

*Conference on ICT for Facilitating
Digital Learning Environments
11th – 13th January 2006
DRTC, Bangalore*

Paper: X

E-learning and its Impact on LIS Profession

Dimple Patel

Hyderabad, Andhra Pradesh
dimplerp@yahoo.co.in

Abstract

The paper focuses on changing role of libraries and LIS professionals in the digital learning environment. The paper also discusses about the library services in an integrated environment where digital libraries and e-learning programme goes hand in hand. It highlights e-learning scenario in India with special reference to the initiatives taken by educational institutions. Finally, the paper emphasized the need to initiate LIS education in Digital Learning Environment, particularly in India.

“Education, therefore, is a process of living and not a preparation for future living.”

– John Dewey

1. Introduction

Internet has changed the way humans used to perceive communication. Instant communication of ideas, knowledge, and feelings has become a reality today with email and chat software. Information is available at the click of mouse. Wikis and Blogs have given a new meaning to ‘*dynamic content*’. With speedy developments in IT and ICT tools, the world is indeed becoming a ‘*global village*’. After transforming the way humans communicate, Internet has now found its way into the essential activity of human life i.e. the learning process. E-learning is no longer only a buzzword, but has become a reality especially, in higher education. In a cut-throat competition environment today and attractive openings for highly paid jobs in BPOs and MNCs, especially in India, many students are giving up on higher education. The only option for such students to pursue higher studies is either to leave their jobs or go on leave-without-pay. It is in this situation that e-learning can play an essential role of a virtual education centre, where the student and teacher can interact through various interfaces, from different geographical locations.

2. E-learning in India

While it is true that E-learning has given a new dimension to distance education in the world, it is yet to catch up in Indian universities. In India e-learning is a very recent phenomenon and currently restricted to IT sector. Companies like Cisco, Hughes Escorts Communications (HECL), LG, Reliance, Patni use online training courses for their employees to coordinate training sessions for geographically dispersed employees.

Recent trends have shown that non-IT training is also attracting both big and small vendors. Many international universities and institutes are offering online degree courses, “attracted by Internet’s cutting-edge distinction and promise of more students and revenues.”(1)

In some of the Indian universities, TV & radio broadcasting are commonly used in distance learning. Recently, distance education courses are also being conducted through video-conferencing. But they are not catching up as fast as expected. The reasons for this are:

- Lack of penetration of ICT in rural India
- Lack of course content except in the field of IT
- One of the main reasons for e-learning not being very successful in India is the lack of content is mainly in Indian languages, still majority of the content on Internet mainly education material is in English. The digital content has to come in vernacular languages, to make it successful. (2)
- Lack of psychological acceptance. It is widely acknowledged that the issue of “personal touch” is hindering the growth of e-learning. Most students still prefer the feel of a classroom, rather than just sitting in front of a computer and waiting for a reply
- Lack of expertise in terms of development and delivery of e-learning solutions
- Substandard course material
- Unreliable communication infrastructure, insufficient bandwidth, (for two-way video conferencing, delivery of rich multimedia training content and real-time training over Internet)
- Lack of standards and long gestation period for implementation are few other hindrances.
- Lack of experience and understanding of the market.
- E-learning’s ability to create a credible learning mechanism and proof-of-concept is still quite far.
- There are no major recognized e-learning certification courses in India that are available today that guarantee employment,” (3)
- Include lack of uniform e-learning standards and workplace practices, and the lack of adequate human resources to power the spiraling upward growth. These concerns apart, government apathy has also bolstered fly-by-night e-learning entrepreneurs who eye quick bucks and increasingly deliver ‘learning garbage’ to a global clientele.

3. E-learning courses in India

Following are a few case studies of e-learning initiatives in educational institutions in India.

3.1 BITS Pilani

The BITS Virtual University (<http://vu.bits-pilani.ac.in/>) is already operational. It is a supplement, and not a replacement, of the conventional Distance Learning program of BITS. The student of distance learning can access and also participate in an on-line video conference over IP and interact with the BITS Faculty at their Pilani office or residence through the BITS Connect network at a mutually convenient time. If a student has missed viewing a live lecture session, then the student can view the recorded version of the lecture at a time convenient to him/her. There is also a virtual lab to give the student the feel of a real laboratory. At the moment, the BITS Virtual University is restricted to a few specialized Master's level programs, but there are plans in future to extend this mode to other programs as well. (4)

3.2 NMIMS, Mumbai

The Narsee Monjee Institute of Management Studies (Deemed University), Mumbai is tied up with a third party service provider (Hughes Escorts Communications Ltd) for transmission of live lectures through Hughes VSAT network. Here the class timings are predetermined. The NMIMS Faculty is then required to go to the Hughes studio and the program is beamed live via satellite to around 35 Hughes centers across India. The students are required to go to the centre in their respective cities and attend the live lecture. The lecture schedules, Faculty assignments and presentations, examination details and all other communications are done through the *nmims.edu* site. The students are expected to visit this site and keep in touch with themselves and the Faculty through e-groups. Currently, the NMIMS is offering a Post Graduate Diploma in General Management (a part time course meant for people with several years of Industry experience)

and a Post Graduate Diploma in Business Administration (full time course). NMIMS also undertakes company specific programs in the e-learning mode. (4)

