

# E-Learning and Higher Education-An Emerging Trend

Shagufta Rehman<sup>1</sup> , Mohd Ashraf Wagi<sup>3</sup>

<sup>1</sup>Department of Education, Central University of Kashmir (India)

<sup>2</sup>Department of Education, GDC Budgam (India)

## ABSTRACT

*Technological development and the internet have changed people's lives on different scales including teaching and learning. The web has become one of the channels of learning that opens the door for people around the world to access education for free, or for fewer costs. The Internet is a technological development that has the potential to change not only the way society retains and accesses knowledge but also to transform and restructure traditional models of higher education. The use of Information Communications Technology (ICT) in higher education (HE) seems to have adopted the mantle of a self-evident good, with its adoption acquiring a sense of inevitability. In fact so ubiquitous has its use become that it would be almost impossible to find a college or university that has not incorporated some form of e-learning into its strategic vision. E-Learning initiatives has created expectations in higher education institutions. Indeed, e-Learning has enabled universities to expand on their current geographical reach, to capitalise on new prospective students and to establish themselves as global educational providers. E-learning is changing the way colleges approach the education of students. Once a relative novelty, it is now a standard in any educational program even when one matriculates and takes all courses in residence This paper examines the issues surrounding the implementation of e-Learning into higher education, including the structure and delivery of higher education, the implications to both students and lecturers and the global impact on society.*

**KEY WORDS:** *Information communication technology, Higher Education, E-Learning*

## I. INTRODUCTION

The Higher Education sector in India is very vast and its role in national development is well established. The objectives of Higher Education can be achieved only through qualitative changes in the system. Higher education system in India imparts education in almost all fields of knowledge viz.: Arts, Science, Commerce/Management, Education, Teachers training, Engineering, Technology, Architecture, Medical, Law, Veterinary, Mmusic and performing arts; National and Foreign Languages; Culture; Communications etc. The development of higher education in India after independence has been remarkable. But the growing phenomenon of globalization, liberalization and privatization has been immensely influencing the Education. The fact is that we are in the midst of an increasingly rapid transformation in education, across dimensions of purpose, content, pedagogy and methodologies. Technology, social change and the decades-long trend of ever-increasing cost have left us with many unanswered questions, multiple challenges and, of course, the need to be highly innovative in an educational culture that tends to be wary of change.

Alvin Toffler in his famous book "Future Shock" says that, "To help avert future shock, we must create a super industrial educational system and to do this, we must search for our objectives, methods in the future rather than

past. Education must shift into future tense." , The output of Education should be multidimensional and with full global competitiveness. According to Eric Hoffer, "The central task of education is to implant a will and facility for learning; it should produce not learned but learning people. The truly human society is a learning society, where grandparents, parents and children are students together"

With a growing emphasis on information technology, Higher Education is viewed as increasingly essential for the world's population. Information Technology and Mobile Technology is now forcing education sector to change according to the need of the time. The most emerging dimension of education in the 21st century is the need to use technology and make it an integral part of course contents. Education now becomes an industry; there is explosion of technologies and knowledge in all spheres. Since, the early part of the new millennium, many areas has been impacted by internet and online ways of doing things. The institutions encourage the staff members not only to upgrade their academic profile but also their pedagogical strategies by offering advanced and latest ICT facilities. The following advanced pedagogical tools are used by the staff members for effective delivery of content. Smart classrooms-The institution which has:

