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## DIGITALIZATION OF LIBRARY: A REVIEW

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**Abstract:** Libraries are establishments with a service emphasis that provide access to information, culture, and knowledge. In order to fulfil this role, libraries collect, store, process, and organize printed, digital, electronic, or multi-media documents. In this current review we are provided compressive data related to some most innovative digital libraries which play a key role in the development and enhancement of knowledge in the present day. These digital platforms also provide the time spacing facility to the users as compare to traditional libraries.

**Index Terms - Libraries, digitalization, e-sources, time saving**

### 1 Library

Different people associate libraries with different things, from a place where students can go to study to a service that allows anybody to borrow books, access the Internet, or conduct research. In a sentence, libraries provide a way for students, academics, teachers, professionals, laypeople, and others to acquire knowledge and information, particularly the structured collections of books and other published materials for reading and borrowing. Because they are part of an institution, libraries have restricted access and are only available to those who are affiliated with that institution.

#### 1.1 Functions of libraries

Libraries are institutions with a service focus that offer access to knowledge, culture, and information. Libraries provide this function by gathering, storing, processing, and organising printed, digital, electronic, or multi-media documents; developing methods for finding useful content; and providing user services for information distribution. (Jofferson and Khanna)

#### 1.2 Need and Purpose

Information is transported and disseminated through books. Information and knowledge are carried through books. Books are necessary for students to learn about a variety of topics that interest them. Books are necessary for teachers to successfully and efficiently carry out their teaching duties. In order to practise their professions, doctors, lawyers, and other professionals need books. Almost everyone who is literate requires books for one reason or another. Any subject has a huge and varied volume of literature. Additionally, it is quite difficult for any one person to afford enormous book collections, such as those seen in libraries. In general, books are pricey. In addition, after a book has served its purpose, it might not ever be needed again. Even if that were the case, books would still need to be carefully stored and conserved. People find it easier to access books they need through libraries, especially when collections are huge and dispersed over many locations. We need libraries because they are knowledge repositories because they will keep the written records of our civilization for future generations. Currently, libraries are available to students, professors, and others at every school, college, and institution. Professional libraries are also available to cater to their particular information demands. In contemporary societies, libraries serve the function of providing information support to educational institutions, bodies responsible for making policy and decisions, business, and the general public in order to increase public awareness and education on topics such as health, social welfare, and other topics of common concern to society. One of the best ways for society and the country to access information for the advancement of its social, cultural, and economic well-being is through libraries. The purpose of libraries is to spread fundamental information and to preserve and promote human culture and civilisation. (Jofferson, Rangnathan and Khanna)

#### 1.3 Purposes of libraries

books and other information carriers are distributed in order to support the purposes and goals of institutions; information is archived; and a space is provided for community interaction around information.

To make it possible for people to access, save, and recreate information across a variety of media, as well as the ICT tools required to manage the digital divide, manage access to information in a responsible manner.

#### 1.4 Value and Importance

Although libraries are a dynamic workplace, they are still trying to define their services, claim their territory, and find their role in the new information age. Libraries don't just happen. They must show the financial organisations and their parent institutions the worth of the investments made in libraries if they want to avoid having their future severely affected. Of course, value should not be just considered from an economic perspective. It is more about the significance that society ascribes to the outputs and results of libraries. (Kent, Rangnathan and Khanna)

### 1.5 Strengthening Academic and Research Performance

The significance of libraries resides in enhancing academic achievement in teaching, learning, and research as a vital support system. Libraries are vital tools for fostering all-around human growth and for nation-building.

### 1.6 Bridging Links Between Information Sources and Users

The community benefits from the librarian's role as a channel for communication and information transfer. The library acts as a conduit between books and patrons, bringing information forward and making it pertinent, clear, and useful. Libraries are frequently seen as knowledge hubs precisely because of this context.

### 1.7 Bridging Digital Divide

Access to the Internet and ICT tools has taken centre stage as societies move toward being ICT- and knowledge-based. In terms of reaching out to the general public, libraries are key. Libraries offer Internet access and host tutorials to expose those without ICT skills or access to Internet resources, helping to close the digital divide.

