

DEPLOYMENT OF TECHNOLOGY FOR LIBRARY SERVICE DELIVERY IN POST-COVID-19 PERIOD BY FEMALE LIBRARIANS IN NIGERIA

By

Gloria .O. Oyovwe-Tinuoye, ^{PhD}

&

Sambo, Atanda Saliu^{Ph.D.}

Abstract

The study examined information service delivery in the post-COVID-19 pandemic era among female librarians in Nigeria. The study was an online survey designed by the researchers with three (3) research objectives of the study. An online self-constructed questionnaire was designed by the researchers. The population of the study comprises all female librarians in Nigeria with WhatsApp accounts. Data was collected through a Google web form which was distributed to various individuals with WhatsApp accounts. A total of three hundred and twenty (320) female librarians responded from different libraries and institutions in Nigeria. The findings revealed that COVID-19 increased the use of social media tools such as WhatsApp, Facebook, Telegram, Zoom and among others; increased the use of ICT for academic collaboration, disrupted library services, affected social interactions between female librarians and users. The study further revealed that technology deployed for service delivery were smartphones, laptops, Zoom, WhatsApp, Telegram, TeamViewer, Instagram, personal computers and tablets. The study revealed that the use of information technology enables female librarians to organise library materials, disseminate information materials and master basic skills in information technology. Finally, the majority of the female librarians emphasised that barriers such as inadequate funding from federal and the State governments, insufficient ICT facilities, subsidy data, inadequate skills, erratic supply of power and lack of incentives were issues affecting the provision of information service delivery in post-COVID-19 era.

Keywords: information provision, Service delivery, Post-COVID-19, pandemic, female librarians, Nigeria.

Introduction

A female librarian is a certified librarian in charge of managing library information resources. Her duties in the library may include the selection, processing, organizing and dissemination of information materials for easy accessibility. Omolola and Oyewumi (2017) avowed that a female librarian who has acquired competency in applying theory and technology in the creation, selection, organization and dissemination of information to users. Accordingly, Ogunbadejo (2019) asserted that

female librarians combine their qualifications with their role as women to provide information services that can enhance people's lives. Similarly, Ahiauzu and Echem (2019) asserted that female librarians are part of the human resources that make up the workforce of the academic community and justify the height of their relevance in the role of providing fundamental services, facilities and resources in all formats for teaching and research in the institutions.

However, as society is changing, female librarians are picking up new and challenging roles. Ahiauzu and Echem (2019) asserted that to achieve the digital goal of information packaging and dissemination as part of her core activities, it is imperative for the female librarian to best position herself to be equipped with the right knowledge, skill and competence. Ali and Gatiti (2020) asserted that libraries, as social institutions, are responsible for ensuring public health awareness and the provision of up-to-date information to their users. Similarly, Adomi and Oyovwe(2021) asserted that library and information science professionals are equally looking for reliable information about the pandemic to enable them to disseminate useful information to their users.

The study of Chidi-Kalu et al. (2018) reveals that female librarians in their role should educate their patrons in such a way that they will know when they need information, identify the kind of information that will address their particular problem, find their needed information resources, evaluate the information resources, organize the information and use the information effectively in addressing their problems. This can only be achieved when female librarians can provide reliable information on post-COVID-19. Such roles have made female librarians assume the position of and function as instructors, mediators and even in most cases guidance and

counsellor, especially in this era of post-COVID-19. However, studies have been conducted on library and information professionals' information needs during COVID-19 but none have been conducted on the technology deployed in service delivery in post-COVID-19 pandemic period by female librarians in Nigeria. Hence, this study tends to fill this research gap.

Objectives of the study

The core objective of the study is to ascertain the Deployment of technology in the post-COVID-19 pandemic period by female librarians in Nigeria. The precise objectives are to:

1. find out the COVID-19 pandemic effect on services provided by female librarians in Nigeria
2. find out the technology deployed by female librarians for service delivery in post- COVID-19 pandemic in Nigeria
3. find out the Challenges faced in library service delivery by female librarians in Nigeria after post -COVID-19.

