Critical Study Of Digital Library In India

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ABSTRACT:

The exploration of the Digital Library is particularly beneficial to education since it allows students to learn and build a digital library, supports the process of learning through teaching, and assists the university in obtaining catalogs, references, and research-related information. While the results of the topic and sub-topic analysis on the implementation of the public library demonstrate that: the company can create a library and provide information on its products; the public can obtain information more quickly thanks to the implementation of the Digital Library; and the preservation of historical and cultural relics that can be learned from in the future. In this article, critical study of digital library in Indian context has been discussed.

Keywords: Digital, Library, India

I. INTRODUCTION:

A digital compilation of materials commonly found in a traditional library and the compilation of all digital information and the related services that enable its usefulness to all possible users are just two examples of the many definitions that the phrase "digital library" contains. The quick development of technology has led to the emergence of digital libraries, designed to cater to a wide range of user interests. Even if the term "digital library" has gained popularity recently, over the preceding three decades, these libraries have truly advanced technologically. These days, there's a big interest in digital libraries. The American Digital Library Federation defines a digital library as follows: In order to make a collection of digital works easily and affordably available for use by a specific community or group of communities, digital libraries are organizations that provide the resources, including the specialized staff, to choose, organize, provide intellectual

access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of the collection.

A collection of services, informational objects, and organized and presented objects that are available in digital format make up the digital library. The digital library is dependent on technology and is not a single entity. Digital libraries could potentially be accessible to everyone.
A digital library's objective is to gather, preserve, and arrange knowledge and information in a digital format.

II. LITERATURE REVIEW:

Priyanka Shrivastava (2022). This presentation aims to talk about the future of digital libraries. Researchers from a range of disciplines get together to discuss the rapidly expanding topic of digital libraries. As of right now, the field lacks a clear goal that sets it apart from various other domains. Researchers may find it easy to think of digital libraries as a logical next step in a well-established field. From the perspective of information retrieval or databases, digital libraries can be considered federated databases. Digital libraries could seem like a particular use case for hypertext from a hypertext perspective. When looking at the Internet from the perspective of a wide-area information service, digital libraries could seem like a single application. From a library science perspective, one could perceive digital libraries as a continuation of the trend towards automation in libraries. [1]

Mohammad Syahidul Haq et al. (2022). All forms of information may now be shared widely thanks to digital technology, which has replaced antiquated formats with automated processes. The library has also entered a new era, known as the digital library era, as a result of the advancement of digital technology. A digital library is a type of modern library that relies on contemporary technology to convert information and data into digital formats for increased efficacy and efficiency in information processing, storing, and transmission. Thus, the goal of this project is to create an Android-based digital library application for the State University of Surabaya's Department of Education Management. By utilizing the nine steps, this study applies the research and development methodology put forth by Borg and Gall. The development of an Android-based digital library application at the State University of Surabaya's Education Management Department has been successfully

implemented, according to the study's results. The trial's average percentage was above 80%, placing it in the category of very feasible implementation. To continue developing this Android-Based Digital Library Application, however, faults and problems that can arise still need to be prevented by ongoing review and monitoring. [2]

Agrey Kato et al. (2021). This study looked at university-level digital library (DL) resource development, awareness, uptake, and usage. Reviewing the success criteria and determining the key technological components of digital library resources is essential to developing and implementing a successful system. Information technology used in electronic libraries was defined and categorized into a number of groups that affect user satisfaction in a DL setting. They include ease of use, accessibility, simple interface design, excellent communication quality, Internet performance, performance assurance services, social network communication ease, and customer-driven acquisition. The performance of DL utilities and the ease of accessing online information have become critical factors due to these significant DL service features. We examined and assessed a number of research studies to determine the usability of DL services, and then used the Blacklight open-source software to construct the DL discovery system. [3]

Ali, Sana et al. (2021). Even though the COVID-19 pandemic presented enormous pedagogical problems, the use of ICT in the classroom proved to be quite effective. Academic activities are sustained by a notable growth in the use of web-based learning and reliance on digital libraries. The current study looked at how students used digital libraries and how that affected their reading habits and educational activities in light of Pakistan's shutdown of traditional libraries and the current healthcare crisis. The researchers employed a cross-sectional study design and gave out 230 closed-ended questionnaires to Twin Cities students attending public universities. IBM AMOS Version 23 is used to edit, code, and analyze the data using structural equation modelling. The use of digital libraries, dependency, maintaining educational activities, and improved reading habits during the COVID-19 pandemic were found to be strongly and significantly correlated. The results, however, categorically disregarded the influence of prior experience on improved reading habits and dependency on digital libraries. The importance of digital libraries as a key component of the crisis management system was also underscored by the

findings. Therefore, in order to address potential educational problems and barriers, this analysis suggests more research on the various benefits of digital libraries, particularly in times of emergency. [4]

