

Accessibility and utilization of information resources in the post COVID-19 era: A case of selected university libraries in Kenya

¹Mercy Shidemburi Musungu, ²John Maina

¹<https://orcid.org/0000-0001-6134-2248>, ²<https://orcid.org/0000-0001-5925-3625>

¹mercymusungu@gmail.com, ²jonymaina@gmail.com
^{1&2}Meru University of Science and Technology

ABSTRACT

University libraries play a pivotal role in fostering teaching, research, and innovation by offering essential information resources. However, patrons often encounter challenges in using these resources. The research aimed to examine the factors influencing the utilization of information resources in university libraries at Kenyatta University Meru University of Science and Technology and post-COVID-19. The objectives were to: determine the skills needed by librarians in supporting utilization of information, analyse the innovative methodologies used to facilitate access to library resources/services, examine the challenges faced by librarians and patrons and determine the importance of Information Communication Technology (ICT) in improving information resources usability and consumption. The study adopted a descriptive survey research design with quantitative research methods. The study was conducted at Kenyatta University and Meru University of Science and Technology libraries. Simple random and purposeful sampling techniques were used to distribute questionnaires to patrons and librarians, respectively. Data was collected from 20 librarians and 309 patrons, out of whom, 26 librarians and 357 patrons were sampled. The questionnaires underwent expert review to ensure their validity and reliability. The study found that 81% of librarians prefer online search resources, while 41% prefer physical textbooks. 16.5% of patrons preferred e-books and e-journals, with inadequate computers (32%) and unreliable networks (25.7%) as challenges affecting access and utilization of resources. The librarians identified lack of cooperation, inadequate digital library skills, understaffing, and poor network as major obstacles to facilitating access and utilization of library resources. The study recommends that university management should enhance librarian capacity building, training, and reengineer ICT infrastructure to enhance access and utilization of resources in the post-COVID-19 era. The study's findings will aid librarians in redesigning library functions to enhance the efficacy of library services in meeting user information needs.

(Key words: COVID-19 pandemic, Information Resources, Information Access, Information Utilization.)

I. INTRODUCTION

COVID-19 is classified as a Public Health Emergency of International Concern (PHEIC) by the World Health Organization (WHO). The virus spreads between two people at a conversational distance. It is a fatal infection that affects the human respiratory system and can result in death.

Kenya recorded the first COVID-19 case on March 12th, 2020. To stop the spread of the pandemic, the Kenyan government ordered the shutdown of all public meetings, including all learning institutions. Since it was unpredictable to determine when the pandemic would lapse, the Government of Kenya directed a phased resumption of learning but under strict adherence to the laid containment protocols. The steps taken include blended learning, and prioritizing online with few in-

person classes. As evidenced by the shut downs, fatalities, and horrifying infection rates during the peak of the pandemic in 2019–2020, the COVID-19 worldwide epidemic has accelerated a dilemma among all institutions, communities, and libraries. It has set off an essential need to re-examine how libraries can build imaginative approaches to continue serving patrons.

Traditionally, a library is charged with the care of, collection of information resources and facilitating their access and use. University libraries serve as sources of knowledge, supporting the mother institutions' learning and research efforts. Libraries play a significant role in supporting both traditional and electronic modes of learning (Tsekea & Chigwada, 2020). The COVID-19 pandemic mutually affected the library and its patrons by disrupting its operations and service delivery (Fasae *et al.*, 2020).

The COVID-19 pandemic, which impacted university libraries in the United States and Canada during the spring semester of 2020, required newly implemented regulations like building outages, quarantine periods, forced social isolation, and other precautions, forcing librarians and staff to increase their outreach to patrons (Decker, 2021). Digital libraries in South Africa and Nigeria are recognized as important gateways to high-quality e-books, periodicals, and educational materials, including open educational resources. University libraries in South Africa are thriving at offering online services due to the digital library services, ensuring that teaching, learning, and research continue (Chisita & Chizoma, 2021). More digital content, virtual workshops, readings, and events, as well as subsidizing internet bundles, are among the library program concepts given priority in Kenya (Banks, 2021).

