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Impact of COVID-19 on Academic Libraries: A Case Study

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Abstract

This paper aims to find the impact of COVID-19 on Manipal Academy of Higher Education (MAHE) libraries and the measures taken to overcome the challenges in accessing the information during the COVID-19 situation and render services to the users. A structured questionnaire was prepared and distributed to ten libraries of MAHE at Manipal, India campus. The study revealed that the COVID-19 pandemic has a significant impact on the usage of resources and services provided by MAHE libraries. The libraries were kept open, but the working hours of the libraries have been reduced during the COVID-19 pandemic. The study found that the majority of the libraries have seen a significant decrease in the use of physical resources and an increase in the usage of digital resources. The majority of the respondents agreed that online assistance to projects and research had been provided. The analysis reveals that limiting the number of users into the physical library, mandatory face mask, provision of sanitizers at the library entrances and maintenance of social distancing were some of the measures taken by the libraries of MAHE during the COVID-19 pandemic. The study revealed that MAHE libraries have a rich collection of e-books, online journals, online databases, e-learning platforms and research support tools. Remote access facility was extensively used by the users of MAHE libraries to access the relevant literature for teaching, learning, patient care and research activities and thus to meet their information needs.

Keywords: MAHE, Manipal, Lockdown, Academic Library Services, Academic Library Resources, Digital Resources, COVID-19

1. INTRODUCTION

Academic libraries are an integral part of the formal education system and they support the educational programs of the institutions that they are associated with. Academic libraries are

categorized into school libraries, college libraries and university libraries. Academic libraries function to meet the objectives such as providing relevant documents to the parent organization and constantly strives to bring in the latest information to the users in their respective subject areas. The librarians of the academic libraries are the information providers who bring the two main components, i.e., users and the documents, together.

2. Manipal Academy of Higher Education (MAHE), Manipal, India

Manipal Academy of Higher Education (MAHE) is a deemed university located in Manipal, India. The University also has campuses in Mangalore, Bangalore, Jamshedpur, Melaka, and Dubai. MAHE traces its roots to the Kasturba Medical College, the country's first self-funded medical college established in 1953. Today, MAHE offers more than 350 programs across 30 disciplines. The Government of India declared MAHE as an Institution of Eminence.

2.1 Manipal Academy of Higher Education Libraries

Manipal Academy of Higher Education, Manipal has 15 libraries and these libraries are attached to its Health Science, Technical and Management institutions within India and abroad. MAHE libraries strive to render world-class facilities to their users. MAHE has three major libraries, and one among them is KMC Health Sciences Library at Manipal. KMC Health Sciences Library at Manipal, perhaps the best among all Health Sciences Libraries in India. The state-of-the-art library stretching over 1.5 lakh square feet on five levels is a domain for information seekers, be it students, faculty, or researchers. It can accommodate 1300 students at a time. Besides the comfortable seating and reading environment, the library is well equipped with modern facilities. There is a separate audio-visual room, computer lab, group study area and private study area in the library.

MAHE's other two major libraries are Kasturba Medical College Central Library, Mangalore and Manipal Institute of Technology Central Library, Manipal. Libraries have fully computerized their collection and services using Koha library management software. All libraries are enabled with Wi-Fi facilities and security systems with Closed Circuit Television (CCTV) and Access control. The KMC Health Sciences Library, Manipal and KMC Central Library, Mangalore are enabled with RFID technology. The libraries provide various research/project support services such as access to Turnitin (plagiarism check), Grammarly (online grammar and spelling checker), organizing author workshops, literature search service, access to bibliographical and citation tools, i.e., Scopus and Web of Science.