3.3 EDUSAT

The Indian Space Research Organisation (ISRO) had successfully launched an exclusive satellite for educational services (EDUSAT) on its board Geosynchronous Satellite Launch Vehicle, GSLV on September 20, 2004. The main aim of the EDUSAT pilot project was to demonstrate the concept of multicasting interactive multimedia for the educational sector and augment distance education capabilities in the country.

It is a collaborative project of the Ministry of Human Resource Development (MHRD), and the Department of Space Indian Space Research Organization (ISRO). EDUSAT will be implemented through the following institutions:

- IGNOU (Indira Gandhi National Open University) Nodal Institution
- AICTE (All India Council for Technical Education)
- ICAR (Indian Council of Agricultural Research)
- NCERT (National Council of Educational Research and Training)
- UGC (University Grants Commission)

The MHRD propose to use the ICT capabilities of the EDUSAT satellite for Elementary Education, Literacy, Vocational Training and Teacher's Training. A later phase will expand to include Agriculture, Health, Community Development Programmes etc. Through EDUSAT Indira Gandhi National Open University (IGNOU) and the University Grants Commission (UGC) will further expand the educational facilities in the remote areas of the country Universities and Colleges located in remote areas, Academic Staff Colleges, Media centres etc. The NCERT will expend its reach through Edusat to NCERT centres across the country, Central Tibetan School, National Institutes of Open Learning, Kendriya

Vidhyalayas, Jawahar Navodaya Samitis etc. AICTE plans to cover Engineering Colleges and Institutes of Technology across the country under Edusat. The ICAR is still at conceptual stage of joining the EDUSAT network. It plans to cover Institutes, Bureaux, National Research Centres and Project Directorates under its mandate. (5)

3.3.1 VTU-EDUSAT

In Karnataka, Visvesvaraya Technological University (VTU) is the main beneficiary of the pilot project under the first phase of EDUSAT implementation. Under this pilot project, all engineering colleges of VTU are being networked with one hundred nodes. Besides Karnataka, the Y.B.Chavan State Open University, Nashik, in Maharashtra and the Rajiv Gandhi Technical University in Madhya Pradesh are covered under the pilot projects.

Using this EDUSAT network, VTU has already planned to train students on such skills as problem solving, leadership qualities, communication skills, experimental skills, teamwork, time and crisis management, techno-entrepreneurship development, design orientation, creativity and career planning. VTU is also planning to conduct programmes on social and environmental awareness, professional ethics and behavioral habits. Further, VTU is also planning to provide web education so that even the overseas students can get VTU certification. (6)

4. LIS Services and E-learning

“Every user his/her information” Second law of library science
-- Dr. S.R. Ranganathan (7)

Libraries play a very important role in education. A library is more than a place where information resources are gathered, classified, organized and maintained. The academic libraries like school, college and university libraries provide invaluable services to patrons like reference, SDI, and CAS services. In E-learning environment too libraries have not lost their importance. In fact their role in bridging the gap between the user and the

information has become more essential than ever. Just like Google can never replace a librarian's knowledge in finding the right information for the right user, e-learning environments cannot do away with libraries. But the challenges for the librarians to organize and disseminate information in newer forms have definitely increased.

Any library or information centre needs to satisfy the five laws of Library Science. The services given in whatever form should be user-centric. The mantra of the librarians is always "*Right information to the Right user at the Right time*". Hence, it is very important that libraries and librarians extend these laws to services provided in an E-learning environment too.

4.1 Changing role of libraries and the library staff

4.1.1 Libraries

E-learning environments pose unique challenges and problems in providing information services. The libraries and library staff will essentially need to adapt to this new situation. Three essential components are common both for e-learning as well as face-to-face classroom teaching i.e., the educator, the learner, and content. But e-learning programmes also involve the IT component. Hence, the educators, the learners, the librarians and the IT staff need to coordinate and work in harmony for the successful running of e-learning courses. Libraries need to be equipped with the necessary infrastructure and latest technologies both hardware and software to face these challenges.

E-learning allows learning activity from either office or home. Learners with different educational background, skill levels, and interests can join relevant programmes. The learners will have the flexibility to learn and finish the programmes at their own pace. They will have their own online spaces where they can organize the resources according to their relevance. It is here that the libraries will have to provide the learners with appropriate resources and help the learners organize these resources for fast and efficient retrieval of relevant information.

