E-LEARNING - A NEED TO CATER INDIAN HIGHER EDUCATION

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ABSTRACT

There exists a paradox in eLearning among various institutes. Few institutions join the race, while the rest suffer from lack of knowledge or from lack of realization of the importance of eLearning. Institutes like IITs are adopting all latest technologies and are keeping their students enlightened from various parts of the world. ELearning has vast potential in India. To conclude modernization of education in Indian colleges and universities is a necessary attempt. The syllabuses, subjects and courses have to be planned in such a way that it satisfies the top international standards. To attract affordable international students, who are interested in comparatively quality education, eLearning has to be promoted. Infrastructures also have to be standardized so that it satisfies the basic needs of every student. On the technology support side we need adventurous faculty collaborators willing to share both their content expertise, and their experience as effective teachers and communicators. The knowledge resource from the best brains of various institutes, colleges and universities has to be used for bringing about a better society. In brief, global exploration into any branch of knowledge is possible only through technology enabled learning. "Open up the doors – to as many people as possible to gain access to it, at whatever moments in their lives, however frequently they choose to knock upon this or that education door." When the world of knowledge is knocking the doors of Indian Higher Education, let us warmly welcome and accept. Where we can be the knowledge generator according to the needs of Indian students, why to just stay back and be the user of that knowledge.

Keywords*: e-learning, Higher Education, Challenges*

INDIAN HIGHER EDUCATION SCENARIO

In India, the higher education has got both government and private players in the market. It consists of arts, science, and management, technical and professional education. Since the Indian knowledge industry is entering into the take off stage, the strategy of survival of the fittest holds good. The foreign players are also trying to join the competition. And hence the less effective educational institutions are forced to merge themselves with others or they are forced to go out of market. Though the transition period is painful, the ultimate fruit will be surely in favour of both the knowledge sellers and buyers. If this system is well planned, students can reach the knowledge of remote and unreachable locations in every nook and corners of the world at no cost.

There exists a paradox in eLearning among various institutes. Few institutions join the race, while the rest suffer from lack of knowledge or from lack of realization of the importance of eLearning. Institutes like IITs are adopting all latest technologies and are keeping their students enlightened from various parts of the world. ELearning has vast potential in India. A major marketing and awareness effort will bring about the desirable change. UGC, NAAC, ICSSR, DBT, NCERT, ICHR, NEEPA, AICTE and other agencies of ISO 9000 family are pushing from various directions to bring the slow growers to walk with the rest. University Grants Commission provides eLearning programs like EDUSAT and INFONET.

The traditional learning system had been used in India and was sustainable for long. But the educational needs are changing and a global education standard is imposing itself and forcing the Indian education system to undergo many changes. The concept of e learning is definitely gaining popularity in the country but at a slow pace as compared to other countries. The Indian Constitution resolves to provide quality education to all and in an effort to fulfil the educational needs of the country specifically for the diverse societies and cultures of the country the government has chalked out different educational categories: Elementary education, Secondary education, Higher education, Adult education, and Technical and Vocational education is nothing but the development of the whole individual and nurturing the potentials inherent traits. E-learning is a useful medium through which India can attain the goal of reaching the unreached in rural areas, motivating the learners for

higher education as well as woman empowerment through their education. In the current super-fast era and globalised world, education needs to meet the additional demands of present time such as creating globally competent work force. Due to globalization, the whole world has become a global village. Now, education can be used as a useful tool to raise awareness of environment, peace, culture, social diversity, increased competitiveness and the concept of a global village. In the present world, education is being used as a means of becoming a global citizen. In order to work in this more competitive world, one has to be competent enough to survive. Education gives us that powerful tool by which we can live a life of worthiness. It is only through improving the educational condition of a society that the multi-faceted progress of its people can be guaranteed. E-learning is the best option available to achieve these goals. E-learning is also a powerful medium to improve inclusiveness of education in our country. If an educational institution is committed to give high quality education, it should be built on values and ethics, and be innovative in offering its teaching programmes. E-learning is not a single strand but is multifaceted, covering a wide range of approaches and methods [5].

