

# **A Critical View on the Current State of Digital Libraries in India**

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**Abstract:** On the rear end, information was the primary concept for the advancement of humanity from the agricultural to the industrial eras. It is the information era, which is characterized by technology, communication, and information. It requires that the appropriate information be provided in the appropriate format at the appropriate time. Libraries are anticipated to assume a significant function as information centers. India, a developing nation, has observed the modifications that Indian libraries have implemented in the development of their collections and the acquisition of knowledge. The objective of this study is to provide a comprehensive overview of the projects and initiatives that have been implemented to facilitate the creation and advancement of digital libraries in India.

**Keywords:** Digital Libraries, Present Scenario, Discretionary Perspective

## **I. INTRODUCTION**

Our capacity to adapt to the evolving requirements of library patrons has been greatly aided by ICT and its technological instruments. Virtual reference, customized OPAC interfaces, and downloaded media that library patrons may access from the comfort of their homes are just a few examples of the additional services that libraries can now provide thanks to technological advancements in recent years.

Libraries may now provide better, user-driven facilities and service options because to the expansion of accessible technology. It may be accomplished physically with additional service choices like enabling users to call unrehearsed book presentations or discussion groups, or electronically with the customization of library web sites. Librarians must establish a more rigorous practice of periodically assessing and innovating services, as well as asking users for feedback, in order to support such collaborative initiatives.

## **ORIGIN AND EVALUATION OF DIGITAL LIBRARIES**

An 1988 report to the Corporation for National Research Initiatives coined "digital library in print." The NSF, ARPANET, and NASA Digital Libraries Initiative popularized it in 1994.

According to Gurami Sujatha (2008), major libraries worldwide started digitizing in the early 1990s. In 1992, Cornell University formed the digital access alliance to investigate digital photography, which the Cornell Institute of Digital Collection employs. Yale's Open Book Project scanned its microfilmed 19th- and 20th-century volumes in 1992.

Digital libraries were launched in India in the mid-1990s using information technology, the internet, and Central Government support. This method was recognized during the 1996 Society of Information Science Conference on Digital Libraries in Bangalore. Several libraries have attempted this, but the Indian digital library initiative is nascent.

William Arms defines digital libraries as networked collections of information and associated services. This approach relies on information management. Data from satellites is not a library. Digital libraries contain organized data. Hybrid libraries work with traditional and electronic materials, say users. The Hybrid Library allows seamless access to the greatest resource in any medium print, speech, digital, etc. Virtual libraries provide selected information to distributed library patrons electronically without books, periodicals, reading space, or staff. Tim O'Reilly is associated with Library 2.0 and Web 2.0, which followed the 2004 O'Reilly Media Web 2.0 conference.

**Digital Library development milestone in Asian context**

1994	NSF Digital Library Initiative Phase 1 (DLI-1) The First Annual Conference on the Theory and Practice of Digital Libraries, College Station, Texas
1995	First IEEE Advances in Digital Libraries Conference, McClean, Virginia
1996	First ACM Conference on Digital Libraries, Bethesda, Maryland
1997	First European Conference on Research and Advanced Technology for Digital Libraries (ECDL), Pisa, Italy
1998	The First International Conference on Asian Digital Libraries (ICADL 1998), Hong Kong, China
1999	President's Information Technology Advisory Committee (PITAC) Report NSF Digital Library Initiative Phase 2 (DLI-2) Institute of Museum and Library Services (IMLS) Program NSF National Science, Mathematics, Engineering, and Technology Digital Library (NSDL) Program ICADL 1999, Taipei, Taiwan
2000	ICADL 2000, Seoul, Korea
2001	ICADL 2001, Bangalore, India First ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL 2001), Roanoke, Virginia
2002	ICADL 2002, Singapore JCDL 2002, Portland, Oregon China DL Conference, Beijing, China
2003	ICADL 2003, Kuala Lumpur, Malaysia JCDL 2003, Houston, Texas
2004	JCDL 2004, Tucson, Arizona International Conference on Digital Library, New Delhi, India ICADL 2004, Shanghai, China
2005	JCDL 2005, Denver, Colorado ICADL 2005, Bangkok, Thailand

**BACKGROUND OF DIGITAL LIBRARIES IN INDIA**

**National Mission on Libraries:** National Virtual Library of India is an open-access database of digital materials on India and Indian knowledge. NML Model Libraries would create 6 Ministry of Culture Libraries, 35 State Central Libraries, and 35 District Libraries, focusing on economically disadvantaged regions. Network access would also be supplied to 629 state district libraries.

