Computerization of Library Services in University Libraries in Nigeria: A Case Study

Humphrey Igwechi Wiche
Department of Library and Information Science,
Ignatius Ajuru University of Education, Portharcourt, Rivers State, Nigeria
E-mail: humphrey.wiche@iaue.edu.ng

Abstract - **The study examined the computerization of library services at the Federal University, Otuoke, Bayelsa State, Nigeria. The study's execution was directed by three research questions, and a descriptive survey approach was chosen. 56 library employees made up the study's population, but only professionals and paraprofessionals were selected using the judgmental sampling technique, resulting in a sample of 21. The questionnaire was used to collect data. Frequency counts, straightforward percentages, and means were used to examine the data. The results demonstrate that five of the university library's seven units were computerized and that this computerization has a favourable effect on the delivery of library services. Finally, the findings demonstrate that some of the significant obstacles to the effective use of the computerized library system in offering library services include an unstable power supply, a lack of funds, and slow Internet speed. Based on the findings, the researchers suggested that the university library should computerize the other two departments for better services. Additionally, the government ought to increase the nation's electrical supply and provide appropriate funding for education.**
Keywords: **Library Computerization, Library Services, University Libraries, Bayelsa State**

I. INTRODUCTION

The university library is the heart of the university because it plays an important role in the achievement of the university's goals. The primary goal of the university library is to provide access to quality information resources and services to satisfy the information needs of users for effective teaching, learning, and research (Ogunbodede & Oribhabor, 2022). These resources and services must be processed promptly and easily accessible to her users, especially in this digital age. Before this time, library activities were done manually, but with the advent of Information and Communication Technology (ICT), university library services have been transformed globally. Most library services are now computerized as a result of ICT, which has largely replaced the conventional methods of providing library services. It has opened up new options and more effective electronic delivery methods to overcome the traditional library system's limitations of time and location.

The computerization of libraries refers to the use of computers and other technical tools to carry out library tasks that were formerly handled manually, such as cataloguing and circulation. It includes all of the electronic infrastructure and tools used by libraries to enhance and deliver effective services (Oni, 2004). These tools include telecommunications technologies like the telephone, cable, satellite, TV, and radio; computer-mediated conferencing and videoconferencing; Internet-based facilities; software programs; printers, laminators, fax machines, and photocopiers. These ICT resources have been used to perform repetitive and routine data processing tasks that are typical of university library operations effectively and efficiently.

The use of digital technologies has changed every aspect of university libraries' services. ICT has had a significant impact on the calibre of the information offered through libraries, and it also makes it possible to supply patrons with competent and adequate library services (Adebayo *et al.,* 2018). The conversion of numerous manual library procedures and processes to computerized ones has improved the effectiveness, efficiency, and timeliness of library service delivery (Hussaini *et al.,* 2017). The use of computers in academic libraries increases patron satisfaction with the information resources available there, saves time for both library personnel and users, prevents duplication of effort, and makes library services efficient (Nayana, 2019; Hussaini *et al.,* 2017; Otunla, 2016). Omehia (2018) observed that the extent of information collection, processing, arrangement, and dissemination in libraries has increased as a result of the use of ICT. It removes barriers related to time, space, language, and media while increasing speed and lowering costs.

In industrialized nations, the majority of university libraries have fully embraced the digital revolution, which has led to better library service delivery. The researchers have noted that the majority of university libraries in Nigeria have not fully computerized their services, despite the growth and potential of ICT in enhancing library services. Most university libraries in Nigeria provide library services manually rather than using computerized library services (Ajani & Buraimo, 2020). If Nigerian university libraries don't adopt ICT, users won't have access to the full range of resources made possible by contemporary technology, and their needs won't be met by the services they provide. Dissatisfaction among users could result from this. If

university libraries in Nigeria are to remain relevant in the digital era, they must immediately capitalize on exciting ICT breakthroughs to provide services to their clients. When ICT is employed more frequently in library services, the quality of those services in Nigerian university libraries would improve. It is, therefore, on this note that this study examined the computerization of library services at the Federal University, Otuoke, Bayelsa State, Nigeria.

