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Digital Library Services: A Comprehensive Review of Usage, Benefits, Challenges, And Future Trends

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Abstract

The introduction of digital libraries in the modern world has become extremely important as it is an integral part of the information systems. The purpose of this review paper is to examine digital library services through reviewing their concept, application, benefits, challenges, and future prospects. The paper demonstrates the main features and roles of digital libraries by focusing on a number of aspects. It discusses what benefits people get from using digital libraries as a source for obtaining information. Digital libraries offer various kinds of electronic information resources that include e-books, e-journals, databases, institutional repositories, multimedia, and educational materials. The study shows how digital libraries can contribute to the development of education because they help people teach and learn more efficiently. Moreover, the paper identifies a number of factors and issues that should be taken into account when dealing with digital libraries. These include issues of intellectual property rights, perspectives of users, infrastructure and technology, policy and law, and information services. Although digital libraries possess many positive characteristics, they still pose a number of challenges. They include the lack of technological skills among users, poor internet connectivity, intellectual property rights issues, lack of funding, resource management difficulties, and others.

Keywords: Digital Libraries, Information Services, Academic Libraries, Digital Resources, Information and Communication Technology (ICT)

1. Introduction

This word "Digital Library" could mean different things based on the situation and the person being talked about. Kids can use their own computers to get to a lot of different digital tools in our Digital Library. Some of these tools are books, libraries, games, and teaching materials. Several types of teaching aids are offered, such as books and other items. You can view archives on the internet. These archives might store things like information from Geographic Information Systems (GIS) and computer-aided design (CAD), as well as satellite photos and video shows. A computer library is an example of something that might fit into this group for someone who works in space study. When a business owner uses the digital library, they can get to a huge amount of information that helps with the application. This information is important because it includes important details like data about huge market deals, stocks and offers, spending amounts, and other important details. It is not hard at all to understand what is being said. A "digital library" is a group of digital resources that can be used and shared by a network or a group of people over the internet. Some people get more out of this than they would from going to a regular library. When people use a dynamic library, words are used in many ways, such as to give hints about activities that are not directly related to each other. Information extraction, knowledge processing, knowledge gathering, visual and audible sorting, online software stores, computer archives, mobile archives, picture files, digital backup, digital text, eBooks, publishing collections, electronic journals, and many more are some of these things.

There are also a huge number of different ways to use words. These problems were solved by computer scientists, engineers, researchers, and other experts in the field who worked on digital libraries. Digital libraries' main goals are to give people access to digital content and make it easy to find again. A answer to these problems called digital libraries was made possible by the work of other pros in the field. We will talk about the hard work of library and information workers who work on the ground level in the next line. These are the people who work in digital libraries on the collecting, connection, and management sides.

The Stanford Digital Library does research on all kinds of digital libraries. The following groups could be made out of these digital libraries: "Bundle defined" is what they mean when they say "such as planned gathering of services." They define it as "such as planned gathering of services that depend on collections of materials, such of which that can never be legitimately influenced by the affiliation giving assistance in which they play a role." According to E.A., a digital library is a "better approach to completing the elements of libraries" that includes "new types of data assets, new ways to handle characterization and listing, serious use of electronic frameworks and systems, and breathtaking changes in scholarly, authoritative, and electronic practices." This is what the 1994 IEEE GALA Workshop on Intelligence Access to Online Digital Libraries said: "A digital library is a collection of digital registering, storage, and exchange hardware along with the content and programming needed to copy, imitate, and extend the services provided by traditional libraries that use paper and other material methods for collecting, categorizing, finding, and sharing information." One definition of a conventional library is one that collects, organises, locates, and distributes information via the use of paper and other physical instruments. In addition to having all of the same components as a conventional library, a full-service digital library also makes use of the many advantages that come with the storing of digital documents, doing research, and communicating with users.

2. Intellectual Property Rights

Images, data, text, and other material are all subject to intellectual property rights within the framework of digital libraries, as they would be in any other setting. To guarantee the library's continuation, expansion, and improvement, administrators of digital libraries must attend to practical concerns like intellectual property rights in addition to the library's foundational design and the development of user services. A great deal of uncertainty surrounds IP rights in the modern digital age. Further complicating matters is the fact that the business motive, the concept of fair use, and the growth of the global economy have all coalesced to create these problems. There are a lot of regulatory and legal hurdles to jump when we move our information resources to a digital infrastructure. Copyright management, data authenticity, document integrity, user privacy, payment processing, security encryption, and individual privacy are all aspects that fall under this category.