Jelena Ćirić and Aleksandar Ćirić (2021). In 2020, the contagious disease COVID-19 spread over the world, leading to the implementation of lockdown measures by multiple governments. Additionally impacted were public libraries. Access to digital content was the only service that many public libraries continued to offer and was still open to patrons. In response, the Njegoš public library in Knjaževac, Serbia, enhanced accessibility to its extensive digital collection and promoted it. The library kept an eye on who had access to the digital library as well, speculating that conclusions drawn from the statistical data might provide new information and opportunities for advancement. The public library's website included statistical data that showed the most popular days and times of day for users both during and after the pandemic. There was a trend toward mobile devices and operating systems that were more recent when it came to accessing devices. The time reading grew on average by almost 130%, peaking in March 2020 during the most draconian lockdown. Consequently, servers for digital libraries ought to be able to manage these kinds of spikes in network traffic with faster download rates. When compared to those from the prior year, library posts on social media, particularly Facebook, were viewed an order of magnitude more during the pandemic. Social media posts proved to be a successful means of advertising the digital library during the shutdown imposed by the pandemic. [5]

Pambayun, K. G. (2021). Notwithstanding the notable surge in the utilization of digital libraries amidst the COVID-19 pandemic, the dissemination of their articles has not been categorized as a means of scientific dissemination. As a result, the purpose of this study is to map and characterize the data in digital libraries throughout the pandemic on worldwide publications that are Scopus-indexed. Data from 66 publications on the Scopus database were gathered using the bibliometric assessment approach. The author simultaneously searched for publications from January 2020 to June 2021 using terms like "Digital Library," "Electronic Library," and "Covid-19." Out of 66 publications, the results indicated that 23 (34.8%) had high relevance to digital libraries during the pandemic,

with 74% being scientific journal articles. The United States of America makes the most contribution, whereas Emerald is the biggest publisher, with only 35% of titles available. Meanwhile, "pandemic," "covid," "library," and "services" are the main subjects of this research map. In conclusion, there is a great opportunity for research and publications on this topic because the dissemination of papers as a form of academic communication has not been entwined, as shown by the lack of linkage between each author. The shift to high-tech virtual and digital services not only increases users' and librarians' digital literacy, but it also represents an adaptation effort. [6]

Tsakonas, G., Kamps, J. (2020). The Theory and Practice of Digital Libraries (TPDL) conference in Thessaloniki, Greece, is the focus of a special issue of this volume. We give a quick synopsis of TPDL 2017 and present the chosen papers that comprise the remainder of this collection. The articles address several facets of recent research on digital libraries, emphasizing the field's significance and diversity of disciplines. [7]

Fakir Ashraf Shah Sattar Shah and Shilpa Satish Waghchoure (2019). New technologies have made early digital library visualizations a reality over the past thirty years. The era of digital learning is increasingly reliant on digital libraries. Their crucial position is increasingly serving as a gauge for the contribution libraries make to the revolution and advancement of their communities and the country as a whole. An electronic library that handles data in both digital and analog forms, both of which are born digital. This essay aims to explore the functions and consequences of digital libraries in the information age. It depicts fundamental ideas, the historical context, elements, traits, procedures, benefits, and drawbacks of the digital world. [8]

R Ilahi et al. (2019). To advance public interest and understanding, digital library services have made extensive use of information and communications technology (ICT). Researchers only need to browse the internet to readily find the relevant information. Digital libraries aim to offer potential readers a variety of reading options. They also protect the culture and traditions so that future generations can learn them. Digital libraries are being used for both community and educational purposes as learning resources. This paper's goal

was to examine and assess how a digital library system in the classroom affects possible readers. [9]