Problem Statement

Users' needs influence the availability and access of information resources (Onye, 2016). Readers frequently acquire information from sources that involve the least amount of work. The existence of a source of information does not necessarily mean that it is accessible since there could be some hurdles within that hinders access (UNESCO, 2021). Although university libraries may have the necessary information resources, their users do not access or use them. The greatest extent towards which information is actually located, retrieved from, and used to support teaching, research, innovation and learning. The library plays a key role in facilitating the utilization of information by embedding ICT tools (Ashikuzzaman, 2021). It is now feasible to communicate information anytime, anyplace in a digital format that can be read by a computer due to the fusion of computing, information, communications, and library resources brought about by breakthroughs in ICT.

University libraries encountered difficulties in delivering their functions due to the COVID-19 epidemic and the traditional support to patrons due to the closing of parent institutions during the pandemic lockdown. Despite the hurdles, the library did not close its services; librarians came up with innovative methods to remain relevant and serve its patrons better during and after the COVID-19 pandemic (Mehta & Wang, 2020). Some of the methods employed were Web 2.0 platforms such as instant messaging, Facebook, WhatsApp, and Twitter; and subscriptions to online resources through consortia.

To conform to the directives of the Ministry of Health on COVID-19 containment measures, both the Reuben Marambii Library of Meru University of Science and Technology and the Kenyatta University Post Modern libraries revised their circulation policies. First, the physical interaction between the librarians and the patrons was minimized. The user orientation, training, and support were, therefore, virtualized. Second, the library halted the loaning of print resources as patrons were encouraged to embrace library e-resources. Third, the libraries significantly reduced the reading space to enable social distancing within the reading space. Many patrons could not access the facility within their convenient schedules and program. The two libraries adopted technological approaches to serve their patrons. For instance, among other initiatives, they designed self-taught user service tutorials, expanded their subscriptions to databases, and increased online training and user education.

However, this necessary shift was embraced sluggishly by the library patrons. This study, therefore, endeavoured to critically examine the actual hindrances influencing the use of and access to information resources post-COVID-19 era in university libraries, taking Reuben Marambii Library of Meru University of Science and Technology and the postmodern Kenyatta University Library as a case study. This research prioritizes studying the factors affecting access and utilization of information despite the library acquiring the resources. This paper, therefore, bridges this gap and further proposes proper mitigation measures to actualize these new vital adjustments in university libraries.

Objectives

The general objective of this study was to investigate factors affecting the utilization of information resources at the Reuben Marambii Library of Meru University of Science and Technology and the Kenyatta University Post Modern University library during the post-COVID-19 pandemic era.

Specially the study sought to:

- i) Determine the needed skills by librarians in supporting accessibility and utilization of information post-COVID-19 pandemic.
- ii) Analyse innovative methodologies used by the library staff in facilitating access to library resources/services.
- iii) Examine the challenges faced by library staff and users during the pandemic

- iv) Determine the importance of information technology (ICT) in improving information resource usability and consumption

II. USE AND ACCESSIBILITY OF INFORMATION RESOURCES IN UNIVERSITY LIBRARIES.

This section reviews and evaluates literature on the use and accessibility of library information resources in university libraries.

According to Aladeniyi & Owokole (2018) Information sources in print, electronic forms and other media, are the most widely used in university libraries Textbooks, journals, handbooks, newspapers, periodicals, manuals, reports, dictionaries, atlases/maps, encyclopedias, the internet, computers, abstracts, and audio-visual materials are all examples of these. Libraries' primary aim has been to choose, gather, organize, and make information more accessible and usable. The availability and use of information sources and services are critical components of a successful educational system. The library's aim may not have been met until these resources reach their maximum capacity and usage by clients (Onye, 2016).

Skills possessed by librarians in supporting accessibility and utilization of information during the pandemic

In order to facilitate library users' access to and use of information resources, librarians must possess the necessary abilities. With the right expertise, librarians can provide users with accurate and reliable information sources in a variety of formats. In addition to developing their knowledge of new technology and information, librarians must also be able to market information products or services.

Instead of being forced to start from scratch, the COVID-19 pandemic has led librarians to evaluate, alter, and expand their current online services (Walsh & Rana, 2020). Digital library skills, which were initially causally handled, have become essential for information professionals. For instance, being the sole remaining alternative, librarians were required to become savvy in digital services in order to continue providing library services to users during the shutdown. As per Ali and Gatiti (2020), the responsibilities of library professionals during the COVID-19 pandemic included educating people through health education and providing library resources and information services to faculty staff and students.

