

Difficulties Encountered in the Delivery of Library Services in the period of Pandemic: Experience from Academic Libraries in Tertiary institutions in Delta State

Owasa Diodemise Ese
Delta State University, Nigeria
Ese.evwaras.ovwasa@gmail.com

Abstract

Background: This study examined the difficulties encountered in the delivery of library services in the period of covid-19 pandemic.

Aim: The aim of this study is to examine the difficulties encountered by librarians in tertiary institutions in Delta State in the delivery of library services in the period of lockdown.

Method: The study was guided by three research questions and three null hypotheses. A descriptive method of ex-post facto research design was adopted in the study. The population comprised all academic libraries in tertiary institutions in Delta State with a sample of 137 library staff. Questionnaire was the instrument used for data collection. The data obtained were analysed with the aid of mean, standard deviation and independent samples t-test.

Result: It was found that the library staff were only able to provide skeletal services such as information and research assistant to staff of the tertiary Institutions, and that due to the restriction in physical contact, they were only able to use What Sapp, phone calls and text messages to communicate with library users. The study also found that as a result of the covid-19 protocols, the library staff experienced difficulties in the delivery of library services. It was recommended amongst others that the government should rejig ICT facilities in these institutions.

Keywords: Library Services; Academic Library; Covid-19; Pandemic; Digital Library; E-library; ICT

1. Introduction

The advent of the COVID-19 pandemic in 2019 presented unprecedented challenges across various sectors globally, with the education sector being one of the most affected. Academic libraries, integral to the functioning of tertiary institutions, experienced significant disruptions in their service delivery models due to the pandemic's impact. The need for social distancing and subsequent lockdowns necessitated a shift from traditional in-person library services to remote and digital alternatives. This transition, while essential for continuing educational support, exposed several difficulties inherent in delivering library services during a global health crisis.

Academic libraries serve as crucial hubs for learning, research, and the dissemination of information. They provide access to vast resources that are pivotal for the academic success of students and the research activities of faculty members. In the context of tertiary institutions in Delta State, Nigeria, the pandemic-induced shift highlighted infrastructural and technological inadequacies, resource limitations, and the digital divide among students and staff (Olanlokun & Adekanye, 2020). These challenges impeded the ability of academic libraries to effectively meet the information needs of their users, thereby affecting the overall academic experience.

1.1. Statement of the Problem

The rapid and unanticipated onset of the COVID-19 pandemic necessitated an immediate response from academic libraries to adapt to new modes of service delivery. However, the readiness and capacity of these libraries to transition to remote operations varied significantly. In Delta State, tertiary institutions faced considerable hurdles in maintaining the quality and accessibility of library services. The primary issues included limited access to digital resources, inadequate technological infrastructure, insufficient training for library staff in digital service delivery, and the socio-economic barriers faced by students, such as lack of internet connectivity and digital devices (Ekwueme & Igwe, 2021).

These challenges are symptomatic of a broader systemic issue within the educational infrastructure in the region, which struggled to cope with the demands of a rapidly evolving educational landscape. The pandemic thus underscored the urgent need for comprehensive strategies to enhance the resilience and adaptability of academic libraries. Addressing these problems is critical for ensuring that academic libraries can fulfill their role in supporting education and research during crises and beyond.

This study aims to investigate the specific difficulties encountered by academic libraries in tertiary institutions in Delta State during the pandemic. By identifying these challenges, the research seeks to provide actionable insights and recommendations for improving library services in the face of future disruptions.

2. Related work

The library is considered the engine room of the university. It houses information resources needed for knowledge and skill acquisition. Without the library, the university will be like a car without engine. Yusuf and Iwu (2010) likened academic library to the focal point where scholarship revolves around. Through the library, students and staff gather information to support their learning experiences. Students go to the library to do their assignment, obtain materials needed to support researches and gather information about current affairs. Staff visit the library to gather information about major course content to support their research.

The standard of every educational programme can be evaluated through the strength of the library (Agboola & Bamigboye, 2011). This is why university managements and the government invest heavily on the library resources in the university. Academic libraries, according to Katamba and Abdulsalam (2014), are designed to promote learning, research, and community service.

