

EMERGING ROLE OF DIGITAL LIBRARIES IN E-LEARNING: CHALLENGES & OPPORTUNITIES

by

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ABSTRACT

The use of sophisticated technologies such as computer and telecommunication are bringing class room to the home and opening access to education for those who never entered or are unable to enter the portals of university. It is opening the flood gates of education to people hailing from any sections of society, including adult learners. It will greatly facilitate learner choice in terms of time and place for admission and assessment, and such functions could be carried out online which can be called E-learning. The paper discusses need for E-learning and the role of digital libraries in online education. The advantages of virtual universities and the challenges faced by the E-learners have also been described.

Keywords: Digital Library, E-learning

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0 Introduction

E-learning technology is a wonderful gift provided by the present day technological advancement and innovations. The tremendous growth of knowledge, globalization of education, liberalization of economy, advancement of information and telecommunication technologies have left a great pressure on modern higher education. In order to meet growing needs of education, we must make use of best possible methods in our pedagogy which can benefit a large number of students and to cope up with this, universities/institutions have to transform themselves into potential learning centers to cater to the growing needs of global learners. We find that several foreign universities are offering their study programmes in India. So it is the time that we have to keep ourselves prepared for the international competition.

1 Evolution Of Distance Education

In earlier times, information was given to students at their places of residence through print mode. The copies of the lesson were mailed to each students, those who were registered for the course. The students would study these lessons and would then send their reaction, response and performance rolls by mail to their institute. This mode has its own limitation such as i) sub standard quality, ii) delayed delivery to its users.

Modern electronic technology such as Radio, Television and Audio/Video cassettes etc. has placed at the disposal of man, a variety of new modes of communication. But unfortunately, all these methods became unpopular among the distance learners due the following reasons: i) the unsuitability of the timings of the broadcast, ii) ill drafted and poor quality of the talk,

iii) lack of objectivity in presentation, incapability of repeating programme at the will of listeners, iv) non-uniformity of syllabus of universities/institutes etc.

The next stage in the evolution of the methodology happens to be 'instruction via satellite'. This is done in teleconference/video conference mode. The nodal agency has a studio where the experts gather and deliver lectures. This gets uplinked to a satellite via transponder and then the satellite beams the signals down to all receiving stations. These stations can be located anywhere. The viewers get the chance to interact with their experts through telephone/fax¹. It helps to create the environment of the class room and enable the students to enjoy the same facilities of direct face to face interaction with their teachers and also with their peers.

Now the focus has been shifted to modern information technology mode-virtual class room. Here the teacher is omnipresent and the study materials are available online at reasonable cost. The education provided through www (Internet) has many distinct benefits. It has attractive and convenient modular learning pattern, enhanced learner participation through high interactive and effective instruction. Delivering course via Internet is a key tool to meet all these requirements and virtual class room or virtual campus is a consequence of web based learning. We may also have interactions with the teachers through this mode. The multimedia has immense possibilities as regards bringing live, not only the audio aspect of the teacher's deliberations, but visual aspects also.

2 Virtual Universities and their Advantages

Virtual universities are the universities that do not exist physically, but operate through internet and other tele-communication technologies, replacing or compensating both the computer based as well as home-based learning environment. The learning environment in a virtual university is the computer-simulation of the learning environment of a real university. The traditional universities and colleges have failed to accommodate all students possessing minimum eligibility and desire to continue higher education.

The students belonging to any country, speaking any language, may be rich or poor, can benefit from virtual university. Students enrolling with virtual university can take admission in any programme provided s(he) possesses all essential pre-requisites of the programme. Once one is admitted, he need not travel anywhere, can learn any topic anywhere at any time through Internet. Virtual universities use multimedia, and other communications and information technologies including www, through its virtual university learning environment, for providing information, registration, payment of fees, distribution of learning materials, library service, submission and evaluation of assignments, taking exams, learner-learner interaction, both synchronous and asynchronous communication and conferring of degrees².

Through Internet, course material can be offered independent of time and place. Cost of Internet access will continue to drop day by day. An ever increasing number of students have access to the internet, whether at home or on campus. It provides up to date information and as well as old data³. In online learning, learners can always communicate with their instructors and peers through asynchronous mode (any time any place communication via Email or electronic Bulletin Board Service) and live synchronous (same time, any place interactivity in a virtual classroom via conferencing, text chat, chalk board etc) whenever needed.

There are no longer geographical boundaries for E-learning through virtual universities. Full freedom is given to the learner to select desirable education and to join a course wherever and whenever he likes, and drop out the course whenever he wants. If gets interested later, he can rejoin the same and claim the benefit of those credit which he had secured earlier.