Concept and Aspect of e-Learning is electronic learning, and typically this means using a computer to deliver part, or all of a course whether it's in a school, college, part of training or a full distance learning course. E-Learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely.

Education is what remains after one has forgotten what one has learned in school."

—Albert Einstein.

While Einstein's words may have been intended in good humor, they aptly reflect the fact that effective education is constant and always evolving. In fact, the face of education has experienced a sea change over the decades. Once characterized by the traditional classroom model, education has metamorphosed into learning that is instant, online, self-driven and on the go. The journey of education in India, too, has been dotted with innumerable milestones. In other words, e-learning can also be described as learning that is delivered online, via the internet, ranging from Distance Education, to computerized electronic learning, online learning, internet learning and many others forms. So e-learning can be defined as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. It is interactive learning in which learner can also communicate with teachers, professors or other students in the class. Sometimes it is delivered live; where one can "electronically" raise hand and interact in real time and sometimes it is a lecture that has been pre-recorded. Normally, there is a teacher or professor interacting /communicating with learner and grading the participation, assignments and tests. E-Learning has been proven to be a successful method of training and education. It is becoming a way of life for many citizens in our country e.g. farmers education, adult education, pre-primary and primary education as well as in higher education.

E-LEARNING CONTENT PREPARATION AND PRESENTATION TOOLS

Technology enabled learning is evolved through a combination of hardware, software, media delivery system and communication systems including networking.

Desktop, laptop or notepad, palmtop or hand held computers, electronic blackboard, electronic writing pads, mouse, trackball, joystick, light pens touch screen, optical mark / character recognition, bar code reader, digitising tablet or digitizers and a cursor (puck) or a pen(stylus), speech or voice input device, printers, scanners, copiers and faxes are some of the hardware devices.

Software includes voice recognition, hand writing recognition, information management programs, learning packages in removable disks and in hard disks, data base management and data processing software, information banks (dictionaries, encyclopaedias, almanac, references), digital books, educative games, programmes and languages, skill Training, self-learning packages, edutainment (education and entertaining) software, presentations, word processors, spreadsheets, designers, audio and video animating and editing software.

Delivery systems includes audio and video conferencing aids, dishes and antennas for satellite communication, web cameras, digital video and still cameras, cell phones, speaker phones, telecommunication linkages, modem, server, LCD and/or D.L.P. Projectors.

Some communication services include, telegraph, dialog (telephony, video telephony, telemetry, teletex, telex, videotext, facsimile, video surveillance, Electronic Meeting Systems (audio, video, groupware, teleconferencing.), Retrieval (videotext, broad band), Messaging (voicemail, video mail, electronic mail), etc. Communication technologies are generally categorized as asynchronous or synchronous. Asynchronous activities use technologies such as electronic mail, blogs, wikis, and discussion boards. Synchronous activities occur in an online chat session or a virtual classroom or meeting.

Application of eLearning in Various Types of Methodologies used in Higher Studies Multimedia is highly useful in Research, Teaching, and Learning. In research, review of related and earlier studies can be done through various search engines. Panel discussions, presentations by learners and teachers, submission of assignments, feedback from students, 3600 performance appraisal system for teachers, recording for future, workshops, multiple choice tests, guest lectures from distant university experts, case study, projects, remedial teaching, training the absentees, disseminating instructions, easy evaluation methods, on-line objective testing,

student created projects, experimentations, emerging learning workshops etc. are some of the easy tasks where eLearning can take place easily. 3D graphics are used for creating various models of science and maths. Hypermedia, interactive multimedia, multimedia presentations, virtual reality community, personal information management programs, departmental information management programs, documentation of teaching materials, etc will also enhance applications in higher educational system.

BENEFITS OF E-LEARNING

Integration: All institutions, research institutions, regulatory bodies, professionals, academicians and students can be integrated on regional, state, national and international level. Sharing of knowledge, experience, infrastructure and technology will enhance the effective and efficient utilization of available resources. Students can have an access to unlimited storehouse of information at any hour and from any place.