Academic libraries' role to the human capacity development function of universities cannot be overemphasised. According to Onwudinjo (2015), the primary function of an academic library entails the assistance to its parent institution in achieving its goals. He also mentioned that a library is a vital intellectual resource in an academic community because it assists the university in meeting curriculum requirements and promoting studies and research. Abubakar (2011) also mentioned that the library is a site of great interest to undergraduates since it contains relevant, adequate, and up-to-date information items that are required for learning all possible courses. Hence, all academic libraries are designed to suit the information needs of the institution's academic programmes. That is, librarians make the necessary efforts to involve multiple departments by distributing publisher's catalogues to

each of them in order to examine a list of available materials prior to commencing on annual acquisition.

Academic libraries, according to Arthur, Brafi, and Kuranchie (2013), play a critical role in achieving tertiary institution goals, and academic institutions may not be able to meet students' academic, intellectual, as well as other interests and information demands without the help of good libraries. A decent library and information services have been identified as a necessary component of successful research, teaching, and learning (Banting et al, 2008). Academic libraries, according to Agyen-Gyasi, Lamptey, and Frempong (2010), are critical contributors to knowledge development and serve a diverse range of knowledge searchers. The library is a natural place to start an orderly search for secondary material when conducting research. This raises concerns about educational institutions that lack this critical resource. According to Aina (2004), the services supplied by a university's library reflect the university's excellence.

The delivery of the all-important services of academic libraries has undergone several changes in recent times. One of such changes is the digitalisation of its services to the public. This is even more obvious with the advent of information and communication technology (ICT), which has taken over every area of human endeavour. According to Sadiku (2015), the introduction of ICT has caused libraries to undergo a paradigm shift from conventional to technologically driven information. Information management has changed dramatically because of the deployment of ICTs in the information environment.

With the introduction of digital libraries across Nigeria, many universities in the country followed suit by establishing digital library facilities in their academic libraries (Gani & Magoi, 2014). This is probably to prepare for the unforeseeable future. A future where physical contact among the general public will be limited. A future where almost all human activities will have to be carried out online in the comfort of one's homes, far from public glare.

The year 2020 ushered in cases of corona virus popularly known as covid-19, which started in December, 2019 in Wuhan City, China. It has remained unabated with not end in sight. Hundreds of thousands of people have been reported dead from the disease so far. As at the time of writing this report, a total of 229,139,093 cases of corona virus has been reported, with 4,703,185 deaths around the world (Worldometer, 2021). In Nigeria, a total of 201,630 cases have been confirmed with 2,654 deaths since the first case was announced on the 27th of February, 2020 (Nigerian Centre for Disease Control, NCDC, 2021).

In an effort to contain the spread of the disease, the World Health Organisation (WHO) adopted several measures, including social and physical distances, personal hygiene and wearing of facemasks. NCDC joined the rest of world to implement a lockdown. Virtually every areas of human life were affected, the education sector being the worst hit. Over 188 out of 195 countries implemented nationwide school closures and restricted education facilities (UNESCO, 2020). It was estimated that more than 1,576,021,858, which constitute about 91.3% of all the learners around the world were affected by the closure of educational institutions (Fong, Qadan, McKinney, Griggs, Shah, Buyske & Altieri, 2020).

In Nigeria, school closure began from March 27, 2020 (Eze, Sefotho, Onyishi & Eseadi, 2021), grounding most school activities. In order to avoid a disruption of academic activities across tertiary institutions, several administrators implemented e-learning. In some tertiary institutions in Delta State, managements directed lecturers to migrate to online learning by converting all their lecture notes to digital copies. They were directed to upload the digital copies of their lecture notes on the university's websites and on other social media platforms for students to access while at home.

