

Role of Digital Library in an Electronic Environment

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ABSTRACT

Our society is moving through a cyber culture in this information age which has been referred to as the ‘**Knowledge Era**’ or ‘**Information era**’. ICT has influenced every walk of our life which makes our lives easy and comfortable. Today we live in a digital world concerned with creating, sharing, and using information in digital form. ICT has almost converted the world into a global village which has changed society into an information society. With the passage of time and rapid advancement in electronic information technology, new means of communication have changed how information is handled, stored & exchanged across the world. all these requirements and advancements have transformed libraries from a mere static storehouse of documents to a dynamic powerhouse of information serving all professionals & non –professionals in utilizing useful and need–based collections of documents. The role of libraries in these new environments has also been strongly influenced by these changes.

Therefore, Government has taken steps to create an information society by the establishment of digital libraries and research centre for information production, organization, transfer, & retrieval of information and its use to create new knowledge, values, products & services. The present study focuses on the role of Digital Libraries in an electronic environment where digital libraries become very necessary to meet users' changing information needs. This study also discusses the need and functions of the Digital Library.

KEYWORDS: Digital Library, Information communication Technology, Information Technology.

INTRODUCTION

The 21st century has been referred to as the **Knowledge Era** and **Information Era**. Our society is moving through a cyber culture in this information age. Today, we are living in a digital world which is concerned with creating sharing and using information in digital form. The right information is available to the right person at the right time is the aim of any modern library. ICT has almost converted the world into a global village which has changed society into an information society. It has influenced every walk of our life which can be seen in banking, insurance, commerce & trade sector, bioinformatics, biotechnology & biomedical Sciences, Library & Information services and networking, air & railway reservations and postal services, health care & telemedicine, teaching-learning, Media

and communications, entertainment etc. It makes our life easy & comfortable. Therefore government has taken step to create an **'Information Society'** through the Information Technology and by establishment of digital libraries and research centre for information production, organization, transfer & retrieval of information and its use to create new knowledge, values, products & services.

Information Communication Technology (ICT) is becoming an important element in the era of information & knowledge society. At present, the users are not satisfied with printed material. They require printed information with more dynamic multimedia documents. Therefore, Library & Information centers have adopted many electronic resources for its collection development to meet the needs of different groups of users in a better way. For this, libraries need to find a solution to timely repositioning & role claiming. Learning and education are important issues in the information society and the educational situation is changing for several reasons which is developed from the social, cultural, political & economic changes in the society. The role of libraries in this new environment has been strongly influenced by these changes.

CONCEPT OF DIGITAL LIBRARY

A Digital Library is much more than just the collection of material in its depositories. It provides a variety of services to all of its users. There is no single definition for digital libraries. From information management point of view, Digital libraries are systems that combine the machinery of digital computing, Storage and communication, the content and software needed to reproduce, emulate and extend the services of collecting, cataloging, finding and disseminating information offered by traditional libraries. From the user point of view, Digital libraries are systems that provide a community of users with coherent access to a large, organized repository of information & knowledge.

Some important definitions are given below as-

Lesk (2005) defined a Digital Library as a collection of information that is both digitized & organized and which offers capabilities beyond those of the traditional library.

Smith (2001) defined a digital library as an organized & focused collection of digital objects including text, images, video & audio, with the methods of access & retrieval and for the selection, creation, organization, maintenance and sharing of collection.

Scope of the Study

The present study focuses on the role of Digital Libraries in an electronic environment. In the electronic Era, it became very necessary to develop a Digital library to meet users' changing information needs. This study also discusses the needs and functions of the Digital Library.

Objectives of the Study

- ✓ To emphasize on the need of Digital Library in India.
- ✓ To discuss the role and functions of Digital Library.
- ✓ To find out the shortcoming in Digital Libraries from Indian prospect.

REVIEW OF RELATED LITERATURE

Ananthnag, K.& Suvarna, M.(2014) discussed the role , requirements, functions, advantages, and disadvantages of digital libraries. They also focused on the process of digitization and the challenges of digital libraries.

Hashim & Mokhtar (2012) discussed in his study that the advancement of ICT has brought a lot of changes not only to the library & Information services but also on the role & expectations of the library & information professionals.

Thamaral Selvi (2009) discussed in his study that Internet has become the king of all media by which we can access virtually information and can build a virtual library to provide timely and quality service to the users.

Sreenivasulu (2000) in his study stressed that the multimedia nature of the next generation of Digital Libraries requires the digital librarians who have to manage & organize the digital library, digital reference services, electronic reference services, search co- ordination and manage the archive & its access.

METHODOLOGY

The conceptual and textual information related to the present study were collected from primary and secondary sources of information Such as books, National & International journals, research papers & articles.

Websites were also used for collecting information to prepare this research paper.

