

# Digital Library Initiatives: An Overview of Global scenario with Implications

**Sindhu P N**

Librarian, Government Polytechnic College, Kothamangalam, Ernakulam, Kerala

**Dr. S. Kishore Kumar**

Deputy Librarian, Central Library, Alagappa University, Karaikudi, Tamil Nadu.

**Dr. Lokesh Naik**

Librarian, BMS Government First Grade College, Huliya, Tumkur, Karnataka

## Abstract:

This article discusses about various national and international major digital library initiatives and repositories and purpose of this article is to identify digital libraries and repositories in world available in public domain. Due to development of internet and information technology has gave birth of Digital Library. It is digital forms or electronic forms of all reading materials available in the library. And also discusses various national and international digital library initiatives and issues, challenges and problems involved in design and development of digital library across the world.

Key words: Digital Library, Information Preservation, Information Storage, Digital Library Initiatives, DLI, NSF, NDLTD, Consortium

## 1. Introduction

Digital libraries are the creation, preservation and dissemination of electronic information such as e-books, e-journals, e-newspapers and other kinds of electronic materials. It helps readers to have access to any book at any time through the internet and it also stores the contents at a central location for providing access on multiple devices. **Wani (2021)** expressed that digital library is “A digital library, also called an online library, an internet library, a digital repository, or a digital collection is an online database of digital objects that can include text, still images, audio, video, digital documents, or other digital media formats or a library accessible through the internet”. **Rosenberg (2006)** defined “digital library as one where users access resources by

electronic means and where information is delivered to users electronically". Hence digital libraries are collections of electronic materials, store and dissemination through internet.

Advanced libraries have turned into the unavoidable piece of the contemporary information society for storage and access of large amount of data. Simple access to this huge fortune of information is conceivable through piece stream or advanced content. The DLs innate benefits like high volume of capacity of diverse data, compelling search and recovery, available through numerous focuses at any time, prompt downloading, quicker expansion of data and so forth made the Government to start computerized library projects

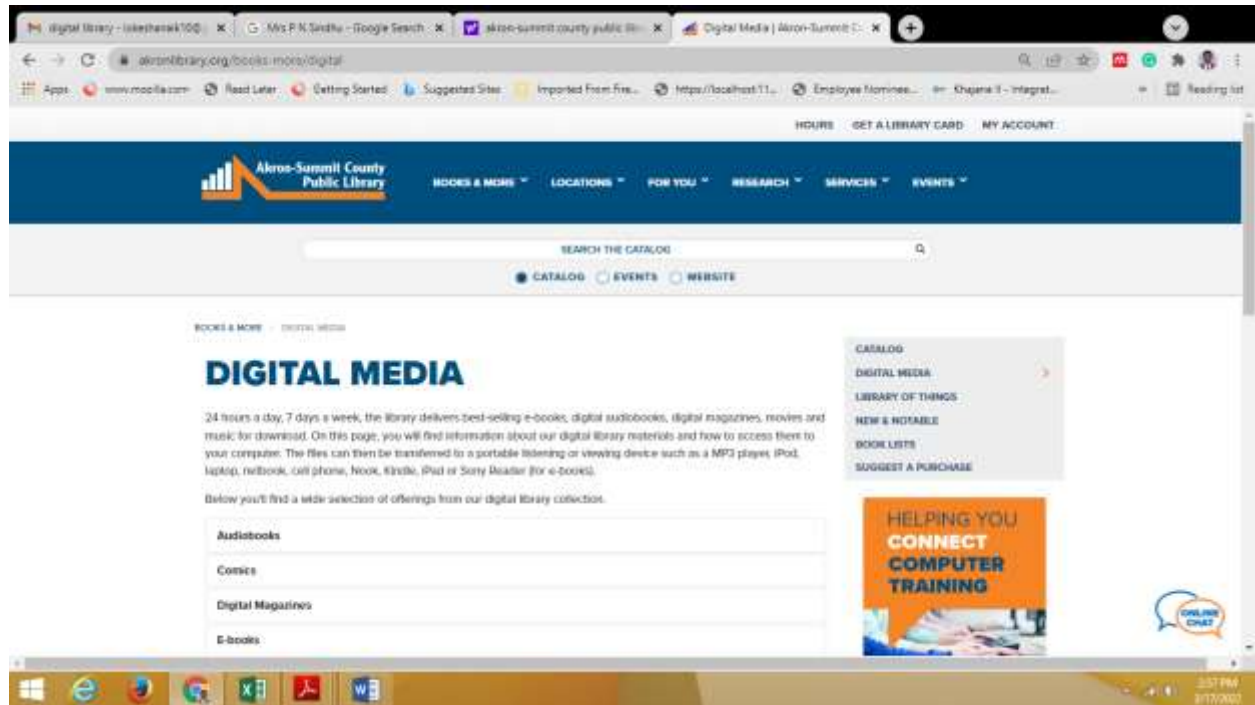
## **2. Current Digital Library Initiatives: International Scenario**

Some important govt., and non-govt., institutions, national and international level institutions, research organization, universities, financial institutions are key player for initiating digital libraries. Some of the digital library initiatives are discussed as follow.

