

Challenges in Managing Digital Library

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Abstract

Multimedia products and services have grown significantly in the digital age, necessitating their management and distribution in a wide range of forms. This essay primarily explores digital libraries from a management standpoint. Although managing digital collections in this electronic environment presents numerous difficulties for librarians—such as managing rights, bandwidth, and data preservation—opportunities are larger for them. These sorts of libraries are managed for various reasons, which are also highlighted. The management of digital library requires the expertise and experience of a library professional, without which it would be impossible. Moreover, modern information experts to express their special position in society. And because of various possible positive and negative aspects, urgent attention needs to be paid to maintaining digital libraries.

Keywords: Digital library management, librarian, digital technologies, digital age, digital library

INTRODUCTION

The modern technology has changed the style of library services and professional skills to accomplish everyday work conveniently. These technologies are now being used by the library professionals to collect, store, and provide reference services. Globally, the transition from print mode to electronic mode or digital material has been well-recognized. An online database of text materials, photos & pictures, audio media, video media, and other types of related documents in digital media types is known as a “digital library.” Digital libraries also enable for organizing, finding, and retrieving the content in addition to storage [1].

The digital content in a digital library can be kept and accessed remotely and locally via computer networks. The current situation calls for institutional repositories, archives, and digital libraries. The users of libraries require the saved information for academic and research purposes. The academic libraries and users have benefited from the development of new technology. The everyday activity of libraries and library professionals now includes digitalization. To meet the expanding range of information needs, it provides expansion of different types of library related activities, standards, communication facilities for longer storage, and housekeeping operations in the clouds [2].

A contemporary form of information retrieval system is a digital library. Since the collections are preserved in digital formats and are accessible from anywhere at any time via computers or mobile devices, it is referred to as virtual [3]. The terms “virtual library,” “electronic library,” “institutional repository,” “library without walls,” “digital library,” and so on, are all used to describe these aspects of libraries. The term “digital library” is the most appropriate and widely used to describe these libraries. It further complicates the notion of a digital library. One of the better definitions of a

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digital library provided by the National Science Foundation, The United States, in 1999 was highlighted by Seadle and Greifeneder [4]. Digital libraries, according to National Science Foundation, “keep materials in electronic format and successfully manage enormous collections of those contents.”

DIGITAL LIBRARIES

Many supporters of digital libraries have offered many different definitions over time, and new ones keep coming out every day. In order to successfully federate digital libraries, the partner institutions of the Digital Library Federation, understood during the course of establishing their program that they needed a shared definition of digital libraries. As a result, they created the definition below, aware that it might change as they collaborated. “Digital libraries are section or subsection of organizations that provide the digital resources, in addition to the specialized staff, structure, offer intellectual access to, distribute, and ensure the persistence over time of collections of digital works” [5]. Digital libraries are “controlled collections of information with related services, where the content is kept in digital formats and accessible across a network.”

Earlier, the digital library, was described by Isah et al. [6], as “a library/information space, located in either a physical or virtual space, or a combination of both, in which a significant proportion of the resources available to users of that service exist only in digital form” [7].



Figure 1. Scheme of digital library.

Source: <https://www.istockphoto.com/photo/laptop-with-online-library-realistic-3d-rendering-gm1218656325-356180856>

The identification, processing, procurement, retrieval, and transmission of library services to users have all changed as a result of information technology. Figure 1 Both users and experts have developed a sense of necessity thanks to digital technology. It has information explosion, a solution to the space issue, drops the market price of technology, in a number of ways improves the worth of information [1, 8].

Digital Library Management

A user-based library service, the digital library completely connects consumers to the knowledge they require electronically, independent of the source. In many ways, managing a digital library is different from managing a conventional library. “The fundamental ideas of customer focused management are not radically modified, but factors like distance from customers, specific product/service delivery mechanisms, technology, and structure must be designed and handled differently” [1]. Cost recovery, copyright difficulties, and training are the three main challenges that librarians face when managing digital library services. In the digital age, librarians must decide whether to raise financing or charge users in order to finance the ongoing costs of the technologies required to operate the digital library [2, 5].

No copied content may be added to a digital library while copyright issues are resolved. The management of digital library is laborious and needs time and money. These problems cannot be

avoided, and managers must reconsider their use of conventional management techniques. Managers need new tools and a new technology to properly manage a digital library and address these issues as well as others [6].

CHALLENGES FOR LIBRARIANS

Any institution that wants to establish its own digital library is needed skilled and experienced staff. They are also technically competent in using digital tools and handling digital data. It can be difficult for knowledgeable employees to keep the library up to date and execute new initiatives in a digital library [9]. The difficulty for a library professional is to continuously update their own knowledge and skill set in order to function in the quickly evolving digital environment of today [3].

To manage digital information and give users immediate access, the digital library needs financial support. Professionals most frequently struggle with funding for digital libraries because without necessary funding they are unable to effectively manage, transfer, and share information in the modern world [4].

Users must employ retrieval mechanisms to access available information from the digital libraries. Although it is very simple for the management of text files, but may require further investigation in the case of photos, sounds, and videos. In any scenario, the user must receive the information that was retrieved. Additionally, a preservation system of some kind must be present in a digital library. In that case, a method for guaranteeing that whatever may be available today is still available tomorrow is required.

The compliance with copyright and intellectual property rights concerns is a significant administrative task. To develop a system that is profitable to users, publishers, and authors, library professionals must have a meaningful discussion with publishers about this issue. For each access, server download, and type of digital library collection, users may incur fees [7].