MAHE libraries have a varied collection of print textbooks, reference volumes/books, ancient books/manuscripts, theses/projects, reports in diverse fields. The libraries provide a growing range of e-resources (online databases, online journals and e-books). KMC Health Sciences Library, Manipal; KMC Central Library, Mangalore and MIT Central Library, Manipal have installed EZProxy software, thus enabling faculty, students and research scholars to access the library's subscribed e-resources from any part of the world (remote access). The KMC Health Sciences Library, Manipal, KMC Central Library, Mangalore and MIT Central Library have provided 'Web-Scale Discovery Service' (Single Window Search tool).

MAHE libraries are providing access to 32 online databases, 17935 online journals and 85211 e-books.

Table 1: List of online databases subscribed by MAHE libraries

Sl. No.	Online Databases
1.	Access Medicine
2.	Access Pediatrics
3.	ASTM Digital library
4.	BIS Codes Online
5.	Capitaline Software Programme
6.	CINAHL Complete
7.	ClinicalKey
8.	Culinary Arts Collection
9.	DynaMed Plus
10.	EBSCO Dentistry and Oral Science Source
11.	EBSCO hospitality and Tourism Complete
12.	EBSCO Host Art and Architecture Complete
13.	EMIS
14.	Hospitality, Tourism and Leisure
15.	Incision Academy, Netherlands -Surgical Films
16.	J-gate
17.	Journal Citation Reports (JCR)
18.	JSTOR
19.	MedOne ComSci
20.	OvidMedline
21.	ProQuest ABI/Inform Collection
22.	ProQuest Health and Medical Complete
23.	Sage Business Cases
24.	Sage Research Methods
25.	SciFinder
26.	SciVal
27.	Scopus
28.	Springer Nature Experiments
29.	SpringerLink
30.	Taylor & Francis Business, Management & Economic Package
31.	UpToDate Anywhere
32.	Web of Science

3. REVIEW OF LITERATURE

Ali & Gatiti (2020) explain in their work "International Perspectives and Initiatives" that social distancing can help to prevent the spread of COVID-19, yet the role of the librarian is the key to support public health awareness and in supporting research teams, to provide routine services to regular library users. He limited his work to Pakistan libraries and explained the librarian's responsibility in following the guidelines provided by the Government during the pandemic situation.

Aristovnik et al. (2020), in their survey, found that higher education students' lives have been impacted, leaving them confused about their prospects. Students found it difficult to adjust the digital transition of the academic curriculum due to a lack of preparedness for the COVID-19 pandemic; along with their studies, their personal and emotional behavior was influenced.

According to Asif & Singh (2020), the pandemic has affected the users in finding the information they need from the libraries due to the worldwide lockdown. Preventive measures such as using the sanitizer, maintaining social distancing, wearing the mask at all times, making use of online platforms for resource sharing are to be taken by the libraries. By

following health and hygiene habits, keeping the surfaces clean and tidy, including library computer desks, switches, doorknobs, advising sick people to stay at home, and limiting the library user numbers in the reading rooms could curb the spread of COVID-19

Bhati P. (2020), in his study on "Role of Library Professionals in a Pandemic Situation Like COVID-19," depicts that library professionals have many challenges to face and to overcome these challenges, a librarian should have very good knowledge about everything, service-oriented mentality, presentation skills, understanding, and cultural diversity, managerial and marketing skills along with technical and communication skills. The current situation of pandemics demands the librarian to play a multi-dimensional role to meet the demands of the users. Social distancing and other approaches in maintaining hygiene premises can promote better use of library resources.

Bilawar B. P. (2020), in his work "Lockdown Period and Information Sources," explains the periods of COVID-19 lockdown and the impact it had on libraries and he raises points about the impact on the declined economic cycle, employment reduction, and restriction of traveling to important places. The author suggests ways to support online users with the help of social media and government-aided information sources. The author explains that the lockdown period has made it clear about the importance of the usage of digital resources.

