Library transformation: Entering the new normal

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Abstract

Purpose: The main objective of this study is to examine the importance of digital libraries during the COVID-19 pandemic in dissemination of information services, to know the users' perspectives towards its success and also examines the challenges faced by the libraries during this pandemic and also about how the librarians cope up with the challenges and function in the new normal situation.

Methodology: An online Pan-India survey was conducted among library professionals and user communities. By using survey instrument, Google Form, a total of 12 questions were asked from general to specific towards use of digital libraries during pandemic period. Total 250 responses were received. The responses received were categorized, analyzed and presented in this paper. The research data were primarily collected from blogs, social media and online survey which were carried out among various library professionals to know their perspective towards digital libraries, new skill requirement and current challenges faced by the libraries in the new normal imposed on us due to COVID-19 pandemic.

Findings: This study reveals that the library professionals are eager to learn online technologies for developing and delivering information services. It also identifies that to remain connected and to spread knowledge, large numbers of online webinars are conducted in library fields. The major challenges the librarians faced during COVID-19 are physical distancing from workplace, fear of disease contraction, Lack of high speed internet connection, low response of users in social media platforms etc.

Originality/ value: This is an original study conducted in India which gives an overview on the transformation of libraries by using digital library services to meet the need of the users during COVID-19.

Keywords: Library transformation, COVID-19, pandemic, digital library, social media.

1. Introduction

Advancement of technology, information explosion and modernization has had great impact on every sector of the society including educational institutions, industries, research, and development etc. Knowledge and services generated thereof have never been so valuable like now. Library and Information sector has always travelled extra miles to provide online and user-centric services to users. The concept of Digital Library (DL) came into existence in mid-1990s with the rapid development of Information and Communication Technology (ICT). This change resulted in an urge to fulfill information needs quickly and easily.

COVID-19 has affected day to day life severely in all spheres including knowledge-based organizations. Libraries around the world are facing tough time around, with fewer users' footfalls and limited/restricted services. It has become a challenge for libraries to decide which services to offer and how to offer. Clearly, any decision to restrict services or to make a library function in a restrictive manner is a difficult one and needs to be taken with all the regulations imposed and possible precautions. At this point of time when COVID-19 imposed a barrier on getting and providing services in physical form, digital library has played a crucial role by providing the services and e-resources to the users remotely. During this pandemic, the functioning of a traditional library became limited to storage of physical collections (not used by users) and providing limited e-services in a restricted manner. The traditional libraries were struggling for survival, whereas digital library emerged with the elimination of time and space constraints of traditional libraries. This paper was based on the analysis carried out on the feedback received from the librarians and users.

2. 'Libraries' changing form conventional to digital: need of the hour

From centuries, conventional libraries have functioned in a limited manner. Their main focus has been on collecting, storing, organizing and disseminating physical information resources. Long time back, the library was meant to be a social institution oriented towards collection and custody of books limiting its use. As time changed, the technological revolution has given birth to a new era by changing the way of working as well as to find, use, create and share information. Potential user demands have constantly grown to the new heights demanding information digitally and in more compatible way; as a result, there has been a great competition to meet user demands.

• No doubt, digital library has met today's requirement substantially, allowing the users to access information at their doorsteps. Extension of these library services and the shift from traditional to digital is not only a gift of technological evolution but was required to overcome time and space constraints. Some of the major features of digital library include: Access anywhere anytime: There is no physical boundary to access the information, users can avail services form anywhere through remote access round the clock.

- Multiple user access: Multiple users can access the same information document at a same time.
- Information Retrieval: Latest Information communication tools used in Digital library offers a robust information search system. By entering search term user can search through entire collection.
- Delivery of services: Powered by modern information and communication technology, access to online resources and databases, DLs help us to design, develop, promote and deliver user services much faster, accurate and exhaustive way.
- Besides these, preservation and conservation of collections, lack space some other benefits of Digital Library system.