Literature review

There are several effects of the COVID-19 pandemic on services provided by female librarians in Nigeria such as the increase in the use of technology in service delivery, more innovation in service delivery, increased the use of technology to render services to distant library patrons, increased the use of social media tools, increased the use of ICT for academic research, disruption of library services, libraries were closed and physical social interactions between the librarians and library users was affected. According to IGI Global (2020), the effect of the COVID-19 pandemic made various groups of people within the educational system adapt quickly to the new

environment, whereby female librarians made frantic efforts to ensure that all library resources and services are available to patrons from a remote location.

Adomi and Oyovwe-Tinuoye (2021) asserted that globally teachers, students, and female librarians are being forced to transition to an online-only environment, as numerous schools, universities and libraries are compelled to close their campuses in response to COVID-19 mandates. Fasae, Adekoya and Adegbilero-Iwari (2020) surveyed academic libraries' responses to the COVID-19 pandemic situation in Nigeria. Their findings revealed that some safety measures put in place by the libraries included total closure of the library, provision of hand sanitizers as well as the use of face mask by library users; social distancing measures also put in place as communication was made through social media as well as the termination of physical attendance to library patrons.

There are several technologies deployed for service delivery in post-COVID-19 by female librarians such as Smartphone, laptops, Zoom, WhatsApp, Telegram, personal computers/tablets, Team viewer and Instagram to users. Anwar and Zhiwar (2019) noted that 45% of the world population are active users of social media such as WhatsApp, Zoom, Telegram, Team viewer and Instagram among others, goes to show the role social media plays in information dissemination worldwide. DeBoni (2020) asserted that Nationwide web surveys and even those that cover several countries can generate results in a few weeks, most especially when the recruitment is performed through social networks such as Facebook, Instagram, Twitter, and WhatsApp.

The study of Sawyerr-George et al. (2018) reveals that for female librarians to achieve a feat in their role of ICT empowerment, they must be trained to be innovative and creative so that they can embrace new trends in librarianship with the use of ICT to satisfy their users. In sustaining this however, it is necessary that

continuous self-improvement, training and retraining be vigorously pursued by the female librarians to avoid being perceived as information and technologically obsolete in this era, but rather, as role models in the ever-learning society (Ahiauzu & Echem ,2019). This implies having up-to-date knowledge of information materials, being proficient and conversant with the use and application of technology tools within her reach, easy manipulation of IT gadgets such as computers, tablets, and laptops among others the ability to effectively interact with library users and assisting them with online materials to suit their needs.

Ahiauzu and Echem (2019) asserted that female librarians in enhancing the digital services to library users in the ever-changing environment are faced with the following challenges range from the issue of inadequate funding from within and outside the library, inadequate sponsorship on the part of parent institutions and government on professional training that will enable them to acquire the needed and relevant skills or knowledge to strengthen their services, the unwillingness of some female librarians in engaging themselves in personal development programmes, lack of time and inadequate provision of technological facilities and infrastructures amongst others. Similarly, Sawyerr-George et al. (2017) revealed that training female librarians play an important role in effective service delivery in their different libraries and that lack of finance hinders their training and education for effective services.

Research Methodology

The researchers adopted a convenience sampling technique for the study because it would facilitate easy and speedy collection of data as the study was conducted when the Nigeria economy is not too palatable in terms of mobility. The researchers designed an online survey with three (3) research objectives of the study. The population of the study consisted of all female librarians in Nigeria with WhatsApp

accounts.

A self-constructed questionnaire entitled: “Technology used for library service delivery in post-COVID-19 by female librarians in Nigeria (TULSDPCOVID-19FLN)”. A total of three hundred and twenty (320) female librarians responded from different libraries and institutions in Nigeria. This represents 60.3% of female librarians with WhatsApp accounts in Nigeria.