Access to best faculty and quality study material: Since eLearning has ability to cover distances, a few good teachers can be scaled up. Faculty availability is not restricted by geography or even time because of recorded classrooms. The expert teachers also will be identified and honoured by the demand for them from learners.

Human bias: eLearning helps removes the bias of sex, religion, colour, caste etc.

Dust free environment: Unlike in chalk and talk method, learning atmosphere becomes dust free.

Individualized instruction: eLearning also offers individualized instruction, which print media cannot provide. It makes learning exciting, engaging and compelling. Blended programmes can integrate eLearning with face-to-face workshops, coaching, action learning and a huge range of other learning methods to cover a range of needs, styles and approaches. Private messaging readily supports these exchanges while protecting the participants' privacy. Based on the individual and/or group needs, interests, career objectives and job profiles, lesson modules can be chosen.

Learning in experience: A Chinese proverb says, 'Tell me, and I'll forget. Show me, and I may remember. Involve me, and I'll understand'.

E-learning for Higher Studies of India

Difficult or dull subjects can be made more interesting, easier and more appealing by e learning. It is an active experience with the emphasis on interactivity and 'learning by doing'. Also, many studies have proved that absorption levels are at least 20% higher in eLearning compared to traditional learning. (www.gurukulaonline. com)

Fast learner- Slow learner mechanism: Quality of output information can be adjusted to the required level and are flexible. ELearning emphasizes continuous learning and promotes "just-in-time" and "just enough" learning. Both slow and fast learners can take their own time of learning because they do need separate timings. And hence the overall stress in the classroom environment can be removed.

Flexible: On-demand availability enables them to remove stress. ELearning empowers you to take charge of your learning and to access online library resources. Since the playback of recorded sessions are possible, absentees can learn the lessons when they are back and the slow learners can listen for more than one time.

Cost effective for both students and organisation: eLearning makes the best knowledge products available at an affordable rate by cutting down the travel and extra living expenses. Overall cost for the organisation is also reduced (instructor's salaries, meeting room rentals, and student travel, lodging, meals, etc).

Zero opportunity cost of time: Since learning can be planned after regular working hours or on holidays or at home, the opportunity cost of the time spent on training is zero. Learning time is also reduced to an average of 40 to 60 percent, as found by Brandon Hall (Web-based Training Cookbook, 1997, p. 108).

Simulation, gaming and interactivity will enrich eLearning: Research shows that student understanding and retention improves when they learn by experience. Technologies such as collaboration, interactivity, modelling, simulations, virtual reality interfaces and gaming will help students experience the skill while being taught. This will help the students in Albert Einstein's scientific method of learning. He says 'I do not teach my pupils. I provide conditions in which they can learn.' And hence eLearning is a wholesome learning.

CHALLENGES TO BE FACED BY E-LEARNING

ELearning is not, however, the be all and end all to every educational need, because computers cannot replace human being. The personal touch, face-to-face interaction, eye contact are some of the stimulating and motivating factors in the learning process. The impersonality, suppression of communication mechanisms such as body language, and elimination of peer-to-peer learning, reduced social and cultural interactions are major drawbacks associated with eLearning mechanism.

As per the collaborative learning theory, human interaction is a vital ingredient to learning. Hence, while designing eLearning packages, it is necessary to realize that the learners are not isolated with technology. Human interactions should be encouraged through audio or video-based web-conferencing programs and threaded discussion boards. Faculty-to-student as well as student-to-student interactions, should be encouraged in any form. Discussion groups can also be formed on-line. The usage of eboards, chats, e-mail, and tele-conferencing, may help remove this potential drawback to some extent.

Let's shed some light on the challenges faced.

1. **The Internet is still a luxury in many parts of the country.**

A vast majority of the Indian population resides in rural areas. The lack of infrastructure in such areas gives rise to connectivity and accessibility issues. However, the Government of India has been instrumental in removing such barriers by implementing various measures. Two schemes have been launched to aid in e-learning implementation:

- National Mission on Education through Information and Communication Technology (NMEICT)
- National Program on Technology Enhanced Learning

These two schemes have been solely launched to implement ICT in video and web-based learning.