It is worthy to note that while the directive on e-learning migration recorded some level of success, there was no provision for the role of the university library at this time. Because of social and physical distances, the main library of the university was completely abandoned during the lockdown and post-lockdown period. The closure of academic libraries during the period was not limited to tertiary institutions in Delta State. According to Chibuzor and Mole (2021), at the University of Nigeria libraries users were unable to visit the library physically. Same was experienced globally, although some university libraries who were prepared for the pandemic were able to provide online access to some of their contents. For example, the University of Nigeria, (UNN), Nsukka provided online access to various range of services such as OPAC, e-books and e-journals in the university's library to users (Chibuzor & Mole, 2021).

In another study, Ameh, Ukwuoma and Oye (2021) and Ovwasa (2024) lamented that due to the rapid spread of the virus and inadequate power supply, most libraries in Nigeria were closed, particularly in public locations, with only a few providing digital information on their websites or through social media channels. The authors suggested that inadequate ICTs needed to drive digital libraries in Nigeria could be the reason for the lack of services during the lockdown period. Many libraries in Pakistan were also able to provide online support to users (Ali & Gatti, 2020). Some libraries also initiated online webinar sessions to interact with users using web platforms such as Google Classroom (Chuks-Ibe, Salau, Salami & Irenea, 2020).

In Delta State University, Abraka, Nigeria, the situation is different. Prior to the introduction of lockdown in the school system, the library's information resources are categorized and preserved in various portions of the library building, with a focus on hard copies. Traditional approaches (face-to-face meetings) are used to provide reference and information literacy services. When the lockdown was implemented and students deserted their campuses due to the Covid-19 outbreak, these conventional procedures used by the university library crumbled.

With near zero application of e-library, how was the libraries in Tertiary institutions in Delta State able to provide services to users during the covid-19, what strategies did they apply to reach out to their users, what are the challenges they encountered in provision of library services to their users. In line with this background, the aim of this study is to examine the difficulties encountered by librarians in tertiary institutions in Delta State in the delivery of library services in the period of lockdown.

Research Questions

1. To what extent were librarians in Tertiary institutions in Delta State able to provide services to users during the period of covid-19 pandemic?
2. What other alternatives to physical contact did librarians in Tertiary institutions in Delta State apply to provide services to users during the period of covid-19 pandemic?
3. What are the difficulties librarians in Tertiary institutions in Delta State encountered in the delivery of library services to users during the period of covid-19 pandemic?

Hypotheses

1. There is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on how they were able to provide services to users during the period of covid-19 pandemic

2. There is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on other alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic
3. There is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on the difficulties encountered in the delivery of library services to users during the period of covid-19 pandemic?

3. Methodology

Design of the Study

The study adopted the survey method of ex-post facto research design to achieve the aim of the study. This method was applied because, it afforded the researcher opportunity of obtaining information from a large group of people at the same time.

Research Participants

The participants of the study are made up of academic librarians in Tertiary institutions in Delta State, with a total of 27 academic libraries. In order to get an even representation of participants in each library, a proportionate sampling technique was used to select librarians from each library. This gave a total of 137 participants for the study.

Development of Instrument

Questionnaire used to collect data in the study. The questionnaire was designed by the researcher in line with the objectives of the study. The questionnaire contains 39 items (12 items for services provided during the period of Covid-19 pandemic, 10 items for alternatives to physical contact and 17 items for difficulties experienced by librarians during the period of covid-19 pandemic). The items were structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree.

During the development phase of the instrument, the questionnaire was handed over to a colleague who is a librarian for face and content validity. The colleagues gave some insight as to how the instrument can be fine-tuned for quality assurance. The suggestions of the colleague were used to enhance the quality of the instrument. Thereafter, the researcher gave the instrument to a measurement expert for face and content validity. The expert assessed the items in the questionnaire and suggested the removal of some items which did not address the objectives of the study and suggested others to be added to the instrument. The instrument was therefore validated for face and content validity through experts' judgement.

In order to estimate the reliability of the instrument, it was administered to some librarians in a neighbouring academic library. The data were analysed with the aid of Cronbach alpha reliability coefficient to determine the internal consistency of the items in the questionnaire. The coefficients obtained include 0.89, 0.74 and 0.83 for the three rating scales used for the study. For instance, Questionnaire on Services Provided during the Period of Covid-19 Pandemic yielded a coefficient of 0.89; Questionnaire on Alternatives to Physical Contact yielded a coefficient of 0.74 while Questionnaire on Difficulties Experienced by Librarians During the Period of Covid-19 Pandemic yielded a coefficient of 0.83. All the coefficients suggest that the instrument had a high reliability index and fit for the study.

