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Importance of Digitization of Libraries: A Review

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Abstract
In recent years, India has experienced a proliferation of digital library development projects. Publish papers on digital libraries in India to obtain insight, evaluate, and comprehend the evolution, progress, and current position of digital library projects in India as reflected in academic publications. It turns out that, except for a few studies on copyright concerns and the management of digital libraries, the vast majority of papers are concerned with the creation of digital libraries and digital collections. Libraries are evolving into new forms as content shifts to digital media and internet connection becomes a need rather than a luxury in today's society. A new concept for the digital modernization of academic libraries has emerged as a result of these technological advancements, and it is soon to become ingrained in the routines of the underdeveloped world's working population. Several benefits and uses for academic digital libraries are also discussed. Learning and new abilities for professionals to deal with digital libraries are developed through the use of digital libraries, an innovative kind of technology.

Keywords: Technological advancements, digital libraries, Copyright

Introduction

Professional librarians continue to play a crucial role in modern libraries, helping them provide enhanced services to their patrons and so increasing the quality and quantity of research conducted. There has been a shift in how library services are provided and in the abilities required of professionals to perform everyday tasks as a result of technological advancements. These advances have allowed librarians to better collect, preserve, and serve patrons in need of reference materials. The worldwide recognition of the change from print to digital media has been widespread. You can find books, photos, movies, and other media in digital form in the digital library. A digital library not only stores information, but also facilitates its classification, search, and retrieval. The digital materials housed in a digital library can be accessed both on-site and remotely. The current situation calls for the establishment of digital libraries and institutional repositories (IR). Library patrons require historical records for study and reference. Academic libraries and their patrons have benefited from the rise of new technologies. Libraries and librarians now use digital resources as part of their regular operations Fabunmi, Paris, and Febunni, 2006. Anuradha P. 2009 [16] It allows for the growth of library activities, standards, communication facilities, and housekeeping operations to accommodate the increasing diversity of users' information requirements. A digital library is a newer sort of library that stores and provides access to content electronically. This type of library is dubbed "virtual" because its holdings can be accessed from anywhere at any time via a computer or mobile device. The terms "virtual library," "electronic library," "institutional repository," "library without walls," "digital library," and so on are all synonyms for the same thing: a library that exists entirely online. The term "Digital Library" has become the standard for referring to these collections. As a result, the concept of a digital library becomes more difficult to pin down. In 1999, the National Science Foundation (NSF) of the United States of America provided one of the better definitions of digital libraries, which was highlighted by Seadle and Greifeneder (2007) [17]. "Save materials in electronic format and effectively manipulate a big collection of such materials" is how the National Science Foundation describes a digital library. World Wide Web is what Cleveland (1998) [18] calls a digital library. He backed up his definition with the massive trove of searchable documents being amassed by the Web. Digital libraries, cyberspace, and IT are all crucial components of the

library of the future, as laid out by Layman (1977) [19]. To achieve comprehensive growth in this era of information-oriented globalisation, he cited the function of digital libraries as crucial. The primary goals of a digital library can be summarised as follows.

Simply said, digitization is the process of transforming content that was once created in one medium into digital form. But, digitally manufactured documents, such as email correspondence, are not included in this definition. To put it in technical terms, digitization is the process of transforming an analogue image into its equivalent numerical values. No matter if you're scanning a photo, a letter, or a document created in Microsoft Word, the digital scanner produces a replica of the original analogue object. The scanned image is converted to a digital format and stored numerically. In the process of converting a photograph into a digital format suitable for display on a computer screen, for instance, the original continuous tone image is discretely partitioned into dots with given values that are then mapped onto a grid. The computer can memorise the dot pattern and reconstruct it in your direction.

Objective

The study's overarching objective is to learn more about the merits and cons of digitising academic library materials so they can be more efficiently used to serve students.

1. To identifying the motivations behind digitising library collections at the institutions of higher education under consideration.
2. To study about the importance of digitising library.

Methodology

The conceptual & textual information related to the present study was collected from secondary sources of information such as looks, national & international journals research papers.

Literature Review

Digitization

Many forms of digital information are archived in the digital library. Paper documents are scanned and converted to digital files in a process known as "analogue to digital conversion" to digitise older collections. While doing a text conversion across languages, it's important to pay attention to the character sets used in each. Unicode is an international standard for representing text in all the world's languages. Using Unicode and other technologies, Chandrakar (2010) [20] talks about the options for localising content written in Indian languages. Though it is titled "Rethinking the Indian Digital Divide: The Present State of Digitization in Indian Management Libraries," Gaur's (2003) paper is more concerned with library automation than with digitization or digital libraries. Digital library activities by these libraries are barely mentioned in the report, and the study found them to be disappointing. The paper focuses on the current state of library automation in Indian management institutes. However, Murthy (2005) [22] discusses the real-world application of digitisation at the National TB Institute in Bangalore.