- 1.1 Smart classrooms** as a teaching resource for making acquisition of knowledge are more productive and forceful.
- 1.2 PowerPoint Presentations** – PPTs are regularly used by the staff members for making knowledge transfer and teaching sessions interactive as well as interesting.
- 1.3 Digital Lab** – The language lab with updated software renders teaching as well as learning practices effective in impact and enjoyable in experience, providing students a platform to acquire and practice various language skills in a virtual environment.
- 1.4 E-Learning (With INFLIBNET)** – This is facilitated through e-library with subscription of open educational resources like INFLIBNET which helps students explore reading material available online from multiple resources all over the world. Such rich learning resources are foundation blocks for enhanced understanding and broader perspectives. VSAT classrooms and Video conferencing units are also an integral part of the institution therefore enhancing the e-learning process.
- 1.5 Media based resources** - Documentaries on political figures, events and movie/film adaptations of novels also form a part of pedagogy for the effective transfer of content using visual aids.
- 1.6 Virtual laboratories** - Laboratories of this sort in the Department of Zoology and Chemistry helps in extending them with the nuances in the respective fields.
- 1.7 E-library** -The college provides a rich library offline and online. E-library with subscription of INFLIBNET is available to cater to the needs of the advanced learners. E-library with the subscription of INFLIBNET is also facilitated to the staff as well as students.
- 1.8 Language Lab** -A language Lab has been set up with the aim to improve the communication skills of the students. They are taught through software for improving communication skills. the lab is an attempt to enhance proficiency in English language.

Hence from the above it is clear that E-learning and technology oriented learning is facilitating students through language lab, e-library and smart class rooms. Power point presentations now have become an integral part of

the teaching methodology in most of the courses ensuring not only effective knowledge transfer but also facilitate follow up interactive sessions with the students.

Since times, E-learning has taken a huge bound forward, beginning as a general website consultation to a now-massively inclusive and comprehensive platform for everything from taking a course online for college credit, using college-internal resources such as Blackboard to communicate with teachers and manage assignments, to obtaining accredited degrees without ever leaving home.

## II.WHAT IS E-LEARNING

The term "e-learning" has only been in existence since 1999, when the word was first utilized at a CBT systems seminar. Other words also began to spring up in search of an accurate description such as "online learning" and "virtual learning". However, the principles behind e-learning have been well documented throughout history, and there is even evidence which suggests that early forms of e-learning existed as far back as the 19th century. E-learning refers to electronically supported learning and teaching of any kind. Any form of learning which uses digital communication, electronic devices or the internet to support the learning process may be described as a form of E-learning. What does this "e" stands for:

The letter "e" in e-learning stands for the word electronic. The pioneer of e-learning Bernard Luskin (2001) has explained "E" as exciting, energetic, enthusiastic, emotional, extended and educational .E-learning stands for internet enabled learning, which is a store house of education, information, communication, training, knowledge and performance management. E-learning includes such processes as computer based learning and internet based learning, but it is important to remember that it does not necessarily require either a computer or an internet connection but only the use of electronics. So learning a language using a CD Rom, for example, or watching an educational television program would also count as E-learning. However, the advent of the internet was the real catalyst for many important advances in e-learning and many of the resources and processes the term is now used to describe involve internet-based activity such as collaborative online learning or interactive educational resources. The term e-learning is a collective expression for all learning involving the use of information and communication technologies (ICT) to support both learning and teaching. It also may refer to the use of various technologies and tools to support learning in different contexts, including face-to-face settings and distance learning, separately or in combination which is also called as blended learning. E-learning basically is a bridge to learning that is facilitated and supported via information and communications technology (ICT). The American Society for Training and Development (ASTD) defines e-learning as a broad set of applications and processes which include web-based learning, computer-based learning, virtual classrooms, and digital. Much of this is delivered via the Internet, intranets, audio- and videotape, satellite broadcast, interactive TV, and CD-ROM. The definition of e-learning varies depending on the organization and how it is used but basically it involves electronic means of communication, education, and training. Many terms have been used to define e-learning in the past. For example web-based training, computer-based training or web-based learning, and online learning. Each of this implies a "just-in-time" instructional and learning approach.

E-learning is simply a medium for delivering learning and like any other medium, it has its advantages and disadvantages. E-learning covers a wide array of activities from supported learning, to blend or hybrid learning (the combination of traditional and e-learning practices), to learning that occurs 100% online.

E-learning is a kind of educational technology which helps us deliver educational content through the internet without making students sit in a physical classroom. It encompasses downloadable e-books, audio content, video content, and structured courses with assignments and assessments.