### 1.8 Libraries are the only institutions that can manage books and information resources without commercial interests –

Books that provide knowledge and information are essential for developing original ideas for managing the affairs of governments, business, and services or for tackling current problems and tasks. For learning and education, books are a need. Libraries are the only organisation that has the capacity to oversee book inventories and act as a conduit between potential users and information sources. As a result, libraries of all kinds with book collections have developed over time as crucial institutional resources, supported by governments and/or other organisations as priceless tools for fostering national development. (National Indian Library of India and Khanna)

## 2 Digital Libraries

The word "digital library" refers to a wide range of concepts, from the gathering of all digital information and the services that make it available to as many users as possible to the digital equivalent of a traditional library. Due to the rapid advancement of technology, digital libraries have developed to meet the demands of people with different interests in many sectors. Despite the fact that the phrase "digital library" has grown in prominence recently, such libraries have been developing for the past 25 years. These days, digital libraries are very popular. This is reflected in the fact that an advanced Altar Vista search conducted in early July 1997 on "digital library" or "digital libraries" retrieved about 30000 entries. Despite the abundance of literature, it is unclear what exactly we mean when we say "digital library." Rarely is the phrase ever described or defined. It has been used for a remarkable variety of things, including electronic versions of public libraries, private library collections, the entire internet, a collection of electronic journals, software agents that support inquiry-based learning, a collection of e-mail and related items, and digital co-laboratories. With the exception of their digitization, it is difficult to discern what these have in common. The items contained in a digital library are represented digitally.

### 2.1 Digital Library: Concept and Definition

The digital library is defined by the working group of the US Government's Information Infrastructure Technology and Applications as a "system" that gives users cohesive access to a sizable organised depository of information and knowledge. According to R. R. Larson, a digital library is a network of thousands of "networked electronic libraries" that functions as one large virtual library. Networking is not required for the digital library. A digital library is one that includes all of its materials in electronic form and allows users to access them via electronic devices. As a result, a digital library is one that offers remote access to numerous databases as well as a number of machine-readable publications. Digital libraries are organisations that provide the resources, including the specialised staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are easily and affordably available for use by a defined community or set of communities, according to the American Digital Library Federation. The following list of qualities can be used to define a digital library:

- A collection of services
- A collection of information objects
- Supporting users with information objects
- An organization and presentation of those objects
- An available directly or indirectly
- An electronic/digital availability

A digital library is much more than just a repository's worth of materials. Electronic libraries All of its consumers can get a wide range of services from it. The information objects that offer content in the form of digital resources form the foundation of the digital library. In order to manage, access, store, and modify the variety of information held in the collection of materials that reflects the library's holdings, the digital library aims to satisfy user needs. The information objects may be represented in the library by digital means whether they are digital or otherwise (e. g. metadata). Direct network access to them is possible, as well as indirect access. Even if the object may not even be electronic and may not be immediately accessible over the network, it must nevertheless be represented electronically in some way. (vijay and Jindal)

### 2.2 Characteristics of Digital Libraries

Digital objects are the structured information found in the digital library and include digital versions of text, audio, video, images, computer programmes, graphics, and multimedia elements. Numerous digital technologies are needed for the digital library. The digital library Provides: - access to a very large information collection, both primary and secondary; Support multimedia components; Provides links to different digital objects; Supports and provides search and retrieval interface. (Chandrakant and sunil; 2007and egyankosh)

Some of the popular digital library platforms are lighted here: -

### 3 Digital Platforms as Library

#### 3.1 N-LIST

N-LIST (National Library and Information Services Infrastructure for Scholarly Content) is a part of e-Shodh Sindhu consortium, INFLIBNET, Gujarat. The UGC currently finances an initiative of the Ministry of Human Resource Development (MHRD) as a college component of UGCINFONET. The N-LIST provides access (more than 6000 e-journals and 135,000+ e-books) to e-resources to students, researchers and faculty of the colleges and other beneficiary institutions through server(s) installed at the INFLIBNET Centre. The authorized users from colleges can now access e-resources and download articles required by them directly from the publisher's website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre. The colleges (except Agriculture, Engineering, Management, Medical, Pharmacy, Dentistry and Nursing) in India are eligible to get access e-resources under N-LIST programme. National Library and Information Services Infrastructure for Scholarly Content provide e-journals (full text) through American Institute of Physics, Annual Reviews, Economic and Political Weekly, Indian Journals, Institute of Physics, JSTOR, Oxford University Press, Royal Society of Chemistry, H.W. Wilson, and Cambridge University Press etc. N-LIST also provide e-books via Cambridge Books Online, E-brary, EBSCOHost-Net Library, Hindustan Book Agency, ISEAS Books, Oxford Scholarship, Springer eBooks, Sage Publications eBooks, Taylor Francis eBooks, Mylibrary-McGraw Hill, South Asia Archive, and World e-Book Library etc. All over the India 4051 beneficiary colleges are registered with N-LIST, 638019 active users and 29966 users activated till date. The registered beneficiary colleges of Indian states are listed below: <sup>(inflibnet)</sup>