Genya Morgan O'Gara et al. (2018). This study aims to present the preliminary high-level results of a year-long, thorough needs assessment carried out in collaboration with the digital library community to uncover requirements and reuse assessment procedures for digital assets owned by cultural heritage and research organizations. Unlike typical library analytics, the assessment under examination focuses on how users use and alter unique resources from digital collections rather than access data. This study employs a range of investigative techniques to examine the state of digital library reuse evaluation as well as its requirements going forward. Pre- and post-study surveys, in-person and virtual focus groups, a review of the literature, and the inclusion of input from the advisory board and community are all included in this. The community around digital libraries is looking for ways to gain more insight into the repurposing and reuse of materials. In order to shed light on the current and anticipated state of digital library reuse assessment, as well as its advantages and disadvantages, as well as community applications, this article presents the preliminary quantitative and qualitative analysis and findings of a community needs assessment carried out in 2017 and 2018. To the best of the authors' knowledge, this is the first work to look broadly at the reuse assessment needs of the community of digital libraries. The early results and preliminary analysis have never been released before. [10]

III. NATURE OF DIGITAL LIBRARIES:

➢ Access to extensive main and secondary information collection is made possible.
➢ Multimedia components are supported.
➢ Offers connections to many digital items.
➢ Offers and facilitates an interface for search and retrieval.
➢ Encourages the conventional library goals of development, organization, access to digital libraries, and preservation.

The digital collection that a digital library possesses or has access to is its most crucial element. A digital library may contain many different types of materials. It may include information in computer-processable format as well as typical paper-based documents. A digital library may consist of a

collection of numerical data, scanned photographs, graphics, audio and video recordings, and structured and unstructured texts.

IV. DIGITISATION TOOLS FOR LIBRARY:

Machines and tools require for digitization of library include:

- Computers.
- Scanners that use scanning software.
- Data Storage Mechanism.
- Accessibility of the Network.
- The system offers a data display.
- Printer.

Functions of Digital Libraries with respect to Users:

- Provides digital access to a vast repository of data.

- Enables the use of multimedia content.

- Access to a network.

- Provides a user-friendly interface.

- Makes connections to both external and local objects.

- Assist and improve the information retrieval and search processes.

- Enables libraries to fulfill their traditional purpose, which includes gathering, creating, organizing, accessing, and presenting materials.

- Promotes the sharing, annotating, and integration of new data.

- Promotes the coming together of people with formal, informal, and professional learning goals.

- Facilitates expedited access to sources of information.

- Provides an easy way to trade resources with other libraries. Sharing files digitally is significantly easier.

Issues related to Digital Libraries:

Technical architecture:

452

➢ Libraries need to update and upgrade their current technology setup, which includes fast internet access and a high-speed local network.

➢ Relational database that supports several digital formats.

➢ Search engines index and make content accessible through full text search.

➢ Numerous servers, encompassing web services and FTP servers.

➢ Electronic document management system.

Building digital collections:

One of the most important parts of creating a digital library is creating the digital collection. One of the primary concerns is the extent to which libraries would acquire original digital works and digitize their present collection. This is the long-standing conflict between access and ownership. How can a specific library decide which specific information requires acquisition or digitization? Many factors, including personnel experience, technological prowess, user group priorities, manageable collection portions, collection strength, and unique collections, may influence who gathers and digitizes content.

Digitization:

Another consideration is deciding which portion of the collection to digitize. We can transform any fixed or analog material—such as books, journal articles, photographs, artworks, and microfilm—into an electronic version by scanning or rekeying. We call this process "digitalization." There are various approaches that are possible in theory.

V. DIGITAL LIBRARIES IN INDIA:

Vidyanidhi:

The Department of Scientific and Industrial Research (DSIR), Ford Foundation, Microsoft India, and the University of Mysore introduced the Vidyanidhi, a national digital library for electronic theses and dissertations (ETD). Vidyanidhi aims to raise awareness of doctoral research in India by conserving and making doctorate dissertations submitted by researchers to Indian universities accessible to a global audience. Vidyanidhi

maintains two main kinds of databases: a bibliographic database and a full text repository, both using Dspace software.

Vigyan Prasar Digitized Library:

Vgyan Prasar Noida is the business that created the Vigyan Prasar Digitized Library. Vigyan Prasar has an open-access digital library with full-text digital copies of all renowned scientific articles published by the organization, all with the goal of advancing scientific knowledge. There are 42 novels in Hindi, 17 books in other languages, and 72 books in English in the digital library.