Digital Library brings us an electronic interface which provides a gateway to explore, acquire and investigate new facts in a specific field or subject which are disseminated in digital form. These E-resources are stored in multimedia repositories and are made available through Interned-based services in real time. Eventually research on digital library flourished and has evolved with the time. In this digital era, Library and information centers are using different tools and software for providing services to the users in the most systematic and quick manner which is ultimately a major goal of a library. In most of the advanced Indian libraries, concept of hybrid libraries has emerged, where physical and electronic resources co-exist, help users to experience traditional and modern features of libraries. Further, space, budget and man-powers are also well utilized in hybrid libraries.

But at the same time in order to provide value added timely services professional competencies of librarians, handholding users, user empowerment and understanding innovative technical services have become very crucial during pandemic hit time.

3. Impact of COVID-19 pandemic on library and information centers and their functioning

COVID-19 has affected nearly on all the sectors of the society. Libraries have also been affected significantly. Situations have arisen when libraries are functioning partially. In some cases, libraries have closed down completely. Library and Information centers being social institution have been prone to the risk of infection of its users particularly where larger numbers of students are using resources. Libraries from all over the globe are finding it very difficult to function properly and effectively; still they are trying their best to minimize the impact on users. Some of the measures which have been taken up by the libraries are:

- Limiting the footfall of users
- Providing the existing services online and introducing new ones according to the suitability of remote users.

- Following strict COVID-19 guidelines such as wearing mask, maintaining social distancing and proper sanitization while entering the library.
- Organizing online webinars related to COVID-19 and spreading information among the users.

Clearly, conventional libraries have been overtaken by hybrid/digital libraries during this pandemic. Electronic services and digitization of information products have proven as a boon to this sector in recent times.

4. Objective of the study

The main objective of this study is to examine the importance and functioning of digital libraries during the COVID-19 pandemic in dissemination of information services and to know the users' perspectives towards its success. Secondly, this study also examines the challenges faced by the libraries during this pandemic and also about how the librarians cope up with the challenges and function in the new normal situation.

5. Literature review

Some of the important studies to justify the importance of digital functioning of libraries have been carried out in the following section.

5.1 Role of digital libraries in information services

Tremendous advancement in technological developments is taking place in the field of ICT, so the user demand to change according to change in technology, to meet the demand of users and the library were shifting from traditional libraries to digital libraries, electronic libraries, and virtual libraries (Halder, 2021). Ilahi (2019) discussed that the implementation of a digital library can be very useful for researcher/students to get the desired information quickly and dynamically. He also mentioned that the implementation of the digital library can be beneficial to the public in obtaining information fast and preserving the literature which can be optimally used in long future. In this context, Kunjam & Chawda (2020) concluded that there will be a constant expansion of digital library activities and services. He also mentioned that digital libraries provide a useful medium to distribute learning resources to students and other users in real time.

Lyman (2017) mentioned that most libraries all over the world are moving towards the "digital" mode. The libraries have started adopting latest technologies to cater to the information need of users in digital form and in real time. Devi (2019) mentioned that National Digital Libraries of India (NDLI) is good initiatives to improve the condition of digital libraries in India and overcome the various barriers like communication, region, language, money which is main obstacle in education. Ekere et al. (2016) mentioned that user perspectives towards a digital library are very positive and in general users were highly satisfied with digital library services. Paterson & Low (2011) found that digital library has an important role in education and students also find mobile based library services very useful

and easy to use. Helena et al. (2011) discussed quality assessment of services provided by digital libraries as it is useful to identify user satisfaction and expectations. Trivedi (2010) mentioned the technological changes can improve the resources of a digital library and librarians are well aware to adapt these technological changes to effectively run a library. On the other hand, Mao & Wang (2009) cautioned that a potential information center/digital library could provide large number of services but can also decrease its value due to eroding service quality.