In E-learning, online information is delivered via dedicated web based hyper text system on the Internet. To produce and manage a comprehensive on- line education service , following components are needed.⁴

- ?? Human resources
- ?? Technical resources
- ?? Information resources
- ?? Learning resources

Human resources include faculty, administrative and technical staff and learners. Technical resources include computer-mediated tools such as software and hardware. Information and learning resources mean internal and external information and activities presented, accessed, used and performed, such as electronic libraries. Internet access and data base resources play a vital part in offering rich content to learners.

3 Role of Digital Libraries in E-Learning

Digital libraries are set of electronic resources and associated technical capabilities of creating, storing, searching and dissemination of information. Digital libraries are playing a vital role in online learning education system. Most of the digital libraries are dedicated to supporting higher education and research and they justify their investment in digital development as a powerful means of realizing the larger institutional goals of the academic community they serve.

One reason for using digital libraries in E-learning is that it can store and manage large amounts of digital content such as full text, course materials, bibliographic databases, library catalogues, image and audio clips etc. Thus it provides an environment to bring together collections, services and people in support of the full life cycle of creation, dissemination and preservation of data, information and knowledge. Another reason to use digital libraries is that using various electronic tools, learners can search text materials and images easily and quickly, which can be applied broadly across all kinds of institutions. Advance intercommunication technology, sophisticated search engines, and affordable cost, large storage of digital content are the other reasons to implement a digital library in modern education. Other advantages of digital libraries in E-learning are:

- ?? The library would allow learner to use electronic resources from anywhere, without even knowing where it is stored geographically.
- ?? One copy of the documents could be viewed by any number of users simultaneously.
- ?? It can be used for increasing course delivery for a large number of clients at a particular point of time.
- ?? Study materials need never go out of print, and new editions can easily be created. One can carry several titles at once on a portable reader and, over time, build a personal library.
- ?? It would be easy for non-specialist to use due to the simplicity of operation.
- ?? Links to publisher's sites for full text journals.

- ?? It provides and facilitate online and on demand enrolment, study and examinations.
- ?? Search result will be delivered to an e-mail box to the user's choice.
- ?? Protecting rare books that are rapidly deteriorating due to over use and poor storage conditions.
- ?? It is cost-effective and cost-efficient for its ability of reuse.

4 Challenges faced by the E-Learners

The development of E-learning has thrown up new problems focused on the copyright implications of electronic text. Students, researchers, staff, employees and other end users affiliated with virtual university or digital libraries should be allowed to print-on-paper excerpts of digitally available works on the same conditions according to which they may make photocopies of print material. The authorities of universities/libraries should take initiative to evolve some solution on this aspect and which may benefit learners, publishers as well as authors. According to the US copyright law, a library to qualify for the copyright exemption, must meet three requirements i) the reproduction and distribution must not be for direct or indirect commercial advantage, ii) the library must be open to the public or to researchers, iii) the copies must contain a notice of copyright. Other major challenges are:

- ?? There is no mechanism available to establish standards for internet materials, instruction, design and quality of interaction.
- ?? Study materials are accessibly only by specified students, licensing problems are unlikely to be serious barrier.
- ?? Since course materials are instructionally designed, it hardly provides for individual variations and further revision.
- ?? Dangers of increased learner isolation as students learn from the screen, and not through much interaction with their peers and teachers.
- ?? Crossing national boundaries creates logistical and organizational problems of distance teaching institutions. The facilities available and aptitude level of European students and developing countries are different.
- ?? Operating overseas can also expose one to the all problems of any international business, exchange rate fluctuations, restriction on foreign exchange, and the export of money from the country of operation to pay for services, sources from another jurisdiction, political turmoil, civil unrest and war etc.
- ?? Information providers are more interested in profit than quality services.
- ?? Lack of organization of information on Internet.
- ?? Not all sites are updated regularly.
- ?? Absence of monitoring mechanism to evaluate the course ware
- ?? Lack of awareness about the use of electronic equipment.
- ?? Access to Internet in developing countries including India, may not be easy or widespread, in comparison to the developed countries.

5 Conclusion

Electronic documents offer possibilities for expanding access as well as changing learning behaviour and academic research trends. Content can always be accessible, regardless of time or place to be read on PCs. The role of digital libraries in distance learning is still not clear in the country like India. The INFLIBNET has already started Networking of different

university libraries, on its completion it will be possible to share all available resources for imparting E-learning to far distant places in the country.

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