants) and MP3 players (e.g., iPod and pod casting). So, now you can avail the services of e-banking, e-booking and e-commerce, etc. including e-learning while on move. The pertinent question that arises with the emergence of m-learning is that whether it should be included in the domains of e-learning or not.

### **ADVANTAGES OF E-LEARNING**

E-learning as an innovative technique to provide unique opportunities for the learning for gaining useful learning experiences both on the individual and group levels. Its advantages are summarized below:

- Most of the learners who may not have time and resources for getting access to the traditional class-bound learning experiences may get it now easily at their convenience in the form of e-learning. A learner can now satisfy his desire and fulfill his ambition of getting access to school or higher education or take up a hobby course without leaving his job, compromising his comfort or feeling handicapped in one or the other sense on account of his limitations. The learners can access information and education contents any time, any place.
- Learning has enough potential to make the education, instruction and learning opportunities provided to the learners adaptable to their needs mental and skill level-local needs and resources at their hands.
- It has a unique feature of arranging an access to the same quality of the content that a full time student has. The best of the world's educational content, treasury of knowledge and the opportunities are available through e-learning to an increasing number of learners especially in the developing and underdeveloped countries.
- Unlike traditional classroom education, e-learning can cater to different learning styles and promote collaboration among students from different localities, cultures, regions, states and countries.
- E-Learning can prove an effective medium and tools for facing the problems of lack of the trained and competent teachers, paucity of schools and the needed infrastructure and material facilities for providing quality education to

the number of students residing in the far and wide corners of the country.

- The flexibility of e-learning in terms of delivery media (CD, DVD, laptops, and mobile phones), type of courses (modules or smaller learning objects) and access (real time or self-paced) may prove a big advantage and attractive option.
- E-learning may make the students more interested and motivated towards learning as they may get a wide variety of learning experiences by having access to multimedia, Internet. Web technology and mobile-learning along with the verbal and non-verbal presentation of the learning contents.
- The opportunities of having an on-line, offline and live interaction between the students and teachers and among the students themselves may make the task of e-learning a joy and best alternative to the lively face-to-face interaction and real time sharing of the experiences in a traditional classroom setting.
- E-learning through audio-visual recording technology has a unique advantage of providing learning experiences that can be paused and reversed for observing, learning and imitating at the will and convenience of the learners. Such self-pacing provides a special weight age to the process of learning.
- It may also provide opportunities for testing and evaluating the learning outcomes of the learners through teachers, peers and auto-instructional devices and software available with the reading material on-line, or through the Internet and mobile phone facilities. It may work for them as a desired source for the proper feedback along with the needed diagnostic and remedial teaching.
- Learning experiences via simulated and gaming techniques, may also provide the benefits of getting richer experiences on the useful pedagogical footings of play-way spirit and leaning by doing or living.

### **STAGES OF E-CONTENT DESIGN AND DEVELOPMENTAL PROCESS**

Unluckily, existing materials cannot be automatically transformed into e-content materials by just making them available from a website. A systematic and a scientific approach are needed to develop quality content. The e-content should follow appropriate instructional design methodology in order to assure meeting of learning objectives and expected outcomes. The effort spent in content preparation should be re-usable across various learning management systems. All the e-content materials should focus on

- **Cognitive Perspective** that emphasizes on the cognitive processes involved in learning as well as how the brain works;
- **Emotional Perspective** that gravities on the emotional aspects of learning, like motivation, engagement, fun, etc.;
- **Behavioral Perspective** highlights the skills and behavioral outcomes of the learning process, role playing, settings of job and
- **Contextual Perspective** that concentrates on the environmental and social aspects which can stimulate learning.

### **PHASES OF E CONTENT DEVELOPMENT**

The e-content development aspects comprise of six stages described as follows (Nachimuthu, 2012).

### **The Analysis Phase**

It is the most important stage as it identifies our current situation comprise of subject experts, target audience and their skills, objectives, budget of the e-content, delivery methods and its constraints with due dates.

### **The Design Phase**

This stage involves the complete design of the learning solution. It helps with planning of an e-content preparation. The issues like use of relevant software; required skills; creative and innovative interactions of subject contents like texts, pictures, videos and suitable animations are addressed.

### **The Development Phase**

It concerns the actual production of the e-content design. It helps to create the e-content by mixing of texts, audio, video, animations, references, blogs, links, and MCQs (multiple choice questions) with some programming specifications like home, exit, next etc.

### **The Testing phase**

It helps to administer the e-content in the actual educational field. In this phase, the spelling mistakes, content errors, clarity of pictures, relevant videos, appropriate audios, timing of animations, and hyperlinks are tested.

### **The Implementation Phase**

It helps to administer the e-content to the target audience. This phase explains how to install and how to use it and their difficulties experienced while using e-content. It checks the product accuracy and quality maintenance.

### **The Evaluation Phase**

It helps to satisfy the e-content and its effectiveness. This phase considers feedback from both learners and instructors.

