

A FUNCTIONAL APPROACH TO DIGITAL LIBRARY IN INDIA

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Abstract: The rapid advancement in Information Technologies has revolutionized the role of libraries. Information Technology has its own niche in every aspect of life in the society. Changes in society & technology made variation in the life style of Indian people and their views & attitude towards the libraries. Today digital world is concerned, with creating, sharing & using information in digital form. Information Technology has almost converted the world into a global village. The rise of digital libraries has brought phenomenal change in the progress of collection, storage, preservation of rare documents, retrieval & dissemination of information. Now – a-days the ICT is considered as an important commodity and is playing an important role for development in all fields such as education, research etc. The present study focuses on the functional aspect of the digital library. In the present society, digital libraries are playing a key role in disseminating information by providing different types of relevant & recent information to the users with a short span of time. The digital library can provide enhanced access to the electronic information sources and the users can access the digital content irrespective of time & space boundaries. This study also discusses the core elements and functional components of the digital library.

Keywords:- Information Technology, Information and communication Technology, Digital library.

1.0 Introduction

Rapid advances in information technologies have revolutionized the role of libraries. Information technology is causing changes in the people in their way of communicating, retrieving & using information libraries are redesigning services and information products to add value to their services and to satisfy the changing information needs of the user community. Information technology has its own niche in every aspect of life in the society. Changes in society and technology made variations in the life style of Indian people and their views & attitude towards the libraries. Today digital world is concerned with creating, sharing & using information in digital form. The right information to the right person at the right time is the main aim of any modern library. Information technology has almost converted the world into a global village. The revolution in the IT sector is influencing the information industry also. The rise of digital libraries has also brought phenomenal changes in the progress of collection, storage, preservation of rare documents, retrieval & dissemination of information. Now-a-days the information & communication technology (ICT) is considered as an important commodity and is playing an important role for development in all fields such as education, research etc. So, information & ICT are recognized as the world's most crucial resources and the driving force for library, social development & modern economic system (unesco, 1999 ;Bilton et al, 2002).

2.0 Concept of Digital library:-

With the impact of information technology the concept of digital library has come into scene a digital library is much more than the collection of material in its depositories. It provides a variety of services to all of its users. Digital libraries are often labeled “libraries without walls” because they rely on their connection to other libraries, information centers & source of data that are not physically available in the library. The basis of the digital library is the information objects that provide the content in the form of digital resource.

According to Candela et al. (2007) “since 2006 the term has been generally used to refer to systems that are heterogeneous in scope and provides diverse types of functionality. These systems include reference linking systems, archives, content administration systems and complex systems that integrate advanced digital library services.”

Vanitha et al. (2006) say “A digital library is a library consisting of digital materials and services. Digital materials and items are stored, processed and transferred via digital (library) devices and networks. Digital services are services that are delivered digitally over computer networks.”

Lesk (2005) defines digital library as a collection of information that is thoroughly digitized, organized and which offers capabilities beyond those of the traditional library. Smith (2001) defined digital library as an organized and focused collection of digital objects, including text, images, video & audio, with the methods of access and retrieval and for the selection, creation, organization, maintenance and sharing of collection.

Thus, viewing the above definitions, digital library is a library in which collections are stored in digital formats and accessible via computers. The digital content may be stored locally or accessed remotely via computers networks. They are the digital face of traditional libraries that include both digital and traditional collections.

3.0 Scope of the study:-

The present study focuses on the functional aspect of the digital library. In the present society digital libraries are playing a key role in disseminating information by providing different types of relevant & recent information to the users with a short span of time. Digital library can provide enhanced access to the electronic information sources and the users can access the digital content irrespective of time & space boundaries. This study also discusses the core elements and functional components of the digital library.

4.0 Objective of the study:-

Due to information explosion, many techniques & technologies have emerged for handling the information more readily, speedily & effectively. The main objective of the study are –

- To emphasize on the functional aspect of digital library.
- To discuss the functional components of digital library.
- To highlight the core elements of digital library.

5.0 Review of related literature :-

Ananthnag, k. & Suvarha, M.(2014) in their study discussed the role, functions, requirements advantages & disadvantage of digital library. They also focused on the process of digitization & challenges of digital library.

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

Chowdhury, G. (2009) discussed the commonalities of research in digital libraries and digital preservation with regard to the issues of users & context of information. He discussed some current research in digital preservation that aims to handle the users & context information for building future digital preservation systems. He also highlighted some major challenges in the areas of capturing, storing and making use of information related to users & context.

Sreenivasulu (2000) in his study stressed that the multimedia nature of the next generation of digital libraries requires the digital libraries who have to manage & organize the digital library digital reference service, electronic reference service search coordination and manage the archive and its access.

6.0 Methodology:- The conceptual & textual information related to the present study was collected from primary & secondary sources of information such as books, national & international journals research papers.