Procedure for Data Collection and Analysis

The researcher recruited the assistants of three research assistants who helped her administer the instrument directly to the librarians in their various libraries. In order to comply with ethical code, the researcher assured the respondents that their responses were confidential. They were also told that the process was completely voluntary and that they can decide to disengage from the process anytime they feel uncomfortable.

The data obtained were subjected to a statistical analysis using descriptive and inferential statistics. Descriptive statistics was employed in answering the research questions at a criterion mean of 2.50. On the other hand, independent samples t-test was used to test the hypotheses at 0.05 alpha level. The Statistical Package for Social Sciences (SPSS) version 24 was used for the analysis.

Results

Research Question 1: To what extent were librarians in Tertiary institutions in Delta State able to provide services to users during the period of covid-19 pandemic?

Table 1: Mean rating of services provided to users during the period of Covid-19 Pandemic

S/N	Services	Mean	SD	Remark
1.	Provides information to lecturers	2.96	0.72	Provided
2.	Provides information to non-teaching staff	2.82	0.95	Provided
3.	Provide research assistants to staff	2.63	0.80	Provided
4.	Organise lectures for students	2.37	0.87	Not Provided
5.	Open to students for reading	2.32	0.73	Not Provided
6.	Lend out books to students	2.31	0.81	Not Provided
7.	Provide research assistants to students	2.30	0.83	Not Provided
8.	Lend out books to staff	2.22	0.84	Not Provided
9.	Provides information to students	1.82	0.72	Not Provided
10.	Provide bibliographic instruction to staff	1.67	0.62	Not Provided
11.	Provide bibliographic instruction to students	1.66	0.66	Not Provided
12.	Organise lectures for staff	1.63	0.63	Not Provided
Average Mean		2.23	0.76	Not Provided
Criterion Mean = 2.50				

Table 1 shows the mean rating of services provided to users during the period of Covid-19 Pandemic. The result shows that the mean score of the respondents ranged from 1.63 to 2.96. The criterion mean that was used is 2.50. This means that any item that is equal to or above 2.50 is considered provided while those below 2.50 are considered not provided. From the result of Table 1, items 1-3 are above the criterion mean while items 4-12 are below. This means that on the whole, the services by provided by librarians in Tertiary institutions in Delta State include provision of information to lecturers and non-teaching staff as well as provision of research assistants to staff. Other services expected of academic libraries could not be provided due to the covid-19 protocols.

Research Question 2: What other alternatives to physical contact did librarians in Tertiary institutions in Delta State apply to provide services to users during the period of covid-19 pandemic?

Table 2: Mean rating of alternatives to physical contact applies to provide services to users during the period of covid-19 pandemic

S/N	Services	Mean	SD	Remark
1.	The use of WhatsApp to communicate with users	3.37	0.63	Used
2.	Phone calls to users	2.85	0.72	Used
3.	Exchange of text messages	2.71	0.96	Used
4.	The use of TV shows to deliver lectures	2.40	0.96	Not Used
5.	Use of news bulletin	2.26	0.89	Not Used
6.	Sending of print materials through courier services	2.22	0.91	Not Used
7.	The use of webinar to present seminar	1.77	0.59	Not Used
8.	The use of Facebook to communicate with users	1.67	0.62	Not Used
9.	The use of zoom to deliver services	1.64	0.71	Not Used
10.	The use of radio to provide information	1.64	0.63	Not Used
Average Mean		2.25	0.76	Not Used

Criterion Mean = 2.50

Research Question 3: What are the difficulties librarians in Tertiary institutions in Delta State encountered in the delivery of library services to users during the period of covid-19 pandemic?