Table 1 N-LIST registered beneficiary colleges of Indian states

| STATE                       | No. of Colleges |             |
|-----------------------------|-----------------|-------------|
|                             | REGISTERED      | Beneficiary |
| Andaman and Nicobar Islands | 2               | 2           |
| Andhra Pradesh              | 258             | 175         |
| Arunachal Pradesh           | 8               | 5           |
| Assam                       | 251             | 198         |
| Bihar                       | 147             | 38          |
| Chandigarh                  | 1               | 0           |
| Chhattisgarh                | 190             | 141         |
| Dadra and Nagar Haveli      | 2               | 2           |
| Delhi                       | 76              | 66          |
| Goa                         | 33              | 31          |
| Gujarat                     | 430             | 100         |
| Haryana                     | 166             | 119         |
| Himachal Pradesh            | 52              | 34          |
| Jammu and Kashmir           | 100             | 72          |
| Jharkhand                   | 106             | 63          |
| Karnataka                   | 735             | 489         |
| Kerala                      | 289             | 242         |
| Ladakh                      | 2               | 1           |
| Madhya Pradesh              | 242             | 134         |
| Maharashtra                 | 1208            | 881         |
| Manipur                     | 53              | 44          |
| Meghalaya                   | 30              | 23          |
| Mizoram                     | 24              | 17          |
| Nagaland                    | 32              | 26          |
| Odish                       | 103             | 32          |
| Puducherr                   | 22              | 13          |
| Punjab                      | 177             | 125         |
| Rajasthan                   | 169             | 63          |
| Sikkim                      | 4               | 2           |
| Tamil Nadu                  | 432             | 340         |
| Telangana                   | 150             | 107         |
| Tripura                     | 20              | 11          |
| Uttar Pradesh               | 259             | 110         |
| Uttarakhand                 | 33              | 13          |
| West Bengal                 | 389             | 331         |

### 3.2 Developing Library Network (DELNET)

DELNET was established in January 1988 at the India International Centre Library and registered as a society in 1992. It was initially supported by the Department of Scientific and Industrial Research, Government of India's National Information System for Science and Technology (NISSAT). The National Informatics Centre, Department of Information Technology, Ministry of Communications and Information Technology, and The Ministry of Culture, Government of India subsequently provided support for it. It provides access of e-books, e-journals, repositories of e-thesis etc.

#### 3.2.1 Databases on DELNET

##### 3.2.1.1 Union Catalog of Books

A union catalogue of the books available in DELNET member libraries is maintained online. This union catalogue is expanding and is always being updated. You can search for the information using the author, title, subject, conference, series, etc. 1,22,57,678 bibliographic records are included. Through the online system, an interlibrary loan request can be submitted.

##### 3.2.1.2 Union List of Current Periodicals

Union lists of recent publications in the social sciences, humanities, and sciences of technology have been compiled by DELNET. Online access to this database is provided to DELNET subscribers. It currently includes 33,931 journals and is updated often with new titles added each year. It serves as a significant source for document delivery services.

##### 3.2.1.3 Union Catalogue of Periodicals

DELNET maintains a unified catalogue of publications that lists all of the libraries' holdings. The database currently has 20,235 records in it.

##### 3.2.1.4 Periodical Article Database

The database contains information on articles that may be searched by title, author, compiler, magazine name, and subject. Researchers and academics are making excellent use of the resource. The database currently has 9,22,042 records.

##### 3.2.1.5 CD-ROM databases

The member libraries' CD-ROMs are being listed in a bibliographic database. 22,234 records make up it.

##### 3.2.1.6 Union List of Video Records

This database contains roughly 6,000 listings for video cassettes that are available in DELNET member libraries.

##### 3.2.1.7 Union List of Sound Recordings

The audio cassette records on this union list are ones that are available in member libraries. There are 1,025 records in this database.

##### 3.2.1.8 Thesis and dissertation database

There is now a database of theses and dissertations that have been submitted to Indian universities. There are 70,293 records in the database.

##### 3.2.1.9 Union List of Newspapers

The database has 70 records and includes details about the newspapers, such as title, editor's name, site of publication, email address, and Web site of the Internet version, if one is available on the World Wide Web.