Innovative methodologies employed by the library staff in facilitating access to library services

Despite the suspension of some library rules, libraries resumed regular operations, with some ongoing enhanced health and safety procedures to decrease the danger of COVID-19 transmission. For instance during the pandemic, library of Congress provided free but timed and ticketed entrance for a limited number of days and times. Cambridge University employed innovative tools like video conferencing, to give information and research skills instruction online (UoC, 2020; LoC, 2021). Studies by Ishola *et al.* (2022) and RSA (2020) advised university librarians in Nigeria and South Africa to accept the new normal and shift their services to web-based as one of the innovative strategies, hence reducing human touch with tangible library items. Gavit (2019) highlights some e-library services adopted by libraries during the pandemic, these include; library Web pages, OPAC, messaging board, consult a librarian, online surveys, digital reference services, online document delivery, e-journals, e-books, e-past papers, interlibrary loan, online help and information literacy, teleconferencing, online SDI services, system-based acquisition, e-articles suggestion, and online plagiarism scanning.

Some of the methodologies introduced by librarians were the use of web 3.0 tools such as social network sites like Facebook and WhatsApp, e-mails, chats and, instant messages to converse and interact with the users. In addition to social media websites, Lobo and Dhuri (2021) said that some techniques utilized to keep users informed of the most up-to-date services, developments, and strategies included blogging, hosting webinars on various themes, updating library websites, and uploading YouTube videos. Some of the libraries that have adopted the new normal is the Library of Congress; it came up with links where users could ask questions in different areas of specialization. The "Ask a Librarian" service was established by the South African National Library, allowing users to contact a librarian via phone or email to request assistance or to arrange pickup of requested materials. They also recorded the events that were happening virtually and shared the videos on their social media.

For example, National Library of South Africa (NLSA) hosted the annual Poetry Slam competition and world book day. Kenyatta University, University of Nairobi, Kenya Methodist University and the Reuben Marambii libraries embraced the web 2.0 tools which allowed them

to share information on various social network sites (Walia & Gupta, 2012).

Challenges faced by library staff and users during the covid-19 pandemic

The pandemic of COVID-19 had a detrimental impact on university library operations and functionality. Despite reopening the libraries, the directive to limit in-person access to library information resources remained an obstacle to library users (Chakraborty & Jana, 2021). The libraries restricted the loaning of information resources, thus limiting users from utilizing information resources. Most libraries worldwide were noted to be recommending the access and utilization of online resources to limit the spread of COVID-19 (Joel & Camble, 2023).

The digital gap, a lack of digital literacy, and sluggish internet speeds, according to university librarians, were the biggest obstacles to their shift from manual to an online mode and their usage of the online resources and web portals at the library (Rafiq *et al.*, 2021)

Role of information technology (ICT) in improving information resource usability and consumption

The emergence of ICT has had a great impact on the quality of the information provided through libraries. Adebayo *et al.*, (2018) simplified the collection, processing, management, access, retrieval, and utilization of information. For instance, the radical change from independent libraries to networks of libraries and information is accessible online. ICT advancements have fundamentally altered how all types of libraries function (Mahanta, 2020).

The use of technological tools in the library has improved security and met the demands of users according to their specifications (Islam & Islam, 2006). Using ICT provides new information services and improves library productivity and efficiency. By utilizing electronic storage medium, digital, and virtual libraries, ICT-based resources aid in the reduction of library space.

Amao (2020) notes that the use of ICTs in libraries has significantly altered how resources are managed, maintenances are carried out, and how services are provided. Shaikh (2019) underlined the critical role that libraries play in offering a variety of services to users by integrating ICT to deliver high-quality information. Evidently, the COVID-19 tragedy expressed the need for a digital library transformation strategy, a new digital

paradigm, and a review of changes in the public's perception of libraries (Tammamo, 2020). Technologies that have recently been developed have been used in some digital library procedures.