Results and Discussion

Table 1: Effect of COVID-19 Pandemic on survives female librarians in Nigeria

Effect of COVID-19	SA	A	D	SD	Mean
COVID-19 brought an increase in the use of technology in service delivery.	90(28.1%)	130(40.6 %)	50(15.6 %)	50(15.6 %)	2.8
COVID-19 brought more innovation in service delivery	120(37.5 %)	100(31.2 %)	60(18.7 %)	40(12.5 %)	2.9
The spread of COVID-19 increased the use of technology to render services to distant library patrons	140 (43.7%)	80(25%)	45 (14.0%)	55(17.1 %)	2.8
The spread of COVID-19 increased the use of social media tools such as whatsApp,Facebook,Telegram, Zoom among others for service delivery	145(45.3 %)	75(23.4%)	65(20.3 %)	35(10.9 %)	3.0
The spread of COVID-19 increased the use of ICT for academic research seminars e-conferences collaboration among others	135 (42.1%)	75 (23.4%)	45 (14.0%)	65 (20.3%)	2.8
The spread of COVID-19 pandemic disrupted library services	170(53.1 %)	70(21.8%)	60(18.7 %)	20(6.25 %)	3.2
The COVID-19 pandemic made librarians to be closed	70 (21.8%)	165 (51.5%)	25 (7.8 %)	60 (18.7%)	2.7
The spread of COVID-19 affected social interactions between librarians and library users (students staff and external researchers)	170 (53.1%)	50(15.6%)	55(17.1 %)	45(14.0 %)	3.0
Overall mean	2.9				

SA- Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree

Table 1 reveals the effect of the COVID-19 Pandemic on female librarians in Nigeria. The findings revealed that a majority of the respondents attested that COVID-19 brought about an increase in the use of technology, more innovation, increased the use of technology for distant patrons, increased the use of social media

tools such as WhatsApp, Facebook and Zoom among others, increased the use of ICT for academic research seminars, disrupted library services and effected social interactions between the librarians and the library users. However, Table 3 reveals that the overall mean(2.9) is higher than the criterion mean(2.5) which also indicated that female librarians were affected by COVID-19 as shown in Table 1.

Table 2: Technology deployed for service delivery in post -COVID-19 Pandemic

Technology deployed	SA	A	D	SD	X
I use a Smartphone to render services to the user	150(46.8%)	50(15.6%)	70(21.8%)	50(15.6%)	2.9
I use a laptop for service delivery	140(43.75%)	90(28.1%)	45(14.0%)	45(14.0%)	3.0
I use Zoom for communication with users	150(46.8%)	40(12.5%)	70(21.8%)	60(18.7%)	2.8
I use whatsapp/Telegram to render services to users	100(31.2%)	90(28.1%)	75(23.4%)	55(17.1%)	2.7
I use a personal computer/tablet to render services to distant users	80(25%)	130(40.6%)	60(18.7%)	50(15.6%)	2.7
I use team viewer/Instagram to render services to users	135(42.1%)	75(23.4%)	55(17.1%)	55(17.1%)	2.9
The use of information technology enables me to organise library materials for service delivery	140(43.7%)	80(25%)	55(17.1%)	45(14.0%)	2.9
The use of information technology enables me to disseminate information materials easier and faster	80(25%)	135(42.1%)	60(18.7%)	45(14.0%)	2.7
The use of information technology enables me to master basic skills in disseminating information materials	90(28.1%)	120(37.5%)	55(17.1%)	55(17.1%)	2.7
Overall mean	2.8				

Criterion mean =2.5

Table 2, reveals that the majority of the respondents attested that technology deployed for service delivery in post-COVID-19 are smartphones, Zoom, laptops, WhatsApp, Telegram, personal computers/tablets, Team viewer and Instagram. The respondents further concur that information technology enable them to organise library materials, disseminate information materials easier, faster and enables them to master basic skills in disseminating information materials. However, Table 4 reveals

that reveals the overall mean (2.8) is higher than the criterion mean (2.5) which also indicated that female librarians deployed technology for service delivery in post-COVID-19 as shown in Table 2. Nationwide web surveys and even those that cover several countries can generate results in a few weeks, most especially when the recruitment is performed through social networks (e.g., Facebook, Instagram, Twitter, and WhatsApp (DeBoni, 2020).