Some have said that the situation's immense complexity makes any amount of little changes useless in resolving it. The 'what' and 'who' limitations of virtual libraries can only be overcome by using physical libraries, which are bound by their own unique set of location-based restrictions. Issues with authentication are one of the related ones. In the context of a digital library, authentication refers to the policies and procedures put in place to control who may access what materials. Realistically, digital libraries are springing up in the lack of a preexisting legislative and regulatory framework, building their collections on top of solid research and against the backdrop of market and economic speculation. Libraries represent many more qualities outside the satisfaction of limited information seeking behavior.

3. User's Views on the Digital Library

The World Wide Web has already provided academics and researchers with a plethora of opportunities to share the results of their studies. The electronic exchange of scientific output is seeing remarkable expansion in the usage of centralized and/or decentralised databases. Visiting the library for hours on end to peruse stacks of books and periodicals is something most of us have long since left the past behind. The one-on-one conversations that library patrons used to enjoy with knowledgeable workers who knew their interests are no more. This is now superfluous since we can just utilize our search profiles to get constant alerts on any new articles that pertain to our research. Digital libraries are more than simply electronic versions of physical ones; this should be kept in mind. Searching is now easier and faster than ever before, and the amount of accessible databases, both full text and bibliographic, has grown significantly.

However, for most consumers, the library is no longer their first or even second choice for finding information. Use it in combination with the plethora of resources that have emerged on the information superhighway. Finding a way to categorize all of these different resources is the biggest obstacle for the user. Despite the library information system's ease of use and plenty of helpful features, it falls short of his or her actual requirements. The real requirement for the user is intelligent assistance in using this combination of local and remote information resources.

4. Odde's Digital Books and Media Services

The Digital Library Reference Model, developed by the DELOS Network of Excellence on Digital Libraries, provides a framework for collaborative learning models such as open education and other post-distance education approaches. The development and use of such models are both facilitated by this model. As learning objects embedded in open educational delivery platforms and as competent educational infrastructure in and of themselves, digital libraries facilitate collaboration in these types of learning in two ways. There is still a big gap between the community of individuals engaged in distant education and the digital library teams working at the organizational level, even if these routes for collaboration do exist. For this reason, ODDE, open, remote, and online learning, and digital libraries all need different models for their integration.

Examining the opportunities presented by the Digital Library Reference paradigm for the creation of a cooperative paradigm for the consolidation of digital libraries is the goal of this chapter. The model provides the framework needed to build an educational digital library

with all of its components. The parts that make this up are detailed below:

1. The appropriate regulations that will direct the expansion of the online library
2. A description of users of digital libraries, along with the rights and duties that they fall under
3. Because of the characteristics of the digital collections and services
4. assembling a digital library and ensuring its accessibility via the procurement of suitable information and communication technology resources

One of the most useful frameworks for building and implementing digital libraries is the Digital Library Reference Model. Helping practitioners in many fields, including the digital humanities, is its stated goal. The model's dual purpose is to simplify the theoretical foundation and to make it easier to create and implement complicated systems. The reference model includes "a minimal set of unifying concepts, axioms, and relationships within a particular problem domain." In addition, it does not depend on any specific features, standards, technologies, or implementations. The DELOS Network of Excellence on Digital Libraries put out the Model, which is part of the Digital Library Manifesto, with the hope that it can close the gap between the existing theoretical frameworks. ongoing, it will perhaps provide a "common basis for communication within the digital library community, and to help focus further advancement."

The Digital Library Model was chosen for this chapter because of its comprehensive nature and emphasis on practical application. Other models, like the 5S framework developed by Fox, Gonçalves, and Shen (2012) [1] and Soergel's Framework for Digital Library Research, were also considered relevant in the process of developing educational digital libraries. For example, digital libraries can only be useful and long-lasting if they facilitate professional activities like medical and teacher training, enable innovative approaches to intellectual work, and promote collaboration amongst groups of professionals. He categorises these ideas into eleven broad topics and stresses the need of researchers tackling each of these issues in their work on digital libraries. For the advancement of digital libraries, Soergel's Model stands as an all-encompassing study viewpoint. However, it was decided that the Digital Library Reference Model, a basic practice-oriented structure, would work far better for this guide.