D. Mestri (2020), in the study "Reopening libraries in COVID-19 pandemic challenges and recommendations," has suggested that the libraries have to adopt new methods to prevent the spreading of COVID-19 until the virus is part of human life. The author suggested different steps to breaking the chain from the virus to spread in library premises. Formulated four levels of library functioning based on the number of active cases of COVID in the place; they are more or less usual, few restrictions, minimum service, and the complete closure of the library at places where the number of COVID-19 cases is above 5000. The author connoted certain approaches while running the library, such as formulating library policy, handling materials, handling of the belongings, maintenance of social distancing, staff safety, limitations on user's entry, etc.

Dadhe & Dubey (2020) have conducted a study on library websites of the Indian Institute of Technology of all the 23 library webpages and found the way the libraries are providing services to the users, and the ways the libraries have adopted the COVID-19 situation, and made a list and explained the preventive measures that are to be taken to combat coronavirus. They found that remote access to e-resources, free and expanded services, and open access to the users can help in supporting the users. The work also emphasized implementing SOP's to contain the spread of COVID-19 in Libraries.

Frederick & Wolff-Eisenberg (2020), in their study in the field of budgeting and the strategy of the academic library during the COVID-19 pandemic stated that the pandemonium situation and the lockdown redirected the library investment towards digital resources and services. Most of the libraries were confident about supporting remote research and learning. Pandemic has had a budgetary impact on the libraries, and the most affected were the public institutions. Staff well-being was given importance while making crucial decisions. Survey results have proven that the library has played a pivotal role in establishing continuity in research by providing remote access.

Ishtiaq et al. (2020), in their work on "Information Dissemination during COVID-19 and Lockdown: The Role of University Libraries of Sindh, Pakistan," used a stratified sampling method in finding out the technical facilities available in university libraries and the professionals who can handle it. The author categorized the respondents according to the nature of the discipline, designation, and qualification and examined the services provided to the users during the lockdown. He assessed the frequent queries that arose during the lockdown. He explains the necessity of recruiting a skilled and qualified librarian to manage the library during the pandemic.

Jaskowska (2020), in his study "Management of Academic Libraries in Poland During the COVID-19 Lockdown," stated that there were drastic changes in the way libraries managed during the pandemic in carrying out functions, There was a steep increase in the usage of digital resources and lending books from the library has declined.

Kumar Jena (2020), in the study "Impact of COVID-19 on Higher Education in India," highlighted the impact of COVID-19 on higher education in India, states that COVID-19 has destabilized higher education systems, and mentions various emerging approaches of India for higher education in disseminating the information to the users, such as e-GyanKosh, Gyandarshan, Swayam, e-ShodhSindhu, VIDWAN, etc. Suggestions were provided to curb the spread of COVID-19 in libraries.

Neog (2020), in the study "Library services through Social Media during lockdown due to COVID-19 with special reference to University Libraries of Assam," investigated social media application by the university libraries of Assam. The study was done to help libraries in the formulation of policy in delivering library services during the pandemic. The study identified social media applications such as WhatsApp and Facebook are used daily to maintain the flow of information to the user. The author points out that usage of social media during a pandemic is extremely beneficial to the users to satisfy their needs.

Winata et al. (2020), in their case study about University libraries of Indonesia in their work "New normal and library services in Indonesia: a case study of university libraries," described the challenges faced by the libraries and the librarians during the pandemic of which the author quotes as "New-Normal era." The author used literature from the webpages, blogs, and social media to collect the data. The author emphasizes redesigning the library furniture following the health protocols, maintaining hygiene, and providing sanitizers to the library users and suggests that there is a deep requirement of community understanding and adjustment to the new normal.

Rafiq et al. (2021) explored the libraries to fetch information on its various responses and the strategies used to overcome the impact of COVID-19. Some of the drawbacks encountered while transforming physical libraries to digital included the non-provision of good network connectivity and lack of knowledge on the technical aspects required to deal with digital resources. Many patrons were the victims of the aforementioned drawbacks and this was managed by lending print materials to the nearby users and by communicating via other social media applications through which the study/research material was downloaded.