2. **E-learning does not cover a lot of certification courses.**

The certifications that come with conventional learning is somehow lost in the e-learning concept of education. The e-learning courses do not cover a lot of certification courses that are recognized by colleges and universities across India or abroad. This pulls the e-learning courses out of sync with any stream of school education.

3. **It would take some time to renovate the conventional educational system.**

The traditional education methods have enlightened generations for decades now. Even though you might feel that they have overstayed their welcome, it has become increasingly difficult for us to overthrow tradition completely and embrace newer methods of learning with open arms.

However, renovation in the old-school methods have seen the light of the day with technology entering the industry. But a complete makeover in education with the e-learning methods would still require some time to establish itself.

4. **Not all learners are tech-savvy.**

Even though the e-learning courses are available in a wide range of platforms for learners to choose from, a basic knowledge of how to operate those devices is imperative to benefit from the courses. And being a tech-savvy teacher becomes a primary requisite. Therefore, before e-learning could be implemented, learners and educators need to be educated about the ins and outs of technology to facilitate a smooth learning curve.

5. **Lack of awareness**

If a large part of the population isn't aware of the amazing benefits that e-learning has to offer, then how can it be expected to change the face of education in the coming years?

Awareness plays a key role in making the proliferation of e-learning a joy ride. With that lacking, the future becomes questionable.

While the challenges pose an impending storm rocking the e-learning ship violently, the numerous benefits calm the waves to a soothing cradle. E-learning streams in like a shining ray of hope, making education accessible for:

- Anyone
- Anywhere
- Anytime

And with the astonishing figures depicting the prospect of a brighter future, e-learning is here to stay

E-LEARNING TRENDS SET TO CHANGE THE FUTURE OF HIGHER EDUCATION IN INDIA

According to IDC, the revenue earned worldwide from eLearning was $6 billion in 2003. That's expected to rise to $21 billion by 2008. Nasscom reports that Indian companies will get revenues of $7 million to $9 million by the end of 2005. ELearning in India has a very big potential and a bright future. At present many Indian students are going abroad for education with various demands. All those demands can be satisfied through commercial/ private players' entry into the knowledge market in future. Also in future there will be high demand for people who can develop multi-lingual courseware that addresses various topics.

In higher education, virtual classroom, a teacher free classroom has got bright future in India. A virtual classroom is one where the virtual reality is enhanced. It is a totally technology enabled class room environment. Virtual Reality (V.R.) is a 3D learning environment where the learner can explore the learning concept. Learning is experienced through games or simulated situation. It brings a real environment while wearing a headset and data glove in an immersive virtual reality environment. In the areas of Medicine, Engineering, Astronomy and other skill trainings, virtual eLearning will become indispensable. 2D and no immerse virtual reality situations are available in many higher educational institutions in India. Since this type of eLearning brings out the joy of learning, every distant learning program should incorporate virtual classroom communication. All technical higher educational departments should prepare separate virtual reality modules for each lesson.

To conclude modernization of education in Indian colleges and universities is a necessary attempt. The syllabuses, subjects and courses have to be planned in such a way that it satisfies the top international standards. To attract affordable international students, who are interested in comparatively quality education, eLearning has to be promoted. Infrastructures also have to be standardized so that it satisfies the basic needs of every student. On the technology support side we need adventurous faculty collaborators willing to share both their content expertise, and their experience as effective teachers and communicators. The knowledge resource from the best brains of various institutes, colleges and universities has to be used for bringing about a better society. E-twinning of institutions will help them to share their infrastructure and technical expertise. More inter-country exchange programs will help achieve the target. In brief, global exploration into any branch of knowledge is possible only through technology enabled learning. "Open up the doors – to as many people as possible to gain access to it, at whatever moments in their lives, however frequently they choose to knock upon this or that education door." When the world of knowledge is knocking the doors of Indian Higher Education, let us warmly welcome and accept. Where we can be the knowledge generator according to the needs of Indian students, why to just stay back and be the user of that knowledge.

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