5. Background of Digital Library Reference Model

The Model (Figure 1) describes the digital library as a three-tier construction where each tier reflects three distinct ideas which are prevalent in the digital library world. The most important part is the digital library management system (DLMS). This is a broad piece of software which offers the basic functionality required by the particular digital library. The system is sometimes a proprietary or commercial product (or mix of components). The second level is the digital library system or DLS. This system is responsible for upgrading the digital library management system by supplying it with the specific features and/or configuration that the digital library needs. The third and final tier is the digital library (DL) consisting of the organization (institution) in charge of collecting, maintaining and providing access to digital material.

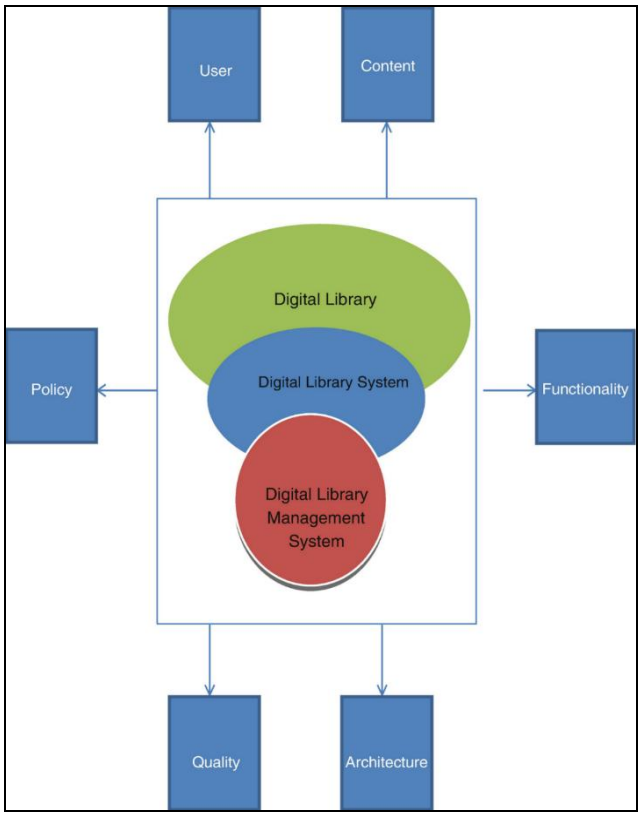

Fig 1: A three-tiered structure consisting of six different DL ideas called DL, DLS, and DLMS

6. The Composition of The Digital Library System

A digital library system's architecture is based on six pillars: the user, the content, the policy, the functionality, the architecture, and the quality. The authors claim that digital library efficiency is affected by each of these notions. In what follows, we'll go into more depth on these topics, but they're essential to any digital library.

User

Join in the fun things happening in the virtual library. Any number of human or artificial agents could be involved. Information producers, consumers, and librarians make up end-users. Designers use this knowledge to define, customize, and maintain the digital library so it can function for current and future users. Administrators, based on end-user expectations, decide what software is needed to build the library. Finally, application developers create the software that ensures digital libraries are deployed appropriately. Librarians, educational administrators, students in distance learning programs, and instructors all use ODDE. Every one of these user groups is significant in the field of online education and might benefit from digital library services by working together more effectively to improve classroom instruction. The idea of the user is just as relevant to their rights as these actors are to their investigations into the digital library. The provision of remote access to digital collections is one of the rights that users are entitled to when they utilize the digital library via ODDE. By enacting user laws that are advantageous to

distant learners, this right may be safeguarded. Additionally, user profiles, whether individual or collective, may be shown. Viewed through the lens of the digital divide, the characteristics of distant learners may be deduced from their proficiency with relevant technologies, information literacy, and technical skills. To meet the dynamic information needs of ODDE students, it is crucial to grasp their information skills and information and communication technology (ICT) in depth. To effectively use digital resources in the classroom, this is a must-have. To ensure the knowledge, skills, and positive attitudes existing in digital libraries and towards them, advocated for the adoption of appropriate user regulations and rights and conscious teaching strategies that are favorable to remote education.