Vaidya & Ali (2021) discuss in their study "Measures and initiatives adopted by Indian University Libraries during the COVID-19 pandemic" that a librarian's role during the pandemic is incomparable. A qualified and experienced person always boosts confidence in running the organization smoothly; the author emphasizes on work from home concept in

preventing the spread of coronavirus. Library resources have been made available to the users through remote access; research help has been provided through organizing webinars and other virtual programs.

Connell et al. (2021) worked elaborately to compare usage of library resources such as databases, discovery tools, library websites during the pandemic in comparison to pre-pandemic usage in three institutions and they reported the increase in the usage of virtual communication extensively. It is seen that students needed librarian guidance to start their research using library tools. The librarians adopted pedagogical practices to outreach the library users through remote access. The library has shifted its collection to digital from the traditional methods to satisfy the user's wants. The librarian had to be open to learning new skills to adapt to the unfortunate situation that has arisen due to the COVID-19 pandemic.

Kashelkar A. (2021) emphasized the impact of COVID-19 on academic libraries and the tools which can help with the dissemination of information to the users through various platforms available over the internet to overcome the information gap due to the pandemic. Literature review method was implemented in gathering the data and found that best practices such as providing round the clock access to the library resources, remote access, utilizing social learning platforms, open learning platforms initiatives of INFLIBNET such as Shodh Ganga, Vidwan, etc. help the librarian to continue functioning of the library swiftly during the lockdown. Following the Government guidelines and implementing social distancing and usage of digital resources and social media platforms can help library professionals in playing a key role in serving the community he works.

4. NEED FOR THE STUDY

COVID-19 pandemic necessitated teaching and learning in online mode instead of offline mode and students were attending online classes from their home/hostels as one of the preventive measures in preventing the spreading of the coronavirus in colleges and universities. COVID-19 pandemic also interrupted access to physical resources of the libraries as entry to the libraries was restricted to limited hours. All the users were more dependent on electronic resources than print resources as access to libraries was restricted during the COVID-19 pandemic. Users of the libraries were of two categories, i.e., users who were using the libraries remotely and the users who were visiting the library by following COVID-19 precautionary measures taken by the MAHE libraries as per the University guidelines. MAHE libraries provide access to a vast collection of both print and electronic resources. MAHE libraries were subscribing to almost all important online databases having e-books and online journals and remote access facility has been extended to the users even before the COVID pandemic. COVID-19 pandemic necessitated librarians to come up with reformed, effective, and innovative services by implementing technologies to keep the information flow from the libraries to both the categories of users, i.e., users who use the library remotely as well as users who visit the library physically. Libraries were implementing the required precautionary measures in their libraries to fight the pandemic.

5. STATEMENT OF THE PROBLEM

The present study is entitled "Impact of COVID-19 on Academic Libraries: A Case Study".

6. SIGNIFICANCE OF THE STUDY

Academic libraries of MAHE at Manipal campus are facing challenges from the onset of the COVID-19 situation. The library's traditional functions and services are impacted majorly and the information service providers of the MAHE libraries at Manipal campus are preparing themselves to acclimatize to the situation by implementing new measures. This study helps to understand the impact of COVID-19 on MAHE libraries in Manipal Campus and various measures that have been implemented in the libraries to keep the functional routine in supporting the users with the user needs.

7. OBJECTIVES OF THE STUDY

The study is focused on the following objectives:

- To understand the impact of COVID-19 on the working hours of the library
- To determine the impact of COVID-19 on the academic libraries of the MAHE at Manipal campus.
- To understand the preventive measures taken in the libraries during the COVID-19 pandemic
- To be acquainted with enhanced services provided by the MAHE libraries during the COVID-19 pandemic.