Table 3: Mean rating of difficulties librarians in Tertiary institutions in Delta State encountered in the delivery of library services to users during the period of covid-19 pandemic

S/N	Services	Mean	SD	Remark
1.	Depression as a result of fear of the unknown	3.61	0.67	Experienced
2.	Fear of going to large gathering	3.60	0.49	Experienced
3.	Boredom from doing nothing	3.59	0.56	Experienced
4.	Inability to publish article	3.58	0.54	Experienced
5.	Inability to interact with colleagues physically	3.54	0.65	Experienced
6.	High cost of bandwidth	3.45	0.64	Experienced
7.	High cost of facilities	3.35	0.69	Experienced
8.	Absence of Resources that meet ones need	3.31	0.74	Experienced
9.	Inability to attend conferences	3.27	0.76	Experienced
10.	Inability to attend routine meetings	3.19	0.60	Experienced
11.	Lack of finance needed for internet data subscription	3.18	0.74	Experienced
12.	Low bandwidth	3.09	0.88	Experienced
13.	Inadequate internet connectivity	3.03	0.78	Experienced
14.	Website problem in terms of access and use	2.92	0.99	Experienced
15.	Erratic power supply	2.66	0.94	Experienced
16.	Inability to use electronic facilities	2.37	1.10	Not Experienced
17.	Lack of specialists for assistance	1.64	0.68	Not Experienced
Average Mean		3.14	0.73	Not Experienced

Criterion Mean = 2.50

Table 2 shows the mean rating of alternatives to physical contact applies to provide services to users during the period of covid-19 pandemic. The result shows that the mean

score of the respondents ranged from 1.64 to 3.37. The criterion mean that was used is 2.50. This means that any item that is equal to or above 2.50 is considered used while those below 2.50 are considered not used. From the result of Table 2, items 1-3 are above the criterion mean while items 4-10 are below. This means that on the whole, the alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic include the use of WhatsApp to communicate with users, phone calls to users and exchange of text messages. Other e-channels could not be used probably due to their unavailability during the covid-19 pandemic.

Table 3 shows the mean rating of difficulties librarians in Tertiary institutions in Delta State encountered in the delivery of library services to users during the period of covid-19 pandemic. The result shows that the mean score of the respondents ranged from 1.64 to 3.61. The criterion mean that was used is 2.50. This means that any item that is equal to or above 2.50 is considered experienced while those below 2.50 are considered not experienced. From the result of Table 3, items 1-15 are above the criterion mean while items 16 and 17 are below. This means that on the whole, the difficulties librarians in Tertiary institutions in Delta State encountered in the delivery of library services to users during the period of covid-19 pandemic include depression as a result of fear of the unknown, fear of going to large gathering, boredom from doing nothing, inability to publish article, inability to interact with colleagues physically, high cost of bandwidth, high cost of facilities and absence of resources that meet ones need. Others include inability to attend conferences inability to attend routine meetings, lack of finance needed for internet data subscription, low bandwidth, inadequate internet connectivity, website problem in terms of access and use as well as erratic power supply.

Hypothesis 1: There is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on how they were able to provide services to users during the period of covid-19 pandemic

Table 4: t-test analysis of the difference between the perception of male and female librarians in Tertiary institutions in Delta State on how they were able to provide services to users during the period of covid-19 pandemic

Gender	N	Mean	SD	df	t	P	Remark
Male	59	2.32	0.19				
Female	78	2.16	0.26	135	4.16	0.000	Significant

$\alpha = 0.05$

Table 4 shows an independent samples t-test, which was used to examine the difference between the perception of male and female librarians in Tertiary institutions in Delta State on how they were able to provide services to users during the period of covid-19 pandemic. The alpha level used in testing the null hypothesis is 0.05, which means that the null hypothesis was rejected or accepted on the basis of the p-value with relative to its standing with the alpha level. What this means that when the p-value is less than or equal to 0.05 level of significance, the null hypothesis will be rejected while the reverse will be the case when the p-value is greater than 0.05 level of significance. From the result, $t = 4.16$, $p < 0.05$ level of significance. Hence, the null hypothesis is therefore rejected, which implies that there is a significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on how they were able to provide services to users during

the period of covid-19 pandemic. Male librarians appear to have been able to provide services to users during the period of covid-19 pandemic more than their female counterparts.