Policies

Included in these components are the regulations, policies, and statutes that control the digital library and its patrons. One way to regulate the usage and evolution of digital libraries is via content standards, access restrictions, and preservation policies, among other kinds of regulations. Digital library administrators, managers, and stakeholders are all personally responsible for formulating policies. According to Gallagher, McMenemy, and Poulter (2015) [2], public digital library users should be informed on what is and isn't appropriate behavior while using the library's services. Acceptable user behavior, digital rights management, privacy and secrecy, user charges, and collection delivery are all part of the rules. Institutional strategy plans of ODDE institutions and their libraries are the source of policies. Thus, this chapter argues that policies are necessary parts of every good strategy plan. Developing long-term strategies to provide library services to distant students is strongly encouraged by the ACRL Standards (2008) [3]. Iterative approaches including reviewing, updating, and refining are necessary for this task. A digital library or other library service that allows for remote study must also have its goals and objectives outlined in the library's mission statement, which must be in sync with the institution's mission statement.

Functionality

A number of services, collectively known as functionality, are made available to users of the digital library. According to research by Candela *et al*. (2007) [4], the three most popular services are search, browsing, and registering new information items. According to Anunobi and Ezeani (2011) [5], these services aid in collection management, provide replication and reliable storage, facilitate the creation and execution of queries, and aid in the resolution and geographical placement of names. The distinctive needs of the community that uses the digital library and the unique requirements of the information resources it contains must influence the way the digital library operates. Students participating in distance education programs place a premium on having access to discovery technologies that facilitate seamless use of remote knowledge sources. Once again, providing distant learners with a wide range of digital reference services-including informational, instructional, and user-is crucial to improving their access to and use of digital materials and services. The discoverability, interoperability, and usability of digital content, resources, and services may be greatly enhanced by implementing open access models of digital library resources. This will also help digital libraries run more smoothly.

Quality

This concept serves as the foundation for assessing the digital library's content and user behavior, as stated by Anunobi & Ezeani (2011) [5]. The concept of quality is defined by Candela *et al*. (2007) [4] as a set of attributes that may be used to evaluate not just the overall content but also the specific details of connected resources. Both qualitative and quantitative methods may be used to evaluate the quality of a digital library, as stated by Soergel (2002) [6]. While quantitative methods may be used to evaluate objective measurements, qualitative ones are more suited to assessing subjective factors. On the other hand, evaluation of digital library services has been lacking, according to some writers (e.g., Saracevic (2000)) [7]. The complexity of digital libraries, insufficient understanding of their nature, developers' lack of interest in having their services evaluated, and insufficient funding for evaluation efforts are all contributing factors to this shortfall.

Despite the fact that these studies have examined digital libraries from the perspective of the user, they have all returned positive reviews. In the last ten years, things have gotten better. Alzahrani, Mahmud, Ramayah, Alfarraj, and Alalwan (2019) [8] examined the key success factors that lead to digital library success using the information system success model proposed by DeLone and McLean (2003) [9]. As previously said, the digital library's quality is comprised of two parts: the system quality and the information quality. Their study indicated that the system quality characteristics were associated with how "user-friendly" a digital library was and how well it responded to and assisted users without generating any problems. Conversely, how valuable a user thinks a digital library is what ultimately decides the information quality.

7. Other Actors in The Digital Library Universe

In addition to the previously discussed essential principles, this section delves into the roles of four main characters inside the digital library's world. These individuals interact with the three-tier architecture and the fundamental ideas in various ways. This group includes those who utilize digital libraries, those who make such libraries, those who run the systems that houses digital libraries, and those who develop the apps that users use.

1. Customers of digital libraries are those who really utilise the library's resources, such as its content and the tools it provides, to access, read, and organise that information. In its whole, the digital library meets the practical requirements of its patrons. Also included in the category of digital library end-users are librarians, content consumers, and content providers.
2. The people responsible for organizing and starting the digital library are known as digital library designers from an application standpoint. Using their knowledge of the application's semantic domain, they create, customize, and oversee the digital library to make sure it satisfies the informational and functional needs of its users. To do this, they communicate with the DLMS and provide content and functionality configuration

choices.

3. To contrast, the physical aspects of a successful digital library implementation are the responsibility of the administrators of the system that manages the digital library. They decide where and how to install the digital library system and which software components are required. The necessary digital library will be serviced by this system. They interact with the digital library management system by providing architectural configuration parameters including software components, hosting nodes, and component allocation.
4. Digital library application developers are the brains behind the software that makes digital libraries possible. To carry out their duties, they write the code for the digital library system and the digital library management system.