8. SCOPE AND LIMITATIONS OF THE STUDY

The current study is limited to the following 10 MAHE libraries at Manipal campus, namely:

- KMC Health Sciences Library
- Manipal Institute of Technology Library
- Welcomgroup Graduate School of Hotel Administration Library
- Manipal Institute of Management Library
- Manipal Institute of Communications Library
- Manipal Center for European Studies Library
- Manipal Center for Natural Sciences Library
- Department of Geopolitics and International Relations Library
- Manipal School of Architecture and Planning Library
- Manipal Center for Philosophy and Humanities Library

9. METHODOLOGY

To determine the impact of COVID-19 on MAHE libraries, ten libraries were selected out of 15 libraries as samples using the convenience sampling method. A questionnaire was designed in Google forms. The questionnaire was distributed to the librarians by reaching them out through their email addresses provided on the library websites. Careful measures were taken in designing the web-based comprehensive questionnaire comprising collective questions that are both open and closed-ended questions covering the impact of the pandemic on the libraries and the extent of usage of physical and digital resources of the libraries, and

the guidelines that have been followed in the organization functioning. The questionnaires were distributed to the librarians of respective libraries and the responses were tabulated carefully on a Microsoft Excel sheet. The results were organized, analyzed, and properly plotted on the graph for easier understanding.

DATA ANALYSIS
10.1 Status of the Libraries - Open or Closed?
The study population consists of ten librarians from ten MAHE institutional libraries. Table 2 gives detailed information about the total number of respondents and the status of the library during the time of the pandemic. Fig. 1 is the graphical representation of the data that has been tabulated. The data obtained is depicted in the pie chart showing MAHE libraries are kept open during the period of COVID-19 by adopting all necessary precautionary measures as per the guidelines issued by the University.

Table 2: Status of the MAHE libraries

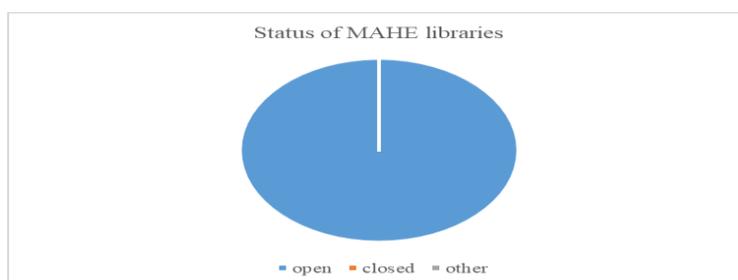| Status of the Libraries	Number of Libraries
Open	10
Closed	0
Other	0
Total	**10**

Fig. 1: Status of MAHE libraries

9.2 Impact of COVID-19 on Library Working Hours
Emphasis was laid on knowing about the working hours of the library if they are open at regular hours or to know if the regular hours of the library are reduced to follow the guidelines implemented by the Government. Table 3 shows that 100% of libraries have reduced library working hours during the COVID-19 pandemic and were kept open between 8-13 hours a day. 70% of the libraries are kept open for the circulation of reading materials.

Table 3: Impact of COVID-19 on library working hours

Sl. No.	Impact	Percentage
1.	Open at usual working hours	0%
2.	The regular working hour of the library is reduced	100%
3.	The library is open for the circulation process	70%
4.	Other	0%

10.4 Impact of COVID-19 on Services of the Libraries

To know the impact of COVID-19 on the library services, the respondents were asked about the usage of physical resources of the libraries. Eighty percent of the respondents have strongly agreed that there is a decrease in the usage of physical resources, while the rest, 20 percent of the respondents, agreed that there is a decrease in the usage of physical resources.