DISCUSSIONS

(I) Need of digital library-

Due to the information explosion many techniques & technologies have emerged for handling information more readily, speedily & effectively (Singh, 2004). Due to lack of time, nobody wants to visit a library and search for catalog cards. A digital library provides a variety of services to all of its users. The goal of a digital library is to satisfy users' needs for management, access, Storage & manipulation of the variety of information stored in the collection. The users can access the digital content irrespective of time and space boundaries. A Digital Library is needed for the following reasons-

- Easy to understand
- Multiple access to the same information
- Information explosion
- Information retrieval
- Distance learning
- Huge storage capacity
- Access to online publication
- Low cost of technology

(II) Role of Digital Library-

Information Communication technology (ICT) is becoming an important element in the Era of Information & Knowledge Society. With the passage of time and rapid advancement in electronic information technology, new means of communication have changed how information is handled, stored, and exchanged across the world. All these requirements & advancements have transformed libraries from a mere static storehouse of documents to

dynamic powerhouse of information, serving all professionals and non-professionals in utilizing useful & need-based collections of documents. The role of libraries in this new environment has been strongly influenced by these changes.

(III) Core Elements- There are three broad classes of digital library elements-

(a)- Data- Data are library materials e.g. a book in a library may be thought of as data of the library.

(b)- Metadata- Metadata popularly known as data about data refers to the information about the library and its materials e.g. an index, or a card catalog may be thought of as library metadata.

(c)- Process- Processes are active functions performed over library elements. Ex. - The act of a librarian helping a patron to find a book by suggesting the use of the card catalog may be thought of as a process.

(iv) Functional components – Digital libraries share common functional components which include-

(a)- Selection & acquisition – The selection of documents to be added the subscription of database and the digitization of conversion of documents to an appropriate digital form are included in these components.

(b)- Organization- The key process involved in this component is the assignment of the metadata (Bibliographic information) to each document in the collection.

(c)- Indexing & Storage- The indexing & Storage of documents and metadata for efficient search & retrieval are included in this category.

(d)- Search & Retrieval – The digital Library interface used by the end users to browse, search, retrieve, and view the contents of the digital library is included in this component. It is typically presented to the users as a Hypertext Markup Language (HTML) page.

(v) Functions of Digital Library- Digital libraries provide efficient and qualitative services by collecting, organizing, storing, disseminating, retrieving and preserving the information in comparison to traditional libraries. The important functions of digital libraries are-

- Digital library supports the preservation of unique collections through digitization besides making information retrieval & delivery more comfortably.
- Digital library accesses to large amounts of information to users whenever and wherever they need it.
- It provides online access to historical and cultural documents whose existence is endangered due to physical decay.
- Digital library provides resource discovery mechanisms that allow users to identify relevant or required resources and their locations.
- It makes available various types of knowledge resources.
- It accesses national & international journals which are being published only in machine-readable form.
- Digital library supports advanced search and retrieval for letter access to information.
- It provides need-based and retrospective search services to the users.
- It enables one to perform searches that are not possible manually.
- It supports multimedia content along with text.
- Digital library enables one greater access to information.

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- It provides Network accessibility on the intranet & internet.
- Digital library also provides facilities for resource sharing.
- It provides means to enrich the teaching–learning environment.
- Digital library supports a friendly interface.

(vi) Limitations of Digital library- Digital libraries in India are facing many problems which should be taken into consideration. Some of the problems are –

- Lack of clear-cut policy at a national level.
- Lack of technical infrastructure.
- Non- availability of cost-effective new technological advancement.
- Outdated software & hardware and difficulty in upgrading the same.
- Rigidity in the publisher’s policies & data formats.
- Lack of proper preservation policy.

SUGGESTIONS

The given problems affect the success of digital libraries. These problems have to be considered positively to ensure planned digital resource development programs and digital libraries in India. For this the following steps may be taken into consideration-

- A clear-cut policy at the National level should be made.
- National policy should focus on Education & lifelong learning for all citizens, Traditional knowledge & preservation of cultural heritage.
- Well trained skilled manpower is needed.
- User focused policy & strategies should be made.
- Provision for refreshing the data should be available.
- Co- operative subscriptions, Shared technology a system, resource sharing & joint achieves should applied.
- Regular up gradation of software and hardware should be done.
- International co-operation & collaboration should be made.

CONCLUSION

This study revealed that Digital Libraries are playing a vital role in providing expanded access to a variety of information in digital format for all levels of users. Digital libraries have become an imperative component in the present electronic environment not only for meeting our current demands in India but also for establishing a reputation at the International level. Libraries face challenges that will lead to improved systems. With the advancement of Information Technology, the library & Information centers should need to improve with the new technologies. Either today or tomorrow, every library has to acquire hybrid structures where they can provide not only the benefits of digital libraries but also the authenticity of traditional libraries. Few libraries in India have initiated the digitization of resources but many of them are hesitating due to a lack of Funds & technical manpower.

The digital library has to triumph over the hang up and look to the lead for the betterment of information services to the user society by adopting digital technology. The initial cost of a digital library is very expensive but after having been done, the maintenance of it is much cheaper & reasonable. It is also suggestible that library should collaborate so that more & more information could be accessed to users. The digital library can offer reasonable & appropriate access to a large amount of repositories through a consortium. However, the Achieves law needs to be changed before digital libraries take over the library and information network to meet the current challenges in the areas of copyright protection of data and prevention of corruption of data.

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