### III. CHARACTERISTICS OF ONLINE LEARNING

- 3.1. Online learning is about the learning processes mediated by network technologies;
- 3.2. Online learning is about making possible successful knowledge management to leverage upon the intellectual capital of the learning environment;
- 3.3. Online learning is about harnessing the strengths and addressing the weaknesses of network technologies to create a conducive learning environment;
- 3.4. Online learning is about providing the interactions among the students and their communities to build and share knowledge.

### IV. USES OF E-LEARNING IN EDUCATION

**It transcends all the geographical barriers:** A student residing in some remote part of a country with little to no access to good schooling can now learn from some of the best teachers in the world in their respective subjects, that too for free or at a very low cost.

**It promotes flexibility in education:** One can learn whenever he/she wants, at his/her own pace without following a time table set by others. Everyone doesn't have to learn the same thing at the same time. The need of production line model of education is over, and E-learning helps us to step out of this production line model and make education more flexible.

**Flexibility promotes mastery learning:** The trend which is most common in most of the educational institutions is that if we have to teach a certain number of topics in each subject by a stipulated time, then we are surely not promoting mastery learning. A person with 40% also passes the examination, a person with 98% also does. But the person with 40% has 60% of deficiency in that subject, and nothing is being done to remove or lower that deficiency. Instead, he/she is promoted to the next and to learn more sophisticated concepts. While, E-learning promotes learning at one's own pace till the student learns acquires mastery over that concept.

**Learn from the best:** As mentioned earlier any student wanting to learn a subject can now learn it from some of the best teachers of that subject in the world. Salman Khan, the founder of Khan Academy once said, *"If Isaac Newton had done YouTube videos on Calculus, I wouldn't have to."* We now have the facility to learn Machine Learning from Andrew Ng and The Lean Canvas from Ash Maurya, the best in their respective subjects. Elon Musk had once said that education is like the movies. If The Dark Knight was not a film and would be reproduced at a local level everywhere, then it would not be even half as good. We now have the

facilities to plan and produce the best educational content and even humanise the classroom experience by flipping the classrooms, with the help of this educational content.

**Access to data helps to improve educational content, learner experience, and assessments:** By getting access to real time student data in big volumes, we can not only improve the educational content to aid better learning but also improve the learner experience to gain and maintain learner interest if there is lack of it, and enhance the diagnosis of general problem areas by improving the assessments.

**The Learning Environment:** There is a notion that an E-Learning environment offers students an improved learning experience when compared to a more traditional learning environment. Holley (2002) found that student participants on E-Learning courses using techniques such as virtual lectures and bulletin boards, achieved better grades than students who studied in traditional learning settings. Hartley (2000) maintains that the constraints of conventional university teaching practises with regards to group working are removed in E-Learning environments, as students can participate in group activities without actually being situated in the same location. This supports the view that E-Learning environments loosen the time and space restrictions associated with traditional institutional practices.

**Accessibility for Students:** One of the most valuable attributes of E-Learning techniques and delivery are that they potentially give students greater access to education, in comparison to more traditional less flexible educational methods. Through the use of advanced technology, students who previously not had access to higher education now have the opportunity to study at the location that best suits their needs (Sadler-Smith 2000). E-Learning also offers people with disabilities the opportunity to further their education from home (Brown, Cromby and Staden 2001).

**The Concept of 'Life Long Learning:** The development of E-Learning methods have brought with them the concept of 'life long learning'. Although it is fair to say that lifelong learning is hardly a recent phenomena. The notion that education finishes when someone enters the workplace or reaches a certain age is dispelled by the introduction of E-Learning techniques and the provision of an opportunity to access teaching and learning resources remotely. Holley (2002), explains that the opportunities given by E-Learning, such as the removal of time and location constraints, offer all people in society the potential to be lifelong learners whatever their location, age or occupation. In addition Serwatka (2002), argues that E-Learning not only encourages 'life long learning' by alleviating physical constraints but also by removing some of the perceived barriers of higher education, enabling students to work towards their preferred course and goals at their own pace and ability. Whilst society's enthusiasm for lifelong learning seems to be increasing, the question of which institution will deliver the learning seems to be unanswered. Shapiro (2000) suggests that the social demands for higher education are not always being met. Furthermore, when they are being met, it is not through the traditional university educational system.