Digital Library

A digital library is a repository that stores many forms of digital content, such as research papers, reports, and newspapers, all in one convenient location. While not technically digital libraries, institutional repositories perform a similar function by archiving and making accessible the research and teaching materials produced by an organization's faculty and students. Digital libraries and institutional repository software were developed as part of the open-source software movement. The process of creating digital libraries has been sped up by software programmes like Greenstone Digital Library software and DSpace. Today, libraries are at the forefront of establishing institutional repositories that promote open access. A repository for the Indian Institute of Science (IISc), Bangalore, was the topic of discussion in Anuradha's (2009) [16] dissertation. Greenstone Digital Library (GSDL) software has been selected for establishing the IISc institutional repository, out of over 40 software packages for creating OAI-compliant (Open Archives Initiative) databases. Although there are many other papers on institutional repositories, only a few are mentioned here to emphasise that an institutional repository can be created by adhering to the tenets of digital library creation, including the use of digital library software, standardised metadata, and digital collections management.

Library of Digital Resources Content

Since more and more information can be found online, it stands to reason that a digital library would house content in a wide variety of digital file types and publish content from a wide range of online publishers. Apart from the underlying network infrastructure, IIT Delhi's Central Library houses several digital resources that together form a digital library. Electronic journals, in-house born-digital collections including theses and scanned books, CD-ROM databases, the online public access catalogue, and courseware are all examples. High initial infrastructure expenditures and a dearth of relevant experience and competence plagued India's digital library development's formative years. While digital library software, especially open-source software like DSpace and GSDL, might be expensive to implement initially, costs have been decreasing as skill and experience have increased over the years. In this case, it's important to know not only what's in digital libraries, but also where it came from. There aren't very many studies on this topic, however, there is one that focuses on finding content for developing countries and makes specific mention of India. The paper discusses the importance of digitization, the types of information that can be used to populate digital libraries and the methods for digitising them. Sreekumar and Sunitha (2005) [23] write another work on digital library content, in which they detail how they built a cutting-edge digital library information system by bringing together printed materials and widely dispersed digital materials from the Indian Institute of Management in Kozhikode. To facilitate this kind of uniform dissemination of scholarly knowledge, the study advocates for library automation, a library portal, a digital library, and an open-access archive for content aggregation and integration. This digital library was built using the Greenstone software. As a new trend in IT, content creation is discussed by Shukla (2007) [24], who also emphasises the necessity to build digital libraries rather than digital collections. Careful information that provides context and interpretation is essential for developing synergy, as emphasised by the author. The essay also makes some suggestions for future research and discusses some of the problems that arise when making content.

Provision of Electronic Library Resources

Library services are available. The library portal has been discussed by Letha (2006) [25] as a means of providing information services via the World Wide Web. An online

library is just one of the many services that can be accessed through the portal of the Technical Information Resource Centre (TIRC) of the National Physical and Oceanographic Laboratory (NPOL), which is highlighted below. Digital library services can be delivered through the library's website, as noted by Gupta *et al*. (2004) [26]. The development of digital resources at the Indian National Science Academy (INSA), New Delhi, is the subject of another case study (Munshi 2003). The article explains how libraries have responded to the rising demand for digital media by digitising materials, collecting CD-ROM-based data sets, and providing services for standalone or networked CD-ROMs environments. It goes on to describe the three resources available to patrons of the INSA library. Services provided by the digital library of the Indian Statistical Institute (ISI), Bangalore, are discussed by Krishnamurthy (2005b) [27]. The natural language processing tool "latent semantic indexing" makes information easier to find later. It evaluates the current state of home-grown digital library development by analysing the search functions of eight different digital libraries in India. Data from this study demonstrate substantial variation in digital libraries' information-retrieval capabilities as a result of the wide range of content organisation strategies and digital formats in use.

In their article "Data Mining and Certain Algorithms That Can Mine Frequent User Access Patterns of the Library Database," Arumugam, Thangaraj, and Shanthi (2005) [28] explain the basics of data mining and describe specific algorithms that can accomplish this task. While the article's title may imply otherwise, this research is not about digital libraries per se but rather is related to the circulation or transaction database of an automated library.