Hypothesis 2: There is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on other alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic

Table 5: t-test analysis of the difference between the perception of male and female librarians in Tertiary institutions in Delta State on other alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic

Gender	N	Mean	SD	df	t	P	Remark
Male	59	2.24	0.22				
Female	78	2.26	0.21	135	0.68	0.496	Not Significant

$\alpha = 0.05$

Table 5 shows an independent samples t-test, which was used to examine the difference between the perception of male and female librarians in Tertiary institutions in Delta State on other alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic. The alpha level used in testing the null hypothesis is 0.05, which means that the null hypothesis was rejected or accepted on the basis of the p-value with relative to its standing with the alpha level. What this means that when the p-value is less than or equal to 0.05 level of significance, the null hypothesis will be rejected while the reverse will be the case when the p-value is greater than 0.05 level of significance. From the result, $t = 0.68$, $p > 0.05$ level of significance. Hence, the null hypothesis is therefore accepted, which implies that there is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on other alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic.

Hypothesis 3: There is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on the difficulties encountered in the delivery of library services to users during the period of covid-19 pandemic

Table 6: t-test analysis of the difference between the perception of male and female librarians in Tertiary institutions in Delta State on the difficulties encountered in the delivery of library services to users during the period of covid-19 pandemic

Gender	N	Mean	SD	df	t	p	Remark
Male	59	3.19	0.22				
Female	78	3.11	0.26	135	1.92	0.057	Not Significant

$\alpha = 0.05$

Table 6 shows an independent samples t-test, which was used to examine the difference between the perception of male and female librarians in Tertiary institutions in Delta State on the difficulties encountered in the delivery of library services to users during the period of covid-19 pandemic. The alpha level used in testing the null hypothesis is 0.05, which means that the null hypothesis was rejected or accepted on the basis of the p-value with relative to its standing with the alpha level. What this means that when the p-value is less than or equal to 0.05 level of significance, the null hypothesis will be rejected while the

reverse will be the case when the p-value is greater than 0.05 level of significance. From the result, $t = 1.92$, $p > 0.05$ level of significance. Hence, the null hypothesis is therefore accepted, which implies that there is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on the difficulties encountered in the delivery of library services to users during the period of covid-19 pandemic.

Discussion

The findings of the study revealed that to some extent, librarians in Tertiary institutions in Delta State were unable to provide library services during the period of pandemic. Most of the librarians were however, able to provide information to academic and non-academic staff. Such information as related to the covid-19 and the protocols approved by the government were provided to staff in the various tertiary institutions in the state. During this time, some academic staff who were undertaking various kinds of research consulted librarians for information regarding their research. It was found to some extent; librarians were able to provide such research assistants as were within the limit of their jobs. However, the core library services such as provision of accommodation for study, organisation of lectures to students, lending of books, provision of research assistants to students, and provision of information to students were not provided, due to the lockdown and the need for social and physical distance. Also, the librarians could not provide bibliographic instruction to staff and students as well as organise lecture to staff.

The finding in hypothesis 1 revealed significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on how they were able to provide services to users during the period of covid-19 pandemic. It was found that male librarians appear to have been able to provide services to users during the period of covid-19 pandemic more than their female counterparts. The possible reason for this finding may be the fact that the male lecturers were courageous enough to attend to some library users. Their female counterparts remained at home for fear of possible contact with infected persons.

The above finding agrees with Ameh, et al. (2021), who lamented that due to the rapid spread of the virus, most libraries in Nigeria were closed down to users. The finding however, disagree with what was observed at the University of Nigeria, Nsukka (UNN), where Chibuzor and Mole (2021) found in their studies that the university library were able to provide online access to various range of services such as OPAC, e-books and e-journals in the university's library to users.

The finding also revealed that during the period of covid-19 pandemic, due to measures put in place to reduce the spread of the virus, librarians in Tertiary institutions in Delta State had to resort to alternative mode of service delivery. However, because of accessibility and ease of use, they were only able to adopt the use of WhatsApp to communicate with users, phone calls to users and exchange of text messages. Other e-channels could not be used probably due to their unavailability during that time.