**Enhancing Teaching Tools:** The future delivery of education is envisaged through e-Learning technology providing teachers with superior teaching tools. Volery (2000) argues that online methods facilitate more effective education and offer significant advantages over traditional teaching methods. This can be via full blown technological implementation or limited technology based environments such as bulletin boards, virtual

lectures and e-Libraries. McClelland (2001) contends that in e-Learning environments lecturers can offer constant educational support, as students are able to communicate with classmates and lecturers, visit websites and view course material regardless of their time and location. To maximise the potential of e-Learning teaching tools Holley (2000) advocates two methods to modify the learning process. Firstly, educational re-engineering that will revolutionise classroom practices and secondly educational fortification that will improve the learning courseware through technology.

## V. SUGGESTIONS

- 5.1 Demand for learning has been so high, and this in tandem with the need to geographically broaden learning may prompt universities to introduce E-Learning initiatives.
- 5.2 E-Learning may provide universities with a means of exceeding the newly formed competition, by taking full advantage of their traditional, already established reputations.
- 5.3 When considering the implementation of e-Learning, educational institutions must be structurally flexible and be able to embrace the capabilities of distance learning as a tool to support overall learning.
- 5.4 The design of the online course should take every learning style into consideration.
- 5.5 Course documents like the syllabus must be available for students to view, particularly at the beginning of the term. This will ensure that the student knows which lessons will be covered throughout the course, and can use the syllabus as a guide throughout the entire course. It provides teachers with an effective road map as well, and helps structure their lesson plans.
- 5.6 Teachers should consider this modern trend in education and get prepared technically and pedagogically to take online teaching in consideration.
- 5.7 Effective management can also help institutions to deal with any increase in lecturer workload by ensuring efficient use of resources. Teachers must be involved in all stages of e-Learning course development, including determining the prospective audience, the purpose of the learning programme and the best format.
- 5.8 Teachers should be trained to make them able to know how to apply e-Learning technology in higher education.
- 5.9 Proficient training including both technical and conceptual issues should be provided to Teachers for possessing appropriate facilitation skills if e-Learning courses are to be successful.
- 5.10 Teachers should be able to establish an open line of communication with students.
- 5.11 Students should have contact information for the systems IT support staff, and have access to a member of staff on a regular basis if needed.

5.12 Discussion forums, social media, chats, email, video conferencing and other VoIP technologies should be used as a means of communication.

5.13 Students need to get enough skills that will help them effectively benefit from the advantages of E-learning. For students, e-Learning can provide an educationally-superior alternative to traditional lectures, in which learning can take place outside the lecture hall.

5.14 E-Learning can also provide a model for students on how to become self directed independent learners, which may assist them to become 'life long learners'.

## VI.CONCLUSION

Last decade has seen a phenomenal growth in the use of the Web in university education, with various factors influencing the adoption of Web-based technology. The reduction of government funding in the higher education sector has forced universities to seek technological solutions to provide courses for a growing and increasingly diverse and distributed student population. Another impetus has been a shift in focus from teacher-centred to learner-centred education, encouraging educators to provide courses which enable students to manage their own learning. E-learning is a large and growing market with great potential in higher education. (Means et al, 2009). Today, E-learning is adopted not only by educational institutions, but also by organizations that want to offer training for their employees. E-learning is a priority for businesses that look forward to improve employee's skills and the economic benefits they can generate from that. That's why online learning has become an important factor for both, education and business. E-Learning has a fundamental impact on the structure of higher education. Whilst the growth in demand can be accommodated by its implementation, the diversity of the new student population requires that institutions carefully develop programmes that will satisfy a broad range of learning requirements. This challenge is intensified by changes to the competitive environment where, in the wake of lifelong learning, traditional institutions are competing with corporate and virtual universities particularly for the mature student population.

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