Libraries will need to give access to resources to a wider range of learners in e-learning environments; for instance, school dropouts, employees pursuing higher studies, academics and professionals pursuing continuing education, lifelong learners, etc. Similar to the SDI services, the libraries will need to create learner profiles so as to provide personalized services to the e-learners.

Not only will the libraries have to deal with a wide variety of learners, but also they will have to provide the users with a wide range of electronic information resources, prominently e-books and e-journals. While electronic resources provide many advantages like remote and instant access, portability, 24-hour access, they also present many issues and challenges especially to the librarians. Copyright issues, plagiarism issues, are but a few of the problems.

The development of Digital libraries and the Open Access movement could not have been timed better. The potential of integrating digital libraries into e-learning curriculum is immense. With lot of scholarly material being released in open digital libraries / repositories, and also in open access e-journals the e-learners can merge these with their local content. It is a matter of pride for the profession that librarians and information professionals are the ones to be active participants in the open access movement. Especially so in India, many open access digital libraries have been launched by academic and research libraries. Some of the open digital repositories initiatives in India are:

1. LDL: Librarians' Digital Library <https://drtc.isibang.ac.in>
2. National Chemical Laboratory (NCL), Pune
<http://dspace.ncl.res.in/dspace/index.jsp>
3. Indian National Science Academy <http://drtc.isibang.ac.in/insa/>
4. INFLIBNET <http://dspace.inflibnet.ac.in/>
5. University of Hyderabad
<http://202.41.85.207:8080/dspace/index.jsp>
6. National Centre for Radio Astrophysics
<http://ncralib.ncra.tifr.res.in/dspace/>

7. Indian Statistical Institute, Bangalore
<http://library.isibang.ac.in:8080/dspace/>
8. Indian Institute of Technology (IIT), Delhi
<http://eprint.iitd.ac.in/dspace/>
9. ETD@IISc, Bangalore <http://etd.ncsi.iisc.ernet.in/>
10. National Institute of Technology, Rourkela
<http://dspace.nitrkl.ac.in/dspace/>

4.1.2 Library staff

The library staff needs to be educated and trained in the use of computers and related technologies most efficiently, so as to deliver prompt and efficient information services to e-learners as well as e-educators. The essential skills required of new-age librarians are:

- Ability to work as part of e-learning teams,
- Project management skills,
- Knowledge of pedagogy, learning models
- Skills to support users online as well as face-to-face
- To develop and organize content for e-learning programmes
- To be active partners in curriculum development team
- To understand the unique needs of online learners
- To be aware of the emerging e-learning standards and frameworks, like IMS, IEEE Learning Object Metadata (LOM), and Shareable Content Object Reference Model Initiative (SCORM)

5. E-learning in LIS Education

With e-learning penetrating into IT and technological courses, it will not be long before when e-learning programmes will be started in Library and Information Science Education. Being in the information-intensive service, LIS academics and educators should take initiatives in starting e-learning courses. In India, particularly, the LIS professionals are now actively involved in IT and using latest ICT tools and technologies. Such professionals should involve themselves in e-learning projects. The academicians and educators can start e-learning programmes in collaboration with librarians. The technical and practical knowledge of the

working librarians and the teaching experience and knowledge of pedagogy of the LIS educators can be blended in the course content to give the LIS students cutting edge information skills in the present competitive environment. The LIS educators in universities and research organizations should take up the task of starting e-learning programmes.

E-learning programmes can be particularly useful in:

- Continuing LIS professional education and staff development of the library staff
- Learning latest tools and technologies in Information Retrieval
- On-the-job training of library staff
- Lifelong learning

But for an e-learning programme to be successful, it has to be well-planned. The following criteria should be kept in mind while designing an e-learning programme.

- A model or framework should be developed for each e-learning course.
- An efficient and practical e-learning model is needed. There should be different models for different levels of learners.
- Learners should be able to create and organize their own spaces for information resources, class work, assignments, etc.
- Spaces should be provided where learners can interact with co-learners, apart from their teachers and also should be able to network with their peers.
- Content is the lifeline of an e-learning course. Hence, the courseware needs to be well planned, detailed and easy to use, as there will be no or very less face-to-face interactions.
- Learning objects should be designed to be reusable, accessible, interoperable and durable and also customizable to the individual needs of the learners.
- Learner interface should be easy-to-use.
- Online examination system should be well-planned and well thought out.
- For a successful e-learning LIS programme it is very essential that the four components of an e-learning model i.e. the learner,

the educator, the librarian and the IT specialist work in collaboration with each other.

6. Conclusion

Higher education is changing rapidly and for over the next ten years will be transformed. These new possibilities create many opportunities as well as challenges for the students, educators and librarians. In the new age learning environments there will be merging of responsibilities and roles, requiring major changes in the way we think about libraries and learning spaces as well as in the roles of students, educators and librarians. It is therefore inevitable for the LIS professionals and educators to keep up with the changes in order to be an integral part of this new and exciting phase of the knowledge society.

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