**Digital India:** The government's flagship Digital India plan aims to make India a digitally enabled society and knowledge economy. Introduction-quote in the mid-1990s, India expanded its e-governance projects to include sectoral applications and citizen-centric services. Major government ICT programs included railway computerization, land record computerization, and others that focused on information system development. Later, several governments launched ambitious e-governance programs to provide residents with electronic services.

**TYPES OF DIGITAL LIBRARY INITIATIVES**
**Digital Libraries and Projects in India**

**C-DAC-Digital Library Projects:** This Asia-first program will digitize 200 rare Rabindranath Tagore and Amrita Sherill paintings from the National Gallery of Modern Arts. The goal is to develop a Digital Library of India platform that promotes innovation and open access to all human knowledge. As a first step toward this aim, the Digital Library

will provide a free, searchable collection of one million books, mostly in Indian languages, to everyone online and via partner institutions.

Mega Centre for Digital Library

Mobile Digital Library: Dware Dware Gyan Sampada

Digital Library at President's House

Digital Library at Nagari Pracharini Sabha Varanasi

Digital Library at Uttaranchal

Gyan Nidhi: Multilingual Parallel Corpus in Indian Languages

Digital Library at Gujarat Vidyapeeth, Ahmedabad

**Digital Library of India (DLI):** Its largest national digital library project in India. Indian Institute of Science, Bangalore started it with help from the Indian Ministry of Communications and Information Technology. First Citizen of India, His Excellency Dr. APJ Abdul Kalam, then president, who contributed to this vision, was interested in establishing Rashtrapathi Bhavan a DLI center.

**National Science Digital Library (NSDL):** The National Science Digital Library offers high-quality online educational resources for teaching and learning in science, technology, engineering, and math, both formal and informal, institutional and individual, in local, state, national, and international educational settings. NSDL includes structured descriptive information about web-based educational materials hosted by providers on other sites. These vendors provided metadata to NSDL enabling structured search and open access to educational content via this website and related services.

**National Digital Library of India (NDL India):** The Ministry of Human Resource Development announced the National Digital Library of India pilot project to build a virtual repository of learning materials with a single-window search function under its National Mission on Education through Information and Communication Technology. Researchers, lifelong learners, fields, popular access devices, and differently-abled learners will be supported. It helps students prepare for admission and competitive exams, teaches global best practices, and allows researchers to perform interconnected research from varied sources. A framework is being established in content volume and diversity to fit all pilot project learners' levels and disciplines. It is being developed at IIT Kharagpur.

**Traditional Knowledge Digital Library (TKDL):** In 2001, the National Institute of Science Communication and Information Resources, the Council of Scientific and Industrial Research, Ministry of Science & Technology, Department of AYUSH, and the Ministry of Health and Family Welfare imitated TKDL to document traditional knowledge in the public domain as literature on Ayurveda, Unani, Siddha, and other traditions.

**Vigyan Prasar Digital Library:** All key Vigyan Prasar scientific works are digitized in the Digital Library. This site offers most books for free to disseminate knowledge.

**Digital Library Initiative at National Library of India:** In the late 1990s, the National Library of India began digitizing rare books, manuscripts, and other materials under the 'Down the Memory Lane' initiative. English and Indian works written before 1900 and 1920 were considered.

**Swayam Project:** Discusses digital library services with the semantic web. It covers digital library strategy, implementation, marketing, promotion, and assessment. Students would understand digital rights and access control and its uses in digital libraries. Course covers open access digital libraries, backend technology, and case studies on building up digital libraries utilizing open source institutional repository software like Eprints, DSpace, and GSDF.