5.2 Role of digital libraries during COVID-19 pandemic

In 2020, the International Federation of Library Associations and Institutions (IFLA) created a dedicated webpage to throw light on all the related and required information for smooth functioning of library for the library community during this pandemic. Rafiq et al. (2021) studied to explore the university libraries' response during the COVID-19 pandemic and determine their working practices, services patterns, strategies applied, and role played. Chakraborty & Jana (2021) discussed on how COVID-19 posed several challenges in smooth functioning of academic libraries in India. They also mentioned that this pandemic can be good opportunity for the libraries and information centers to transform digitally, which can benefit them in future. Many initiatives were adopted by the digital libraries in providing information during the COVID-19 pandemic, and enumerated that digital library and digital law library played vital role in taking charge of legal communication in a crisis situation like COVID-19 (Peruginelli et al., 2021). Also, Mehta & Wang (2020) studied during the pandemic ways followed and challenges faced by the university libraries in implementing digital library services to the researchers, faculty and students.

In this pandemic situation, libraries have been the gateways of relevant information and knowledge for conducting research and development on the related subject areas. Gmiterek (2021) highlighted how Polish university libraries developed social networking services during the COVID-19 pandemic in spring term lockdown. The Library and Information services started to gain importance by providing researchers the opportunity to explore scientific research (Asif & Singh, 2020). The role of university librarians in COVID-19 emergency included raising awareness through public health education, providing support to medical staff, researchers and providing ongoing traditional services to regular library patrons (Ali & Gatiti, 2020). Robertson (2016) discussed the possible impact of a pandemic on libraries. He mentioned that nobody is aware that when a pandemic can break out and libraries must be well prepared to tackle these kind of pandemic. It is necessary to consider the effects of a pandemic on library operation. Electronic resources could play a vital role in keeping libraries function efficiently.

6. Methodology

An online Pan-India survey was conducted among library professionals and user communities to know their perspectives towards digital library services offered and the challenges faced by the libraries in providing various services. The universe of the present study was majorly the library professionals from India using survey instrument, Google Form. A total of 12 questions were asked from general to specific towards use of digital libraries during pandemic period.

Around 1,200 library professionals from public, academic, special libraries were reached through e-mail and social media groups, out of which about 250 responses were received. The responses received were categorized, analyzed and presented in this paper. The research data were primarily collected from blogs, social media and online survey which were carried out among various library professionals to know their perspective towards digital libraries, new skill requirement and current challenges faced by the libraries in the new normal imposed on us due to COVID-19 pandemic.

The responses were collected through Google Form and analyzed to find nature of challenges faced by Indian librarians. It was found that the response rate was around 20.83%. Majority of the responses received were from academic libraries (70%) and 30% from public and special libraries. Due to pandemic induced lockdown, broadly this study used online survey method for the investigation among library professionals and community to analyze value of library services provided in COVID-19 time.

7. Data analysis

The survey data were analyzed for understanding the impact of digital library services during pandemic period in India with the help of tables and graphs.

COVID-19 struck all of a sudden and caught everybody unaware since libraries were asked to close abruptly. However, education, research, academic discussions and many other white collar jobs were performed from home. These activities required adequate library support for users to achieve their goals. Some libraries, which have over the years developed online and electronic collections, had efficient and competent manpower and required infrastructure, were quick to streamline the process, however, processes were not that easy for the rest. In the meantime, COVID-19 fear and disease gripped up the entire country, causing people to stay indoors. Librarians could not attend office infrastructure physically to meet the demand. Figure 1 measures the extent of issues librarians faced for physical distancing from workplace, inadequate level of core competency in handling library databases, remote access and other online infrastructures. While fear of contraction of COVID-19 kept both librarians and users at bay, most of the librarians faced huge challenges to make users aware on any new library service or document.

The study revealed that over 70% of the librarians faced problems due to remote working, 63% opined developing user awareness was an issue, however they largely felt infrastructure in libraries (33%) and staff core competency (28%) were mostly adequate. It was indeed, online infrastructure and handling such situation using online mode were the major constraints.

