

Challenges of Information and Communication Technology (ICT) Before Library Professionals: An Overview

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Abstract

The aim of this paper is to give an overview of Digital Library, the challenges and changing role of library professionals in the field of library and information science, and to show how these changes have influenced service aspects. The information and communication technologies have made life easier for library users as they get information at their fingertips in the electronic form instead of books, journals and other printed material.

INTRODUCTION

The advancement of the science and technology has made a tremendous improvement and changed almost in every sphere of life. Services rendered with the help of ICT are faster and more effective. Digital library means a computerized network system where all the information are stored in electronic format, which can be accessed and transmitted through network enabling retrieval of required information by a large number of users. Users can access their required queries using computer terminals at their work place. Information and Communication Technology includes artificial intelligence, robotics, speech, synthesis, e-mail, cd/dvd, networking, barcode system, e-publishing, hypermedia, multimedia, Video Conferencing, radio, data paging etc. shares common technology revolving around electronics, computers, tele-communications, printing and reprography.

Definitions

Clifford Lynch (1995), defined digital library as a system providing a community of users with coherent access to a large, organized repository of digital information and knowledge. The digital library is not just one entity, but multiple sources seamlessly integrated.

Terence R. Smith (1997), defined digital Library as controlled collections of information bearing objects that are in digital form and that may be organized , accessed, evaluated and used by means of heterogeneous and extensible set of distributed services that are supported by digital technology.

William Arms (2000), defined “managed collection of the information, with associated services where the information is stored in digital formats and accessible over a network”. A crucial part of this definition is that information is managed. A stream of data sent to part from a satellite is not a library. The same data, when organized systematically, become a digital library collection.

CHALLENGES

With the increasing applications of web technology for library work, several libraries in the country are involved in development efforts on the disseminating information through local internet as well as intranet. But significant efforts on digital library development were meagre in the country due to server constraints.

- a) **Infrastructure Constraints:** Not only the weak computer infrastructure in the library and affiliating institutions is creating major hurdle, but also the lack of high capacity bandwidth for network and internet access. Hope that situations will soon improve due to the concerted efforts on the various fronts as VSNL and BSNL are engaged in a massive action plan to enhance the communication infrastructure in the country.
- b) **Lack of Professional Expertise:** Expertise can be generated through either retraining the existing staff members with the help of continuing education

programmes or by including digital library components in the professional courses to give the desired exposure to budding professionals. In a professional service stream like information science, strong compartmentalize would not yield any satisfactory results, and it is high time that we should involve computer and communication professionals to assist use in access provision of whatever contents we are so good collecting, ordering and servicing.

- c) **Absence of High quality Contents:** The overall impact of India research output on the growth of disciplines like science and technology is a matter of introspection. In these disciplines, where considerable progress has been made on digital access provision, most of the publishers, authors, and information providers are based in developing world. Most of the best research papers from the country are getting disseminated through foreign publications due to various reasons. In such a premise, even contents, where our country has a strong hold like arts, folklore, spirituality, traditional knowledge etc. are getting side lined. As we uses and reach of contents in digital form are far more wide reaching than the printed text, and the process of digitization involves cost in terms of contents, systems, experts manpower, care should be exercised on what sort of contents need to be digitized.
- d) **Management Support:** For the provision of world class information systems, resources and services the libraries need the wholehearted support from the respective management. Institutional supports in term of proper funding, human resources and IT skills enrichment are prerequisites for the development and maintenance of state-of-art digital library system and services. There are many more processing problems being faced by the libraries in India in its pursuit of the building digital libraries.

- e) **Lack of ICT Strategies and Policies:** A vast majority of the libraries in India do not have laid down policies own ICT panning and strategies to meet the challenges post by technology push, the information overload, as well as the demand-pull from the users.
- f) **Rigidity in the publishers' policies and data formats:** Having successfully installed and configured a digital library does not qualify a library to automatically populate all its digital collection into the digital library. One has to obtain publishers' consents and copyright permissions for the same. Digital library software's usually accept and process all popular and standard digital format such as HTML, Word, RTF, PPT, or PDF. Most of the publishers' put their materials in their own proprietary e-book reader format, from which the text extraction becomes almost impossible. A vast majority of the scholarly contents rests in journal literature and due to copyright issues they can not be easily (almost impossible) find its way into the local repositories of the digital library.
- g) **Copyright/IPR Issues:** Issue of copyright, intellectual property, and fair use concerns are posing unprecedented array of the problem to the libraries and librarians are struggling to cope with all this related issues in the new digital information environment.
- h) **Lack of the proper planning and integration for information resources:** Presently the library acquisitions in India are either paper based and electronic. In most of the libraries, paper based document out number the electronic subscriptions and acquisitions. Some of the libraries need retro-conversation and digitization of the library holdings too. Literature on the related study show that there is a sever lapse on the libraries with the regard to proper planning of their information resources which are conducive for the developing digital libraries. Also the electronic resources penetrate to

the libraries in a multiplicity of complex format and with different access terms and conditions. These information resources are scattered and distributed across a wide variety of publication types as a vast number of publishers. There is a dire need for proper planning and meticulously framed content integrations model which is achieved and implemented through world standard digital library technology.

- i) **User-Education and Communication Skills** : User Education includes library orientation and training programmes. Librarians must be capable of using wide variety of methods to help users through lectures, reference material, demonstrations etc. The librarian is required to acquire communication skills and competencies.

CHANGING ROLE OF LIBRARIAN

The human resource is essential to the success of technology based service. Librarians are developing new skill sets and playing new rules in this aspect that are necessary to support technology based services. Few years ago the role of librarians to retrieve information from the document held in the libraries was very difficult task but now it is much easier electronic technology to find out the document held in the library. At the same time it is much difficult for library professionals to keep up with the developed technology. These days the explosion in the growth of literature makes it difficult to procure all the literature due to high costs. So the libraries have to switch over from traditional form to digital one.

Now the librarians are not only custodian of collection but also content analyses and information analysis. To meet this challenges professionals are required to continuously update themselves, developing a strong professionals team in institution, conduct continuous training programs for the staff and offer training on new aspects.

CONCLUSION

Modern Technology has changed the nature of our society and style of working of the people. Librarians are changing their nature, traditional to digital. The target of librarian is not only to provide excellent information services to users but technology has added many new dimensions to this task.. Charles Darwing theory- Survival of the Fittest applicable here. Library Professionals have shown great interest to automate their services and seek to provide best services to their users. Changes in ICT are growing rapidly. So we have to keep in touch and constant watch to meet their challenges.

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