

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 as the 'Knowledge era' or 'Information era'. ICT has influenced every walk of our life which makes our life easy and comfortable. Today we are living in a digital world which is concerned with creating, sharing and using information in digital form. ICT has almost converted the world into a global village which has changed the society into information society. With the passage of time and rapid advancement in electronic information technology, the new mean of communication has changed the way in which information is handled, stored & exchanged across the world. all these requirements and advancement have transformed libraries from a mere static store house of documents to dynamic power house of information serving all professionals & non-professionals in utilizing useful & need – based collection of documents . The role of libraries in this new environments has also been strongly influenced by these changed.

Therefore, Government has taken step to create 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 library become very necessary to meet the changing information needs of users. This study also discusses the need and functions of Digital Library.

Keywords- Digital Library, Information communication Technology, Information Technology.

1.0 Introduction-

The 21st century has been referred 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 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 the society into 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 '**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. In the present time, the users are not satisfied with printed material. They require printed information with more dynamic multimedia document. Therefore, Library & Information centers have adopted many electronic resources for its collection development to meet the needs of different group 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.

2.0 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 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.

3.0 Scope of the Study-

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

4.0 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 shortcoming in Digital Library from Indian prospect.

5.0 Review of Related Literature-

1. Ananthnag, K.& Suvarna, M.(2014) discussed the role , requirements, functions, advantages and disadvantages of digital library. They also focused on the process of digitization and challenges of digital library.
2. Hashim & Mokhtar(2012) discussed in his study that the advancement of ICT has brought a lot of changes not only on the library & Information services but also on the role & expectations of the library & information professionals.
3. Thamaral selvi (2009) discussed in his study that Internet has become the king of all media by which we can access virtual information and can build a virtual library to provide timely and quality service to the users.
4. 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.

6.0 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.

7.0 Discussions-

7.1 Need of Digital Library-Due to information explosion many techniques & technologies have emerged for handling the information more readily, Speedily & effectively (Singh, 2004). Due to lack of time, nobody wants to visit a library and search catalogue cards. A digital library provides a variety of services to all of its users. The goal of 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. Digital Library is needed for the following reasons-

- Easy to understand

- Multiple access to same information
- Information explosion
- Information retrieval
- Distance learning
- Huge storage capacity
- Access to on line publication
- Low cost of technology

7.2 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, the new mean of communication has changed the way in which information is handled, stored and exchanged across the world. All these requirements & advancement have transformed libraries from a mere static storehouse of a document to dynamic powerhouse of information, serving all professionals and non- professionals in utilizing useful & need based collection of documents. The role of libraries in this new environment has been strongly influenced by these changes.

7.3 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 data of the library.

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

(c) **Process-** Process 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 process.

7.3.1 Functional components – Digital libraries share common functional components which include-

(a) **Selection & acquisition –** The selection of documents to be added the subscription of data base and the digitization of conversion of documents to an appropriate digital form are included in this 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 is 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 Hyper -Text Markup Language (HTML) page.

7.3.2 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 preservation of unique collections through digitization besides making information retrieval & delivery more comfortable.
- Digital library accesses to large amounts of information to users whenever and wherever they need it.
- It provides on-line 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 resource.
- It accesses to national & international journals which are being published only in machine readable form.
- Digital library supports advance 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.
- It provides Network accessibility on intranet & internet.
- Digital library also provides facilities for resource sharing.

- It provides means to enrich the teaching – learning environment.
- Digital library supports user's friendly interface.

7.3.3 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 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.

8.0 Suggestions-

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

- A clear cut policy at 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 man power is needed.
- User focused policy & strategies should be made.
- Provision for refreshing the data should be available.
- Co- operative subscriptions, Shared technology system, resource sharing & joint achieves should applied.
- Regular up gradation of software and hardware should be done.
- International co- operation & collaboration should be made.

9.0 Conclusion-

This study revealed that Digital Libraries are playing a vital role in providing the expanded access to the variety of information in digital format for all level of users. The digital libraries became an imperative component in the present electronic environment not only for meeting out current demands in India but also for establishing reputation at 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 library but also the authenticity of traditional library. Few of libraries in India have initiated the digitization of resources but many of them are hesitating due to lack of Funds & technical man power.

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 the digital technology. The initial cost of digital library is very expensive but after having being done, the maintenance of it is much cheaper & reasonable. It is also suggestible that library should collaborate with each other so that more & more information could be accessed to users. The digital library can offer the reasonable & appropriate access to a large amount of repository through consortium. However, Achieves law needs to be changed before digital libraries took over the library & Information network to meet the current challenges in the areas of copy right protections of data and prevention of corruption of data.

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