### ***2.1.Akron-Summit County Public Library's Digital Library***

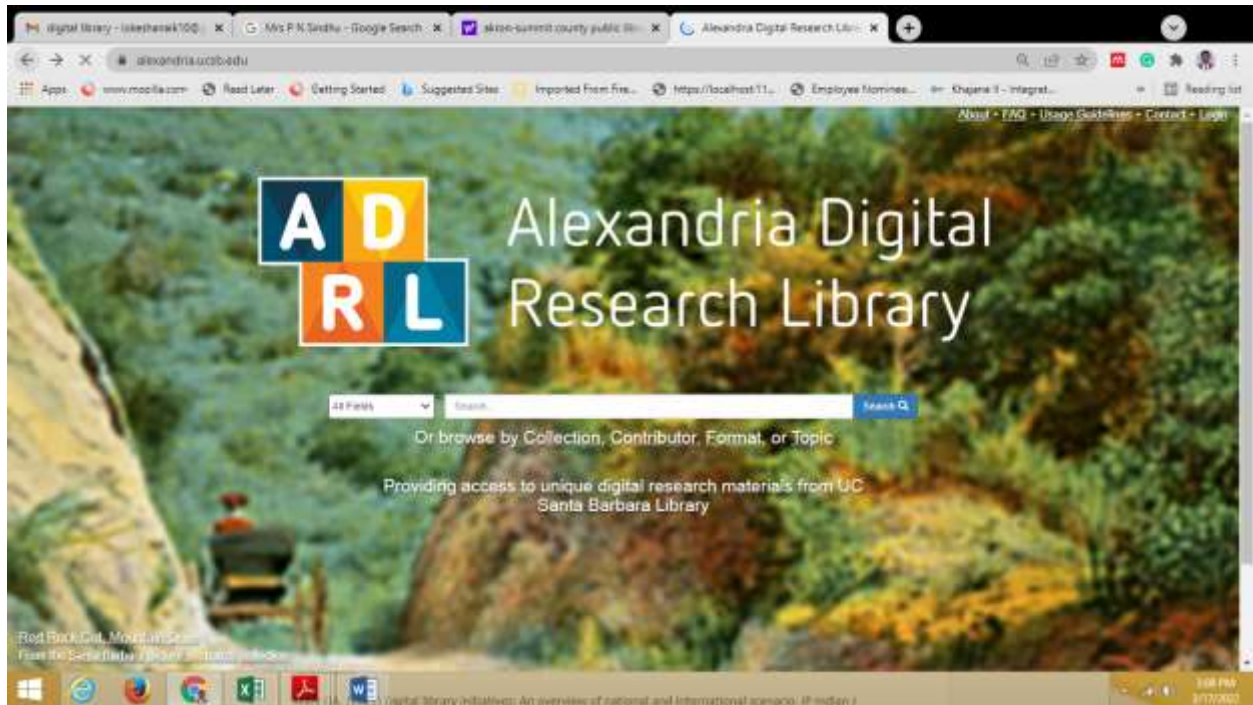
It is a public library of Ohia state and open 24 hours a day and 7 day a week, the library delivers best selling e-books, digital audio books digital magazines, movies and music for download.

<https://akronlibrary.org/books-more/digital>



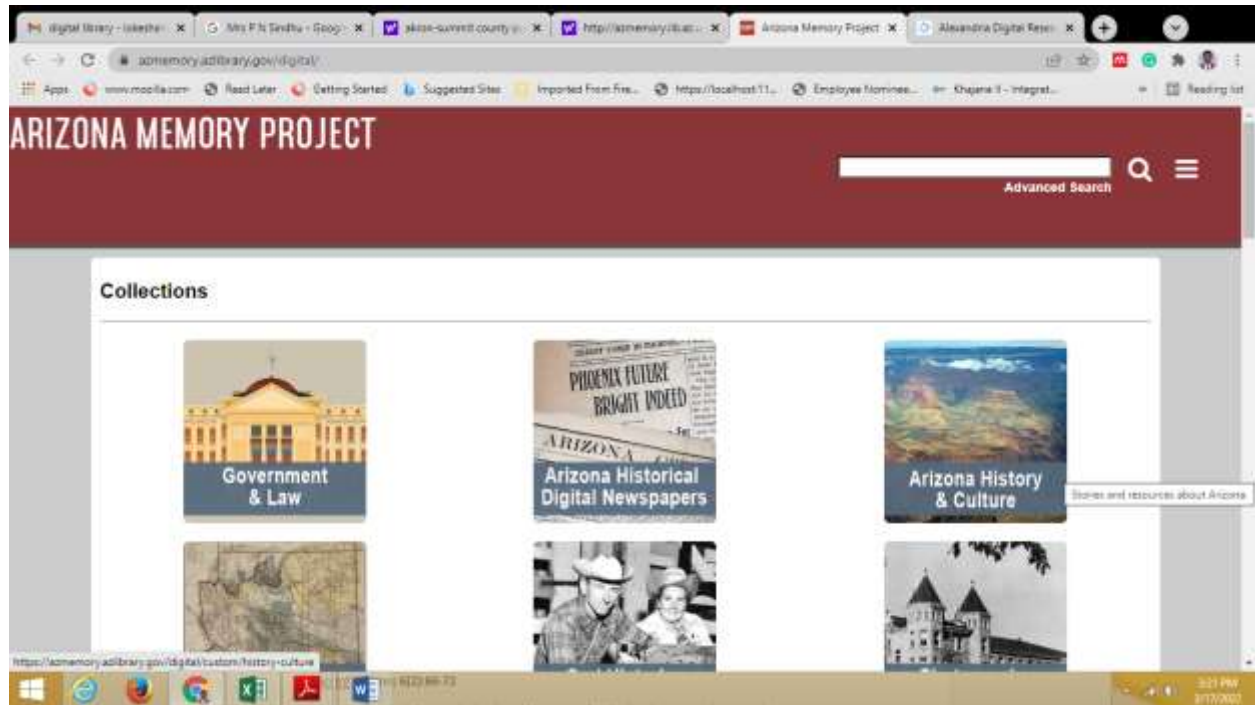
## 2.2. Alexandria Digital Research Library

