

Role of e-Learning in A Developing Country Like India

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ABSTRACT

The life of knowledge and human skills today is shorter than ever, mounting the pressure to remain up to date with ones education and training throughout a career. In the age of globalization and technological revolution, four-year degrees are just the start of a forty-year continuing education. Life-long learning is quickly becoming an imperative in today's world. Electronic learning (or e-Learning or eLearning) is a type of Technology supported education/learning (TSL) where the medium of instruction is computer technology[7]. Although e-learning has potential in India, adoption has been slow and will need a major marketing and awareness effort. In India, globalization has generated a good vibration and life for education. E-learning technologies have great potential to spread learning however, the benefits of these technologies have to reach the rural masses of India, otherwise they will be one of the causes of the Digital Divide. This paper concentrates on the Indian education scenario, eLearning content preparation and presentation tools, application of eLearning to spread education to the remote areas, pros and cons of eLearning and future of eLearning in India. A few suggestions have been made to use e learning for informal and vocational training, which is highly effective for a developing country like India where a majority of population is living in rural/ remote areas and has received almost negligible formal education.

KEYWORDS

e-learning, ICT, Virtual classroom, web technology, web training, distance education, digital divide, online course, communication technology.

1. INTRODUCTION

E – learning is defined as acquisition of knowledge and skill using electronic technologies such as computer and Internet-based courseware and local and wide area networks[1]. Broad definition of the field of using technology to deliver learning and training programs. Typically used to describe media such as CD-ROM, Internet, Intranet, wireless and mobile learning. Some include Knowledge Management as a form of e-learning. The term was introduced in 1995 when it was all called "Internet based Training", then "Web-based Training" (to clarify that delivery could be on the Inter- or Intra-net), then "Online Learning" and finally e-learning, adopting the in vogue use of "e" during the dot com boom. The "e-" breakthrough enabled the industry to raise hundreds of millions from venture capitalists who would invest in any industry that started with this magic letter.

1.1) Types of e- learning

There are fundamentally two types of e-learning: synchronous training and asynchronous training.

Synchronous, means "at the same time," involves interaction of participants with an instructor via the Web in real time. Asynchronous, which means "not at the same time," allows the participant to complete the WBT at his own pace, without live interaction with the instructor.

A new form of learning known as blended learning is emerging. As the name suggests it is an amalgamation of synchronous and asynchronous learning methods.

Asynchronous Methods

Embedded learning: Embedded learning is information that is accessible on a self-help basis, 24/7. It can be delivered to the place of work, or to mobile learners. Electronic performance support system (EPSS) is a type of embedded learning. The advantage is that embedded learning offers learners the information they need whenever they need it.

Courses: The clear advantage of a self-paced course is convenience. Participants can get the training they need at any time. This can include just-in-time training where a participant gets exactly the training he or she needs to perform a task.

Discussion groups: A discussion group is a gathering of conversations that occur over time. They are also called message boards, bulletin boards and discussion forums. Discussion groups can be used to support a group of participants taking the same class or can be used to support participants performing related tasks. A discussion group is a very competent way to supply expert answers to a large group people. A single answer to a common question can help many.

Synchronous Methods

Virtual classroom: Virtual classroom duplicates the features of a real classroom online. Participants interact with each other and instructors online, instant messaging, chat, audio and video conferencing etc.

Blended Method: Most companies prefer to use a mix of both synchronous and asynchronous e-learning methods according to their requirement[13].

2. SCOPE OF e-LEARNING IN INDIA

Elearning can be examined at two levels. The first one is education and another one is training. For education can be used at both elementary and higher levels. In training it can be used by companies to train and upgrade their employees. e-learning permits the delivery of knowledge and information to learners at an accelerated pace, opening up new vistas of knowledge transfer. Early adopters are companies that have tried to supplement face-to-face meetings, demonstrations, training classes and lectures with this technology. "The adoption of e-learning in all spheres—corporates, schools,

universities, etc—is low at present. The Indian market is not substantial when compared to the international market. e-learning in India has been most successful in the corporate segment where it is seen as a means of achieving business goals and motivating employees[12]. A lot of work has to be done to make e-learning successful for education, both formal and informal and to cultivate faith of people in online degrees in India apart from the ones given by renowned institutions like IITs[5]. If e-learning reaches the remote and rural parts of India, it would be much faster to educate people. One major problem faced by India is that almost all highly skilled professionals are based in bigger cities that deprive the rural population from getting educated through them. E-learning simplifies this process by taking the knowledge to masses provided that there's internet connectivity available at some nearby area. Even in the area of higher education, the supply and demand are not balanced. Looking at the population, the available universities are not enough to accommodate all the people seeking education. At this point distance education comes in and has already been quite popular. E-learning can play a major role even here.