Technology

Libraries and information centres in India need a fully developed and state-of-the-art ICT infrastructure for the concept, development, diffusion, and use of digital libraries to become a reality. Build your digital library at no cost by using open-source software. In India, these freely shared packages are used for the vast majority of academic research. In India, special libraries have more resources and are more likely to participate in consortiums and digitization projects than general libraries and information centres (Gulati 2004) [29]. When compared to other library systems in India, the scientific and technology libraries enjoy a more favourable financial situation, making them better able to apply ICT. The digitization and networking of social scientific libraries in India are progressing, albeit slowly, according to a survey of 25 universities affiliated with the Indian Council of Social Science Research (ICSSR).

The legal rights of individuals, communities, and society as a whole are safeguarded by copyright legislation. Copyright enforcement is bolstered and aided by this. Especially in underdeveloped and under-developed nations, where software piracy is substantially higher than in the developed world, the copyright implications in the digital environment become immensely crucial as the number of digital libraries grows and their collections expand. Copyright's repercussions in the digital realm are examined. James (2005) [30] examines copyright in digital libraries, discussing concerns around digitization and Indian law. This article explains how the legal difficulties associated with digitization are sometimes overlooked because of the focus on technical ones.

Caretaking of Electronic Library Collections

It's crucial to maintain the digital library when it's been established. Gupta and Singh narrow in on the problems and solutions unique to the administration of digital libraries, including such topics as hardware management, software management, collection management, preservation/archiving, financial management, and the access system (2000) [34]. It takes careful preparation to create successful digital libraries. Digital library development planning is emphasised by Lakshmi and Suma (1998) [31]. This includes both IT infrastructure and finance planning. The importance of auditing and controlling digital library systems are discussed by Das and Dutta (2004) [32]. The authors determine the audit and control aspects that improve digital library performance. Towards the end of their article, Ravi, Chandra, and Sharma (1997) [33] discuss the future of digital libraries and the trends they predict in terms of efficiency and cost savings. The expertise of Information Workers There is a growing need to reevaluate the function of the traditional librarian in light of the proliferation of digital libraries. One of the first articles to examine this topic in detail, with a focus on the creation of the "digital librarian," was written by Sreenivasulu (2000) [34]. This paper outlines the many responsibilities of a digital librarian and covers the knowledge, abilities, and formal education and experience that this position requires.

The Gap between the Digital Generations

India is currently experiencing the "fits and starts" phase of digital library development. The development of digital libraries has been gradual, but the increasing interest from libraries and information centres in India suggests that this is expected to change. In the middle of all this progress, we must not lose sight of the digital divide that Singh has pointed out is beginning to form in India (2002) [13]. While this paper does talk about some digital library projects, it does so with the caveat that addressing the widespread "digital determinism" and "digital divide" would require a variety of approaches. To secure India's long-term prosperity, Parvathamma (2003) [35] explores the social and economic factors that must be taken into account to close the digital divide between India's rural and urban inhabitants. Reduced funding, costly one-time and ongoing costs, social and economic issues like illiteracy, population increase, poor health, inadequate resources for development programmes, and a lacklustre physical infrastructure all contribute to these difficulties. For many people in the country, these limitations will continue to limit their exposure to digital resources.

Financial literacy was examined by Kaul and Mathur (2017) [36]. The research uncovered challenges to India's efforts to increase the country's financial literacy and offered solutions for overcoming them. The effects of digitalization on a nation can be measured in three distinct ways: through its influence on the state, the economy, and the populace at large. As a result of digitization, the economy has expanded, new jobs have been generated, and innovations have been implemented across all industries. The government has emphasized digitization since it increases openness, improves management, and creates more and better jobs.

Khan, (2019) [37] The socioeconomic and ecological benefits of digitising information, as well as how ICT (Information and Communication Technologies) have changed every industry, are discussed. The effects of digitalization on the growth and development of India's services and MSME sectors were analysed by Maiti and Kayal (2017) [38]. After a slow start, the services industry has shown remarkable growth since the year 2000. The research found that the MSME segment and the service sector in India both have significant

room for expansion as a result of digitalization. With the help of digitalization, India's trade volume and share have both benefited from the rapid expansion of the country's services industry and the MSME segment. The Digital India initiative and the Indian economy were presented by Sheokand and Gupta (2004) [26]. The report also covered the program's pillars and the problems that have arisen as a result of trying to put it into action. The results indicated that a populace that is both digitally literate and empowered can significantly influence economic outcomes. Saving money, producing more, finding better jobs, being more productive at work, and learning more will all result from digitization.