III. METHODOLOGY

This study employed a descriptive survey research design and utilized a quantitative research method. The data was collected from two university libraries: the Postmodern Library at Kenyatta University and the Reuben Marambii Library of Meru University of Science and Technology. Data was collected using structured questionnaires issued to a total sample of 357 library users and 26 staff. The sample was determined using the Krejcie and Morgan (1970) table from an average total of 5000 active patrons from both libraries. Through a personal counter, both sampled libraries maintain a daily record of the patrons entering the library. Twenty library staff and 309 students responded to the survey. Purposive sampling was employed to gather data from librarians, whereas, simple random sampling was utilized to gather data from patrons. The study was restricted to those who gave their consent. Statistical Package for Social Sciences (SPSS) version 28 was used to statistically describe the data in terms of mean, mode, and percentages. Tables and percentages were used to present the results

IV. RESULTS AND DISCUSSION

The study received responses from 20 out of the 26 questionnaires distributed to librarians and 309 out of 357 questionnaires distributed to library users. This translated to a response rate of 76.9% for librarians and 86.6% for patrons. Since the response rate is above the average response rate of recommended 50% percent (Mugenda & Mugenda, 2003), the responses qualified for a generalization of the findings to the entire population.

Librarians' qualifications

The knowledge, abilities, and skills possessed by librarians are necessary drivers of both library performance and user satisfaction. The competency and proficiency of a librarian are contributors to performance. The study identified different qualifications of the librarians who participated in answering the questionnaires as shown in Table 1.

Table 1: Librarians' qualifications

Qualification	Frequency	Percent
Masters	4	20.0

Bachelor	10	50.0
Diploma	6	30.0
Total	20	100.0

This study established that the majority (80%, n=16) of the librarians with diplomas and bachelor's degrees are typically assigned to technical roles. At the technical level, librarians engage with users directly. While master's holders are at the management level, where library administrative and management work is handled. Twenty percent (n=4) of the librarians from this study had master's degree and thus can serve learners, teachers, and researchers in their university and research endeavors

Skills possessed by librarians in supporting accessibility and utilization of information during the pandemic

Librarians are recruited based on their qualifications: skills, knowledge, and abilities specified in the job

Table 2: Librarians with requisite skills

	FREQUENCY	PERCENT
YES	18	90.0
NO	2	10.0
Total	20	100.0

Ninety percent (n=18) of librarians believe they possess the requisite skills to serve their patrons. During a librarian's recruitment, necessary knowledge, skills, and abilities are tested to establish if the librarian can deliver. It is worth noting that 10% (n=2) confessed their lack of

description. Cherinet (2018) observes that the contemporary skills, abilities, and knowledge of librarians are but are not limited to these: online customer service, online information marketing, online searching, virtual training, subject database knowledge, ability to assist users remotely, online professional communication skills and digital selective dissemination of information. These skills are necessary to deliver library services including circulation, information literacy training, searching and retrieval, selective dissemination of information, current awareness, acquisition, classification, and cataloging among other library operations. A significant proportion of librarians who possess the necessary abilities was found in this study, as indicated in Table 2.

library skills. Table 3 shows how librarians acquire these skills.

Table 3: Methods of acquiring skills

	FREQUENCY	PERCENT
Formal Training	12	60.0
Seminar/Conference	6	30.0
Job Learning	2	10.0
Total	20	100.0

The study revealed that formal training, which includes scheduled training and workshop, was the most used mode (60%, n=12). Seminars/ conferences were also adopted mode of skill-sharing (30%, n=6). Another mode of skill sharing that is under-utilized is job learning (10%, n=2), where librarians learn from each other; they share knowledge, skills, and experiences. To equip their team with some of the lacking skills and knowledge or emerging new techniques, the library management put

strategies in place to supplement the requisite skills with capacity building and training programs. Wittenberg *et al.* (2018) emphasize that a Librarian Training Program should focus on training liaison librarians in research data management principles and fostering a community of practice among libraries that assist research data.

Job learning constitutes learning by doing it. This mode of learning requires interpersonal skills, self-driven, and commitment. Being an informal method, it has challenges

thus discouraging its adoption. Though an informal method, if well utilized it has great feedback and is cheap, and requires minimal planning.