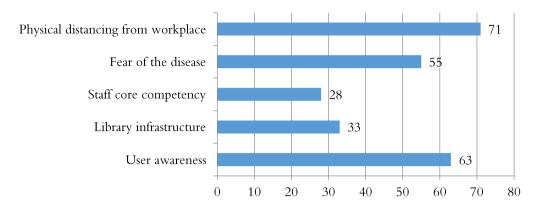


Figure 1: Challenges faced by the libraries while delivering library services during COVID-

According to 75% of the libraries, 'low response of users' is a challenge in providing library services through social media during lockdown. 'Lack of high speed internet connection' has been pointed out as the challenge faced by 25% of the libraries.

The responses pointed out that while library infrastructure remain a perennial issue for delivering library services, competency of library staffs has become major problem in the new normal where staffs required to be digital savvy. Proper training of staffs is clearly the need of the hour.

Library and technology development always go hand-in-hand, however, once absorbed in a work environment, majority of the library professionals never felt necessity to undergo trainings. The pandemic has helped librarians in soul searching towards their learning need. It was revealed in this survey that librarians felt learning new and innovative technologies were a requirement in present days.

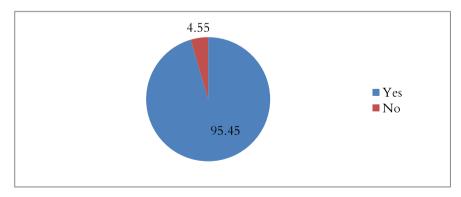


Figure 2: Willingness of library staffs to learn how to develop and deliver modern library services, innovation and handholding

According to Figure 2, more than 95% professionals are eager to learn new innovative technology, services and felt they need handholding to cater such services. This indeed a positive sign, however, hardly libraries hardly libraries have developed clear action plan to train staff members to learn new innovative services. We feel if libraries of all stages, modern to basic, urgently need to develop action plan for staff development and bring it to the notice of relevant authorities for appropriate actions.

It was never easy to understand learning requirement when there are so many subjects to learn. We have asked the respondents to get familiarize with the present-days and must-learn ITeS technologies to work in a new normal condition. Figure 3 highlighted that while all librarians want to learn how to develop DLs, 78% of the respondent feel step-by-step learning on how to develop and deliver innovative services are a requirement for them. Moreover, majority of the respondents want to learn skills in leadership development, knowledge management and project management.

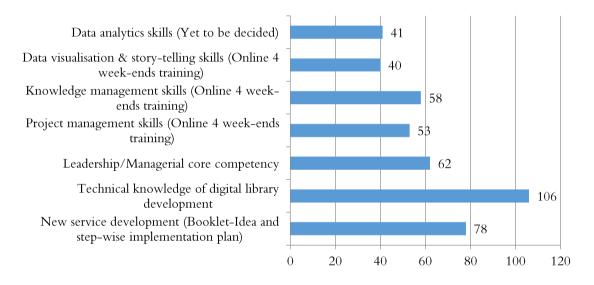


Figure 3: What trainings are required to deliver modern library services?

Almost every professional nowadays is keen to learn new skills and gain new knowledge in order to expand their expertise in the field. Many advanced skills such as data analytics, data visualization, knowledge management, project management etc. are slowly gaining importance among the library professionals. The survey clearly exemplifies the notion.

Technical knowledge of digital library development is the need of the hour according to the most of the professionals surveyed. People also felt steps to follow to develop new value added services is also a must learn activities. This is because in this crucial time professionals are facing challenges in proving their worth before the users. As the user queries have become complex these days, new DL driven services will help libraries to remain relevant and useful.

Pandemic situation has compelled every organization to maintain social distancing and provide services remotely, wherever possible. To connect each other and to spread knowledge, online webinars were conducted in every sectors and library sector is also not far other field behind. Many professionals utilized this opportunity to learn advanced skills, gather knowledge and also learn organizational skills during this period.