Users of one digital library can send a request to another digital library user to utilise content being used by the second library user, and vice versa. Good speed and Khillalia (2019) have filed a patent for Amazon Technologies on this notion of sharing digital libraries. The selected reader's current page or section of a book can be read or seen together with their annotations, bookmarks, and highlights. Only a small fraction of the book (say, 5%) would be freely readable; anyone interested in reading the rest would have to buy a copy. Vrana (2017) looked into how widespread the use of digital libraries to support the e-learning paradigm already is. "e-learning is not possible without the learning material and very well supported by the digital libraries as an aid to e-learning," he said. Digital libraries make available to students, based on their requirements and needs, a wide variety of high-quality informational materials. Most nations now provide access to digital libraries, which provide countless education opportunities both formally and informally.

The Digital Library's Objective

Library services, like identification, processing, acquisition, retrieval, and dissemination to users, have been revolutionised by the rise of information technology. Users and industry experts alike have developed a "necessity intelligence" because of digital technologies. The information explosion, the searching problem in conventional libraries, the solution to the space problem, the reduction in the cost of technology, the improvement in the quality of information, and the saving of the users' time are all alleviated by the transition from paper works to electronic services. The basic goals of a digital library include the following. Usage of digital technology in libraries Interactions of library patrons with digital materials, electronic resources and services the future of academic libraries and academic librarianship the role of technology in academic libraries Professional library practice and patron relations

Digitization's Importance

One of the best things about digital information is that it is not fixed in the same way that texts are when they are written on paper. Since digital texts may be quickly edited without leaving any traces of erasures or alterations, they are neither final nor exhaustive and are fixed neither in substance nor in form unless when a paper copy is printed out. One of the greatest benefits of digital information is its adaptability, which is why we enjoy entering text into a word processor. Unlike with a typewriter, you won't have to put in any extra work to make several revisions, format changes, or commit them to print. That's why CAD software is so popular among graphic designers. To visualise, as opposed to conceiving, the appearance of various visual alternatives, it is simple to conjure up fast any number of variations in value, hue, and arrangement. In addition, digital files do not degrade as a result of being copied, so we can make as many copies as we like of the original.

Libraries and archives have never confronted such difficulties as those posed by collection development in the digital age. These range from being restricted by licencing agreements when acquiring serial publications to having a novel, less well-defined alternatives when it comes to servicing analogue things by digitising them and making them available online. To what extent can digitising physical collections help libraries meet users' needs for accessing materials whenever, whenever, and however they choose? Almost anyone who cares about learning and studying can attest to the great allure of electronic materials. Potential advantages of digital information include greater availability, adaptability, and analytical and manipulative power. It's not shocking that many people think all existing libraries, archives, museums, and other collections of books, manuscripts, pictures, and other media should (and will) be digitised. The reality is that developing and maintaining electronic resources takes time, money, and expertise. Furthermore, those designed for long-term application will almost definitely need periodic maintenance to keep up with advances in technology. By developing digital products, libraries must strike a balance between the infinite potential and the finite means available to them. Because of the necessity to make tough decisions, the process must be well-structured and the outcomes should be in line with the institution's beliefs and aims. Libraries and archives both have the potential to digitise their collections. Unpublished materials like letters or company records are common candidates for digitization in archives, but so are photographs, films, videos, advertising posters, train tickets, and manuscripts. While the following discussion may occasionally use the terms "library" and "archives" interchangeably depending on the source material being referred to, the primary focus of this paper is on the digitization of library items. When employed as a corporate librarian, I participated in research into competition intelligence and assisted in the development of a competitive intelligence system that used digitization as one of several data entry mechanisms. The potential of digitization has resulted in a rise in the technology's prominence. In the first place, digitization can facilitate the distribution of resources to a wider audience by making them available in digital form. By digitising resources and making them accessible online, users gain access to information and media they might not have had access to before. Second, the process of digitization entails more than simply the use of technology and software; it also involves strategic planning and the selection of information and physical objects.

Digitization's Benefits

Digitized imaging has certain distinct benefits. Images can be of high quality and often improved upon, and users can get the content they need from a distance. With the addition of full-text searching, cross-collection indexing, and a sleeker user interface, the material and content may reach a wider audience. A further benefit is the adaptability of digital content. Data is easily reformatted, edited, and reprinted because it is not "fixed" like paper or written text. The greatest appeal of digital conversion initiatives may be the opportunity to make previously inaccessible materials from rare or special collections (which could previously be viewed only on-site) available to a wide audience. The internet has been a valuable resource for people all around the world. Facilitating remote access, in particular, makes it simpler to