Innovative methodologies employed by the library staff in facilitating access to library resources/services

Conventionally, physical library operations and management are commonly practiced in normal

circumstances. Most people prefer manual access to physical textbooks and in-person assistance since humans are social beings. Table 4 highlights the library patrons' most preferred access method, technique, and library resource.

Table 4: Users' preferred Information resources, access methods and techniques

	TYPE	FREQUENCY	PERCENTAGE
ACCESS METHOD	Manual	79	25.6%
	Electronic	226	73.1%
	None	4	1.3%
SEARCHING TECHNIQUE	OPAC	106	34.3%
	Internet Search Engine	145	46.9%
	Ask A Librarian at the Counter	31	10.0%
	Ask A Fellow User	25	8.1%
	Browse Through the Shelves	2	0.6%
COMMONLY USED LIBRARY RESOURCES	E-Books	42	13.6%
	E-Journals	9	2.9%
	Textbooks	128	41.4%
	Past Papers	35	11.3%
	Newspapers	14	4.5%
	References	49	15.9%
	Theses	3	1.0%
	Others	14	4.5%
	None	15	4.9%

The study revealed that 73.1% (n=226) of the users preferred online services (electronic) while 25.6% (n=79) of the users preferred manual access to information resources. The most preferred tool for searching information resources is internet search engines 46.9% (n=145) and OPAC 34.3% (n=106). However, some patrons prefer asking the librarians at the counter, 10% (n=31) while 8.1% (n=25) prefer asking a fellow user. It is worth noting that 41.4% (n=128) prefer physical textbooks. These patrons were inconvenienced so much by the lockdown. On the other hand, 13.6% (n=42) of the users prefer e-books.

Since lending of items (books, patch cables, CDs, DVDs, newspapers, magazines, print journals, policies, booklets, etc.) was paralyzed, users embraced e-resources.

Minimizing the physical operations in the library as a containment measure of COVID-19 made it necessary to

design and promote a digital/virtual environment to address these challenges to guarantee continuous library operations (Vassilakaki & Moniarou-Papaconstantinou, 2021). To support users and revamp librarian-user interactions, the libraries introduced innovative mechanisms to revamp their user services. For instance, the two libraries introduced WhatsApp; ask librarian/LiveChat with a librarian, phone call, email, SMS, and other social media to serve patrons virtually.

Challenges faced by library staff and users during the COVID-19 pandemic

By disrupting normal library operations, COVID-19 hit the library staff and users alike. The study identified the challenges that users faced in accessing and utilizing

library resources and those that affected the library staff in their line of duty. Table 5 below summarizes the main challenges identified.

Table 5: Challenges faced by users

	FREQUENCY	PERCENT
Inadequate staff	25	8.1
Lack of Computers	99	32.0
Unreliable Internet	85	27.5
Limited Skills and competence	31	10.0
Others	5	1.6
Unfriendly librarians	64	20.7
Total	309	100.0

The findings revealed that 8.1% (n=25) of the respondents agreed that the libraries are understaffed, and 32. % (n=99) said libraries are not installed with enough computers that can help them do their research online efficiently. 27.5% (n=85) agreed that internet service at the library is not reliable hence inconveniencing them from doing their research online, 20.7% (n=64) decried unfriendly librarians, 10% (n=31) of the respondent revealed that they lack skills relevant to assist the researchers. 1.6% (n=5) of the respondents gave other reasons that inconvenienced them from accessing the library resources like “*lack of technical skills*”, “*inadequate space*”, “*outdated collection*” and “*unaware*

of the services or training”. As a preventive move, the Ministry of Education prepared a directive to reopen the universities. Before delivering services, the library must meet the criteria outlined in this regulation. Although the libraries had set some of the strategies with the bare minimum to reopen libraries the challenges encountered call for the re-engineering of the library support of access and utilization of the information.

Further, the staff respondents registered some of the challenges they encountered when they reopened, as shown in Table 6.