It is found for the collections of digital research materials include text images steamed video numerical and spatial data. It is developed in the 1990s with Alexandria Digital Library (ADL) and found under UC Barbara Library's home. It has many digital resources and continually being added. <https://www.alexandria.ucsb.edu/>



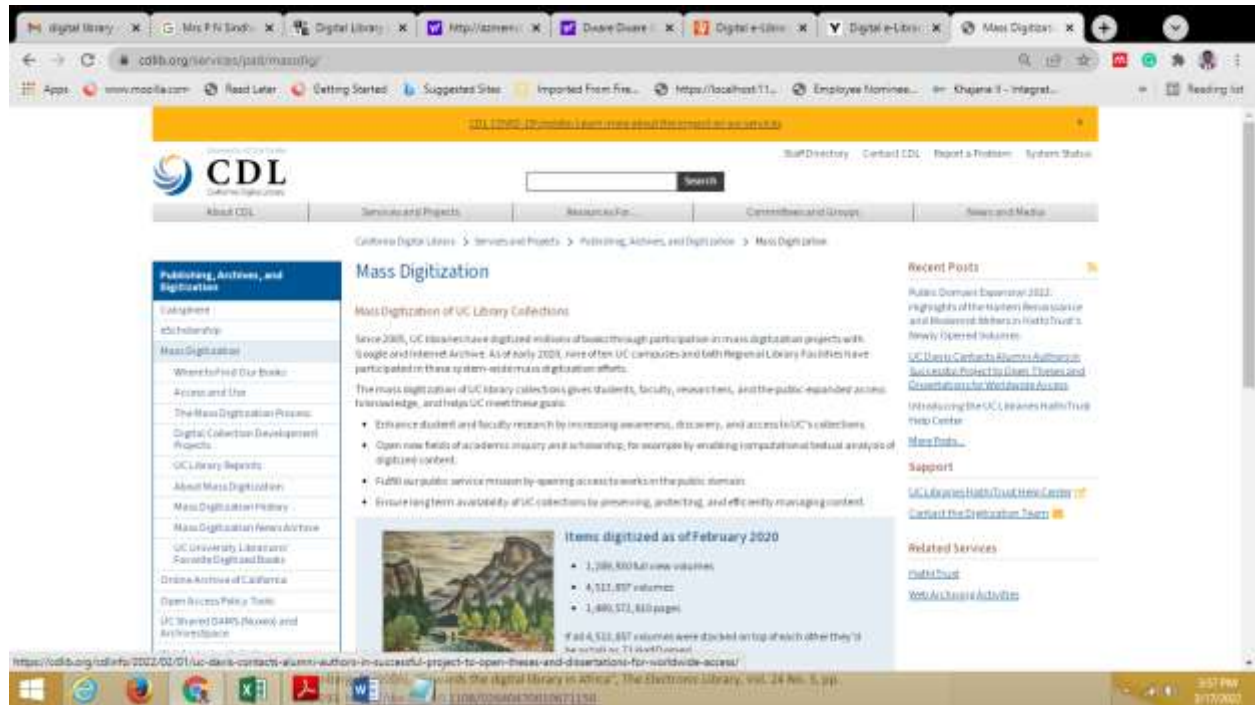
### ***2.3. Arizona Memory Project***

This project “was launched in March 2006 and granted by Arizona Historical Advisory Commission. It is an online effort to provide access to the wealth of primary sources in Arizona libraries, archives, museums and other cultural institutions. This project provides the opportunity to view some of the best examples of govt., documents, images, maps and object that chronicle Arizona’s past and present”(Bansode, 2008).



#### 2.4. California Digital Library

This is “digital library supports the assembly and creative use of the world’s scholarship and knowledge for the university of California libraries and the communities they serve”(Bansode, 2008). Hence, There are 12,89,930 full view volumes and 148,95,72,810 pages are digitized as of February.



### 2.5. Digital South Asia Library

This provides “digital material for references and research on South Asia to research scholars, business leaders and other users, Images and photographs are arranged in databases, maps and atlas and books and journals. Major participants are library of congress, the Asia Society, British Library, University of Oxford, University of Cambridge and other institutions in South Asia”.