2.1) Advantages of e-Learning

There are a number of advantages of e-learning. First, we are using state-of-the-art technology and instructional strategies. Cultures can be shared through e-learning. Disabilities can be accommodated, with or without the knowledge of other participants. Gender may not be an issue, because in many situations, gender is unknown—or it can be. Because of global access, the classroom may be the world.

Nothing can replace traditional classroom teaching, but e-learning complements the process and can help reach out to the masses[4]. The biggest advantage of e-learning lies in its ability to cover distances. For an organization that is spread across multiple locations, traditional training becomes a constraint. All trainees need to come to a classroom to get trained. Additionally, the trainee's learning pace is not addressed as all trainees are treated as having equal abilities and there is little flexibility in terms of timing and completion of the course. The major advantage is the consistency that e-learning provides. e-learning is self-paced, and learning is done at the learner's pace. The content can be repeated until it is understood by the trainee. It can be made compelling and interesting with multimedia, and the trainee can be given multiple learning paths depending on his or her needs.

2.2) Disadvantages of E-Learning

Just as a glass may be half full, it may also be half empty. Which means, there are also disadvantages to e-learning. Class members with disabilities may be functioning at a disadvantage for a number of reasons. Some participants may be technologically challenged and are hesitant to participate in full. Online discussions may inhibit class members, or they may encourage banter. One of the common disadvantages to e-learning is that some students, especially those for whom English is not their native language, have difficulty

communicating and being understood. Another group of students may experience computer or technology anxiety, which may in turn impact their learning and their final grades.

3. e-LEARNING CONTENT PREPARATION AND PRESENTATION TOOLS

The advent of e-learning has been a shock to some people. Flexibility is a huge issue. The administration may have courses taught face-to-face, online, or hybrid—to meet the needs of the institution, the department, the faculty, and/or the students. For the faculty, online courses permit them to multitask and be “in two places at one time”. And for the students, they may take classes simultaneously at institutions anywhere in the world. Competition is steep for online courses, especially when many institutions offer the same course and the transferability from one program or institution to another is fairly uncomplicated. Teaching strategies for online courses do not necessarily parallel those strategies used in a face-to-face class. It is paramount that instructors receive adequate training in using the technology as well as knowing (and using) strategies which are most appropriate for online learning. Not only should instructors be trained to use a course management system, but also it would be beneficial if students received some type of official training in how to participate in an online course; this “introduction” could be in the form of a required course or perhaps even a tutorial which must be completed satisfactorily prior to registration for an online course. The technology demands of an online course can create chaos for faculty and students alike. The institution has an obligation to provide appropriate technology for the online course. The students, in turn, have an obligation to meet the minimum technology standards established by the institution. Of course, a dial-up system of interconnect can be a challenge, and faculty need to determine options that can be readily received by these users. Technology enabled learning is evolved through a combination of hardware, software, media delivery system and communication systems including networking[6].

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, digitizing 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's 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's, information banks (dictionaries, encyclopedias, almanac, references), digital books, educative games, programmes and languages, skill Training, self learning packages, edutainment (education and entertaining) software's, presentations, word processors, spreadsheets, designers, audio and video animating and editing softwares.

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, teletext, 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.

4. CHALLENGES FACED BY e -LEARNING IN INDIA

Majority of population staying in rural areas and making them aware about the concept of elearning is a major challenge. Lack of infrastructure in terms of connectivity, availability of Internet, etc. is another issue. The government is taking various measures to improve the communication systems and new technologies like 3G in the telecom space have already started to be implemented to make things better.

Social Implications of E-Learning are another segment of study that is very important to be understood for the success of e-learning in India. The social implications of e-learning may be categorized into the following types of issues: cultural, gender, lifestyle, geographical, religious/spiritual, literacy, disabilities, and digital divide[9]. Within the cultural issues category are content, multimedia, writing styles, writing structures, Web design, and participant roles. Some content, although crucial to the course, may be either unacceptable or unfavorable with certain members of the class. If faculties are aware of a sensitive component of the discussion or material covered, how can that faculty member lead the class to include or exclude the materials? Even writing styles can impact the process of holding an online course. The students and instructor need to know the “rules of the road” of written assignments. And, what participant roles are expected and/or tolerated; and, if the expectations are not met, who is responsible for keeping discussions and homework on track? Gender issues continue to be a part of class, even though people are separated by miles and even continents. Possibly it is the instructor’s responsibility to monitor facilitation and rotate leadership roles in groups to assure gender neutralization. Any behavior issues must be addressed and corrected immediately. Lifestyle differences take on any number of forms, and the instructor will need to be on guard to assure equal treatment of class members, regardless of their respective lifestyles and preferences. In some situations the students themselves will take on this monitoring role, while in other situations the instructor must step in. The “different strokes for different folks” adage must be maintained—preferably with a minimum of disruption to the entire class. Geographical issues and differences make be very apparent, especially when we are looking at a global perspective. For example, if a chat room activity is to take place, all impacted time zones need to be accommodated.