Table 4: Impact of COVID-19 on services of the libraries

Sl. No.	Impact	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	Physical resource usage decreased	80%	20%	0%	0%	0%
2.	Digital resource usage increased	50%	50%	0%	0%	0%
3.	Patron enrollment decreased	10%	20%	40%	30%	0%
4.	Increase in online research assistance	20%	60%	20%	0%	0%
5.	Decreased library lending	0%	40%	40%	20%	0%

Further, 50 % of the respondents have strongly agreed and 50% of the respondents have agreed that there is an increase in the usage of digital resources. It has been observed that a very small percentage of respondents (10%) strongly agreed that the COVID-19 pandemic resulted in a reduction in enrollment of patrons in the libraries. In the meantime, 40% of respondents were neither agreed nor disagreed and were neutral about the enrollment of patrons in the libraries during the COVID-19 pandemic. A very small percentage of respondents (20%) disagreed that the lending of reading materials has been decreased due to COVID-19 Pandemic. The study also revealed that 40% of the libraries providing research assistance online. The same has been depicted in Table 4 and Figure 2.
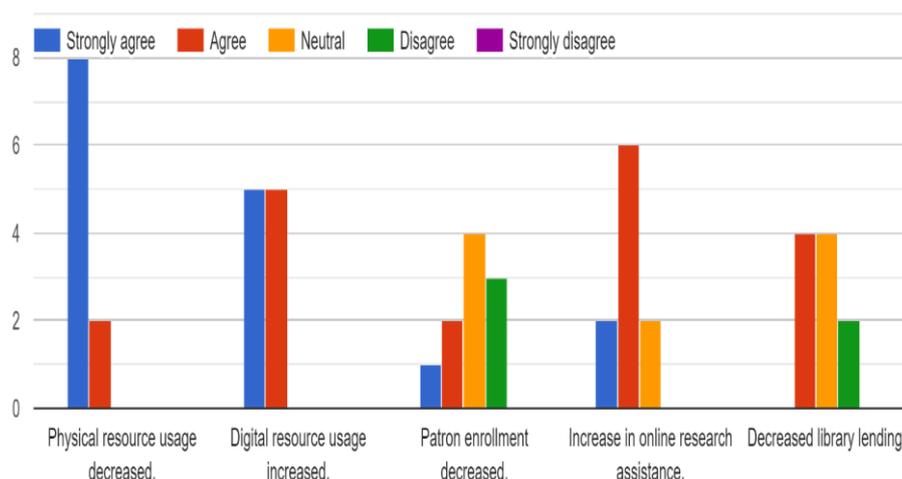

Fig. 2: Vertical bar graph showing the impact of COVID-19 on MAHE libraries at Manipal.

10.5 Preventive Measures Adopted in MAHE Libraries at Manipal

Coping up the COVID-19 pandemic, libraries of the MAHE have taken all the required measures to prevent the spread of disease. All the MAHE libraries have adopted preventive measures like limiting the number of users, mandatory use of face masking in the premises of the library, provision of hand sanitizers, frequent sanitization of library premises, maintenance of social distancing, Temperature checks at the entrances.

Table 5: Preventive measures adopted in MAHE libraries at Manipal

Sl. No.	Measures Adopted	Percentage
1.	Limiting the number of users in the library	100%
3.	Temperature check at the entrance	100%
4.	Provision of hand sanitizers	100%
5.	Frequent sanitization of the library premises	100%
6.	Mandatory use of face mask	100%
7.	Maintenance of social distancing	100%
8.	None of these measures are adopted	0%

10.6 Enhanced Services Provided in the MAHE Libraries at Manipal

The study examined enhanced services provided by the libraries to the users. The responses given by the respondents have been tabulated in Table 6 and the results show that during the COVID-19 pandemic, 100% of the libraries have extended the due dates of the users, 90% of the libraries have implemented no late fines to those who failed to return the books. 80% of the libraries have provided online research assistance and project assistance for the users' community. 40% of the libraries conducted webinars (user education) for the users. 40% of the libraries converted staff meetings to online completely. 40% of the libraries have provided virtual author workshops to the users to bring close the publisher to the library users for article publishing.