However, this prohibited those who were not on the WhatsApp platform from participating in the survey. Accordingly, it has been observed by De Boni(2020) speed, large samples, and wide scope inherent in e-surveys do not guarantee external validity (representativeness or generalization of the results), which can only be achieved with probability sampling method or census. Therefore, the limitation of the findings of this study stalks from the incompetence to guarantee the representativeness or generalization of the results.

Table 3: Challenges faced by Female librarians in providing services delivery

Challenges facing service delivery	SA	A	D	SD	X
Inadequate assistance from state and FBN funding e-service in the library	180(56.2%)	70(21.8%)	30(9.37%)	40(12.5%)	1.9
Insufficient ICT facilities in the library	200(62.5%)	80(25%)	20(6.25%)	20(6.25%)	3.4
Lack of subsidy of data for the librarians	150(46.8%)	100(31.2%)	40(12.5%)	30(9.37%)	3.1
Poor signal during service delivery	100(31.2%)	90(28.1%)	70(21.8%)	60(18.7%)	2.7
Inadequate training skills in the use of technology facilities	120(37.5%)	80(25%)	60(18.7%)	60(18.7%)	2.8
Erratic supply of power	120(37.5%)	90(28.1%)	65(20.3%)	45(14%)	2.8
Lack of incentive for librarians	110(34.3%)	80(25%)	75(23.4%)	55(17.1%)	2.7
Overall mean	2.7				

Criterion mean 2.5

Table 3, reveals that the majority of the respondents indicated that inadequate assistance from the State and FGN in funding e-service in the library,

insufficient ICT facilities, poor signals, erratic supply of power, inadequate training skills on ICT and lack of incentives for female librarians. However, Table 5 reveals that overall mean (2.7) is higher than the criterion mean(2.5) which also indicated that female librarians has challenges for service delivery in post-COVID-19 as shown in Table 3.

This is in line with Sawyerr-George et al. (2017) who found that training female librarians play an important role for effective service delivery in their different libraries, and that lack of finance hinders their training for effective services. This is in agreement with Ahiauzu and Echem (2019) who attested that those female librarians in enhancing the digital services to library users in the ever-changing environment are faced with the following challenges range from the issue of inadequate funding from within and outside the library, inadequate sponsorship on the part of parent institutions and government in professional training that will enable them to acquire the needed and relevant skills or knowledge to strengthen their services, the unwillingness of some female librarians in engaging themselves in personal development programmes, lack of time and inadequate provision of technological facilities and infrastructures amongst others.

Conclusion

Based on the findings of this study, it is concluded that female librarians were affected by COVID-19 and as such COVID-19 brought about an increase in the use of technology, more innovation, increased the use of technology for distant patrons, increased the use of social media tools such as WhatsApp, Facebook, Zoom among others, increasing the use of ICT for academic research seminars, disrupted library services and effected social interactions between the librarians and the library users in service delivery. Technology deployed for service delivery in post-COVID-19 are

smartphones, Zoom, laptops, WhatsApp, Telegram, personal computers/tablets, Team viewer and Instagram. This technology enables female librarians to organise library materials, disseminate information materials easier, faster and enables them to master basic skills in the dissemination of information materials. Although, inadequate funds, insufficient ICT training and inadequate ICT facilities/gadgets among others. In addition, information got from this research will be made available to the National Universities Commission, Tetfund and all stakeholders of Tertiary institutions on how to improve library services in tertiary institutions in Nigeria.

Recommendations

- I. Library management should constantly sponsor female librarians for conferences, workshops and seminars on the latest Information and Communication Technology (ICT) used in library operations for effective service delivery.
- II. Library management should ensure that the latest ICT facilities and gadgets are acquired in the library for effective service delivery.
- III. Library management should be friendly with the university management in order to be getting access to more fund allocated to the library.
- IV. Library management should also be seeking for grants from local and foreign bodies/ agencies in order to build up the standard of library operations.

