

# Impact and Study of E-Learning Model – A Literature Review

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**Abstract -** This research study identifies the impact of E-learning on the efficiency and the various challenges being confronted on implementation based on the concept of E-learning models. The popularity of the Internet and latest advancement in Information Technology has produced new potential outcomes for education conveyed through web-based learning or E-learning model. With an assortment of electronic gadgets, applications and administrations accessible, electronic method of showing and learning has developed as a fundamental option or supplement to customary "chalk and talk" method of instruction. So, the E-learning model frameworks have turned into the center part of the instruction for learning process in numerous institutions especially in metro cities; such as Mumbai and Pune or even in the technologically advanced cities all over the world.

**Keywords -** Education, E-learning, information technology, web-based system.

## I. INTRODUCTION

A radical change occurred when the computers evolved which changed the entire process of learning. On the contrary e-learning is computer-based education system which enables a learner to learn from anywhere at his own convenience. But, nowadays, the role of internet is prominently involved in E-learning. Earlier more of computer-based methods like CD ROM, were used. But nowadays, technically the whole scenario of learning has been advanced by bridging the locational poles with the use of techniques and methods that creates the virtual classroom environment. Considering various obstacles that are managing time, money, conveyance facility and residential problem in big cities rising in the way to advance learning of today's smart students, Elearning has been prove as a boon for such advanced learners.

## II. LITERATURE REVIEW

### 2.1 CONCEPT OF E-LEARNING MODELS IN HIGHER EDUCATION:

Ashutosh, (2009) E-learning based on wireless communication network technologies involves less cost and has become effective learning program due to its flexibility, freedom for its usability. The learner in traditional teaching not only is influenced by the instructors experience & skills

but also develops a verbal communication skill with the individuals of different cultures. Elearning when used with the traditional stings can increase learner's interest and knowledge in a broader viewpoint. (Hiltz, Wellman, 1997, Kumar, Kumar, Basu 2001).

E-learning requires maturity in understanding and self-discipline of the users for its effectiveness when compared to traditional classroom learning. This is one of the major reasons of dropout rate in E-learning programs.

Wentling (2000) The word E-learning refers to the achievement and usage of information which is usually facilitated and is shared by means of electronic devices. To the learners, the E-learning is influenced by computers and appropriate connectivity of internet, but it is sure that it will develop into systems which comprise of a variety of channels as wireless devices and satellite, and technology of mobiles. Singh (2013) Digital learning makes class rooms interactive by active participation of students & teachers and animations/videos/quizzes in E-learning help learner retain knowledge better. Activity based learning in e-learning involves all the gates of knowledge (Gyanendriya), resulting in high impact on learners by way of learning concepts, demonstrating the knowing of the ideas on

smearing them to actual situations, and synthesize the information through skill-based assessments.

Wentling (2000). With the help of surveys and observations, this study has analyzed the views that individuals and several institutions have discussed worldwide the acceptance and addition of the E-learning technologies in higher education. Valentina (2014) given the meaning or definitions of E-learning given by different researchers and the role that E-learning plays in higher educational institutions in relation to teaching and learning processes, along with the advantages and disadvantages of its adoption. It has made communication much simpler and improves the relationships that sustain learning. Mahafdah (2008), in his research discussed on the most important feature influencing the selection among E-learning and the concept of E-learning through traditional methods.

Shrivastava (2013), with study on MOODLE observed that the retention rates are high in active learning (practice by doing, group discussions etc) compared to passive learning (reading, lecture etc) methodologies. Kakoty, Lal, Sarma (2011) the promising areas of E-learning based on following as content management; web security; addressing requirements of learner and their preferences by researching learner's characteristics; education to be globalized and its cross-culture aspects; semantic web that can be provided by flexible and personalized access to the learning materials.

Aixia (2011) With the ease of online technology and World Wide Web, the system of learning has become more complex. Many of the Institutions have implemented the E-learning environment to fulfill the needs of the learners. The results from the study show that the attitude of the students represented the satisfaction level of the learners towards the use of the E-learning environment.

To enhance the quality of higher education, teaching and research so that E-learning could be promoted across the Indian Universities/Institutions/Research Labs. Virtual classes have started in IIT's, IIM's etc on NKN. Data centers, sharing of computer labs & medicals labs are some features of NKN Saxena (2011). Vatnal, Prakash, Mathapati (2004) E-learning is only an instrument, its efficiency depends on the excellence of content, learning

resources & communication tools used and concluded by stating that the new trends are inter-library loan & consortia sharing. Ellis (2009) the key aspects of E-learning from the view of student perception are internally constituted and its relation to the features related to the learning experiences of the students of universities. It evolved strategies for improving student experience with E-learning when supported by a campus-based experience.

## 2.2 Factors Affecting Efficiency Of E-learning

Bhatia (2011) in his article on 'Features and Effectiveness of e-learning Tools', discussed theories like Spiral Path by Jerome Bruner; Importance of Association & Collaboration by Lev Vygotsky; Learning by Doing by Jean Piaget and concluded that for the success of e-learning programs, e-learning tools should be integrated with the pedagogic principles with learning theories. Nelasco (2007) The benefits of e-learning as integration; access to best faculty & quality study material; dust free environment; individualized instructions; learning by doing; self-paced; flexible; cost effective; zero opportunity cost of time; enrich learning with simulation, gaming & interactivity and they concluded that in recent time there will be an increase in demand for multi-lingual courseware; quality E-learning has to be provided to attract affordable international students; infrastructures have to be standardized; electronic combining of institutions would benefit them to share organization and methodological proficiency.

