



## Academic Digital Libraries & Its Digitization: Importance of Technology and Challenges in Indian Perspective

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### **Abstract:**

*Digital libraries try to exploit the information technology with strengthening the library services to its users. Digital libraries will select, acquires, catalogue, classify & disseminate information using advanced ICT tools. But academic digital libraries are facing challenges regarding software and hardware, funds, migration, deterioration of media, inadequate technology infrastructure and copyright and IPR issues rapidly changing devices. This paper discusses the importance of technology, digital library and digitization in present era & the challenges involved in the process of digitization are highlight.*

**Keywords:** Digital Libraries, ICT, Digitization, Information, Academic Libraries.

### **Introduction:**

The library is an institution acquired a recognize status by the civilized society thought the world. India witnessed a wide range of variability in growth and development of libraries during and before Mughals and British, India experienced slow growth of libraries. British rulers introduced universities but there was time gap between of the universities and their libraries. But things did change rapidly after the appointment and involvement of Dr. S. R. Rangnathan in to academic library system. His contribution to the growth and development of libraries is undoubtedly tremendous and unforgettable. His five laws of Library science made revolutionary and dynamic changes for the development of libraries in India. Dr. S. R. Rangnathan worked for legislation in the field of Library. Development of library legislation has made great impact on overall library development reducing and targeting the obstacles in library development. Establishment of National Science Institute at Banglore, India focused on making available atmost all journals from almost all the countries to support educational and research programmes of the institute providing physical and intellectual access to information to the researchers. The collection which includes books, journals, reports, standards and patents. Now the library access 10 thousand online journals due to INDEST, AICTE. The library of this institute exploit the facilities of information technology to the research without anytime loss. At present, there are number of academic libraries using information communication technology digitizing their libraries for the cause.

In present scenario, with the advancement of information & communication technology and the needs of the user is drastically changing in such circumstances only digital libraries can meet the demands of the age. The technology provides and changes total digital library field including technical progress in computing, networking, information storage, and retrieval, multimedia and in interface design.

### **Definition:**

According to Gladney “A digital Library is an assemblage of digital computing, storage and communications machinery together with the content and software needed to reproduce, emulative and extend the services provided by conventional libraries based on paper and other material means of collecting, cataloguing, findings and disseminating information. A full service digital library must accomplish all essential services of traditional libraries and also exploit the well-known advantages of digital storage searching and communication.”

According to Sharifabadi digital libraries are considered as a federation of library services and collections that function together to create a digital learning community. Digital library are also called as electronic library, virtual library, system library, library without walls, hybrid library.

### **Importance of Digital Library in Academic Libraries**

- Today the internet use is expanding its boundaries and web technologies growth is also huge www based system linking e-resources for rapid and unlimited access.
- Internet explorer and Netscape navigator makes user interface simple.
- Due to online storage technologies makes huge opportunities to store large amounts of varied contents.
- The digital library makes available easy access of digital content to users and which can be used from remote areas.
- The digital libraries are helpful for learning, reading and creating the suitable environment for educational process.
- The digital library enhances overall capacity of library and library services not only providing facilities for electronic collection but also workable to print based collections.
- The digital library facilities faster information retrieval and document delivery services to the users.
- The digital library provides such capabilities to the use resources by multiple users at a time making available the required documents with continues process.
- The digital library can share global data breaking all the obstacles between the resources and users.
- The digital library enhances and facilities immediate access to users.
- The digital library makes available the access of all type of information, of any format from any of the location or during travel to users.
- The digital library perform a variety of systematic functions doing complete and correct coordination and management.
- The important function of digital library is to collect, coordinate and distribute large amount of information using latest development technologies based on Information and Communication Technology for remote accessing.

### **Digitization:**

#### **Definition:**

According to Witten & David digitization as the process of taking traditional library materials that are in the form of books and papers and converting them to the electronic form where they can be stored and manipulated by a computer. Means the conversion of reading material from its basic format into an electronic form.

### **The Reasons for Digitization of Library Material**

Digitization of academic library and its material with its resources has the following reason

- Libraries hold old reading material in the form of different formats kept by librarian which has the continuing value for learning, teaching, research, preservation and documentation and public accountability this old material to be preserved for long time with the help of digitization process for longer periods for its effective and efficient use.
- This old material also can be converted from its basic form to electronic form which is easy accessible and easy usable.
- Single point of access to documentation.
- Advanced search and retrieval facilities for users.
- The important reason of digitizing library material is by mailing public research more and widely accessible.