Table 6: Enhanced services provided in MAHE libraries at Manipal

Sl. No.	Enhanced Services	Percentage
1.	Remote access to library resources	50%
2.	Webinars (user education)	40%
3.	In-person staff meetings converted to online	40%
4.	Extended due dates	100%
5.	No late fines	90%
6.	Virtual author workshops	40%
7.	Online project/research assistance	80%
8.	None of the above services are provided	0%

Remote access is one of the services which played a major role in reaching out library resources to their users. 50% of the libraries are providing remote access to digital resources. The results obtained show the efforts put in by the libraries to satisfy the users in every possible way to meet their information needs. Looking at the study results, MAHE libraries have implemented all the necessary precautionary measures for the prevention of COVID- 19 disease.

10. FINDINGS

Following are the findings of the study:

- MAHE libraries are kept open during the period of COVID-19 by adopting all necessary precautionary measures as per the guidelines issued by the University.
- All the MAHE Libraries under study have reduced library working hours during the COVID-19 pandemic and 70% of the libraries are kept open for circulation of reading materials.
- 80% of the respondents have strongly agreed that there is a decrease in the usage of physical resources, while the rest 20 percent of the respondents agreed that there is a decrease in the use of physical resources
- 50% of the respondents have strongly agreed and 50% of the respondents have agreed that there is an increase in the usage of digital resources.
- A small percentage of respondents (10%) strongly agreed that the COVID-19 pandemic resulted in a reduction in enrollment of patrons in the libraries.
- The study revealed that 40% of the libraries providing research assistance online.
- Limiting the number of users and mandatory use of face masking in the premises of the library, provision of hand sanitizers, frequent sanitization of library premises, maintenance of social distancing were followed 100% by all the libraries of MAHE.
- Temperature checks at the entrances have been adopted in all the libraries

11. SUGGESTIONS

The study revealed that the majority of the MAHE libraries have access to a number of e-resources and the best attempt has been made by the libraries in reaching out to users through remote access facilities. The MAHE libraries need to explore the information needs of undergraduate students and provide remote access to the required undergraduate textbooks as well. There is a need to conduct webinars on each and every subscribed database to facilitate conducting literature searches by the users frequently. Online feedback needs to be taken periodically from the users to improve further in the collection development of e-resources. Libraries need to interact with the users and stress the importance of COVID-19 precautionary measures in preventing the spread of the COVID-19 pandemic in libraries.

12. CONCLUSION

The librarians had to remold themselves and stirrup all the skills they had to come up with innovative plans to walk through the pandemic to render the services to the user community. The impact of COVID-19 on the academic libraries of MAHE was tangible. It is heartening to note that MAHE libraries were kept open for the users during COVID-19 by following all the precautionary measures to prevent the spreading of the disease. Since the students were attending online classes from their homes and many students were not on campus, there was a decrease in the usage of print resources in the library. MAHE Libraries played a significant role in the collection development of e-resources and dissemination of information online by providing remote access facilities. Though it was challenging to provide all required literature/books online and to satisfy each and every reader, since libraries had a subscription to a huge collection of digital resources even before 2020 and were conducting user training

programs in using e-resources regularly, library users find it convenient to use the digital resources remotely during the COVID-19 pandemic. Looking ahead, the use of e-libraries will continue to grow exponentially and there will be an increase in ICT-based services. Prediction is tricky in regards to the future, but remote access to the users will be made a priority. Frequent sanitization of library premises, virtual meetings for the staff, research assistance online, conducting webinars, providing remote access to the community, signage boards are necessary for the library. Blogs for providing factual information about COVID-19, installation of drop boxes at possible locations shall improve the use of library resources to the maximum extent. Libraries have transformed over the past decades in terms of usage of technology and this COVID-19 pandemic made libraries understand the need for digital resources and the need for automation of the libraries. To prevent the spreading of the COVID-19 pandemic, libraries of the MAHE have taken all the required measures to prevent the spread of disease. All the MAHE libraries have adopted preventive measures like limiting the number of users, mandatory use of face masking in the premises of the library, provision of hand sanitizers, frequent sanitization of library premises, maintenance of social distancing, Temperature checks at the entrances.

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