Srivastava (2013) observed that E-learning is growing in education & training sector with more & more students joining E-learning & more & more companies providing training to their employees through e-learning because of cost, time, conveyance etc. Tripathi J (2010), at each stage cost analysis should be done to ensure project remains within allocated budget. The quality factors could help in identifying issues in quality of E-learning in Indian context & thereby formulating strategies accordingly, which would result in efficient (in terms of cost) & effective (in terms of outcomes) E-learning practices Agariya, Singh (2007).

Barik (2012), observed that certain factors of privacy defilement; integrity defilement; renunciation of service; unlawful use; malevolent program; denial; masquerade;

leakage by abusing communication channel; brute-force attack are the various threats in E-learning system. E-learning can be used to communicate government rules, policies & setup transparency in governance (Chandra 2014). Nelasco (2007) E-learning has benefited the community by contributing grouping of all the institutes, recruitment of the qualified teacher and use of superior study material, for the negligence of social prejudice, dirt free education, personalized teaching, knowledge in skill, sole fast and slow learner procedure, flexibility, cost efficiency, zero break cost of time and many more.

Pien-Chen Sun (2010) The investigation of an assimilated model of six proportions that includes the apprentices, teachers, courses, skill, design and setting. The results showed that certain serious factors affecting learners perceived satisfaction were computer anxiety, E-learning course quality, perceived ease of use, instructors attitude toward E-learning, E-learning course flexibility, perceived recommendations to increase learner satisfaction and promote support to their E-learning application. Jen-Her Wu (2010) the satisfaction of the student towards learning was mostly affected by the student situation and their achievement potentials and introduces a research based model in a mixed e-learning arrangement (BELS) environment, which was examined with the determinants of student learning satisfaction, grounded on communal intellectual theory. Somayeh, (2016) With the use of multimedia more learning could be done and maintaining the environmental means and decreasing ecological and audial pollution are the overall benefits of e-learning. Noirid (2007) E-learning has given a platform to the learner based education environment and is providing learning as per demand with updated each minute knowledge. The purpose behind the review of literature in e-learning models has been identified the key issues from literature as well as from the web.

### 2.3 Opportunities And Challenges Of E-learning In Indian Higher Education

Khan (2015) E-learning opportunities and challenges in India observed that E-learning marketplace is assessed at a growth rate CAGR of 17.4% during the period FY2013-

FY2018 due to government initiatives & increasing adoption of technology. Rakesh (2014) the contextual factors which are being used in using e-learning for higher education in India are - User characteristics (ex. perceptions about ICTs, learning/teaching styles, approaches/theories about the role of ICTs); Organizational characteristics (ex. policies, structures, authority & responsibility, business rules, its culture); Social context (ex. cultural change) and mindset problems. With the development of interest in higher education, more E-learning models can be created and executed by institutes all over the country. Computer-generated learning programs have been successfully implemented by IIMs, Symbiosis and AMRITA institutes and a number of foreign universities has tied up for the E learning initiatives in India as well (Rajpal 2008). Sharma (2014) observed the use e-learning for informal and vocational training in India.

Advantages & opportunities of e-learning in India are: spreading education across geographies; flexibility in learning; 24x7 access; self-learning & evaluation; online help; multimedia for effective communication; sharing of learning activities within institutes; consistency in teaching. (Khan 2015). Shah, Dafouti (2013) Existing excellence of ICT based education is very less in the village areas. It is suggested that any individual interested in implementing the ICT linked programs in the distant rural places, should measure the native situations, priorities & requirements of rustic students, so that it benefits them. Kushwah, Vijayakumar (2008) it will be more effective and useful for knowledge development rather than spending time on language learning; to provide access to all sources of information available in Indian languages and to reduce cost of learning and the system development should be based on global standards like Unicode & there is also a need to popularize language technology in software and hardware.

Osman (2006) the utmost significant risk in this field is the rigidity towards the change and insufficient funds and the essential substructure and the deficiency of consciousness amongst learners, absence of proficient personals. The key obstacle in facing E-learning and the requirements for effective E-learning from the lookout of the researcher, are

the most important stages of automated material creation and upcoming features of E-learning in higher educational institutions Mahafdah (2008).

Kattoua (2016) E-learning system is based on various factors like the personal, social, cultural, technological, organizational and environmental factors is more effective in present time. With the rapid and vast development of the use internet knowledge, majority of the institutes and universities all over the globe have been capitalizing seriously in E-learning system so that they can sustain their old method of education and to progress the learning capability of students and as well as their performance standards. Cheon (2011) described a theoretical ideal model, which is more built on the concept of planned behavior (TPB), where it has explained that how the beliefs of learners in higher educational institutions are influenced for their readiness towards the adoption of mobile devices in their coursework. Perceptions of students of higher education towards mobile learning have made a unique type of learning through the utilization of the distinctive abilities of portable mobile gadgets.

### III. CONCLUSION

The above paper has critically reviewed the literature on the impact of E-learning model and its dominancy on traditional classroom teaching. The review resulted that the effectiveness of E-learning program is successful as it provides freedom to its usability and flexibility at their own pace of time, cost and convenience in the teaching learning system of higher education. Moreover, it had an insight of the concept E-learning model, with its advantages and disadvantages, with its impact on the behavior and perception of the student learner's as well as the teacher in preparing, developing, sharing their tech-based information specifically in private college universities. Certain demographic factors are also important as they affect the student learning mainly in a collaborative E-learning situation. This research helps in better understanding of the students of the private institutes and can help the management and teachers to develop the policy, procedures, study material as per their expectation. This could lead to an effective educational information system and leads to

environmental, economic and social impact on learning with the deployment of best fit with latest information technology.

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