



DIGITAL LIBRARIES IN INDIA: A STUDY

Dr. Monika

Mahabir College of Education, Kurukshetra.

ABSTRACT

Digital libraries are getting popularity rapidly. Digital libraries have the many properties like they store, preserve, distribute and protect contents in different formats and, at the same time, they allow interaction between the user and the contents; they are always present, both geographically and over time; they can make works internationally known, enhancing referencing and citations; they can make public the products of the educational process and let them be used as inputs for further learning. This work addresses some aspects of digital libraries that make them suitable tools to support higher education.

KEYWORDS- Digital Library, E-Learning, Higher Education, Traditional Library, Web.

INTRODUCTION

Our society is undergoing a process of rapid change, moving toward what is called the information society, the knowledge society, the network society or the informational mode of development. The concept of digital libraries in India began in the mid 1990s with the spread of information technology, the internet and the support of the Central Government. In 1996, this concept was recognized during the Conference on Digital Libraries organized by the Society of Information Science at Bangalore. Though a few libraries have made attempts earlier in this direction, the digital library initiative in India is still at budding stage. But now it is believed that information and knowledge are distinguishing features of this modern society and the main driver of this change is the growing use of information and communication technologies (ICT).

Over the centuries, libraries have been the keepers and distributors of books, journals, maps and other materials that are used by students in the learning process[1]. They have also been the legal deposit of part of the products of scholarly publications – theses & dissertations, articles, technical reports, etc. In general, students have been patrons of the libraries of their institutions. In order to make more contents available and thus benefit students and faculty, pools of institutions have engaged in commuting items and/or their copies. There is no reason for digital libraries not to have the same functions of traditional libraries, except that they can add functions and value due to their digital and networked nature.

Digital libraries facilitate digital publishing and networking of electronic educational and cultural resources. In this world of fast change, digital libraries offer many facilities to education in general and to higher education in particular. This work addresses some of the roles of digital libraries in higher education; comparisons to traditional libraries are also presented.

1. THE CONCEPT OF E-LEARNING

E-learning is literally an abbreviation of the term electronic learning. In simpler terms e-learning is internet-enabled or computer enhanced Learning. It also refers to learning that is facilitated using digital tools and contents. E-learning includes wide set of applications like the use of interactive learning packages, web based learning environments, communication applications like e-mail, discussion rooms, chat, video conferencing etc[2]. In the case of web based training programmes, the learner follows a pre-designed process that includes programmes for practice, assessment and feedback activities. E-learning can also be considered as a basic concept of educational delivery via technology or as an educational technique.

2. HIGHER EDUCATION IN INDIA

The Indian education system is the second largest in the world and is perhaps the most complex in terms of its spatial outreach and profile of students and teachers in terms of their linguistic, social, cultural and economic background. University Grants Commission (UGC), Professional Councils, Central Government, and State Governments are playing major roles in enhancing the quality of higher education in the country. The UGC is responsible for coordination, determination and maintenance of standards and release of the grants to the universities and colleges. Professional councils are responsible for recognition of courses, promotion of professional institutions and providing grants to undergraduate programmes and various awards.

University Grants Commission has been striving for ensuring quality of higher education since its inception, and more so during last two decades[3]. There has been tremendous surge in educational institutions coming up particularly after creation of All India Council of Technical Education AICTE in 1987. For such a huge number of academic institutions in India it needs efforts to bring quality in library services immediately.

3. DIGITAL LIBRARY INITIATIVES IN INDIA

Many large libraries throughout the world started digitizing their materials in early 1990s. In 1992 Cornell University formed the digital access coalition to explore the use of digital imagery which is now taken up by the Cornell Institute of digital collection. A number of initiatives are being taken-up, in India towards digitization. The concept of digital libraries in India began in the mid 1990s with the spread of information technology, the internet and the support of the Central Government. In 1996, this concept was recognized during the Conference on Digital Libraries organized by the Society of Information Science at Bangalore. Though a few libraries have made attempts earlier in this direction, the digital library initiative in India is still at budding stage. Majority of the Digital library initiatives were largely confined to limited uses such as subscribing to e-journals, scanning documents and installing them on the intranet. But there is every need for rapid change in this scenario of libraries in India to use the Information Technology (IT) and ICTs which are confined so far to the prestigious National institutes such as the Indian Institutes of Technology (IIT), Indian Institutes of Management (IIM), Indian Institutes of Science (IIS) Research Institutes under the control of NISSAT and some special Libraries. Some of the important digital library initiatives and programmes initiated across the country are as follows:

a. INFLIBNET

Information and Library Network Centre(INFLIBNET) was established to create and establish campus wide networking with state -of -the -art - information and communication technology and to help the users to access the knowledge world in cyber space. It is an autonomous body of University Grants Commission, located at Ahmedabad. In last one decade Centre has achieved many milestones especially in the area of content development and information delivery, software development (SOUL), establishment of network infrastructure, human resource development and access to networked resources to the academic community in India.