<https://dsal.uchicago.edu/>

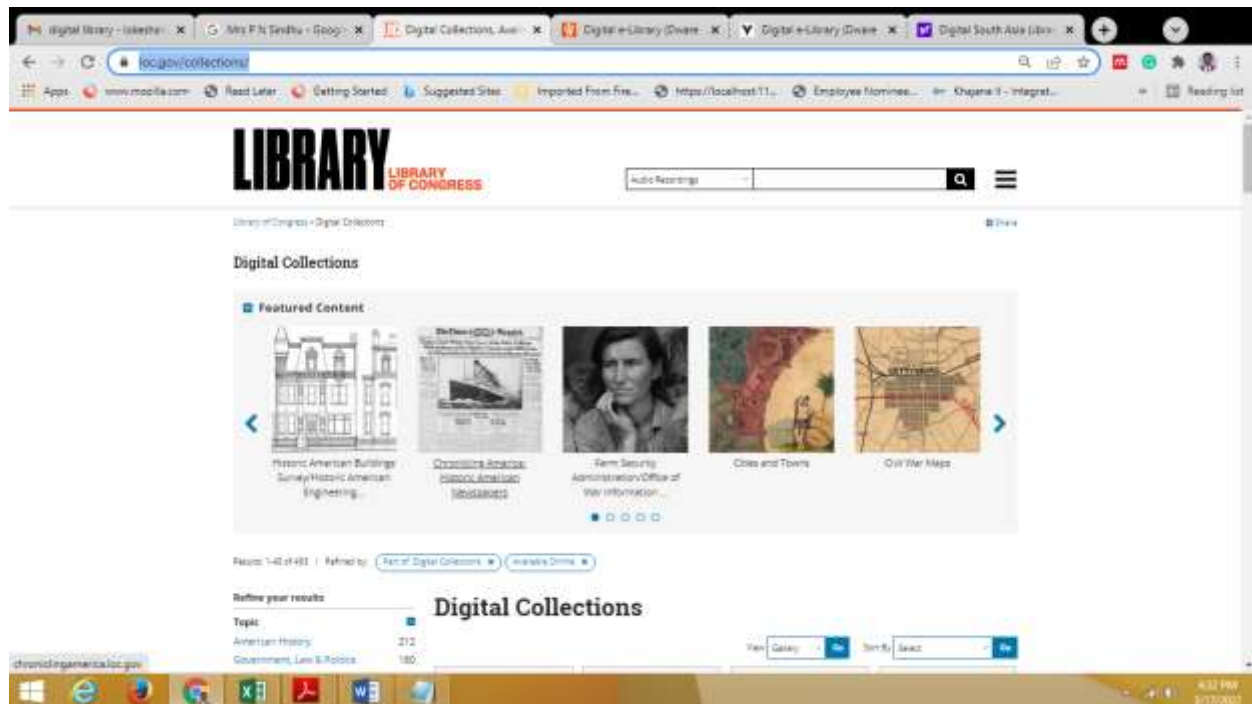


## 2.6. Library of Congress

Library of Congress is world largest and oldest library in the world founded by United States of America with contain millions of records. It contains all in one collection i.e. multimedia of digitized all types of books, images, audio and video recorded, “motion pictures and text from USA historical collections of the library of congress (LoC) and other institutions. At present it has 7.5 million digital collations and more than 212 historical collections”.

<https://www.loc.gov/collections/>

[World digital library project has collections of cultural heritage materials from worldwide. The data was translated from English language to other additional world popular languages like Russian, Arabic, French, Chinese and others and it has 18931 printed digital form of material till 26.3.2022.](#)



## 2.7.The Digital Library Federation (DLF)

DLF, an initiative of the Council on Library and Information Resources (CLIR), is an international consortium of libraries and other organizations that have pioneered the application of information technology to libraries.

“DLF serves its parent organization, the Council on Library and Information Resources, as the place where CLIR’s broader information-community strategies are informed and enriched by digital library practice. DLF connects CLIR’s vision and research agenda with our active practitioner network, and brings the insights of the DLF community to bear. DLF is a place where big ideas can be road-tested, but also from which they can emerge, shaping new strategic directions for the entire community” (Gladneyet, 2022)

“In addition, we partner closely on key CLIR initiatives related to DLF’s mission, in order to provide advice and expertise to CLIR from the digital library community, as well as connections and opportunities for our members Chief among these are” (Gladneyet, 2022)

“CLIR’s Digitizing Hidden Special Collections and Archives grants our shared program of CLIR/DLF Postdoctoral Fellowships in Data Curation and a developing initiative to help foster and create, despite great challenges and as a tool for preservation and peace, a large-scale digital library of the Middle East. The Digital Library Federation is led with guidance provided by



CLIR's president and Board of Directors and a distinguished DLF Advisory Committee, in response and support of the work and contributions of DLF community members. Programmatic directions and initiatives are driven by year-round community engagement and discussions at the annual DLF Forum. Funding for DLF initiatives comes from membership dues and grants" (DLF, 2022).

Hence, DLF (Digital Library Federation) works as parent organization to CLIR (Council on Library and Information Resources). DLF is work with the guidance of CLIR's body and it continually review and assess its programs.

### **3. Digital Library in India**

#### ***3.1.National Digital Library of India***

Digital library of India is now become as National Digital Library of India (NDLI). It is a repository of learning resources with search/browse facilities and provides host of services for the learner communities. It is monitoring from Ministry of Education and Govt., of India. It provides user group-specific services such as

1. **School:** Students will find a wide variety of study materials including text books from NCERT and other schools, question papers, video lectures, and materials to prepare for exams.

There will be videos, simulations, activities, self-assessments, and other educational materials available. Additionally, there will be books, question papers, and solutions from NCERT and CBSE, as well as videos for general interest.

2. **Engineering:** Students of all engineering disciplines can find in this book lectures from NPTEL/SWAYAM courses, presentations made by faculty in class, online classes, and information on questions and solutions in common subjects.

There are several common disciplines in Aerospace Engineering: Architecture, Chemical Engineering, Civil Engineering, Computer Science & Engineering, Electrical Engineering, Electronics & Communication Engineering, Mining Engineering, and Ocean Engineering.

3. **Science**

This contains lecture videos and notes of NPTEL/SWAYAM courses, online class lectures, some books and questions/solutions for undergraduate students across all science discipline.

There are a variety of common subjects in Agriculture, Atmospheric Science, Biology and Biotechnology, Chemistry, Physics and Computer Science.

• **Humanities:** This section is intended for undergraduate students in humanities and social sciences. It contains books, questions, solutions, article summaries and notes.

- General
- History
- Geography
- Sociology
- Economics
- Psychology
- Political Science
- Education
- Constitution and Law
- Philosophy
- Mass Communication
- Library Science
- Music
- Film Studies

4. Literature: This is for undergraduate and postgraduate understudies of language and writing and furthermore for general peruses. This contains artistic fills in as well as study materials on English, Hindi, Sanskrit, Urdu and Bengali dialects.