8. Making Strategic Decisions About Digital Libraries

Having rules and procedures in place to ensure the long-term viability of a digital library's services and resources is crucial to the project's success. Documents including action statements, strategic plans, and policy papers that have been supported must be included in the digital library's plans and policies. Financial, societal, and moral considerations of long-term viability should all figure into digital library strategic planning. From an economic perspective, it is essential to have consistent financing and a viable business model for recouping expenditures. Steps towards this objective might include doing regular business planning, identifying user requirements and delivering satisfying services, and taking responsibility for one's actions. If a digital library does not have a long-term strategy and financing policy in place, it can limit its functionality and creativity. Like other members of the academic community, ODDE stakeholders face many financial obstacles when trying to get high-quality information for their research. Subscription access's hefty price tag and the electronic information realm's unsustainable modes of information distribution are two of these issues. "Pay to read" and "pay to download" are becoming more commonplace, with library materials being housed behind paywalls. In contrast to the open access model, which allows everyone to read published works online for free, this one has writers footing the bill for publishing costs. It's also called the subscription access model.

A major barrier to the ODDE community's access to library resources, especially in the Global South, is the paywall model, so-called since it is impossible to view an article because of the existence of a "wall," which means the membership costs. Library consortia and other collaborative information-sharing initiatives may help ODDE libraries in these developing regions overcome this challenge. the idea of shared digital library resources in ODDE as being similar to strategies used by large commercial publishers, who engaged in mergers and acquisitions to solidify their "oligopolistic" economic advantages via resource consolidation. Following this line of reasoning, ODDE institutions and their planners may gain by forming library consortia as a means to acquire licensed digital content and take use of the shared experiences of each participating institution. One of the many advantages consortia agreements provide, according to Sachin (2018) [10], is that they ensure a greater number of users' information needs are met. The technological abilities of the staff members in charge of the digital library's launch and ongoing maintenance are also met.

9. Information Services and Digital Collections

Considering the needs of users in relation to the content is crucial for those developing digital libraries. Primary objects, annotations, and metadata are the "managed information" components that comprise content, according to Candela *et al*. (2007) [4]. Items that are not copyright protected, collections, maps, schematic data, or computer-generated images are what they're claiming them to be. Teddy and Large classify digital library resources according to the following: full-text materials, metadata sources, multimedia materials, and general websites. Many experts believe that online library services are essential for meeting the information needs of distant learners because of the remote help they give. Assignments, dissertations, and tutorial class supplements are just a few examples of the many ways in which distance learners rely on digital material from a wide range of sources.

For ODDE to work, people need to be able to access digital resources so they can make use of the data housed in digital libraries. There has never been a more critical moment to provide access to research programs than in the twenty-first century. "Open access" means just what it sounds like: making research results available to everybody, at any time. The European Research Council is one of several international organizations calling for instantaneous access to research findings within their respective jurisdictions in this era of lightning-fast Internet and computer infrastructure in light of pressing global, regional, and national crises and emergencies like the COVID-19 Pandemic and terrorism. Open access publishing has gained more traction as a result of these and other global efforts to disseminate knowledge.

There are three main types of open access publications. Open access comes in three varieties: gold, hybrid, and green. To a certain degree, article publication costs, government funding or grants, or private organization contributions cover the expense of publications in gold and hybrid publishing. Librarians in the Global South may not be able to support Gold and Hybrid journal publishers on a big scale because to the disproportionately high costs that authors in the South face. However, many libraries and businesses in poor countries prioritize eco-friendly practices, which exemplifies modern ideas of sustainability. Using repositories to publish academic papers is a crucial aspect of the green approach, sometimes called Green Open Access. Because of this, academic libraries that have gone digital are putting their limited funds into creating institutional and subject repositories that encourage ecologically conscious publishing. The licensing regimes that enable discovery, interoperability, and sharing in ODDE have an impact on the design of these repositories, which in turn promote collaboration and resource sharing.