A. Statement of the Problem

ICT's rapid development and use in libraries have had an impact on librarians and raised important considerations about how they should adjust to new responsibilities and pursuits in a society that is increasingly interconnected. Most of the old methods of service delivery in libraries have been replaced by ICT. Despite its rapid growth, it has been noted that most university libraries in Nigeria have not fully computerized their operations, which has contributed to the gap between them and libraries in wealthy nations. Many university libraries continue to employ antiquated manual ways to provide library services, which prevents them from being able to offer patrons efficient and effective services. University libraries in Nigeria must immediately capitalize on the exciting ICT breakthroughs to offer improved services to their patrons if they are to remain relevant in this digital age. Because using these ICT tools would improve the delivery of library services, it is appropriate for libraries and librarians to adopt and utilize them. It is, therefore, on this note that this study examined the computerization of library services at the Federal University in Otuoke, Bayelsa State, Nigeria. The work seeks to proffer answers to the following research questions:

1. What units of the library are computerized?
2. What are the impacts of the computerization system on library services?
3. What are the challenges encountered in the use of the computerized library system in providing services?

II. LITERATURE REVIEW

Studies on the computerization of library services have been done in various ways. A review of a few of these investigations is provided in this section.

In academic libraries in Benue State, Nigeria, Agada *et al.,* (2021) looked into the impact of library automation on staff productivity. 241 librarians from the three university libraries in Benue State made up the study's population. According to the research, academic libraries in Benue State's libraries have seen a significant improvement in staff members' job performance as a result of the automation of library operations. The perceived influence of automation on university library services by library staff in Southwest, Nigeria was examined by Ajani & Buraimo (2021). 697 library staff members from nine university libraries in southwest Nigeria make up the study's population. The results showed that library automation in southwest Nigerian

university libraries was only partially implemented and that library automation had a favourable effect on library services. A study on the use of ICT in academic libraries in Kwara State, Nigeria, was undertaken by Adeniran *et al.,* (2020). The study, which included 83 librarians, revealed that most academic libraries in Kwara State are at a developed stage in terms of the availability of ICT facilities.

ICT usage by librarians at Ekiti State Universities in Nigeria was investigated by Yusuf *et al.,* (2021). 115 library staff from the three universities in Ekiti state made up the study's population. The research reveals that, among other things, photocopiers, printers, computers, OPAC, Internet services, and scanners are among the ICT resources used in university libraries to deliver services. In private universities in southwest Nigeria, Olagoke & Kolawole (2019) investigated how automation in libraries affected librarian performance. 349 librarians from 22 private university libraries in southwest Nigeria made up the study's population. The results showed that five of the six library services were entirely automated, which enhanced the performance of the librarians by 70%.

The study likewise found a strong and favourable relationship between librarian performance and library automation. ICT use in public library services in Rivers State, Nigeria, was the subject of a study by Ogunbodede & Bobmanuel (2022). The research results showed that ICT resources were scarce and severely underutilized in Rivers State public libraries services. In John Harris Library at the University of Benin, Aliu & Emese (2011) looked at the effects of computerizing library operations on patron use and services. The study finds that the delivery of services and the user experience have been significantly impacted by the computerization of library operations.

However, studies have discovered several difficulties in using the computerized library system to deliver services in Nigerian university libraries. According to Ajani & Buraimo (2021), among the difficulties confronting university libraries are a lack of vendor technical assistance, a lack of financing, staff attitudes, and technophobia. Additionally, some of the biggest obstacles to the usage of ICT facilities in university libraries included a lack of proper funding, slow Internet speed, and inconsistent electrical supply (Ogunbodede & Bobmanuel, 2022; Ogunbodede & Wiche, 2021).

Power outages, slow Internet connections, a shortage of computer terminals, and an insufficient number of computers were some of the problems preventing effective Internet usage in numerous Nigerian higher educational institutions, according to Ivwighreghweta & Igere (2014). According to Obiadazie *et al.,* (2019), among the obstacles preventing the successful computerization of library services in Nigeria were a lack of dependable sources of power supply and a lack of ICT skills among librarians. However, as described by Aiyeblehin *et al.,* (2018), the issues of funding, irregular power supply and inadequate ICT/library infrastructure can be regarded as perennial difficulties affecting the many categories of libraries in Nigeria.

Humphrey Igwechi Wiche

III. METHODOLOGY

The research design used for the study was descriptive. 56 library employees from the Federal University in Otuoke, Bayelsa State, made up the study population. Only professionals and paraprofessionals were chosen using the judgemental sampling technique, yielding a sample of 21. The questionnaire served as the data gathering tool. The study data were analyzed with frequency counts and simple percentages, and the mean. Responses to the questionnaire were measured using the 4-point Likert scale of "Strongly Agree" (SA) = 4 points, "Agree" (A) = 3 points, "Disagree" (D) = 2 points, and "Strongly Disagree" (SD) = 1 point. On the scale, a criterion score of 2.5 was adopted. The criterion score was obtained as follows: Criterion score = (4 + 3 + 2 + 1)/4 = 2.5. For research questions 1 to 3, items with a mean score below the criterion score of 2.5 were considered as disagree, and those between 2.5 and above were considered as agree. The data were evaluated using descriptive statistics such as frequency counts, sample percentages, and means. The findings are shown in the table below.

