



Influence of Library Technology Applications on Accessibility and Retrieval of Information Resources among Female Librarians in Federal University Wukari, Taraba State, Nigeria.

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Abstract

This study was designed to investigate the influence of library technology applications on accessibility and retrieval of information resources among females' librarians in Federal University, Wukari the study was guided by four (4) objectives and four (4) research questions. Descriptive survey research design was adopted for the study and population of the study was the 42 professional and non-professional staff of A.A Rasheed Library, Federal University Wukari. The sample was 15 female librarians. Data were gathered through the instrument of a questionnaire developed by the researchers. The instrument was subjected to face and content validation by three experts, two from library and information science department and one from measurement and evaluation unit, both in university of Nigeria, Nsukka cronbach alpha method was used to determine the internal consistency of the instrument. The reliability coefficient was established at 0.81, which implies that the instrument is reliable for the study Data collected were analyzed using descriptive statistics, mean and standard deviation. The findings revealed that the level of awareness and usage of library technology applications among female librarians in Federal University Wukari is to an extent considered very high. The findings also revealed that there are benefits of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari. Following the findings, recommendations were made such as: Library administrators should provide regular training and support to female librarians to enable them to effectively use library technology applications amongst others.

Keywords: Library technology, Information retrieval, Information resources, Accessibility

1.1 Introduction

The advent of library technology applications has transformed the way librarians manage, organize, and disseminate information resources. The integration of technology in libraries has improved the accessibility and retrieval of information

resources, enhancing the overall library experience for users (Adebayo & Emmanuel, 2019). However, the impact of library technology applications on female librarians' accessibility and retrieval of information resources is a relatively underexplored area of research. Female librarians play a crucial role

in managing and maintaining library collections, providing research support, and promoting literacy and lifelong learning (Kwanya et al., 2017). Despite their importance, female librarians often face unique challenges in accessing and retrieving information resources due to various barriers, including lack of technical skills, limited access to technology, and societal expectations (Mwanzo, 2020).

Library technology applications, such as online public access catalogs (OPACs), digital repositories, and library management software, have the potential to enhance female librarians' accessibility and retrieval of information resources (Okiy, 2019). These applications provide a platform for librarians to manage and organize library collections, facilitate information discovery, and support research and learning (Aina & Adebowale, 2020). However, the effectiveness of library technology applications in enhancing accessibility and retrieval among female librarians depends on various factors, including the level of technical skills, the availability of technology infrastructure, and the organizational culture (Kiplang'at et al., 2018). Furthermore, the digital divide and the lack of digital literacy among some female librarians may hinder their ability to effectively utilize library technology applications (Mtega & Mgaya, 2019).

The integration of library technology applications has revolutionized the way information resources are managed, accessed, and retrieved in academic libraries. Federal University Wukari, like many other institutions, has invested in various library technology applications to enhance the accessibility and retrieval of information resources. However, the impact of these applications on female librarians, who play a crucial role in managing and maintaining library collections, is a relatively underexplored area of research. Studies have shown that library technology applications can

significantly enhance the accessibility and retrieval of information resources. For instance, a study by Jumba, Usman, and Bashiru (n.d.) found that information retrieval tools influenced information retrieval and facilitated the utilization of library resources at the Abubakar Adamu Rasheed Library, Federal University, Wukari. Similarly, a study by Umebali (2024) revealed that accessibility enhances the utilization of library resources by students in federal colleges of education in South East, Nigeria.

Despite the benefits of library technology applications, female librarians may face unique challenges in accessing and retrieving information resources. These challenges may include lack of technical skills, limited access to technology, and societal expectations (Mwanzo, 2020). Therefore, it is essential to investigate the influence of library technology applications on accessibility and retrieval of information resources among female librarians in Federal University Wukari. This study aims to explore the impact of library technology applications on female librarians' accessibility and retrieval of information resources. Specifically, it seeks to investigate the level of awareness and usage of library technology applications among female librarians, the benefits and challenges of using these applications, and the factors that influence the adoption and effective use of these applications.

The findings of this study will contribute to the existing body of knowledge on the influence of library technology applications on accessibility and retrieval of information resources among female librarians. The study will also provide valuable insights for librarians, policymakers, and stakeholders on how to promote effective use of library technology applications and enhance the accessibility and retrieval of information resources.

1.2 Research Questions

The following research questions guided the study:

1. What is the level of awareness and usage of library technology applications among female librarians in Federal University Wukari?
2. What are the factors that influence the adoption and effective use of library technology applications among female librarians in Federal University Wukari?
3. What are the benefits of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari?
4. What are the challenges of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari?

3.1 Research Methods

The study adopted a descriptive survey research design. This design was considered appropriate because descriptive survey studies are interested in describing the characteristics of certain groups of people considered a representative sample of the entire group. The population of the study was made up all 42 library staff in A.A Rasheed library, Federal University, Wukari. The sample for the study was all 15 female

professional and non-professional librarians.