Within this category would also fall the insensitive locale jokes. And even the technology issue of Internet access needs to be considered. In some communities, dial-up access is the only possible means of interconnect; there are no alternatives. Religious and spiritual considerations must be addressed and honored. Perhaps it would be unwise for an instructor to require work be done on certain days, given that these days may be religious days for some religions; suggest, perhaps, a block of time when activities might be assigned. A sensitivity to religions is critical. Literacy should be a “given” for an online course, but it cannot be overlooked. Regardless of the level of the course, there will very possibly be people who lack certain skills (or at least could use improvement): reading, writing, information, and keying (typing) are skills which are necessary but may need improving. Disabilities must not be overlooked. The Digital Divide is the last category within these social implications to be discussed in this presentation and paper. Regardless of how the term “digital divide” is defined, it means there is a gap, whether this difference is between general and minority groups, men and women, persons with disabilities and the remainder of the population, young and older members of the class. It comes down to differences—those without something (whatever this something happens to be) and those without it. Accessibility to technology and the training to use this technology will help reduce the digital divide, the gap between the haves and the have-nots.

5. FUTURE OF e -LEARNING IN INDIA

India has a major role to play in the international e-learning services industry. It is already one of the leading IT service provider countries, and it is now aiming to achieve the same position in the IT enabled services. The presence of world-class educational infrastructure and training professionals enables it to be one of the leading e-learning services providers in the world. On the domestic front, the government and private sectors have taken many e-learning initiatives. Though these initiatives have been met with a lot of enthusiasm and user acceptance, their commercial viability is still under consideration. The government has been taking some proactive measures in a regulatory and financial capacity to boost the e-learning environment in India. Funds have been invested in setting up Internet kiosks in rural areas for the purpose of communication, which can be used for e – learning initiative as well and can help in providing informal and vocational training as well as formal education. The main strengths of the Indian e-learning services industry are:

- English speaking, highly qualified and techno savvy manpower
- Safe Electronic Environment – Official recognition for Digital Signatures and E-transactions
- Lower costs of human capital when compared to developed countries
- Strong and buoyant domestic education industry that facilitates up-gradation of skills and introduction of new products

5.1) Future Trends in e-learning

Business-to-employee initiatives will address e-learning : Companies can build B2E intranets or corporate portals to conduct business with employees, and provide them self-service for access to benefits, forms and information. B2E capabilities will become increasingly important tools for recruitment, retention, and employee-relationship management. Also will reduce cost, save time for the company.

e-learning will extend to customers: CRM initiatives might include customer education. Companies can use e-learning to introduce new products, educate customers in self-service techniques, and compare competitors' products and services

Simulation, gaming and interactivity will enrich e-learning: Research shows that student understanding and retention improves when they learn by experience. Technologies such as collaboration, interactivity, modeling, simulations, virtual reality interfaces and gaming will help students experience the skill while being taught.

There will never be enough of the right skills: Along with technologies and business practices, some skills are changing so quickly that they're outdated within a few months of introduction. In addition, the number and range of skills required of the average employee is increasing.

CONCLUSION

In a market such as India where the concept is still new, one crucial element that will make a difference in generating a good response is marketing. This not only holds true for segments such as government and education, but for the corporate sector as well. Experts are of the view that there needs to be a mindset for the adoption of e-learning. The other point is content. If content providers are giving off-the-shelf content, there should be scope for customization since each organization has its own needs. Regions without university education can access universities in other regions via the Web, a solution much cheaper than building university infrastructure. In underdeveloped countries, e-learning can raise the level of education, literacy and economic development. This is especially true for countries where technical education is expensive, opportunities are limited, and economic disparities exist. However, one of the problems with e-learning in India is the lack of course content, especially outside the mainstream focus areas of IT education, English-language content, and tutorial-like courses. There will be high demand for people who can develop multi-lingual courseware that addresses various topics[2]. The social implications of online learning center around one primary requirement that students need to feel a part of the class, regardless of where they are located physically or geographically. The "missing of connection" to the other students in the class and with the institution can impact the success of an online student. Bottom line: the Indian market is still young, but it will continue to adopt the concept of e-learning in order to meet its communication needs and seize business opportunities.

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