b. Digital Library of India

Digital Library of India (DLI) is the biggest national level digital library initiative in India. It is a part of the *Universal Digital Library Project*, envisaged by Carnegie Mellon University, USA, which has some other international partners such as China and Egypt. DLI is coordinated by Indian Institute of Science, Bangalore and is supported by Ministry of Communications and Information Technology, Government of India[4].

c. Digital Library of art Masterpieces

HP Labs, (Hewlett Packard's) announced a pilot project with the Centre for Development of Advanced Computing (CDAC) to digitize part of the art collection in the National Gallery of Modern Art (NGMA). NGMA plans to put up images of the paintings on the net, from which customers can order full-sized prints. The digitization of "Geet Govinda," an important classic of Indian literature, is one of their successful ventures.

d. Indian National digital Library in Engineering Science & Technology

The Ministry of Human Resource Development (MHRD) has set-up the *Indian National Digital Library in Engineering Sciences and Technology (INDEST)* Consortium is the most ambitious initiative taken up so far in the country. It welcomes other institutions to join and offers highly discounted rates of subscription and better terms of agreement with the publishers. INDEST Consortium presently include *ACM Digital Library, ASCE Journals, ASMe Journals, Capitaline, Euromonitor (GMID), IEL Online, Indian Standards, Nature, ProQuest Science, Sciencedirect, Springerlink* and bibliographic databases of *Compendex, Inspec and MathSciNet*.

e. National Institute of Advanced Studies (NIAS), Bangalore

This institution has started digitization of paintings and the Microfilming of Indian Publication Project (MIPP). The NIAS has also started work on rare manuscript preservation projects for both microfilm and microfiche.

4. CHALLENGES FOR DIGITAL LIBRARIES

Digital libraries face many challenges – interoperability, 24/7 operation, multi-language, multi-culture and multilegislation situations, multiple types of information and ever changing digital formats, information asset security, digital preservation, and IPR – Intellectual Property Rights. The last two seem to be the most crucial. Worldwide many efforts have been devoted to the

study of these two topics and to finding solutions for the problems they represent in the use of digital contents. Digital preservation challenges can be seen from three different points:

- (1) The physical preservation of the supporting medias (HDs, CDs, DVDs, tapes);
- (2) The technological preservation to avoid technological obsolescence; and
- (3) Preservation of access.
- (4) Continued access indefinitely into the future of records stored in digital electronic form.
- (5) Problems related to both media deterioration and to technological obsolescence.
- (6) Integrity of documents and of the information.

5. BENEFITS OF DIGITAL LIBRARIES

Digital libraries are suitable tools to manage courseware and additional reference items used in class. Some major benefits of these libraries are as follows:

A. Management of documents in all formats in a unified way

Texts, animations, interactive exercises, audio files, video streams, e-books, e-journals and online tests can be stored, described and distributed through computers and networks.

B. Access control

Contents can be assigned different types of access according to the classes of users that are entitled to them. Authors can decide if their works are to be used by their students only, by any student of a given institution or the public in general.

C. Content sharing

Authors can make their contents available for other faculty to aggregate into their courseware. This can be done without duplication, simply by 'pointing' to the contents with the suitable set of metadata elements.

D. Interactivity

Contents that are managed by digital libraries can be interactive and based on multimedia. Students can listen to soundtracks, view animated images, solve exercises and have them checked online, write and send comments to authors and/or tutors.

E. Customization

Some users may require special characteristics of the contents and the system. This is true when people with special needs are involved, for example, persons who are blind or visually impaired.

F. Reuse

Courseware can be developed with a granularity that makes it flexible to combine and support multiple syllabi. Reuse is important because developing courseware is expensive and takes time, so increasing reuse improves efficiency.

CONCLUSION

It has been seen that Information and Communication Technologies (ICTs) have brought significant changes in all-round development of the society through transmission of information. Application of information technology to Library and Information Science has provided wider opportunities in archiving and accessing knowledge in the digitized form besides conservation and preservation of the traditional knowledge. Digitization of materials will provide enhanced access to the electronic information sources and the users can access the digital content irrespective of time and space boundaries. Libraries have to redefine their values and services, collaborate with their users, and design their tasks creatively to provide, reference and instructional support to e-learners.

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