##### 3.2.1.10 Database of Electronic Books

It has almost 1613 records.

Delnet also provides access to Cambridge Dictionaries online, Networked Digital Library of Theses and Dissertations, ODLIS : Online Dictionary of Library & Information Science, GISTNIC Databases, MEDLINE & other databases of NLM, U.S. Patents: Full Text, Full Text Medical Journals, Open Access Journals, Engineering & Technology E-Journals: Table of Contents, Full-Text Medical Books, Full-Text Engineering & Technology E-journals, Learning Resources for LIS Professionals, Digital Libraries of the World etc. <sup>(delnet)</sup>

### 3.3 Shodhganga (Indian theses repository)

A digital archive of theses and dissertations submitted to Indian universities is known as a reservoir of Indian theses/ shodhganga. It is administered by the University Grants Commission (UGC) of India's INFLIBNET Centre, an autonomous inter-university centre. Its original location was on the Gujarat University campus in Ahmedabad. INFLIBNET Centre relocated to a new institutional building at infocity in Gandhinagar, Gujarat, in January 2013.

Up to 544 Indian institutions would have signed memorandums of understanding with the INFLIBNET Centre by the year 2022 to take part in the Shodhganga project. The academic community throughout the world has free access to read and download the entire text of every document submitted to Shodhganga. There are more than 3 lakh theses and 8000 synopses in the repository. <sup>(Shodhganga and Gazette of India 2016)</sup>

### 3.4 OAPEN LIBRARY

It has academic books that are available for free, primarily in the humanities and social sciences. The OAPEN Foundation is a not-for-profit organisation based in the Netherlands, with its registered office at the National Library in The Hague. OAPEN is dedicated to open access, peer-reviewed books.

OAPEN operates three platforms:

1. OAPEN Library a central repository for hosting and disseminating OA books
2. OAPEN Open Access Books Toolkit - a toolkit on OA book publishing for authors
3. Directory of Open Access Books - a discovery service indexing OA books, in partnership with OpenEdition. <sup>(OAPEN)</sup>

### 3.5 National Digital Library of India

The National Digital Library of India is a virtual library of learning resources that offers a wide range of services for the community of learners and users, including access to textbooks, articles, videos, audio books, lectures, simulations, fiction, and other types of learning media (6423499+). The NDLI offers free access to a large number of books and is designed to hold data in any language. It also offers interface support for the ten most popular Indian languages. Indian Institute of Technology Kharagpur developed, ran, and maintained it. The opportunity to register as a user is available to users everywhere. However, certain well-known sources' content is restricted to registered users only. These works that require registration come from sources like: South Asia Archive, World eBook Library, OECD iLibrary, and Society of Satyajit Ray etc. it has 20,00,000+ users. <sup>(National Digital Library of India)</sup>

### 3.6 Project Gutenberg

Project Gutenberg is a library of over 60,000 free eBooks; can be found online at Project Gutenberg. The first source of free electronic books, or eBooks, was Project Gutenberg. eBooks were founded in 1971 by Project Gutenberg's founder, Michael Hart, and his legacy continues to be an inspiration for the production of eBooks and related content today. Only eBooks (i.e., written

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### 3.7 JournalTOCs

JournalTOCs is for researchers, students, librarians and anyone looking for the latest scholarly articles. JournalTOCs is the largest, free collection of scholarly journal Tables of Contents (TOCs): 31,359 journals including 14,963 selected Open Access journals and 11,815 Hybrid journals, from 3333 publishers: <sup>(JournalTOCs)</sup>

### 3.8 Science hub

All scientific information ever published in a journal or book will be freely and unrestrictedly accessible through Sci-Hub. A database of 88,343,822 research documents that can be downloaded for free has been compiled by Sci-Hub. The collection consists primarily of research articles that have been published in journals, with the remaining 20% being different forms of materials. 36% of the documents in Sci-Hub were published between 2010 and 2020, and 77% were released between 1980 and 2020. For all of the main scientific publishers, the coverage is > 95%. The Sci-Hub database is around 100 TB in size overall. <sup>(science hub)</sup>

**4 Conclusion:** Digitalization of library provides a wide platform to the users use the stored data at any time without cost or open access to any document which is saved in the database of particular digital platform. These platforms are used very wisely due to time saving and wide range of material in one platform without time limit. This current review provided data related to some advanced digital libraries which play a key role in the research development and cerebral growth in the present days.

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