Traditional Knowledge Digital library:

The National Institute of Science Communication and Information Resources is implementing the Traditional Knowledge Digital Library (TKDL), a well-known Indian digital library imitation. The United Nations recognizes English, Japanese, German, French, and Spanish as its five official languages. You can access TKDL in each of these five languages. TKDL has compiled information on traditional medicine formulations into thirteen million A4-sized papers.

Muktabodha Digital Library and Archiving Project:

The Muktabodha Ideological Research Institute launched the Muktabodha Digital Library and Archiving program in July 2003. It is one of India's largest indigenous digital library initiatives. People can access this digital library as long as they use it for non-commercial purposes. Muktabodh's main online resources are easily navigable thanks to its hyperlinked indexes, which include text titles, author or commentator names, and volume numbers.

Indian National Digital Library in Engineering Sciences and Technology (INDEST):

In order to strengthen access to subscription-based electronic information resources, the INDEST consortium is a national information infrastructure program that aims to increase the capacity of the information infrastructure in Indian academic institutions that offer professional education and research in the fields of engineering, technology, and management sciences. To give member universities access to full-text content, electronic journal publishers negotiate with the

INDEST consortium. Sixty government-aided engineering colleges and university technical departments receive funding from AICTE and a few other officially financed government agencies for their subscription to electronic resources. The Ministry of Human Resource Development (MHRD) provides the necessary funds for 37 core member institutions, including IISC, IITs, and IIMs, to subscribe to e-resources.

VI. DIGITAL LIBRARY OF INDIA (DLI):

The Digital Library of India (DLI), the biggest digital library project in South Asia, has grown throughout the country and established a network of 21 scanning centers, including four mega scanning centers that supply digital content to the DLI system. Dr. A.P.J. Abdul Kalam, the former Indian President, launched the gateway to the Digital Library of India on September 8, 2003. One of the scanning hubs for DLI projects is the Library of the Honorable President's House, where a large number of rare and expensive volumes are being digitized. Additionally, the former Indian President is actively involved and provides digital content for his own creations. Currently, three portals in Hyderabad, Noida, and Bangalore provide access to DLI. Numerous Indian language technology researchers use this program as a test bed for developing various systems, such as text-to-speech (TTS), summarization, machine translation, and optical character recognition (OCR). DLI also has a large collection of books in all of the major Indian languages, many of which are freely available to readers worldwide. These books were written before 1900. This initiative's bilingualism is a major factor in its success on a worldwide level. The primary DLI-implementing organization is the Indian Institute of Bangalore.

Under the guidance of the Ministry of Education (MoE), Government of India, the Indian Institute of Technology Kharagpur (IIT KGP) founded the National Digital Library of India (NDLI), a National Mission on Education through Information and Communication Technology (NMEICT) Project. With its single-window interface and educational resources, it provides access to digital archives for users in India and around the world, enabling e-learning and education for all. On June 19, 2018, the Honorable Minister of HRD, Prakash Javadekar, formally opened the National Digital Library of India, marking a significant turning point in the nation's education history. Offering a 24/7, integrated,

national digital knowledge base that facilitates immersive e-learning for all students, regardless of level, across all subject areas is the aim of NDLI's activities. This unique collection of individuals acts as the dynamic, motivated core of our engine, working tirelessly to fulfill the objective of democratizing education in order to enable a young India to realize its full potential.

Role of Digital Libraries in E-Learning:

Computer-based, online learning is referred to as "electronic learning." The concept of e-learning is that anyone can use the internet to study from anywhere on the globe. It also discusses education and learning in virtual environments. Technology facilitates this type of remote learning. Additionally, it can be utilized in tandem with "blended learning," which is instruction in a classroom. The role of e-learning in higher education is growing. As everyone is aware, the Gross Enrollment Ratio, or GER, is quite low in comparison to other countries worldwide. Online learning could be quite helpful for people who are unable to attend regular classroom settings. E-learning offers flexibility in terms of time, place, and person. Online learning is open to everyone, anytime, anywhere.

By merging technology and information resources, digital libraries provide remote access, doing away with the need for physical borders between resources. Digital libraries will give instructors and students access to a wider range of resources and facilitate their interaction with people outside of the traditional classroom, even if these resources are still customized to meet the needs of certain learning communities. More integration of the many learning modalities will be possible as a result.

Digital libraries may allow students and teachers of all stripes to share resources, time, energy, and knowledge for the good of all, even though not every professional will want to interact with beginners even occasionally or use information resources outside of their assigned curriculum.