10. Technological Infrastructure and Skills Development

The technical infrastructure ensures the successful integration of the digital library's services and resources into the hardware and software components. The correct

technical infrastructure and resources make digital libraries' infrastructure a guarantee that users will have access to content that is relevant to their requirements. They also include programs, protocols, software, and hardware that work together to ensure data can be accessed without interruption. Because of its complex nature, technology enables the networking and interoperability of a wide range of information technologies and tools. In this chapter, we will focus on the most important aspects of implementing digital library services for distance education. These include the following: the ability of different information systems to work together (the smooth delivery of distributed information services), the right software to handle digital library services, and the overall infrastructure of information and communications technology (ICT). Open educational resources (OERs) and massive open online courses (MOOCs) in open distance learning environments (ODDE) are impacted by the significant barrier that is caused by inconsistent Internet connectivity and computer infrastructure.

Also, distant learners could miss out on the digital library's potential if they lack the right mix of knowledge and technological abilities. Many topics have been brought up in regards to technological and informational abilities, including the following: the amount of prior computer experience, the various kinds of computer skills, the accessibility of training programs, the various approaches to training, the overall impression of ICT proficiency, and the difficulties in making use of digital libraries. The viewpoint of the ODDE community is often taken into account while discussing these matters.

11. THE Impact of Digital Technologies on Academic Libraries: Challenges and Opportunities

The new trend in the current era is digital libraries, institutional repositories, and open archives. These three types of libraries are able to fulfil the requirements of users for accurate information. This is due to the fact that users have become more information conscious when it comes to accessing electronic information, in comparison to other purposes such as academic or research requirements. As stated by Yadav AK, Kumar S (2023) [11], the digitisation of libraries has become an integral element of the job that librarians do, and the majority of libraries are now participating in digitisation initiatives. The academic libraries of India have been impacted by the development of digital technology, which has led to an overall improvement in the libraries. The management of user services, communication facilities, housekeeping operations, standardisation, and the growth of library activities are all managed via the use of digital technology in academic libraries. Academic libraries have a responsibility to provide the ever-increasing and ever-changing information requirements of its end-user visitors.

Because libraries have entered the digital age, it has become necessary to computerise the majority of the processes that take place there. Traditional librarians now do their jobs differently as a result of technological advancements. Librarians in today's world make use of many technologies in order to collect, categorise, preserve, disseminate, and offer reference services, among other things. This does not imply that conventional libraries will cease to exist from this point forward. In addition to providing assistance for digital libraries, traditional libraries will continue to exist as buildings for a considerable amount of time. Consequently, conventional libraries and digital libraries coexist in the same space. Given this, it is clear that librarians play a key role in libraries, and they will continue to do so in the future. It is essential for librarians to maintain a healthy equilibrium between their conventional duty and the one they play in the digital world.

Academic Libraries in the Age of Digital Devices: A new function in the dissemination of knowledge has been assigned to academic libraries in the 21st century. Because of the transition from analogue to digital, libraries are no longer only collections of books; the overall atmosphere of libraries has also changed. Through the use of computerised library catalogues (On-line Public Access Catalogue - OPAC), library automation systems have enabled libraries to facilitate the provision of convenient access to their holdings. This has, more recently, resulted in the establishment of digital libraries (IFLA in 2013).

12. Benefits of Using social media in Libraries

Communication, outreach, and community participation are just a few of the many benefits that libraries get when they integrate social media into their services. Some of the most important advantages that literary institutions may get from using social media are as follows. Social media platforms provide instantaneous two-way communication between libraries and their patrons, greatly improving the quality of service they provide. Announcements, updates, and other important information may be broadcasted in a timely and efficient manner. By using social media, libraries may ensure that users get timely updates, announcements, and critical information, thereby maintaining up-to-date communication. Information is updated in real-time to achieve this.

Social media systems allow users to engage in community events, ask questions, and post comments by connecting libraries and users directly. The term "two-way communication" describes a conversation that may go either way. The use of social media allows libraries to reach a wider audience that isn't limited by their physical locations, which increases their visibility and outreach. By advertising their events, resources, and services online, libraries may reach a wider audience and bring in new patrons. Libraries may actively participate in the communities in which they are located by using social media platforms for communication and engagement. Through activities like replying to comments and concerns and organizing question-and-answer sessions, libraries have the opportunity to create meaningful relationships and foster a feeling of community. Promotion of Library Resource Utilization social media is a great tool for libraries looking to promote their collections, databases, and other services. Libraries may use social media platforms like Instagram and Pinterest to create visually appealing displays of books, resources, and educational materials. Consequently, patrons are more likely to peruse the library's holdings, leading to a mutually beneficial outcome.