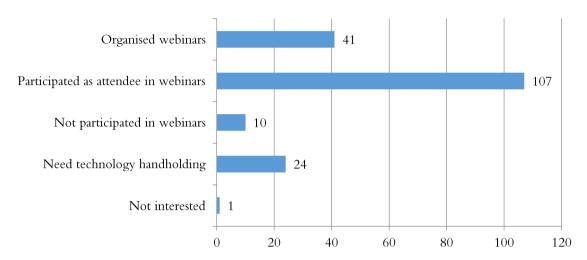


Figure 4: Engagement in webinars during the last few months

According to the survey, majority of the professionals agreed on participating in the webinars. While only a fraction of professionals remain dissociated from the webinars these days, most of the professionals have attended these sessions. However, not many of them are willing to organize these webinars (Figure 5). Many professionals agreed on lacking technical knowledge, infrastructure and lack of manpower support were deterrent to conduct and organize webinars.

Figure 5 clearly shows that there is a need to extend technical assistance to many professionals in order to give them technical expertise for organizing webinars. Library associations like SIRs (Society for Information Research and Studies), ILA (Indian Library Association) etc. have conducted a few webinars in partnership with many libraries, which actually supported these organizations handholding, many such events need to be conducted in coming months for community benefits. Many of the professionals have shown their interest to tie up with association to organize webinars on basic to advanced subjects depending on the nature of participants and requirements.

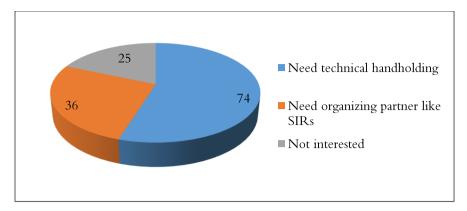


Figure 5: Reason for not organizing the webinars

8. Findings and analysis of the study

Below are the findings of the study extracted from the Pan-India survey which was conducted among library professionals and user communities to know their perspectives towards digital library services. The major findings of the study are:

- According to most of the library professionals, physical distancing from workplace is the major challenge faced by libraries.
- Some professionals under the study found fear of disease contraction as major challenge faced during the pandemic lockdown period.
- Lack of high speed internet connection and low response of users in social media platforms (eg. WhatsApp, LinkedIn) was a challenge towards user awareness and delivering library services.
- Library professionals are eager to learn online technologies for developing and delivering information services, however, require handholding from experts.
- While all librarians want to learn how to develop DLs, majority of the respondents feel step-by-step learning on how to develop and deliver innovative services are a requirement for them.
- During the pandemic, to remain connected and to spread knowledge, large numbers of online webinars are conducted in library fields. While all of our respondents have attended many of these webinars for knowledge enhancement, they require handholding on how to conduct webinars.

9. Conclusion

The responses pointed out that while library infrastructure remain a perennial issue for delivering library services, competency of library staffs has become major problem in the new normal where staffs required to be digital savvy. Proper training of staffs is clearly the need of the hour. During the COVID-19 pandemic, the working of a traditional library

became limited to storage of physical collections (not used by users) and providing limited e-services in a restricted manner. The traditional libraries were struggling for survival, whereas, digital library emerged with the elimination of time and space constraints of traditional libraries.