7.0 Discussions-

7.1 Features of digital library-

Digital library is the one which really helps the user to get access to the digital resources directly on the screen of their computer itself. Digital library is reforming the dissemination of the information with respect to the availability of speed & access. The main features of the digital library are-

- All resources are in digital form.
- Accessibility from anywhere & anytime.
- Availability for long time.
- Network accessibility.
- User friendly interface to access the information.
- Providing access to very large collections including access to primary and secondary sources of information.
- Provide client-server architecture.
- Advanced search & retrieval of information.
- Dynamic & ephemeral.
- Supporting multimedia content and fractal objects.
- Free as well as fee-based.
- Greater opportunity for publishing.

7.2 Core elements of digital library:- There are three broad classes of library elements-

- A. **Data** – Data are library materials. Ex- a book in a library may be thought of data of the library.
- B. **Metadata**:-Metadata popularly known as data about data refers to the information about the library and its materials.
Ex -an index a card catalog may be thought of the library metadata.
- C. **Processes** :-processes are active functions performed over library elements.
Ex- The act of a librarian helping a patron find a book by suggesting the use of the card catalog may be thought of as process.

7.3 Functional components of digital library:- Most digital library share common functional components. They are-

- A. **Selection & acquisition**:- This components includes the selection of documents to be added the subscription of data base and the digitization or conversion of documents to an appropriate digital from.
- B. **Organization**:-This component includes the assignment of the meta data (Iribliographic information) to each document being added to the collection.
- C. **Indexing & storage** :-This component carries out the indexing and storage of documents and meta data for efficient search and retrieval.
- D. **Search & retrieval**:-This is the digital library interface used by the end users to browse, search, retrieve and view the contents at the digital library. It is typing presented to the users as hyper Text-mark-up languages (HTML) page.

7.4 Functions of digital library:-The Digital library is an information service in which all the information resources are available in complete processable form and the functions of acquisition storage preservation retrieval access and display are carried out through the use of digital technology. The resources in digital library can be divided into those that are originally created in a digital format such as electronic journals and data sets those originally non-digital resource such as manuscripts and print that are subsequently digitized. A digital library can disseminate its information across a network and users can retrieval information in the same way. Digital library preserves and provides access to the increasing number of publications that are being produced only electronically such as web sites & e-journals. Digital library offers the potential to bring these distributed collections together into a single virtual collection. Both storage & access are fully electronic in way that users can access whatever they need from their desktop. In digital library all information objects are available directly or indirectly via electronic means which makes enhanced retrieval functionalities possible. Digital libraries provide efficient and qualitative services by collecting organizing strong disseminating retrieving and preserving the information. The important functions of digital library are –

- Digital library supports preservation besides making information retrieval and delivery more comfortable.
- Digital library provides on-line access to historical & cultural documents whose existence is endangered due to physical decay.
- It supports advanced search and retrieval for better access to information.
- Digital library access to large amounts of information to users whenever and wherever they need it.
- Digital library access to national & international journals which are being published only in machine readable form.
- It provides network accessibility on intranet & internet.
- It supports multimedia content along with text.
- Digital library provides need-based and retrospective search services to the users.
- Digital library provides resource discovery mechanisms that allow users to identify relevant or required resource & their locations.
- It enables one to perform searches that is not possible manually.
- It provides user-friendly interface.
- Digital library provides facility for networking and resource sharing.
- Digital library makes available various types of knowledge resource.
- It provides means to enrich the teaching learning environment.
- Digital library manages contents from multiple locations.
- It supports all sort of library operations and functions.

8.0 Conclusion-

The present study revealed that automation in the libraries has become a new phenomenon. The digital technological development offered more efficient & new ways in information processing and management. To this context digital library systems came into existence which are for long-term preservation of large documents collection. Users want letter & effective information as library materials scientific database in education and research. Therefore, digital libraries play a vital role to satisfy the needs of users. Now one can access high speed network and retrieval device due to availability of computers processing power on affordable price which became possible due to advancement in information technology. In turn this capability provides us control to accumulate & relocate big volume of information in digital format at low cost. Besides electronic publishing & resource sharing activities have become easy & convenient.

Digital library has provided wider opportunities in archiving and accessing knowledge in the digitized from besides conservation & preservation of the traditional knowledge. Digital library will provide enhanced access to the electronic information source and the users can access the digital content beyond time and space boundaries. Digital libraries provide an effective means to distribute learning resource to students & other users (Adams, Jansen & Smith, 1999). They present opportunities and challengers for the library & information communities and all stakeholders. The digital library has to triumph over the hang-up and took to the lead for the betterment of information services to the user society by adopting the digital technology. It is suggestible that library should collaborate with each other so that more and information could be made available to the users. The digital library can offer the reasonable & appropriate access to a large amount of assorted information sources through consortium.

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