- The main objective of digitization of library is to improve access to library resources.
- Digitization also improve the efficiency of information search mechanism.
- Digitization will helps to preserve old manuscripts, research projects, maps, audio-video, recording, historical research, gazettes, photos converting into electronic form mailing high quality durable and to ensure preservation in greater access.
- Digitization provides efficient access to library resources and allows users to search for collection rapidly from anywhere anytime to save the time of users.

#### **Digital Library and Digitization Challenges:**

In modern environment, though the digital libraries operate in a networked environment deals with digital collections and ICT based services. Digital libraries are still at the age of evolution and at their storage there are so many challenges before digital library and number of obstacle in digitization of library a few of them are as follows -

- 1) Selection of Document: Due to information explosion it becomes very difficult for librarian what type of information to be digitized and which is not to digitized. The information which is on high demand and important today becomes obstacle tomorrow. To overcome this problem librarians have to take advice of subjects experts and of library users.
- 2) Issue of Copyright: The issues related to copyright rise serious matters before librarian in digitization. Librarian cannot fulfill the demand of the material asked by user due to copyright issue. Librarian must be given permission to digitize copyright materials so that they can satisfy to their users.
- 3) Life of Storage Media: The material stored in digital format may become useless after some days years. Thus the documents digitized and stored in such media become useless. Today's technology will be useless for tomorrow therefore it creates technological issues and very difficult to keep and maintain such storage devices.

Problems of Hardware and Software used in digital library for digitization are also the main challenges before library. Constantly changing hardware and software creates some greatest issues and creates greatest pressure on storage and preservation of archival collections and on the interim mechanism for storing digital information. It is not only the problem of media deterioration but this problem is also creates rapidly changing storage devices. Therefore this is the biggest challenges to digital libraries in the process of digitization an even fully serving digitally in full phase also suffering this issue. Funding digitization of library is expensive and requires enormous funding due to increasing cost of upgraded hardware and software. Increasing cost of storage devices, increasing cost of subscription of e-resources & databases. The training of library staff regarding changing digitization mechanism and tools handling also requires funding. Today some institutions lacking funds for this work and depending due to inadequate funds.

#### **Problem of Technical Expertise:**

Digital libraries have to transfer material in digital formats with changing hardware/software configuration from one to another or from one generation of computer to a subsequent generation. To perform all this work right from management to services needs appropriate skilled human resources. The competent and skilled staff reading available can spread, initiate, important and digitization.

- Inadequate application of ICT in digitization: Digital equipment and devices are the base of digital library but due to the increasing cost of this infrastructure it becomes obstacle in digitization particularly in academic libraries of developing countries like India.
- Migration of Digital Information: The main purpose of migration is to contents of digital object it's the face of current changing technology. Up gradation of hardware & software needs migration of digital content with more recent computer environment.



- Deterioration of Digital Media: Media deteriorates after some years and can loss due to generation loss, disaster or virus attacks. Thus, e-resources and collection stored in previous technologies may not be excessive with the new technologies.
- Language Barrier in Digitization: Language is the important barrier to provide e-content through digital libraries in all languages. As there are six thousand languages in the world and eighteen official languages and more than thousand dialects in India. It is very difficult to provide and facilitated the e-resources and material in all languages.
- Digital Divide: In developing countries some institutes have the necessary infrastructure for digitization including hardware & software along with costly e-resources but in number of institutes very difficult to establish infrastructure based on ICT.

### Conclusion:

Digital libraries is an essential organ of modern educational institutions. Digitization is important task in developing libraries, which collect, provide, distribute, preserve and sharing e-resources. Digitization is a complete process involving various dependencies. Users of academic libraries are migrating on to e-resources. All this digital collections should be available and accessible to users but today's libraries are also challenging different types of problems to overcome the problems the concerned professionals must work together because todays demand is digital libraries and digitization will help ensure and fulfill the expectations of students, researchers and scholars. Advances in technology always creates new challenges but we must have to face it.

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