Electronic journals:

Electronic journals are becoming more and more popular, but their penetration has not yet reached the level many had predicted. As electronic journals develop, they will surely improve both formal and informal learning, and they will likely

be useful tools in the K–12 sector, which has traditionally only maintained tiny journal collections in schools. Electronic journals are typically stored in one of two ways: (i) on a file server formatted in LaTeX, PostScript, or ASCII, with documents stored there and accessible via email or FTP ("generic approach"); (ii) on hypertext/hypermedia systems, with documents stored there and accessible via the internet ("hypertext approach").

Newsgroups, listservs and mail archives:

Global networks facilitated access to USENET newsgroups and listservs, and their archives may have been the first examples of digital libraries in networked environments. Archie and Veronica, news reading and filtering apps, are examples of search tools that offer minimal support for locating information in these online disputes. Listservs are used for specialty projects and distance learning courses (both the ESS and Perseus projects previously mentioned make use of listservs). Marchionini's cable television course students used a listserv to present "one-minute papers" at the end of each class period. This provided continuity between sessions and customized teacher-student interactions instead of just a remote phone connection during in-person sessions. Students in human-computer interaction graduate seminars taught by Christine Borgman at UCLA and Marchionini at the University of Maryland collaborated on term projects during a different semester using email and file transfer protocols. Students from the different schools contributed a variety of backgrounds to the classroom, which allowed the students to develop broader perspectives and constructive alliances. Instances of "techno-bullying" were also seen.

VII. DIGITAL LIBRARIES IN WEST BENGAL:

One of the most important tasks that college libraries carry out is the gathering and distribution of information for scholarly and research purposes. Apart from traditional libraries, digital libraries are also contributing significantly to the overall growth of university students by giving them access to resources and knowledge. Through a single interface, students can access a vast amount of material thanks to digital libraries. The capacity to access databases remotely may be the reason for their increasing appeal. We made an effort to determine the current status of digital library services in West Bengal colleges, taking into account all the advantages. Over fifteen undergraduate

institutions in West Bengal had their digital libraries thoroughly evaluated by the researcher. The researcher created and sent a survey to the principals and librarians of most of these colleges to obtain precise data. Information on the student's academic standing, the date of the college and library's founding, the number of students who attend classes every day, the frequency with which teachers visit, the number of books in the library, the number of periodicals that are subscribed to, and the automation of library services. Does the library have electronic resources available for use? How much demand is there for electronic resources? Is it more common to use electronic or conventional resources? Could you please tell me about the annual budget that is set aside for conventional and electronic resources? The level of training that library employees have received in handling digital resources.

Notwithstanding the age of the college or college library or the quantity of students enrolled, the overall findings show that the number of books and periodicals that the libraries subscribe to is nearly constant. The majority of libraries subscribe to seven or eight periodicals in addition to having an extensive collection of 13,000–18,000 volumes. The 'Enlist' service provided by INFLIBNET is used by libraries to access electronic resources. Most colleges allocate an annual budget of Rs. 70,000 to 80,000 for books and Rs. 5,900 for e-resources when it comes to funding books, periodicals, and e-resources. However, four principals have stated that funding for books and electronic resources is dependent on the state government's financial support. A principle reported that they spend approximately Rs. 3,000,000 a year on books. It was discovered that most college librarians who participated in the interviews understood library automation to be the process of digitizing the library. Overall, the author's responses to questions concerning the automation software show a mix of favorable and unfavorable opinions. Some libraries claim to automate their services with software like KOHA, while others claim to employ customized software that meets their unique requirements. While some librarians claim that fully automated services are now available, others claim that their library's computerized services are only partially automated. Regarding internet speed, the librarians' opinions were not all that similar. Some people said that the internet speed was good.

VIII. CONCLUSION:

Digital libraries are primarily influential because of their capacity to improve informal learning. Self-directed learners can profit from classroom instruction in the same ways that classroom learners can. In many ways, the development of freenets might be considered an expansion of the public library system. Digital libraries are virtual learning environments that offer organized materials for certain competencies and topics, as well as chances for wide-ranging investigation and informal, self-directed learning. In order to address concerns about coverage (because no learning system can incorporate all the information learners may require) and obsolescence (changes in systems and knowledge), the design community is currently investigating ways to support on-demand learning in electronic contexts.

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