- Investigation of English Literature
- Investigation of Hindi Literature
- Learn Sanskrit
- Learn Urdu
- Scholarly Works in English

5. Law and Management: "Regulation" segment is for regulation understudies and professionals. It contains address recordings, acts, decisions, and articles and takes note. "The

executives" area contains the board and bookkeeping questions and arrangements, video talks and a few books, notes, articles and theory important for bookkeeping, business and the executives understudies.

- The executives :: Video Lectures, Questions and Solutions, Books, Notes
- Regulation :: Act, Judgment, Article, Video Lectures, Question Paper

#### 6. COVID-19 Research Resources Repository (Journals and Conferences)

A few diaries are thinking of plans to distribute 'Coronavirus Special Issues depends on topic that line up with the focal point of the diary. A few gatherings also have reported such plans. This part gathers such diaries/meetings - forthcoming. Diaries, that attention on COVID-19 and related research overall and/or totals such examination, are additionally included.

This will help the researcher find suitable dissemination options.

COVID-19 Special Issues: Upcoming

COVID-19 Special Issues: Published

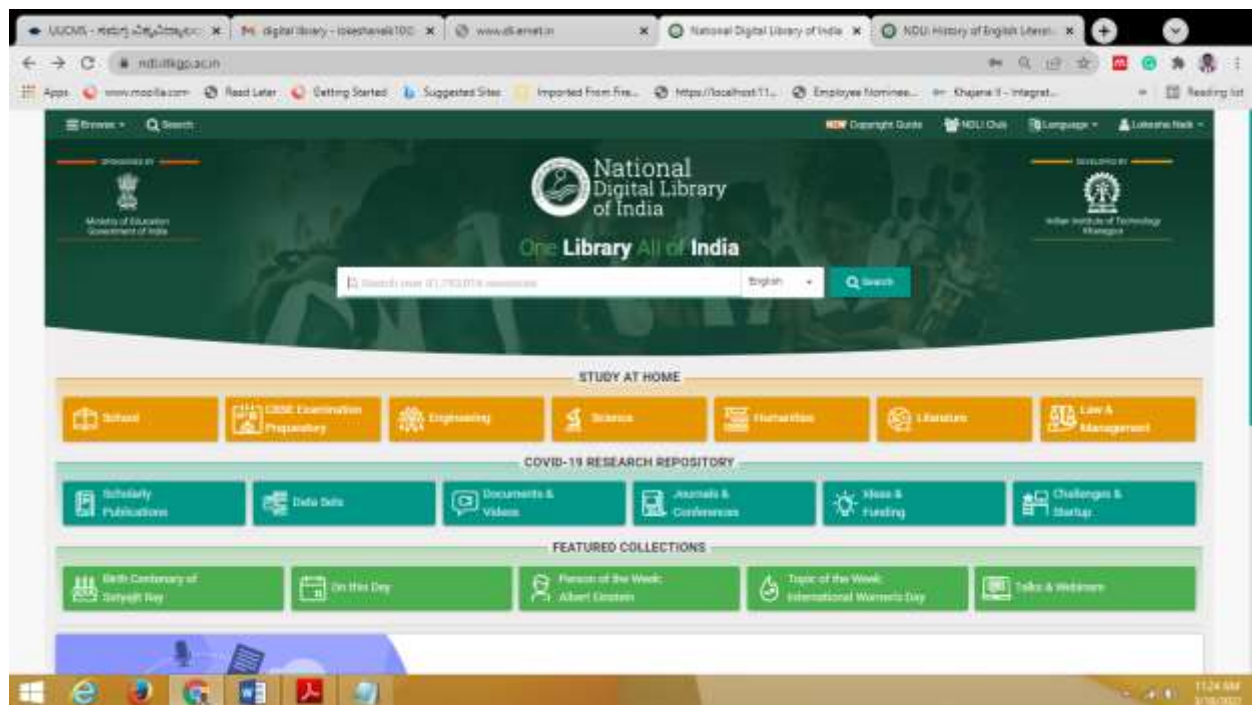
COVID-19 Publishing Journals

COVID-19 Journals Aggregators

COVID-19 Conferences / Meetings

“National Digital Library of India (NDLI) is a virtual repository of learning resources which is not just a repository with search/browse facilities but provides a host of services for the learner community. It is sponsored and mentored by Ministry of Education, Government of India, through its National Mission on Education through Information and Communication Technology (NMEICT). Filtered and federated searching is employed to facilitate focused searching so that learners can find the right resource with least effort and in minimum time. NDLI provides user group-specific services such as Examination Preparatory for School and College students and job aspirants. Services for Researchers and general learners are also provided. NDLI is designed to hold content of any language and provides interface support for 10 most widely used Indian languages. It is built to provide support for all academic levels including researchers and life-long learners, all disciplines, all popular forms of access devices and differently-abled learners. It is designed to enable people to learn and prepare from best practices from all over the world and to facilitate researchers to perform inter-linked exploration from multiple sources. It is

developed, operated and maintained from Indian Institute of Technology Kharagpur” (<https://ndl.iitkgp.ac.in/>).