A. Answering Research Questions

This section discusses the findings of this study based on the research questions raised. The results are presented in Tables I-III.

Research Question 1: What units of the library are computerized?

TABLE I UNITS OF THE LIBRARY THAT ARE COMPUTERIZED

Sl. No.	Units	Mean	Remark
1	Electronic library	3.1	Agree
2	Selection/acquisition unit	2.9	Agree
3	Cataloging unit	2.8	Agree
4	Reprographic unit	2.7	Agree
5	Circulation unit	2.6	Agree
6	Reference/serial	2.2	Disagree
7	Security unit	2.0	Disagree
	Grand Mean	2.6	

Table I shows the units of the library that are computerized. Items 1-5 have mean values that are above the criterion mean (2.5) while items 6-7 have mean values that are below the criterion mean. Table I, therefore, shows that five out of the seven units in the university library are computerized.

Research Question 2: What are the impacts of computerization on library services?

TABLE II IMPACTS OF COMPUTERIZATION ON LIBRARY SERVICES

Sl. No.	Impacts of Computerization	Mean	Remark
1	It enhances user satisfaction with library services	2.9	Agree
2	It enhances multiple access to information resources	2.9	Agree
3	Ease of book charging and discharging	2.9	Agree
4	It increases the performance of library staff	2.9	Agree
5	It boosts the image of the institution and the webometric ranking	2.7	Agree
6	It exposes librarians and other library personnel to current trends in IT	2.7	Agree
7	It enhances the selection/acquisition processes	2.6	Agree
	Grand Mean	2.8	

Table II reveals the impact of computerization on library services. All the items in table II have mean values that are above the criterion mean of (2.5). More so, the grand mean (2.8) is greater than the criterion mean (2.5), and this shows that computerization has a positive impact on the provision of library services.

Research Question 3: What are the challenges encountered in the use of the computerized library system in providing services?

Table III shows the challenges encountered in the use of the computerized library system in providing services. All the items in table III have mean values that are above the criterion mean of (2.5) except for item 5 with a mean value of 2.4. More so, the grand mean (2.7) is greater than the criterion mean (2.5), and this shows that items 1-4 are the major challenges in the use of the computerized library system. The most notable ones are inconsistent power supply, inadequate funding, and slow Internet speed.

TABLE III CHALLENGES IN THE USE OF COMPUTERIZED LIBRARY SYSTEM

Sl. No.	Challenges	Mean	Remark
1	Inconsistent power supply	3.1	Agree
2	Inadequate funding	2.8	Agree
3	Slow Internet speed	2.7	Agree
4	Lack of ICT literacy	2.6	Agree
5	Apathy on the side of librarians	2.4	Disagree
	Grand Mean	2.7	

IV. DISCUSSION

The study focused on the computerization of library services at the Federal University in Otuoke, Bayelsa State, Nigeria. According to research question one, five of the university library's seven units were computerized. This illustrates that the majority of library services were computerized, which has improved library services and users' experiences. This outcome is congruent with that of Olagoke & Kolawole (2019), who discovered in their study that five of the six library services were completely automated, improving the performance of the librarians by 70%.

According to research question two, computerization has a favourable effect on the delivery of library services. This conclusion is in line with that of Aliu & Emese (2011), who found that the computerization of library operations had a considerable impact on service delivery and user experience. Finally, findings from study question three indicate that using the computerized library system effectively to deliver services was hindered by an erratic power supply, a lack of funds, and slow Internet connectivity. This is consistent with the findings of Ogunbodede & Bobmanuel (2020), and Aiyeblehin *et al.,* (2018), who discovered in their respective studies that the difficulties affecting the various categories of libraries in Nigeria are related to funding, erratic power supply, and inadequate ICT infrastructure.

V. CONCLUSION AND RECOMMENDATIONS

The study focused on the computerization of library services at the Federal University in Otuoke, Bayelsa State, Nigeria. The findings indicate that five out of the seven units in the university library are computerized, that computerization has a positive impact on the delivery of library services, and that inconsistent power supply, inadequate funding, and slow Internet speed were some of the major obstacles to the effective use of the computerized library system in providing services. Based on their findings, the researchers suggested that the university library should computerize the other two departments for better services. Additionally, the government ought to increase the nation's electrical supply and provide appropriate funding for education.