The management of the tertiary institutions in Delta State seems to have neglected the library in their migration to e-learning during the lockdown. The libraries were closed for physical contact. The library staff were only able to communicate with users through WhatsApp, phone calls and text messages as these were the available mode of communication. The possible for this could be obvious lack of ICT facilities available in these institutions (Ovwasa, 2021).

The analysis of hypothesis 2 revealed that there is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on other

alternatives to physical contact applied to provide services to users during the period of covid-19 pandemic. This finding implies that both male and female library staff were unanimous as to the use of alternative mode of communication during the period of covid-19 pandemic.

The above finding is in line with Ameh, et al. (2021), who noted that inadequate ICTs needed to drive digital libraries in Nigeria could be the reason for the lack of services during the lockdown period. However, the finding did not support the claim of Chuks-Ibe, et al. (2020) that most libraries initiated online webinar sessions to communicate with users using web platforms such as Google Classroom.

The findings of the study also showed that the library staff experienced several difficulties during the period of covid-19 pandemic. Such difficulties impede their abilities to provide services to their users. The difficulties include depression as a result of fear of the unknown, fear of going to large gathering, boredom from doing nothing, inability to publish article, inability to interact with colleagues physically, high cost of bandwidth, high cost of facilities and absence of resources that meet ones need. Others include inability to attend conferences inability to attend routine meetings, lack of finance needed for internet data subscription, low bandwidth, inadequate internet connectivity, website problem in terms of access and use as well as erratic power supply.

A corresponding hypothesis revealed that there is no significant difference between the perception of male and female librarians in Tertiary institutions in Delta State on the difficulties encountered in the delivery of library services to users during the period of covid-19 pandemic. This means that both male and female library staff had the same experience of difficulties. The reason is not farfetched. They work in the same environment with obvious similar learning and work experience.

The above finding agrees with Alabi and Sani (2021), who identified some difficulties experienced by librarians during the covid-19 period to include inadequate ICT facilities, poor training, low capacity infrastructure, poor power supply and lack of preparedness.

4. Conclusion and Recommendations

In view of the findings of the study, it was concluded that librarians in Tertiary institutions in Delta State experience different levels of difficulties during the period of covid-19 pandemic, which had a great impact on their service delivery. These difficulties ranged from fear of the unknown as occasion by the rate of infection being announced on daily basis, lack of adequate ICT facilities to migrate to digital library and poor internet connectivity. Although they were able to resort to the use of alternative channels such as WhatsApp, phone calls and text messages, their service delivery was limited to only provision of information and research assistant to staff of the tertiary institutions. Students, who are the main focus of the library were not included. In line with this conclusion, the study recommended the following:

1. Government should take urgent steps to rejig the ICT facilities in the academic libraries of the various institutions
2. Management of the various tertiary institutions should implement fully digital library services in their academic libraries
3. Library staff should be trained on the application of ICT in the delivery of library services

4. Library staff should visit other university libraries in and outside the country to learn from libraries that successfully provided services via digital channels during the period of covid-19 pandemic