References

- Adomi, E.E & Oyovwe-Tinuoye, G.O(2021). COVID-19 Information seeking and utilization among library and information science professionals in Nigeria. *IFLA Journal* 48(1),216-227.
- Ahiauзу, B.E. & Echem, M.E. (2019).The Role of the 21st Century Female Librarian for Service Delivery in Nigeria: Case Study of Academic Libraries in Rivers State, Nigeria. *Journal of Library and Information Sciences* 7(1), 106-116.

- Ali, M. Y., & Gatiti, P.(2020). The COVID-19 (coronavirus) pandemic: Reflections on the role of Librarians and Information Professionals. *Health Information & Libraries Journal*, 37(2), 158-162.
- America Library Association (2020). *Pandemic Preparedness resources for libraries*. Retrieved from [http://www.ala.org/tools/publication and resources](http://www.ala.org/tools/publication_and_resources).
- Anwar, M., & Zhiwei, T.(2019). Social media makes things possible for Librarians: A critical note. *American Journal of Biomedical Science and Research*, 6(1), 23- 28.
- Chidi-Kalu, E., Abdulrahim, N. & Adepoju, F. (2018). The role of women librarian In information literacy in the 21st century: A conceptual perspective. *Journal of Association of Women Librarians in Nigeria*, 1(2), 127-140.
- De Boni, R.B. (2020). Web surveys in the time of COVID-19, *Cadernos de Saúde Pública*, 36(7) <http://dx.doi.org/10.1590/0102-311x00155820>.
- Fasae, J. K, Adekoya, C.O&Adegbilero-Iwari, I. (2020), Academic libraries' response to the COVID-19 pandemic in Nigeria, *Library Hi Tech*, Vol. ahead-of-print No. ahead-of-print.<https://doi.org/10.1108/LHT-07-2020-0166>
- IFLA(n.d) Library Map of the World.Avaliable at [https://librarymap ifla.org/map/metric/number_of_libraries types National libraries](https://librarymap.ifla.org/map/metric/number_of_libraries_types_National_libraries)
- IGI Global (2020).What Is the Role of Libraries During the COVID-19 Pandemic? Available at: [https://www.igi-global.com/newsroom/archive/role-libraries-during-covid-pandemic /453 5](https://www.igi-global.com/newsroom/archive/role-libraries-during-covid-pandemic/4535)
- Librarian Registration Council of Nigeria (2021).List of certify librarians. Retrieved From [http://.www.ircn.gov.ng](http://www.ircn.gov.ng)
- Ogunbadejo, A. (2019). *The woman librarians' roles in developing STEM Education for Economic Growth and Sustainable Development in Nigeria*. Retrieved from <http://.www.eprints.federalpolyilaro.edu.ng>.
- Omolola, I. G.& Oyewumi, G. (2017). Mentoring women in librarianship for career and development. *Journal of Association of Women Librarians in Nigeria*, 1(1),1-8.
- Premise (2020). The Do's and Don'ts of Conducting Surveys During COVID-19. Available at: [https://www.premise.com/the-dos-and-donts-of-conducting-surveys- during-covid-19/](https://www.premise.com/the-dos-and-donts-of-conducting-surveys-during-covid-19/).
- Wright, K. (2005). Researching internet –based populations advantages and disadvantages of Online survey research, online questionnaire authoring software packages, and Web survey services. *Journal of Computer – Mediated*

Communication, 10, Available at:<https://scirp.org/reference/referencespapers.aspx>.

Sawyerr-George, O., Bribena, E. & Sawyerr, R. E. (2017). Need for continuous education and training of women librarians for effective service delivery. *Journal of Association of Women Librarians in Nigeria*, 1(1), 9-17.

Sawyerr-George, O., Assor, D. E. & Theophilus, N. (2018). The role of female librarians in empowering girls of the 21st century through ICT. *Journal of Association of Women Librarians in Nigeria*, 1(2), 1-14.