REFERENCES

[1] 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 and Practice* (e-journal). 1951. Retrieved from http://digitalcommons.unl.edu/lib philprac/1951

[2] Adeniran, C. O., Nwalo, K. I. N., & Ajani, Y. A. (2020). Application of information and communication technology in academic libraries in Kwara State, Nigeria: Progress and challenges. *MBJLIS-Middlebelt Journal of Library and Information Science*, 18.

[3] Agada, E. O., Tofi, S. T., & Ohemu, T. O. (2021). Perceived influence of library automation on the job performance of library staff in academic libraries in Benue State, Nigeria. *Nigerian Libraries*, *51*(1).

[4] Aiyeblehin, J. A., Onyam, I. D., & Akpom, C. C. (2018). Creating maker spaces in Nigerian public libraries as a strategy for attaining national integration and development. *International Journal of Knowledge Content Development & Technology*, *8*(4), 19-31. Retrieved from http://ijkcdt._net/_PR/view/? aidx=17761&bidx=1364.

[5] Ajani, F. O., & Buraimo, O. (2021). Perceived impact of automation on university library services by library personnel in Southwest, Nigeria. *Information Development*, 1–13. DOI: https://doi.org/10.117 7/0266666921992089.

[6] Aliu, I. M., & Emese, G.I (2011). The impact of computerization of library operations on library services and use: A case study of John Harris Library University of Benin. *Journal of Information and Knowledge Management*, *2*(2).

[7] Hussaini S., Vashistha R., Jimoh A. & Jimah H. (2017, 16 September). Automation of library services for enhanced users' satisfaction of information resources in academic libraries in Nigeria. In: *International Conference on Recent Innovation in Science, Engineering, Humanities and Management*. CSMSS College of Polytechnic, Kanchanwadi, Aurangabad, India, 150-159.

[8] Ivwighreghweta, O., & Igere, M. A. (2014). Impact of the Internet on academic performance of students in tertiary institutions in Nigeria. *Inf. Impact J. Inf. Knowl. Manag.*, *5*(2), 47-56.

[9] Nayana J. (2019). A study on library automation status among the aided college libraries in Bengaluru. *Library Philosophy and Practice (e-journal),* 3048. Retrieved from https://digitalcommons.unl.edu/ libphilprac/3048.

[10] Obiadazie, R. E., Nwankwo, N. G., & Anene, I. A. (2019). Computerization of library services in Anambra State: Challenges and prospects. *International Journal of Social Sciences and Humanities Reviews*, *9*(2), 221-230.

[11] Ogunbodede, K. F., & Oribhabor, C. B. (2022). Digital resources usage and academic performance of undergraduate students in Nigeria: A case study. *European Journal of Interactive Multimedia and Education*, *3*(2), e02213. DOI: https://doi.org/10.30935/ejimed/12491.

[12] Ogunbodede, K. F., & Wiche, H. I. (2021): Nexus of Nigerian academic libraries and online education in the pandemic era. *International Information & Library Review*, DOI: https://doi.org/10. 1080/10572317.2021.1973310.

[13] Ogunbodede, K., & Ibisiki, B. (2022). Utilization of ICT in public library operations in Rivers State, Nigeria. *Library Philosophy and Practice (e-journal),* 7092. Retrieved from https://digitalcommons. unl.edu/libphilpr ac/7092.

[14] Olagoke, D. P., & Kolawole, J. A. (2019). Effect of library automation on performance of librarians in private universities in south-west Nigeria. *Information and Knowledge Management*, *9*(5). DOI: https://doi.org/10.7176/IKM.

[15] Omehia, A. E. (2018). Information communication technology and library service delivery. In Obi, B. B. and Ajunwo, J. (Ed.), Introduction to use of library study and information communication technology (ICT) (118-122). Port Harcourt: Press and Bookshop Unit Ignatius Ajuru University of Education.

[16] Otunla A.O. (2016). Current status of automation in academic libraries in Osun State, Nigeria. *Journal of Applied Information Science and Technology*, *9*(2), 29-40.

[17] Yusuf, J., & Fasae, J. K. (2021). Use of ICT as correlates of service delivery by library personnel in Ekiti State Universities, Nigeria. *Library Philosophy and Practice (e-journal),* 6144. Retrieved from https://digitalcommons.unl.edu/libphilprac/6144.