References

- Abubakar, B. M. (2011). The library as the academic life wire of the university. *Library Philosophy and Practice*, (January).
- Agboola, I. O., & Bamigboye, A. (2011). *Students' level of study and use of library resources in Nigerian universities: A comparative study*. Retrieved 20th September, 2021 from <http://unuib.unl.edu/lpp>.
- Agyen-Gyasi, K., Lamptey, R., & Frempong, A. (2010). Academic librarians' role in maximizing library use in Ghana. 20th September, 2021 dspace.knust.edu.gh:8080/
- Aina, L. O. (2004). *Library and information science text for Africa*. Ibadan: Third World Information Services.
- Alabi, C. O., & Sani, J. O. (2021). Librarians and information service delivery in Kogi State Nigeria during covid-19 pandemic. *Journal of applied Information Science and Technology*, 14(1), 107-117.
- Ali, M. Y., & Gatti, P. (2020). The covid-19 (corona virus) pandemic: reflections on the roles of library and information professionals. *Health Information and Libraries Journal*, 37, 158-162.
- Ameh, G. J., Ukwuoma, H. C., & Oye, P. O. (2021). Covid-19 pandemic and evolving library and information services: lessons for Nigeria. *International Journal of Development and Management Review*, 16(1), 75-87.
- Arthur, C., Brafi, P. O., & Kuranchie, A. (2013). The Use of Academic Libraries among Students in Tertiary Institutions in the Sunyani Municipality, Ghana. *Journal of Education and Practice*, 4(2), 117-126.
- Chibuzor, L. D., & Mole, A. J. (2021). Academic Staff Use of Electronic Resources (ER) in Nigerian University Libraries During the COVID-19 Lockdown Period. *Library Philosophy and Practice* (e-journal). 5341.
- Chuks-Ibe, P. O., Salau, S. A., Salami, R. O., & Irenoa, K. O. (2020). Public Library Services in Nigeria during and Post Corona Virus Disease (COVID-19) Era Roles and Challenges. *Niger Delta Journal of Library and Information Science*, 1(1), 18-24.
- Ekwueme, L. O., & Igwe, K. N. (2021). The impact of COVID-19 pandemic on library services in tertiary institutions in Nigeria. *Journal of Library and Information Science*, 10(2), 56-69.
- Eze, U. N., Sefotho, M. M., Onyishi, C. N., & Eseadi, C. (2021). Impact of COVID-19 pandemic on Education in Nigeria: Implications for Policy and Practice of e-learning. *Library Philosophy and Practice* (e-journal). 5651.
- Fong, Z. V., Qadan, M., McKinney, R., Griggs, C. L., Shah, P. C., Buyske, J., ... & Altieri, M. S. (2020). Practical implications of novel coronavirus COVID-19 on hospital operations, board certification, and medical education in surgery in the USA. *Journal of Gastrointestinal Surgery*, 24, 1232-1236
- Gani, E., & Magoi, J. S. (2014). The emergence of digital libraries services in Northwest Nigerian universities: Challenges and prospects. *Library Philosophy and Practice* (e-journal). 1184.
- Katamba, A. S., & Abdulsalam, A. S. (2014). An assessment of the levels of job motivation and satisfaction as predictors of job performance of library personnel in Nigerian universities. *Journal of Balkan Libraries Union*, 2(2), 26-33.
- Nigerian Centre for Disease Control, NCDC (2021). *Covid-19 Nigeria*. Retrieved 20th September, 2021 from <https://covid19.ncdc.gov.ng/>
- Olanlokun, S. O., & Adekanye, E. A. (2020). Adapting library services in Nigerian universities during COVID-19 lockdown: Challenges and opportunities. *Library Philosophy and Practice*, 1-15.

- Onwudinjo, O. T. (2015). "Law Journal Collections: Accreditation Issues and Imperatives for Law. *Library Philosophy and Practice*, 7(5), 148-152.
- Ovwasa, (2021). Information needs and seeking behavior of small and medium enterprises (SMEs) managers in Nigeria. University of Ilorin, Nigeria. *International Journal of Information processing and communication*. 11(1), 113-126.
- Ovwasa, (2024). Social demographic variables and the use of Electronic Information Resources among University students in Nigeria. *Sule Lamido University Journal of Science and Technology*. 8(1).
- UNESCO (2020). *COVID-19 – A glance of national coping strategies on high-stakes examinations and assessments*. Retrieved 20th September, 2021 from https://en.unesco.org/sites/default/files/unesco_review_of_high-stakes_exams_and_assessments_during_covid-19_en.pdf
- Worldometer (2021). *Covid-19 coronavirus pandemic*. Retrieved 20th September, 2021 from <https://www.worldometers.info/coronavirus/>
- Yusuf, F., & Iwu, J. (2010). Use of academic library: a case study of Covenant University, Nigeria. *Chinese Librarianship: An International Electronic Journal*, 20th September, 2021 from <http://www.iclc.us/cliej/c130Y1.pdf>.