**D'source (e-Kalpa):** The digital design resource database will allow more individuals to access knowledge at various times and locations. Under the National Mission in Education via Information and Communication Technology, the Ministry of Human Resources, Government of India sponsors this 'Creating Digital-learning Environment for Design' initiative, known as 'e-kalpa'

**Indian Parliament Library:** Members of Parliament as well as Lok Sabha Secretariat personnel and employees are served by this library. At first, the computer center created large databases. The data is currently accessible and saved in PARLIS.

**Indira Gandhi Memorial Library, University of Hyderabad:** In India, IGML was the first library to launch a digital library program and the first library to be completely automated. About 250,000 pages, mostly theses and dissertations,

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**DOI: 10.48175/568**

**763**

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as well as 300 books in English and Indian have been digitized by the library since 2002. Approximately 170,000 electronic journals are available to the library.

**Punjab Digital Library (PDL):** Without regard to script, language, religion, ethnicity, or other physical characteristics, the PD Library's goal is to gather, digitize, conserve, and make available the collective knowledge of the Punjab area.

#### **DL-Consortium in India**

Libraries form a consortium to organize, collect, maintain, and collaborate on common objectives to provide higher-quality services than they could alone. It has benefited overburdened libraries. Evans, et al. (2012) Additionally, a single library collection will grow quicker than alone. Inter-library cooperation may also promote communication and connections between areas and foster cross-discipline collaboration.

Ohio Link, the first US state-wide consortium, was founded in the late 1980s. Their success in getting governmental support for their collaboration garnered notice. In India: Tata Institute of Fundamental Research used Springer's consortia model for multi-site licensing and cross-sharing content among all TIFR's libraries in 2000, creating the first limited-purpose, successful consortia-like model.

**e-Shod Sindhu Consortium:** MHRD created e-Shod Sindhu by integrating UGC-INFONET Digital Library Consortium, NLIST, and INDEST-AICTE Consortium. Centrally-funded technical institutions, universities, and colleges will continue to have current and archival access to more than 15,000 core and peer-reviewed journals and a variety of bibliographic, citation, and factual databases from a large number of publishers and aggregators through the e-Shod Sindhu.

**National Medical Library's Electronic Resources in Medicine (ERMED) Consortium:** Managed by New Delhi's National Medical Library. An effort by Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India to build countrywide electronic medical information resources for efficient health care.

**CSIR E-Journal Consortium:** Department of Scientific and Industrial Research (DSIR) funding and NISCAIR, New Delhi administration. Its 40 national labs do R&D in engineering, biological, chemical, physical, environmental, and information sciences. The CSIR e-Journals partnership plans to make over 4500 electronic journals from top publishers and learned organizations available.

**DAE Consortium:** DAE-C services are restricted to 36 DAE institutions, including BARC and TIFR, and the UGC-DAE Consortium for Scientific Research is an autonomous institute of university grants commission that provides specialized training and advanced characterization facilities for university researchers and makes DAE facilities accessible to them. It has agreements with 4 publishers and gives a

**FORSA library Consortium:** Established in 1982, the Forum for Resource Sharing in Astronomy & Astrophysics now has 12 members and has agreements with 4 publishers.

**The National Knowledge Resource Consortium:** It is a network of libraries and information centers including 24 DST and 39 CSIR institutions that was founded in 2009. It makes it easier to access over 5,000 e-journals from all major publishers, as well as citation and bibliographic databases, patents, and standards.

**Industrial Credit and Investment Corporation of India Knowledge Park:** The Knowledge Park at Hyderabad has signed an agreement with Informatics India Ltd provide access to J-Gate Custom Contents for Consortia service to four Hyderabad based and one Pune based R & D Institutions. Initially this service is free for the members with the objective of making it self-sustaining in the later stage.

**ICMR e-Consortia:** as part of modernization the Indian Council of Medical Research has under taken many new initiatives like subscribing to JCC@ICMR and Full Text Electronic Databases i.e., ProQuest. ICMR has identified five core bio-medical journals and subscribes for e-version in consortia mode to all ICMR institutes. These include Lancet, Science, BMJ, NEJM, and Nature. This e-journal consortia will be beneficial for cross sharing of information among the ICMR Institutes.