A self-developed questionnaire titled “library technology applications on accessibility and information retrieval Questionnaire” (LTAAIRQ) was used for data collection. The instrument contained 20 items divided into four clusters based on the research questions. The instrument was validated by three experts, two in Library and information science Department and one in Measurement and Evaluation unit all from University of Nigeria, Nsukka. The instrument was trial tested on 20 female librarians in university of Nigeria, Nsukka, which is outside the study area but has similar characteristics. Cronbach Alpha method was used to ascertain the reliability coefficient of the instrument and the reliability index of 0.81 was obtained.

Descriptive and inferential data analysis was employed. Mean and standard deviation were used to answer research questions raised in the study. A criterion mean of 2.50 was used as a benchmark for decision-making. Thus, any item with a mean of 2.50 and above was accepted, while item with a mean below 2.50 was unaccepted by the respondents.

4.1 Results

Research Question One: What is the level of awareness and usage of library technology applications among female librarians in Federal University Wukari?

Table 1: Mean and Standard Deviation of Responses on the level of awareness and usage of library technology application among females Librarian in Federal University Wukari.

S/N	Item statement	N	X	SD	Decision
1.	How would you rate your level of awareness about library technology applications?	15	2.87	1.06	Accepted
2.	To what extent do you agree that library technology applications have improved your job performance?	15	3.27	0.96	Accepted
3.	How would you rate the ease of use of library technology applications?	15	3.07	0.95	Accepted
4.	To what extent do you agree that library technology applications have increased your productivity?	15	3.2	0.96	Accepted
5.	How would you rate your level of satisfaction with library technology applications?	15	3.53	0.66	Accepted
	Cluster Mean		3.19		

Data presented in Table 1 revealed that all items in the cluster are accepted with a cluster mean of 3.19. Respondents agreed that level of awareness and usage of library technology application among female Librarians in Federal University, Wukari is high and accepted with mean score ranging between 2.87 and 3.53.

Research question Two: What are the factors that influence the adoption and effective use of library technology applications among female librarians in Federal University Wukari?

Table 2: Mean and Standard Deviation of Responses on the factors that influence the adoption and effective use of library technology applications among female librarians in Federal University Wukari.

S/N	Item statement	N	X	SD	Decision
1.	How would you rate the relevance of library technology applications to your job requirements?	15	2.93	1.12	Accepted
2.	How would you rate the user-friendliness of library technology applications?	15	3.0	0.93	Accepted
3.	How would you rate the availability of training and support for library technology applications?	15	2.53	1.18	Accepted
4.	How would you rate your level of technical expertise in using library technology applications?	15	2.73	1.05	Accepted
5.	To what extent do you agree that management support is essential for the successful adoption of library technology applications?	15	3.6	1.77	Accepted
Cluster Mean			2.96		

Result in Table 2 above shows the factors that influence the adoption and effective use of library technology applications among female Librarians in Federal University, Wukari. The cluster means score of 2.96 which is above the criterion mean of 2.50 indicated that all items in the cluster are accepted. The mean score of item 6,7,8,9 and 10 are 2.93, 3.0, 2.53, 2.73 and 3.6

respectively.

Research question Three: What are the benefits of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari?

Table 3: Mean and Standard Deviation of Responses on the benefits of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari.

S/N	Item statement	N	X	SD	Decision
1.	library technology applications have increased your ability to access information resources remotely	15	4.07	1.31	Accepted
2.	Improved accessibility to information resources	15	3.67	1.45	Accepted
3.	Enhanced information retrieval	15	3.13	1.58	Accepted
4.	Increased productivity of female Librarians	15	3.73	1.50	Accepted
5.	library technology applications have improved your ability to provide effective library services	15	3.47	1.65	Accepted
Cluster Mean			3.61		

Result presented in Table 3 showed the mean and standard deviations of respondents on the benefits of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari. Result showed that items 11, 12, 13, 14, 15 had mean ratings of 4.07, 3.67, 3.13, 3.73 and 3.47 and standard deviations of 1.31, 1.45, 1.58, 1.50 and 1.65 respectively.

These mean ratings are above the criterion level of 2.50 set for accepting an item, this means that to a great extent, increased productivity of female librarians,

improved their ability to provide effective library services, enhanced information retrieval, improved accessibility to information resources are all benefits of using library technology application in enhancing accessibility and information retrieval in federal university, Wukari.

Research Question Four: What are the challenges of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari?

Table 3: Mean and Standard Deviation of Responses on the challenges of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari.