### 3.2. Vigyan Prasar Digital Library:

It is an autonomous organization of Government of India, Department of Science and Technology (DST). “It is founded in the year 1989 for communication of science and technology. It maintains an open access digital library to spread scientific information, where the digital collection contains digitized full text versions of all significant scientific works that are published by Vigyan Prasar” <https://vigyanprasar.gov.in/digital-library/>

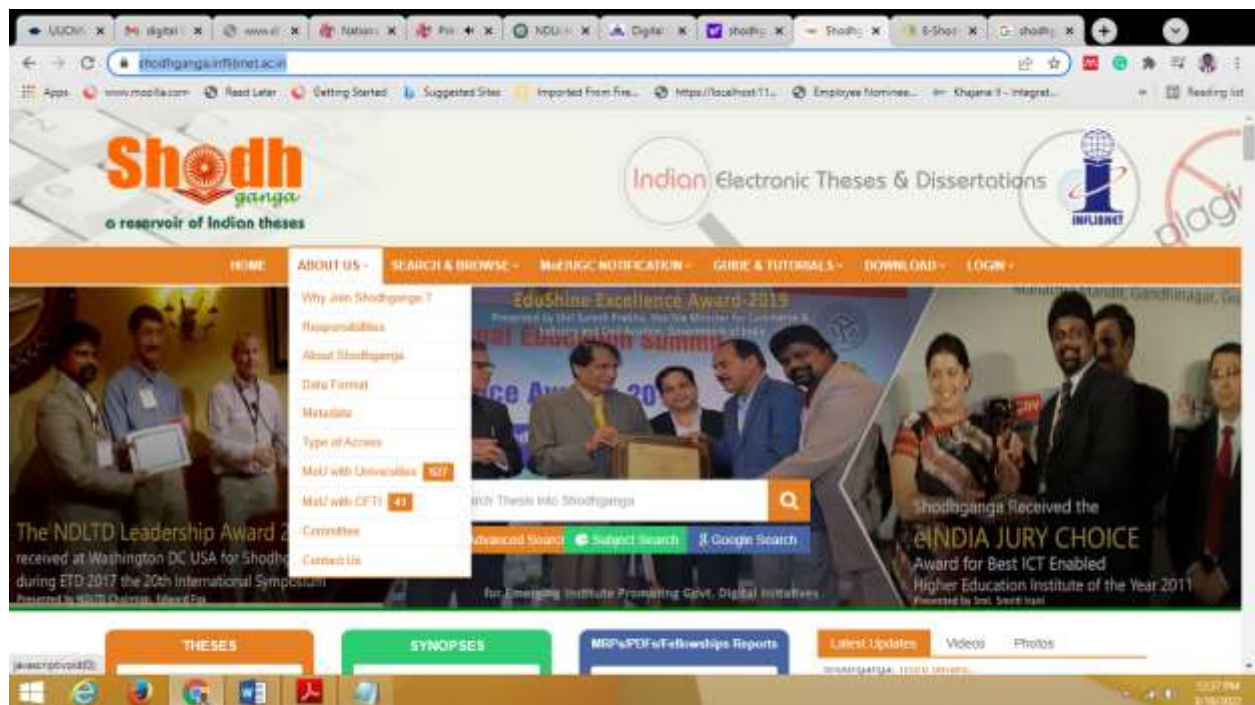
<https://vigyanprasar.gov.in/wp-content/uploads/2017/08/158585e.pdf>

## 4. Library Consortium in India

### 4.1. Shodhganga: Indian ETD Repository

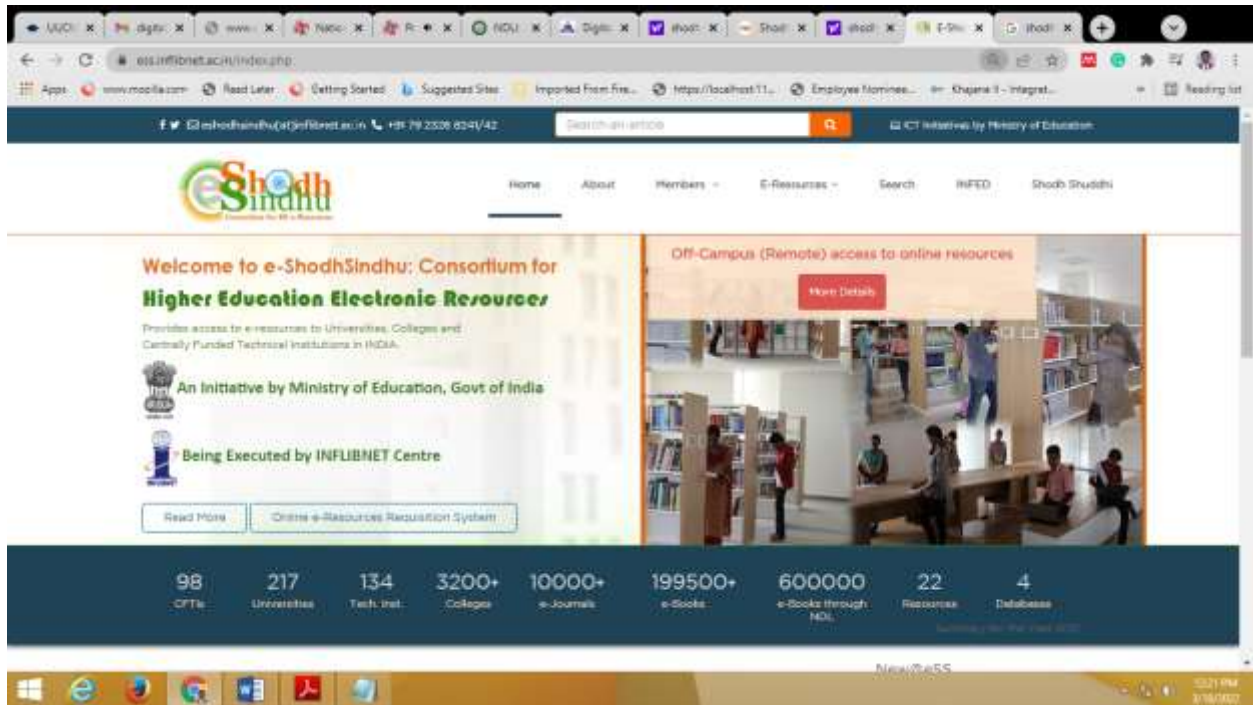
It is digital repository of Indian Electronic Theses and Dissertations. It was launched by INFLIBNET (Information Library Network) centre under the support of UGC (University Grant Commission) and made mandate submit e-theses with the aim of to facilitate open access of electronic version of theses and dissertation to research community worldwide. It is maintained by INFLIBNET centre. “There are 627 universities have signed MOU with INFLIBNET centre to join Shodhganga project and upload their theses. As on today there are 3,47,729 full text

theses and even 8,395 synopsis also maintained in shodaganga repository” (<https://shodhganga.inflibnet.ac.in/>).