Table 6: Librarians' challenges brought by the pandemic

	FREQUENCY	PERCENT
None	2	10.0
Lack of skills to serve people with special needs	1	5.0
Inability to access information	1	5.0
Inadequate digital skills	2	10.0
Inadequate IL	1	5.0
Lack of cooperation	6	30.0
Poor network	2	10.0
Staffing	4	20.0
Stigma due to COVID-19	1	5.0
Total	20	100.0

The library staff identified the following challenges brought by the pandemic: Thirty percent (n=6) of the librarians complained of a lack of cooperation hence hindering teamwork to support users virtually, 20% (n=4) of the librarians mentioned that understaffing was a challenge that affected service delivery while 10% (n=2) of the staff respondents lacked digital skills, 10% (n=2) of the librarians complained of the poor network during the pandemic. 5% (n=1) of the respondents revealed that new measures introduced at the library to counter COVID-19 did not consider people with special needs. Another 5% (n=1) said that inability to access information is a challenge due to internet connectivity, and 5% (n=1) of the staff disclosed inadequate information literacy training is a challenge since the new delivery method was introduced to counter COVID-19 but enough training was not done and 5% (n=1) of the librarians complained of the stigma due to COVID-19

that made users and staff avoid accessing the library services.

Covid-19 challenges libraries all around the world to provide library services. Despite the challenges, according to Adela (2021), ministries of education gave directives that were cascaded to the parent institution of the libraries and to the libraries leaving them to handle the matter and make decisions after the re-opening. The libraries are left with no choice but to cope with the situation and develop survival mechanisms to continue supporting access and utilization of information.

Role of information technology (ICT) in improving information resource usability and consumption

The COVID pandemic will go down in history as the year of an eye-opener on the power of ICT as a driver in the information service industry. The findings revealed that all the library staff (100%) agreed that the library currently depends on ICT information resources. Table 7 details the users' preferred access methods.

Table 7: Library users preferred Information resources access method

	FREQUENCY	PERCENT
Manual	79	25.6
Electronic	228	73.8
Not specified	2	0.6
Total	309	100.0

The majority of the library users, 73.8% (n=228), preferred online access. Interestingly, 25.6% (n=79) opted for manual access to library resources, and they must have been greatly inconvenienced by the new normal.

Table 8 highlights the access tools, techniques, and commonly used resources.

Table 8: Librarians preferred information access methods, tools, ICT dependence and e-resources

FEATURE	TYPE	FREQUENCY	PERCENTAGE (%)
ACCESS METHODS	Manual	0	0.0
	Electronic	2	10.0
	Hybrid	18	90.0
ICT DEPENDENT	Yes	20	100.0
	No	0	0.0
ACCESS TOOLS	OPAC	19	95.0
	Search Engine	1	5.0
	Indexes/Databases	0	0.0
	Others	0	0.0
	E-Books	16	80.0

RESOURCES			
	E-Journals	2	10.0
	Audio-Visual	1	5.0
	Others	1	5.0

The study revealed that librarians preferred a hybrid (both manual and electronic) method to access information resources, 90% (n=18). Ten percent (n=2) of the librarians chose online only. It is worth noting that no librarian selected manual access. All the librarians declared that they depend on ICT for their day-to-day operations and confirmed the current library collections are ICT-dependent. The two libraries mainly applied the Online Public Access Catalog (OPAC), 95% (n=19) in their operations. The most commonly used electronic information resource is E-books (80%, n=16).

Both Post Modern Library at Kenyatta University and Reuben Marambii Library of Meru University of Science and Technology libraries utilize both online and traditional methods to serve their students. The institution libraries have adopted ICT technology to aid in their service delivery during the post-COVID-19. From the results, 74.3% of the patrons preferred online access/service which is more convenient for them. Therefore, ICT-dependent resources give libraries a platform to serve their patrons virtually (Adomi & Oyovwe-Tinuoye, 2021). The study areas have shown that ICT is used to aid in offering on and off-campus access services, Database access, Repositories, Online search engines, and Online Customer service. According to Petrowicz (2020) after the reopening of universities libraries immediately responded and adapted operations, services, and procedures, and the transition to delivering library services mostly digitally. Even though online support of access and utilization of information is the most recommended alternative, it comes with its challenges. The university librarians believed that the biggest obstacles were the digital divide, a lack of digital literacy, and sluggish internet speeds (Rafiq *et al.*, 2021).

ICT has been utilized in pre-COVID-19, more during COVID-19, and post-COVID-19 mostly to facilitate online library services. ICT has eased the way of doing things in the library both for the librarians and the patrons. Despite the benefits, the patrons decried inadequate computer and ICT facilities, poor network connectivity, lack of know-how, and high cost of internet bundles (especially off-campus) as the impediments to embracing digital library services.