Up-to-the-minute information and advertising of events: Libraries may use social media to keep patrons up-to-date on upcoming programs, seminars, and events in real-time.

Since they are given information in real-time, clients are kept informed in a timely manner. More people may participate electronically in library activities via live streaming on social media sites like Instagram and Facebook. Because of this, the library is able to welcome more patrons. Through the use of social media platforms, libraries may engage in user-centric services, which include actively listening to the thoughts and preferences of its patrons. It is possible for libraries to run polls, surveys, and collect comments from patrons in order to better tailor their services to their needs and interests. Libraries should think about doing these things for this reason. Distributable Instructional Materials Are Available. Libraries may utilize social media to provide educational materials like how-to videos, research methods, and tutorials. As a result, the library's instructional value is enhanced, and it is also set up to become an important lifelong learning resource. Reason being, these two elements are complementary to one another.

13. Conclusion

This study set out to answer several important questions about how today's college students, teachers, and researchers perceive, access, use, and benefit from digital library services. According to the research, digital libraries play a significant role in providing academics and researchers with information resources in a quick, accessible, and comfortable method. This study's findings reveal that most users are familiar with digital libraries and make frequent use of electronic resources for research and education, including electronic books, journals, databases, and institutional repositories. Users may save time and effort by using digital library services, which allow them to access information anywhere, at any time. According to the study, digital tools help students learn on their own, improve research quality, and increase their academic production. Digital library service at universities improves pedagogy, student achievement, and academic inquiry, according to the study. People were pleased by the accessibility and helpfulness of the internet. Users are encouraged to develop their technical abilities and information literacy in the digital library setting. These skills are essential for thriving in today's information culture. Additionally, the survey uncovered a few problems that customers had while trying to utilize digital library services. Challenges that some respondents encountered included a sluggish internet connection, a lack of technical abilities, limited access to new resources, and an inadequate understanding of the digital tools and services that were accessible. These problems hinder the efficient use of digital library resources. Accordingly, schools' digital infrastructure, Internet access, and technological support systems must undergo constant development.

14. References

1. Fox E, Gonçalves MA, Shen R. Theoretical foundations for digital libraries: The 5S (societies, scenarios, spaces, structures, streams) approach. Morgan & Claypool Publishers; 2012 Sep 1.
2. Gallagher C, McMenemy D, Poulter A. Management of acceptable use of computing facilities in the public library: avoiding a panoptic gaze?. Journal of Documentation. 2015;71(3):572-590.
3. Owusu-Ansah CM, Rodrigues AD. Digital information and library services in ODDE: Towards a collaborative digital library model. InHandbook of open, distance and digital education 2023 Jan 1 (pp. 819-839). Singapore: Springer Nature Singapore.
4. Candela L, Fabregat S, Josa A, Suriol J, Vigués N, Mas J. Assessment of soil and groundwater impacts by treated urban wastewater reuse. A case study: Application in a golf course (Girona, Spain). Science of the total environment. 2007;374(1):26-35.
5. Anunobi CV, Ezeani MI. Digital library deployment in a university: Challenges and prospects. Library Hi Tech. 2011;29(2):373-386.
6. Wühl E, Witte K, Soergel M, Mehls O, Schaefer F, German Working Group on Pediatric Hypertension. Distribution of 24-h ambulatory blood pressure in children: normalized reference values and role of body dimensions. Journal of hypertension. 2002;20(10):1995-2007.
7. Jansen BJ, Spink A, Saracevic T. Real life, real users, and real needs: a study and analysis of user queries on the web. Information processing & management. 2000;36(2):207-227.
8. Alzahrani AI, Mahmud I, Ramayah T, Alfarraj O, Alalwan N. Modelling digital library success using the DeLone and McLean information system success model. Journal of librarianship and information science. 2019;51(2):291-306.
9. DeLone WH, McLean ER. The DeLone and McLean model of information systems success: a ten-year update. Journal of management information systems. 2003;19(4):9-30.
10. Mandave P, Bobade H, Patil S. Jackfruit seed flour: Processing technologies and applications. International Journal of Agricultural Engineering. 2018;11:149-154
11. Yadav AK, Kumar S. Libraries in the Age of Digital Technology: The Challenges and Opportunities of Digitization. Journal of Library and Information Communication Technology (JLICT). 2023;12(2).