## **DEVELOPING OF E-LEARNING AND E-CONTENT CREATION IN INDIA**

In India e-Learning and ICT use at various levels of education are going on, some of them are at a pilot stage while others are operating a full scale in a large geographical (Shetty & Gadiwala, 2012). The development of e-learning in India can be divided in four evolutionary era, these are Era of instructor-led teaching and training (pre-1983); Era of Multimedia (1984-1993); First wave EL (1994-1999); second wave EL (2000 till date) (Nayak & Beura, 2010). Development of e-learning in India may be considered in the 1970's after emergence of Computer Aided Instruction (CAI) was used for teaching purposes (Ravi, Mohan, & Srinivasaragavan, 2005).

Some of the below mentioned developments have played very important role in e-learning which may be considered milestones in the direction of e-Learning by which we could reach at present stage where we are in a position to develop and design the model for e-learning:

- A centre for Educational Technology (Central Institute of Educational Technology, CIET) was set up in NCERT, New Delhi in 1984 with the help of UNDP and UNESCO (CIET, 2010).
- UGC has set up a Consortium for Educational Communication (CEC) in 1993 as a nodal agency to coordinate, guide & facilitate educational production of Audio Video learning contents at the National Level. (Agarwal,

2009).

- UGC in 1991 initiated an Information and Library Network (INFLIBNET) program; in 1996 it became an independent Inter University Centre of UGC for sharing of the learning resources. INFLIBNET has played important role in promoting scholarly communication among academics and research community in India (INFLIBNET, 2012).
- In 1996, the National Institute of Information Technology (NIIT) started, as the first Net varsity, and it becomes a separate subsidiary as a NIIT Online Learning Limited (NOLL) in 2000 (Ravi, Mohan, & Srinivasagavan, 2005).
- Government of India established “The National Task Force on Information Technology and Software Development” in 1998. (National Taskforce on IT & Software Development, n.d.)
- In 1999, the Indira Gandhi National Open University (IGNOU) started Virtual Campus Initiative (VCI) with two programs on IT-the Bachelor of Information Technology (BIT) and Advanced Diploma in Information Technology (ADIT) (Mishra, 2007).
- The National Program on Technology Enhanced Learning (NPTEL) was launched in 1999, with the objective to enhance the quality of engineering education in the country by developing curriculum based video and web courses. (Agarwal, 2009).
- The MHRD, in 2003, initiated the Project – National Program for Technology enhances quality engineering education in the country by developing based video courses and web based e-courses. It was decided that the courses will be prepared by seven IITs at Delhi, Bombay, Madras, Kanpur, Kharagpur, Guwahati, Roorkee and IISc, Bangalore as participating institutions (<http://www.mhrd.gov.in>)
- ISRO (Indian Space Research Organization) Govt. Of India has successfully launched EDUSAT on 20<sup>th</sup> September, 2004 to provide network for content providers in Universities where training programs for teachers are regularly conducted (Rao, 2011).
- 2001).
- The pilot project SAKSHAT, a one step education portal launched on October 30, 2006 to facilitate lifelong learning for students, teachers and those in employment or in pursuit of knowledge free of cost to them SAKSHAT ([http://www.mhrd.gov.in/sakshat\\_hindi](http://www.mhrd.gov.in/sakshat_hindi)).
- Government of India in 2008-09 started a program called “National Mission on Education through ICT”, for adaptation of ICT in education and research.
- The National Knowledge Network (NKN) an important initiative of the government of India launched in the year 2010, to connect institutions specializing in higher education, research and development, health care, agriculture and governance and to provide multi-gigabit internet connectivity (Nagaraj, 2012). \
- In 2011 the Government of India announced and implemented several policies to promote broadband internet connectivity in the country. Draft National Telecom Policy (NTP) was released in 2011 for consultations with various stakeholders with to empower the people of India by providing secure, reliable, affordable and high quality converged telecommunication services anytime, anywhere, and experience by enhancing the speed of

delivery (India, Ministry of Communications & Information Technology, Department of Telecommunication, 2012).

- The MHRD, under its National Mission on Education through ICT (NME-ICT), has assigned work to the INFLIBNET, UGC, CEC (Consortium for Educational Communication) and various other institutions to develop technology, contents and infrastructure (such as e-PG Pathshala Management System, INFLIBNET, Ahmedabad, 2012) (Sakshat, 2011).
- Aakash, a low cost tablet PC with browsing capability, is launching in 2011, to fulfill the gap of access infrastructure availability. Several other vendors have also launched their low tablets (Such as Carbon mobile, Micromax, and BSNL).

## CONCLUSIONS

The article suggests the meaning and importance of e-learning in recent education. At present we have lots of e-learning projects in India, but there is a lack of awareness among learners, they are not able to get the benefits from it. This study aims to thorough some light and investigates the growth and development of some of the popular e-Learning project running in India. E-Learning involves almost all forms of ICT technologies which able to cover a wide range of users. But it is also remarkable thing that the future of e-learning will depend upon its management, the platform, its content, entities for Content Creation of e-learning and their expertise.

E-content development is the heart of teaching learning process. Although content development plays a key role in e-learning, it is undoubtedly not an easy process. It requires expert knowledge in the subject area, patience in creating the necessary objects that make up quality and a higher sense of creativity in structuring and sequencing the topics.

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