V. CONCLUSIONS AND RECOMMENDATIONS

This study focused on examining the factors that influence the accessibility and use of information resources in the Reuben Marambii Library of Meru University of Science and Technology and the Post-Modern Library of Kenyatta University during the post-COVID-19 epidemic period. The study revealed that the librarians' digital skills were lacking due to the absence of training and other capacity-building initiatives. The research reveals that the difficulties brought on by the load of COVID-19 are factors affecting the availability and use of information. However, some challenges are due to unpreparedness and lack of upgrading most services from conventional to modern. Modern methods of offering services employ technology for both functional and operational roles of libraries.

The study noted that some of the innovative strategies put in place during the reopening of the libraries inconvenienced some users. They include early closing of the library due to curfew hours, reduced library reading capacity, halting lending service, and limited users from accessing library information resources. These greatly affected the access and utilization of information resources in the two libraries.

As with the pandemic crisis, the "new normal" requires librarians and users to be tech-savvy and capable of handling it. The library management should prioritize training staff and users to bridge the digital divide and transform them into tech-savvy since it is necessary. New best practices such as use of the hybrid method of support users on access to information, the use of AI technologies, and standard policies to be developed by experts to guide libraries during a disaster like the COVID-19 pandemic.

The Kenyatta university library and Reuben Marambii libraries must integrate current information with dedicated online platforms and communications technology, including high-bandwidth Internet connectivity. Technological infrastructure such as internet networks, computers, and related devices are needed to be improved, which the funders of the libraries should consider. Further, this research calls for policymakers to feature new measures in the libraries that will protect both the user and librarians. The results of this study call for further research to be done in specific library services to draw solutions to the associated challenges posed by the COVID-19 burden.

REFERENCES

- Adebayo, O. A., Ahmed, Y. O., & Adeniran, R. T. (2018). The Role of ICT in Provision of Library Services: A Panacea for Sustainable Development in Nigeria. *Library Philosophy & Practice*. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1951>
- Adela, F. (2020). Reopening Ethiopian Higher Education Institutions Library in the Context of COVID-19. *International Journal of Information Library and Society*, 9(2), 38–43.
- Adomi, E. E., & Oyovwe-Tinuoye, G. O. (2022). COVID-19 information seeking and utilization among library and information science professionals in Nigeria. *IFLA Journal*, 48(1), 216–227.
- Aladeniyi, F. R., & Owokole, T. S. (2018). Utilization of Library Information Resources by Undergraduate Students of University Of Medical Science Ondo, Ondo State, Nigeria. *American International Journal of Contemporary Research*, 8(4), 92–99. <https://doi.org/10.30845/aijcr.v8n4p9>
- 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. <https://doi.org/10.1111/hir.12307>
- Amao, M. A. (2020). Use of Information and Communication Technology in Library Services, Impact and Challenges. *African Scholars Journal of Contemporary Education Research (JCER-8)*, 19(8), 283–292.
- Ashikuzzaman, M. (2021, January 3). Impact of ICT in Library and Society. *Library & Information Science Education Network*. Retrieved from <https://www.lisedunetwork.com/impact-of-ict-in-library-and-society/>
- Banks, K. (2021). 8 ways COVID-19 has changed library programming forever | AISA | Association of International Schools in Africa. *Association of International Schools in Africa (AISA)*. Retrieved from <https://aisa.or.ke/8-ways-covid-19-has-changed-library-programming-forever/>
- Chakraborty, S., & Jana, S. (2021). Challenges and opportunities of academic libraries in India because of COVID-19. *Annals of Library and Information Studies (ALIS)*, 68(2), Article 2. <https://doi.org/10.56042/alis.v68i2.39571>
- Cherinet, Y. M. (2018). Blended skills and future roles of librarians. *Library Management*, 39(1/2), 93–105.
- Chisita, C. T., & Chizoma, U. S. (2021). Rethinking academic library space amidst the COVID-19 pandemic in South Africa: Preparing for the future. *Information Discovery and Delivery*, 49(2), 105–113.
- Decker, E. N. (2021). Reaching academic library users during the COVID-19 pandemic: New and adapted approaches in access services. *Journal of Access Services*, 18(2), 77–90.
- Fasae, J. K., Adekoya, C. O., & Adegbilero-Iwari, I. (2021). Academic libraries' response to the COVID-19 pandemic in Nigeria. *Library Hi Tech*, 39(3), 696–710.
- Gavit, B. K. (2019). Web Based Library Services. *Library Philosophy and Practice (e-Journal)*. Retrieved from <https://digitalcommons.unl.edu/libphilprac/2931>
- Islam, S., & Islam, N. (2006). Information and communication technology (ICT) in libraries: A new dimension in librarianship. *Asian Journal of Information Technology*, 5(8), 809–817.
- Joel, A. P., & Camble, E. (2023). Information dissemination during the COVID-19 pandemic: The role of librarians in Borno State Public Library. *Information Development*, 39(2), 287–293. <https://doi.org/10.1177/02666669211049122>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Lobo, J., & Dhuri, K. R. (2021). Positive impact of COVID-19 pandemic in enhancing digital literacy skills among library professionals: A study. *Library Philosophy and Practice*, 1–18.
- LoC. (2021). *Visiting the Library | Library of Congress* [Web page]. Library of Congress, Washington, D.C. 20540 USA. Retrieved from <https://www.loc.gov/visit/>
- Mahanta, P. K. (2020). Application and Utilization of ICT in the Degree College Libraries of Assam. *Library Philosophy and Practice*, 1–14.
- 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.

- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative & qualitative approaches* (Vol. 2). Acts press Nairobi.
- Onye, U. U. (2016). Availability, Accessibility and Utilization of Library Information Resources by Students of the Federal University of Technology, Owerri (FUTO). *Information and Knowledge Management*, 6(10), 20–24.
- Petrowicz, D. (2020). The effects of COVID-19 on Libraries | For Librarians | Springer Nature. *Springer Nature*. Retrieved from <https://www.springernature.com/gp/librarians/the-link/blog/blogposts-news-initiatives/the-effects-of-covid-19-on-libraries/18507278>
- 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), 102280. <https://doi.org/10.1016/j.acalib.2020.102280>
- RSA. (2020). *KwaZulu-Natal Arts and Culture on reopening of public libraries and museums*. Republic of South Africa. Retrieved from <https://www.gov.za/speeches/kwazulu-natal-arts-and-culture-reopening-public-libraries-and-museums%20A0-14-sep-2020-0000>
- Shaikh, T. A. A. M. (2019). *Application of information and communication technology in libraries: Prospects and challenges*. National Level Conference on Web Based Library and Information Services in Academic Libraries., Shindkheda, Dist. Dhule, India.
- Tamaro, A. M. (2020). COVID-19 and Libraries in Italy. *International Information & Library Review*, 52(3), 216–220. <https://doi.org/10.1080/10572317.2020.1785172>
- Tseke, S., & Chigwada, J. P. (2021). COVID-19: Strategies for positioning the university library in support of e-learning. *Digital Library Perspectives*, 37(1), 54–64.
- UNESCO. (2021). *Media & Information Literacy Curriculum for Educators & Learners*. United Nations Educational, Scientific and Cultural Organization.
- UoC. (2020, November 17). *Library life in the time of COVID*. University of Cambridge. Retrieved from <https://www.cam.ac.uk/stories/library-covid-life-1>
- Vassilakaki, E., & Moniarou-Papaconstantinou, V. (2021). Library space and COVID-19: Re-thinking of place and re-designing of digital space. In *Libraries, digital information, and COVID* (pp. 207–213). Elsevier.
- Walsh, B., & Rana, H. (2020). Continuity of academic library services during the pandemic the University of Toronto libraries' response. *Journal of Scholarly Publishing*, 51(4), 237–245.
- Walia, P. K., & Gupta, M. (2012). Application of web 2.0 tools by national libraries. *Webology*, 9(2), 21–30.
- Wittenberg, J., Sackmann, A., & Jaffe, R. (2018). Situating Expertise in Practice: Domain-Based Data Management Training for Liaison Librarians. *The Journal of Academic Librarianship*, 44(3), 323–329. <https://doi.org/10.1016/j.acalib.2018.04.004>