S/N	Item statement	N	X	SD	Decision
1.	constant need for updates and maintenance is a challenge when using library technology applications	15	3.33	1.63	Accepted
2.	Difficulty in accessing relevant information resources	15	3.0	1.73	Accepted
3.	Lack of training or support	15	3.87	1.39	Accepted
4.	Insufficient infrastructure	15	3.6	1.63	Accepted
5.	Technical difficulties	15	3.27	1.74	Accepted
	Cluster Mean		3.41		

The data presented in Table 4 revealed the mean rating of the responses of the respondents on the challenges of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari. The table had mean values ranging from 3.0 to 3.87 which are all above the criterion mean of 2.50 on a 4-point rating scale. The above finding indicated that the respondents agreed that lack of training or support, technical difficulties, insufficient infrastructure, difficulty in accessing relevant information resources and constant need for updates and maintenance are all challenges of using library technology applications in enhancing accessibility and information retrieval of

information resources among female librarians in Federal University Wukari.

5.1 Discussion of Findings

The findings of the study revealed that is the level of awareness and usage of library technology applications among female librarians in Federal University, Wukari is very high. This is an indication that many if not all the females Librarian are aware of the usage of library technology applications which they used daily at work. This align with the submission of Khan (2016), that Information and Communication Technology (ICT) has transformed library services globally. Most current information are recorded in electronic format, ICT has also contributed immensely to the performance of

librarians in the discharge of their duties such as in cataloguing and classification, reference services, circulation management, serials control and e-library.

The finding of the study also revealed that there are factors that influence the adoption and effective use of library technology applications among female Librarians in federal university Wukari. Such factors include: user-friendliness of library technology applications, your level of technical expertise in using library technology applications amongst others. The finding is in line with Rexwhite, Doreen and Akpovoka (2013), who stresses that information is used in the context of user or studies need, to denote a physical entity or phenomenon, the channels of communication through which messages are transferred or the 3 factual data, document, transmitted orally. This information can be described as a response caused by an external stimulus that condition one's form of behaviour or the amount of impact received from exterior that modifies our state of knowledge.

The finding showed that there are benefits of using library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University Wukari. Some of which are: increased productivity of female librarians, improved their ability to provide effective library services, enhanced information retrieval, improved accessibility to information resources. This finding aligns with the study of Ricci, Rokach and Shapira (2015), where the observed that library technology can assist in providing better references services, making easier for patron to find the information needed. They went further to say that it can further increase accessibility, increase productivity and enhanced security and efficiency.

The finding of the study also revealed that numerous challenges such as lack of

training or support, technical difficulties, insufficient infrastructure, difficulty in accessing relevant information resources and constant need for updates and maintenance are among the main challenges that inhibit the use of library technology applications in enhancing accessibility and information retrieval of information resources among female librarians in Federal University, Wukari. In a study conducted by Baeza-Yates and Ribeiro-Neto, (2019) opine that volume of technological content continues to grow exponentially, digital libraries face significant scalability challenges. Ensuring that the infrastructure can handle large volumes of diverse digital assets while maintaining efficiency is a complex endeavor. According to (W3C, 2018), ensuring that digital libraries are accessible to diverse user groups, including those with disabilities, is a critical challenge. This involves compliance with accessibility standards and the development of user-friendly interfaces. Accessibility considerations also encompass making digital content available to users with different technologies and network conditions.

Conclusion

The study on the influence of library technology applications on accessibility and retrieval of information resources among female librarians in Federal University Wukari has provided valuable insights into the benefits and challenges of using these applications. The findings of the study indicate that library technology applications have improved the accessibility and retrieval of information resources, but also pose significant challenges, including technical difficulties, lack of training and support, and insufficient infrastructure.

The study highlights the need for library administrators to provide adequate training and support to female librarians to enable them to effectively use library technology applications. Additionally, the

study emphasizes the importance of investing in modern infrastructure and technology to support the effective use of library technology applications. The findings of the study have implications for library practice, policy, and research. They suggest that library administrators and policymakers should prioritize the development of strategies to promote the effective use of library technology applications among female librarians. Furthermore, the study highlights the need for further research on the impact of library technology applications on the work of female librarians and the delivery of library services.

Overall, the study contributes to the existing body of knowledge on the impact of library technology applications on the work of librarians and highlights the need for library administrators and policymakers to prioritize the development of strategies to promote the effective use of these applications.

Recommendations

Based on the findings the researchers recommend the following:

1. Library administrators should provide regular training and support to female librarians to enable them to effectively use library technology applications. This training should include hands-on practice and ongoing technical support.
2. Library administrators should invest in modern infrastructure, including hardware and software, to support the effective use of library technology applications. This includes ensuring that computers and other devices are up-to-date and have sufficient storage capacity.
3. Library technology application developers should prioritize the development of user-friendly interfaces that are easy to navigate and use. This includes ensuring that applications are accessible on a range of devices, including desktops, laptops, and mobile

devices.

4. Library administrators should promote digital literacy among female librarians, including training on basic computer skills, online searching, and digital resource evaluation. This will enable them to effectively use library technology applications and provide support to library users.
5. Library administrators should regularly evaluate the effectiveness of library technology applications and gather feedback from female librarians and library users. This will enable them to identify areas for improvement and make informed decisions about the development and implementation of library technology applications.

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