study literature and history. Access to digital copies of primary sources by a larger audience is a fantastic service and boosts the collection's usefulness (de Stefano, p.13). There is no need for anyone to incur any transportation expenses, and this communication could lead to the development of novel insights. By making sources available, libraries can "publicise" their holdings to colleagues and establish the material's relevance. The research library's "crown jewels" might be on display in the sections of the special collection. Museums and archives have rethought their intended audience in light of recent shifts in public and private funding, the ease with which images may be reproduced, and the prevalence of digital media. Electronic media, particularly the World Wide Web, are the modern means of disseminating information to the general education market. Due to digitization projects' extended data recovery, new areas of research are now conceivable using materials that were previously inaccessible due to their analogue nature. With the use of Optical Character Recognition (OCR), analysis can go deeper. But, organisations must understand that digital assets are distinct from analogue objects and require their methods of management, preservation, and migration.

Staff members who take part in digitization projects have the opportunity to advance their careers by learning new techniques and expanding their horizons in the process. As "assets," a school and its employees may provide their knowledge and experience to rival establishments. There is little doubt that digitalization has "added value" to the resource, but it also has the potential to give fresh life to stale establishments. Making use of a digital surrogate can help preserve an original by reducing the amount of time it spends being handled.

Discussion

Indian digital library literature has been left out of previous review studies. The evolution of digital libraries in India had a hesitant start in the mid-1990s but has gained steam since the turn of the century. Some digital library initiatives have emerged from the libraries of science and technology institutions. This may be because science and technology libraries typically have more time and money to devote to digitization projects. The S&T libraries have always been at the forefront of library automation efforts. Although India has a sizable network of public libraries, we've discovered that they're woefully behind the times when it comes to digitization efforts. The construction of digital libraries in general, and in public libraries in India specifically, needs to be accelerated. The development of digital libraries is currently attracting a lot of attention. Past research has shown that the phrase "digital libraries" can have a variety of interpretations depending on the target audience (e.g., students, government, institutions, publishers, librarians, etc.). Findings from the current research show that the term "digital libraries" can mean a variety of different things, even within the LIS community, including but not limited to: digitization; access to consortia resources; the establishment of institutional repositories; automated library services; and library websites. Therefore, it is incorrect to use the phrase "digital libraries" to refer to any information and communication technology (ICT)-based activity or resource found in the library. Creators of digital libraries should be well-versed in all the various facets of digital library administration. This is currently lacking in many situations. It is crucial to provide library and information workers with training in digital library construction and management so that digital libraries can be produced with the proper context, essence, and methodology. While there are pre-conference tutorials at digital library conferences in India and a few institutes have been providing training on digital library and institutional repository software, our research did not find a report or study on any training programmes. Now that digitization projects around the country are gaining steam, it's time to establish uniform national guidelines for the development and administration of digital libraries. Yet, this crucial aspect of digital library policy in India has not been the subject of any reports. Studies should be done to map out standardisation needs, investigate interoperability and copyright concerns, and sketch out document classification schemes, all to assist policymakers. India, after Africa, is the second most culturally, linguistically, and genetically diverse region in the world. There are a total of 122 languages spoken in India, with 22 of those recognised under the Eighth Schedule of the Indian Constitution. Even though India has a wealth of non-English information resources, it appears that most digital library efforts are currently focused on English language materials. It is crucial to broaden digital library efforts to incorporate Indian language materials, necessitating the creation of technology to easily incorporate these new resources into current digital libraries or the creation of new digital libraries in multiple languages.

The university's digital library began as a repository for its records. Theses, dissertations, project reports, yearly reports, book chapters, research articles, and old question papers (all related to JUIT) can all be found there at the moment. Around 10,000 documents are stored there, many of which are referenced frequently. During the past few years, the university library has been actively contributing to India's National Digital Library (NDL) by uploading more than 1,500 essential papers for public use on the web. The interface of the digital library is quite friendly to users. Easily search for and browse available documents without ever leaving the homepage.

Conclusion

To sum up, technology is an integral aspect of any educational institution, and its influence and effects are particularly felt in libraries. Digital libraries help users save time and get them the information they need when they need it. This shows why careful planning is required before launching a digital library. We currently classify digital libraries as a subset of traditional libraries, but in the future, conventional libraries will be classified as a subset of digital libraries. Such digital libraries provide further support for services that end users want. The moment has come for libraries to go where their patrons are, rather than waiting for them to come to them. One of the primary goals of a digital library in any educational institution is the unrestricted sharing of knowledge. Librarians have a responsibility to inform patrons about digital resources and how to access them. When it comes to digital libraries, India has a lot going on.

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