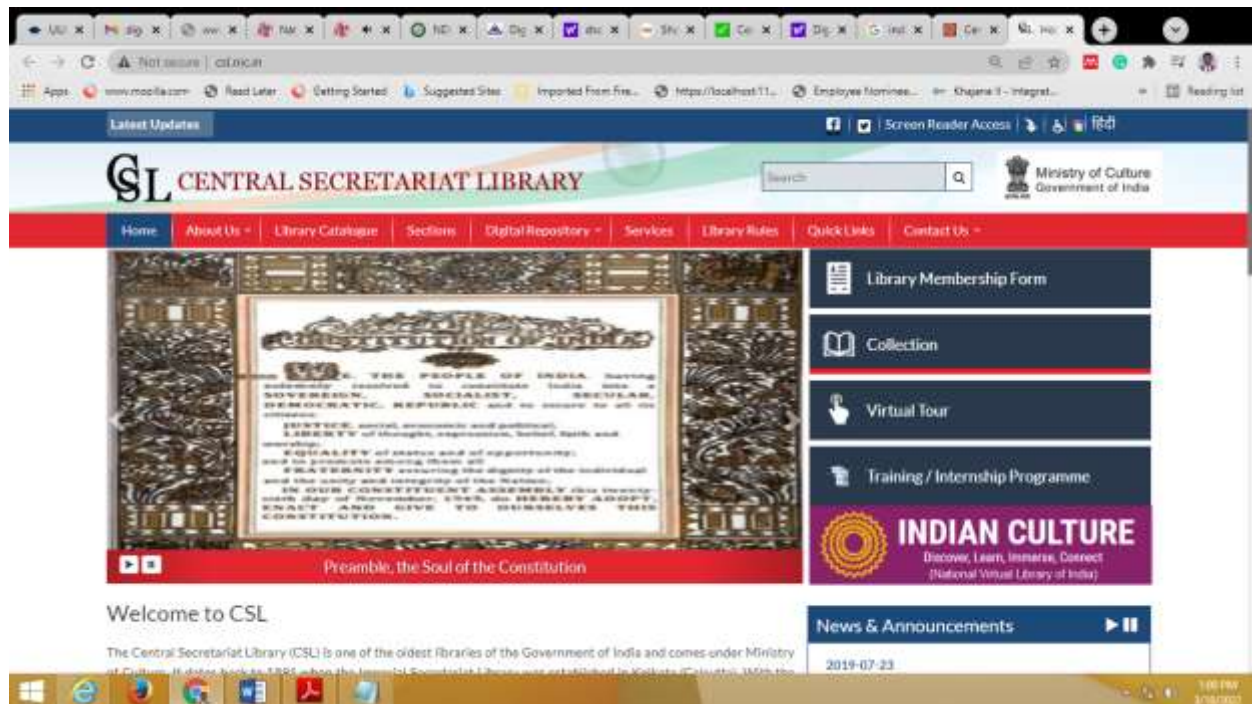
#### 4.2. Shodhasindu:

It is a digital consortium; based on recommendation expert committee Ministry of HRD has framed this consortia initiative and merged “UGC-INFONET Digital Library consortium, NLIST, and INDEST-AICTE Consortium. It is providing 10,000+ e-journals 1,99,500+ e-books, 6,00,000 e-books through NDL and many more e-resources to its member institutions including technical institutions, universities and colleges who are under 12(B) and 2(f) sections of the UGC Act”. (<https://ess.inflibnet.ac.in/>)



### ***4.3. Central Secretariat Library: Government of India***

It is center of largest government libraries in the country. It holds Indian and foreign official documents are available in its collection. It mainly caters to the needs of all ministries and department of Government of India. Even non-official members can also use this library such as research scholars, academicians, students and others. As on today 8.5 lakhs documents which include books government publications, reports and gazettes (<https://indianculture.gov.in/MoCorganization/central-secretariat-library>).