References

- 1. Ali, M. Y., & Gatiti, P. (2020). The COVID-19 (Coronavirus) pandemic: Reflections on the roles of librarians and information professionals. *Health Information & Libraries Journal*, 37(2), 158-162. doi:10.1111/hir.12307
- 2. Asif, M., & Singh, K. K (2020). Trends, opportunities and scope of libraries during COVID-19 pandemic. *IP Indian Journal of Library Science and Information Technology*, 5(1), 24–27. doi:10.18231/j.ijlsit.2020.005
- 3. Chakraborty, S., & Jana, S. (2021). Challenges and opportunities of academic libraries in India because of COVID-19. *Annals of Library and Information Studies*, 68(2), 110-118. Retrieved from op.niscair.res.in/index.php/ALIS/article/view/39571/465479204
- 4. Devi, M. (2019). National digital library of India: A case study. 2nd National Conference on Development of Digital Libraries in IPR regime, Lucknow. Retrieved from https://www.researchgate.net/publication/339474442_National_Digital_Library_of_India.
- 5. Ekere, J. N., Obiora, O. C. & Chidinma, N. M. (2016). Users' perception of the facilities, resources and services of the MTN digital library at the University of Nigeria, Nsukka. *Library Philosophy and Practice*, 1, 1-23. Retrieved from http://digitalcommons.unl.edu/libphilprac/1390
- 6. Gmiterek, G. (2021). Polish university libraries social networking services during the COVID-19 pandemic spring term lockdown. *The Journal of Academic Librarianship*, 47(3). doi:10.1016/j.acalib.2021.102331
- 7. Halder, D. (2021). A transitional shift from traditional library to digital library. In Research anthology on collaboration, digital services, and resource management for the sustainability of libraries (pp. 453-461). IGI Global.
- 8. Helena Vinagre, M., Gaspar Pinto, L., & Ochôa, P. (2011). Revisiting digital libraries quality: A multiple-item scale approach. *Performance Measurement and Metrics*, 12(3), 214–236. doi:10.1108/14678041111196677
- 9. Ilahi, R., Widiaty, I., Wahyudin, D., & Abdullah, A. G. (2019). Digital library as learning resources. *Journal of Physics: Conference Series*, 1402(7). doi:10.1088/1742-6596/1402/7/077044
- 10. International Federation of Library Associations and Institutions. (2020, October 13). COVID-19 and the global library field. Retrieved November 8, 2021, from https://www.ifla.org/covid-19-and-the-global-library-field/Halder, D. (2021). A transitional shift from traditional library to digital library. In Information Resources Management Association (Ed.), Research anthology on collaboration, digital services, and resource management for the sustainability of libraries, 453-461. doi:10.4018/978-1-7998-8051-6.ch026
- 11. Kunjam, B. K., & Chawda, R. K. (2020). Digital library. *International Journal of Engineering Research*, 9(8). doi:10.17577/IJERTV9IS080313

- 12. Lyman, P. (2017). What is a digital library? Technology, intellectual property, and the public interest. In S. R. Graubard & P. LeClerc (Eds.), *Books, Bricks and Bytes* (pp. 1-34). New York: Routledge.
- 13. Mao, Y. & Wang, J. (2009). What is a good digital library in undeveloped regions. *In 2009 IEEE International Symposium on IT in Medicine & Education*, (pp. 332–336). doi: 10.1109/ITIME.2009.5236403.
- 14. Mehta, D., & Wang, X. (2020). COVID-19 and digital library services a case study of a university library. *Digital Library Perspectives*, 36(4), 351–363. doi:10.1108/DLP-05-2020-0030
- 15. Paterson, L., & Low, B. (2011). Student attitudes towards mobile library services for smartphones. Library Hi Tech, 29(3), 412-423. doi:10.1108/07378831111174387
- 16. Peruginelli, G., Conti, S., & Fioravanti, C. (2021). COVID-19 and digital library services: an overview on legal information. *Digital Library Perspectives*, ahead-of-print (ahead-of-print).
- 17. Rafiq, M., Batool, S. H., Ali, A. F., & Ullah, M. (2021). University libraries response to COVID-19 pandemic: A developing country perspective. *The Journal of Academic Librarianship*, 47(1). doi:10.1016/j.acalib.2020.102280
- 18. Robertson, G. (2016). Pandemic perspective: how an outbreak could affect libraries. In G. Robertson (Ed.), *Library Security and Disaster Planning* (pp. 141–144). Waltham: Chandos Publishing.
- 19. Trivedi, M. (2010). Digital libraries: Functionality, usability, and accessibility. *E-Journal of Library Philosophy and Practice*, 381. Retrieved from https://digitalcommons.unl.edu/libphilprac/381

Further reading

- 1. Anderson, R., Fisher, K., & Walker, J. (2021). Library consultations and a global pandemic: An analysis of consultation difficulty during COVID-19 across multiple factors. *The Journal of Academic Librarianship*, 47(1). doi:10.1016/j.acalib.2020.102273
- 2. Mageto, T. (2021). Design and development of e-library system: COVID-19 pandemic challenges. *Journal of Computer Sciences and Applications*, 9(1), 1-15. doi:10.12691/jcsa-9-1-1

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