A true digital library must have both an ordered collection of online digitized materials and the ability to make those materials available to as many authorized users as possible. Distribution goes beyond onsite access to include providing access to authorized subscribers of the subscribing organization from anywhere in the world.

It is now possible to configure a server to distribute information with or without appropriate management thanks to server-side software. For their offerings, the majority of online digital content vendors support password authentication. Regardless of the user's log-in location, a subscribing institution can authenticate users from its server and then pass them through to the vendors by using CGI scripting/proxy servers. Digital libraries are multimedia items that demand a lot of bandwidth, such as text files, audio, different types of graphics, photographs, and video clipping types of files. Nations in development, such as India. Additionally, as more users utilize the network to send data, the volume of network traffic will increase [10].

If it comprises a full-text multimedia document, the size transfer only makes the situation worse. While images and graphics take up more space than plain text does, video and sound files are extremely space-hungry and require a lot more space transmission time. Maintaining access to this information is a significant difficulty because e-resources make it easier for information to be created, modified, distributed, and located. Digital material will become inaccessible if preservation efforts are not made because of shifting technology platforms and unstable media [3, 6].

OPPORTUNITIES OF DIGITAL LIBRARY

Despite the difficulties that librarians face in the digital era, their prospects are larger. Today's consumers have access to a variety of media for information access, allowing them to type a command into their desktop computer to access various databases dispersed throughout the world. The user should

have faster and more accessible access to information through modern digital libraries. the development of magnetic data storage systems, which allowed for the compact and computer-readable storage of enormous amounts of data. the creation of techniques for bulk data transmission across a telecommunications network that is fast and has a very low error rate. Some of the opportunities in digital library management have been mentioned here [8].

Digital information storage enables instant access to items that are in high demand and often used. Along with new searching tools and support, there is improved intellectual control. Links are offered for bibliographical resources. By making it possible to improve digital images in terms of their size, clarity, color and combination of colors, contrast ratio, sound management, and text quantity and image manipulation may be done more effectively. Digital resources are simple to copy as these are available online [10].

The new opportunity allows for the preservation of fragile/precious originals while providing substitutes in more approachable formats. By providing the necessary number of reading materials, the potential for integration into instructional materials is offered. Deliveries are made with less difficulty or expense. By making better resources available in the form of widely dispersed original collections, usage is encouraged. Virtual reunification enables the gathering of disparate collections or items that are connected to one another, even if they are separated over numerous sites. A single information resource can be used simultaneously by multiple users. This can provide timely access [3, 10].

With the applications of digital libraries physical storage can be reduced. having the ability to support and create multimedia and programs information resources, allowing for the simultaneous integration of various media. There cannot be any page mutilation from excessive use or any other cause. Through the Internet or Intranet, there is a growing usage of library resources and Web-based resources, making it simple to instantaneously receive or transmit information from as well as to any location on the Internet. supports the sharing of resources between libraries by enabling quick and easy access to materials stored remotely. It is possible to maintain an electronic archive or history of the materials that have already been accessed. By pooling their resources and paying a little fee, numerous libraries may be able to gain access to bibliographical information, online abstracts, full-text e-journals, and even online e-books [5].

CONCLUSION

With the development of new technology, libraries are going digital instead of print. The management of a library's digital collection should provide for quick access to content in a variety of formats. Professionals have a wide range of opportunities and problems thanks to digital libraries. These are the concerns that are extremely important in the digital age. Although there are advantages to digital libraries, we must also deal with some challenging problems including copyright and funding. The management of the library should be aware of the intellectual property used to create the digital collection.

REFERENCES

1. Powell A. Management models and measurement in the virtual library. *Spec Libr.* 1994; 85 (4): 260–263.
2. Anuradha P. The impact of digital technologies on academic libraries: challenges and opportunities, *IP. Ind J Library Sci & Information Tech.* 2017; 2 (2): 46–50.
3. Fabunmi BA, Paris M, Febunni M. Digitization of library resources: challenges and implications for policy and planning. *Int J Afr Afr Am Stud.* 2006; 5 (2): 23–36.
4. Seadle M, Greifeneder E. Defining a digital library. *Libr Hi Tech.* 2007; 25 (2): 169–173. doi: 10.1108/07378830710754938.
5. Chowdhury GG, Chowdhury S. *Introduction to digital libraries.* London, England: Facet Publishing; 2003.

6. Isah A, Mutshewa A, Serema BC, Kenosi L. Digital libraries: analysis of Delos reference model and 5S theory. *J Inf Sci Theor Pract*. 2013; 1 (4): 38–47. doi: 10.1633/JISTaP.2013.1.4.3.
7. Baldonado M, Chang CK, Gravano L, Paepcke A. The Stanford digital library metadata architecture. *Int J Digit Libr*. 1997; 1 (2): 108–121. doi: 10.1007/s007990050008.
8. Robinson JD. The dogs bark and the circus move on. *The Bottom line*. 2015; 28 (1/2): 11–14.
9. Smith DA, Crane G. Disambiguating geographic names in a historical digital library. In: *Proceedings of the Research and Advanced Technology for Digital Libraries, 5th European Conference*; Sep 4–9 2001; Darmstadt, Germany: ECDL; 2001. Available at <https://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=DA4680D5621B71E3FD89BD162E53F3B9?doi=10.1.1.7.8475&rep=rep1&type=pdf> [Accessed on June 2023]
10. Koehler AEC. Some thoughts on the meaning of open access for university library technical services. *Ser Rev*. 2006; 32 (1): 17–21. doi: 10.1080/00987913.2006.10765020.