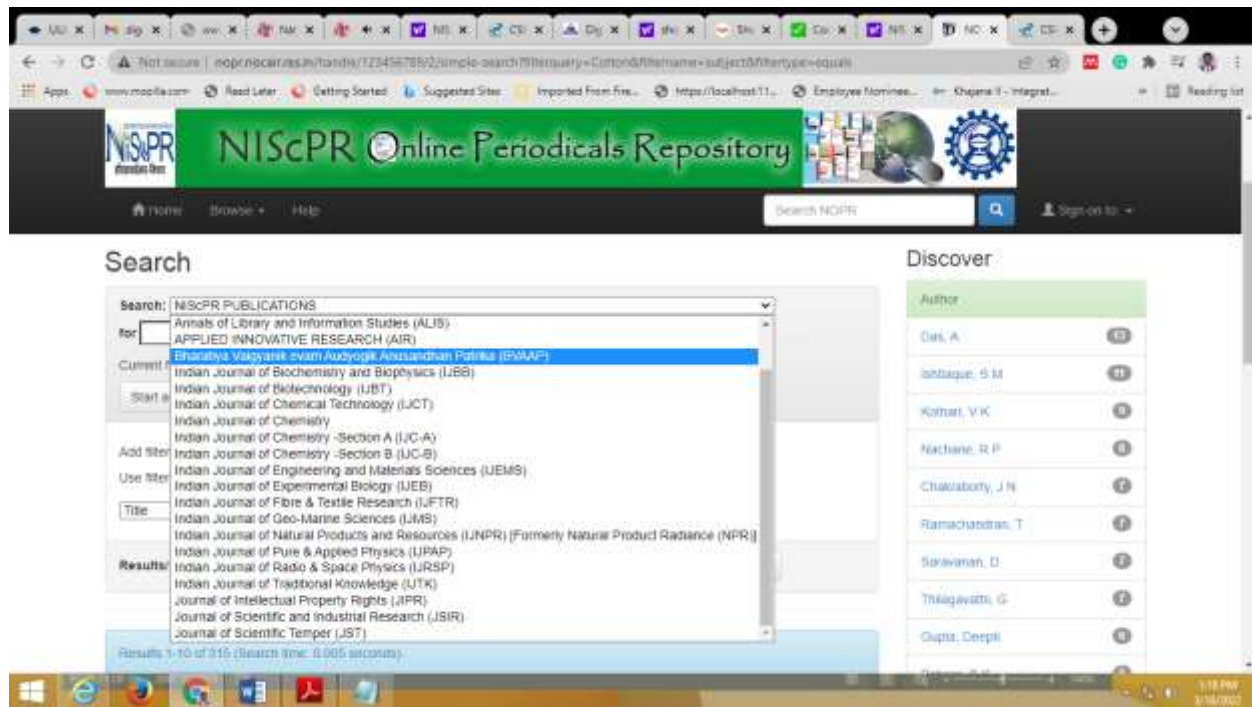


## 5. Indianjournals.com

“IndianJournals.com implemented by Divan Enterprises, New Delhi. It provides single window access to multidisciplinary Indian journals published by different scholarly societies and institutions. It provides access to eleven open access journals and periodicals. This journal gateway also provides access to subscription-based content” (<https://www.indianjournals.com/>). Hence, Indian journals.com is organization which publishes multidisciplinary journals and even it provides some of free access journals.

## 6. NISCIR Research Journals

“National Institute of Science Communication and Information Resources (NISCIR) has developed Online Periodicals Repository (NOPT) to preserve its 20 research journals, working papers, preprints, technical reports, conference papers and data sets in various digital formats. All publications can be access full-text in PDF format through NOPT platform. National Science Digital Library (NSDL) was then established to provide comprehensive S&T information to students of science, engineering and technology. NSDL provides curriculum based access to e-books and lecture notes, presentation for the undergraduate students of science” (<http://nopr.niscair.res.in/handle/123456789/2>). Thus NISCIR is national institutes which develop an online periodical repository for research community as well as its users.



## 7. DRDO E-journal Consortium

“Defense Research and Development Organization (DRDO) is organization under the ministry of Defense is the largest government funded research and development organization in India. DRDO e-Journal services is w.e.f 01.01.2009. It is consortium facilitates sharing of resources and improving access to information and same as shared among DRDO libraries. It is provides more than 500 full text e-journals to its DRDO labs” (<https://www.drdo.gov.in/about-drdo>). Hence it is organization which provides scientific information to its community.

## 8. Digital Library of Online Courseware

### 8.1.Swayam:

“It is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is *to take the best teaching learning resources to all*, including the most disadvantaged. SWAYAM seeks to *bridge the digital divide for students* who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy”. ([https://swayam.gov.in/nc\\_details/NPTEL](https://swayam.gov.in/nc_details/NPTEL)) Hence, Under this program till now 4194 courses are



completed by students and 1,74,25,870 students enrolled, 15,13,096 exam registrations are made and 8,04,879 students are got examination certificate

### **8.2.C-DAC Projects**

“Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Department of Electronics and Information Technology (DeitY), Ministry of Communications & Information Technology (MCIT) for carrying out R&D in IT, Electronics and associated areas. It conducts” ( [https://cdac.in/index.aspx?id=mc\\_hc\\_digi\\_lib](https://cdac.in/index.aspx?id=mc_hc_digi_lib))

1. Mega Centre for Digital Library
2. Mobile Digital Library : Dware Dware Gyan Sampada
3. Digital Library at President's House
4. Digital Library at Nagari Pracharini Sabha Varanasi
5. Digital Library at Uttaranchal
6. GyanNidhi : Multilingual Parallel Corpus in Indian Languages
7. Digital Library at Gujrat

### **Problems and Challenges of Digital Initiatives**

The digitization initiatives are encountered with several problems such as lack of technical infrastructure and knowledge, trained manpower, finances and policy initiatives (Kitturand & Biradar,2017).

Some of the important problems are discussed below:

1. Lack of appropriate safeguarding strategy.
2. No Intellectual Property Rights strategy for content advancement of computerized data.
3. Non-standard specialized exercises, information portrayal and transmission attributes.
4. Lack of various language Optical Character Reader offices.
5. Lack of obvious approach at National and International level with primary spotlight on maintainability
6. Outdated programming and equipment and trouble in overhauling something similar.
7. Non-accessibility of financially savvy new mechanical headway.
8. Non-accessibility of thoroughly prepared gifted work force.
9. Lack of the board support.

### **Conclusion**

The accessibility of ICT and data framework, the researchers turns into a functioning giver of data. Computerized library drives on the planet are as yet a promising progressive phase. There are numerous drives are a couple of time projects with a restricted awards from parent associations. Presently day's worldwide researchers' turns into a functioning patron in advanced library development by digitizing and giving free access data. The computerized library of India is one of the significant drive that is endeavoring to make a genuinely advanced library.

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