**HELINET:** Health Science Library & Information Network Consortium is first of its kind in the country when it was started in the field of health sciences information network in the year 2002. More than About 600+ core international e-journals, 2000+ e-books, 1500+ videos and databases are being subscribed/ procured and provided to students and faculties and research scholars pursuing their studies in various faculties of health sciences of all the respective affiliated colleges under RGUHS.

**IIM's Consortia:** The Six Indian Institutes of Management have formed a consortium and jointly approached the publishers of e-journals and databases in the area of Management, Social Behavioral Science source. They have been giving IP enabled access to e-journals. Well renowned publishers like Elsevier, Blackwell, Kluwer, Wiley provide their resources online to the members of the IIM Consortium. Apart from 25 titles free against print subscription, 2,300 titles as a part of EBSCO databases and 800 titles as part of ABI Inform database have been made available to users of IIM libraries electronically.

**Consortium for E-Resources in Agriculture:** was established Indian Council of Agricultural Research in November 2007 for facilitating accessibility of scientific journals to all researchers /teachers in the National Agricultural Research System by providing access to information specially access to journals online which is crucial for having excellence in research and teaching.

**DBT e-Library Consortium:** the unique Electronic Journal Consortium which is operational since January 2009. Currently the Consortium includes 16 DBT Institutions and 18 North Eastern Region Institutions. The Biotechnology Industry Research Assistance Council, New Delhi is also part of DeLCON.

**MCIT Library Consortium:** is a brilliant initiative by the Ministry of Communications and Information Technology to create a Digital/Electronic library with a mission of resource sharing and networking within the MCIT libraries. It also intends to provide electronic services to the users of the libraries thereby creating a model for Government of India libraries networking.

#### **DL-Institutional repositories (IR's)**

**IR** – is IT tool to collect, preserving and dissemination of scattered information to kept for access through single platform

#### **Present IR's World**

As per Registry of Open Access Repositories (ROAR: <http://roar.eprints.org/>), there are (4508) repositories across the World.

As per Open Directory of Open Access Repositories (Open-door: <http://www.opendoar.org/>) there are (3377) repositories in across the World. (As on 31st July 2017)

Highest Repositories (806) implemented in United States as per ROAR information (as on 31st July 2017)

Highest Repositories (496) implemented in as per (Open-door information) (as on 31st July 2017).

#### **Present IR's India**

As per Registry of Open Access Repositories (ROAR: <http://roar.eprints.org/>), there are (120) repositories in India. (as on 31st July 2017)

As per Open Directory of Open Access Repositories (Open-door: <http://www.opendoar.org/>), there are (77) repositories in India. (as on 31st July 2017)

India stands second in Asia after Japan (227). (ROAR) (as on 31st July 2017)

India stands third after Japan (211) and Taiwan (60). (open-door) (as on 31st July 2017)

## **II. CONCLUSION**

Libraries in India must change their current approach to knowledge acquisition and collection to one of knowledge access in light of the current circumstances. Librarians and libraries must understand their societal roles and how important they are to the development of a knowledge society. NKM (2007) As libraries grow and become more accessible to people seeking knowledge, books and information must be translated into all of India's major languages and appropriately adapted into user-friendly formats to accommodate the diverse ages, interests, needs, and levels of knowledge of both current and prospective library and information service users.

Initiatives for digital libraries in India are mostly seen as being focused on academia and research. Although there are some helpful resources accessible, such as property records, cardiographs, policy papers, court rulings, legislative deliberations, etc., they are not widely distributed. The majority of these projects are carried out alone, with no cooperation from other organizations of a like kind. It is also evident that a large number of the initiatives are one-time endeavors with small grant amounts and often lack adequate continuity planning. Important topics are not covered,

including project goals, preservation techniques, material selection and collaboration with related activities, access mechanism, sustainability, and cost considerations.

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