

Enhancing professionalism through ICT in Nigerian university libraries: Challenges and opportunities

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Corresponding Author

Oladapo O. Adeyemo¹

Ayodele O. Fagbemi²

¹Obafemi Awolowo University, Ile-Ife, Nigeria.

²Email: oadeyemo@oauife.edu.ng

²Ekiti State University, Ado-Ekiti, Nigeria.

²Email: ayodele.fagbemi@eksu.edu.ng

ABSTRACT

Librarians play a major role in providing information in various forms to lecturers, students, researchers. There must exist an effective information communication technology (ICT) in all academic libraries to assist its users and professionals. This paper examines the problems and opportunities of ICT in University libraries and how ICT can enhance professionalism of librarians for better library service delivery. The paper also examined the degree of automation in the libraries and the effectiveness and efficiency of the ICT facilities. Also, staff attitude towards the use of ICT in the libraries were assessed. Four Universities in South-West Nigeria were used in this study. Questionnaire was administered to librarians and library officers using total population sampling technique. Data were analysed using simple percentage. The result indicated that library personnels believed that ICT is important in improving job productivity and library services. However, it was examined that only a small percentage of respondents have a fully automated library and majority of the respondents face issues such as inadequate power supply, poor internet facilities and constant hard-ware breakdown. It was highly recommended that funds should be made available to libraries with adequate skilled manpower and policies should be developed and implemented so as to encourage the deployment and development of ICTs in all institutions. Enhancing professionalism through ICT will improve librarians' ability in managing information effectively with user-centered services while staying up to date with global best practices.

Keywords: Information communication technology, Librarian, Library automation, Library professional, Library services, Productivity.

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Highlights of this paper

- The paper discusses the importance of Information Communication Technology (ICT) in Nigerian libraries.
- It examines the challenges professionals encounter and the opportunities of using ICT.
- The paper concludes that the use of ICT is integral in academic libraries to empower librarians to support research and to give users a seamless experience.

1. INTRODUCTION

The establishment of universities is solely focused on pushing the boundaries of knowledge forward. This is accomplished by providing resources and fostering an atmosphere that is favorable for teaching, learning, and research, resulting in graduates who are competent and informed (Küsters, 2022). Therefore, higher institutions are regarded as a citadel of learning where academic work is conducted by lecturers, researchers and students in search of solutions to the problems affecting individuals, organizations institutions, societies and the entire world. The university library is an establishment in the university community that is focused on organizing, sharing, and conserving knowledge and it is usually regarded as the center of the university.

Library and information science (LIS) as a discipline is a profession that pertain to all aspects of library operations, including the interactions between staff and management, users and coworkers, and the library itself. Using these work ethics to achieve the profession's objectives is important to the practice of librarianship.

Library and Information professionals provides service to not just users inside the four walls of the library but also includes mobile library services which entails providing library services to client outside the library (Ngoka, Ezeani, Ugwuozor, & Ezeani, 2024).

It is important to have professional librarians working in libraries because information users need access to resources which can be generated easily by librarians. Therefore, librarians serve as facilitators, helping patrons access information within the library by offering a variety of services that guarantee information easy accessibility to library resources.

All areas of human endeavor have seen significant and forward-thinking changes as a result of the ICTs' rapid development and advancement. This is due to its rapid evolution in the latter half of the 20th century, especially since the 1960s and 1970s, which has led to significant changes in library collections and the way information is disseminated.

Prior to the development of ICT and its subsequent deployment and use in libraries, the traditional delivery of library services was a tedious and time-consuming activity involving monotonous functional activities. Nonetheless the usage and adoption of information and communication technology has increased the efficiency and practicality of library service provision. Essien, Lu, Abredu, and Zotoo (2022) observed that libraries exist to fulfill the needs and desires of their users. Therefore, using ICT for library services gives libraries a great chance to improve service delivery efficiency and meet the need of information users.

The role of LIS has changed from being aliaison to a creator, with innovative methods for information sharing, as a result of the advent of internet which is widely regarded now as the largest reservoir of information.

Information and Communication Technology (ICT) is a system of information processing that transforms, stores, protects, processes, transmits, retrieves, and displays data using electronic computers, communication devices, and software applications.

Information is vital in educational institution and accessing such information have gone through several changes as a result of the development in ICT. Such changes includes the use of technology and the internet to

provide ICT services to a diverse variety of information users. ICT is therefore important to human activities as it makes everyday life easy (Mabawonku, 2017).

Numerous fields, including education, manufacturing, administration, banking, commerce, and industry, depend on information. Information refers to knowledge gathered through reading, inquiry, observation, investigation and study. The information revolution has made information and communication technologies (ICTs) the focal point of social and economic development on a worldwide scale (Ajayi, 2016).

University libraries are the primary catalysts that enable teaching, learning, and research at a university and to have the appropriate quantity and quality of information to fulfill its vision and mission. Otuza, Simisaye, and Badmus (2016) observed that the services offered by libraries in higher institution are designed to satisfy the fundamental requirements of academic activities which is the basis of the institution's mission.

Academic libraries in particular benefit greatly from ICT. It has caused a significant shift in how contemporary libraries are run and operated. It has significantly altered library operations; the academic library system is now surrounded by a technology-driven environment.

The library uses ICT to store, access, process, gather, manipulate and communicate information (Chaputula & Mutula, 2018). With the aid of computer networking, the library uses ICT to do manual tasks and provide services electronically. This facilitates the creation, processing, retrieval, and distribution of information within libraries for library employees. ICT is used by academic libraries by giving library staff members new opportunities to enhance their information sources and offerings.

ICT offers convenience, cost effectiveness, speed, and currency of information. Therefore, it can be used to provide library services more effectively and efficiently. Examples of such services rendered by the library includes indexing and abstracting services, the Online Public Access Catalogue (OPAC), which are crucial automation tool for information finding, user services, online readers' advisory services, bar-coding, bibliographic services, document delivery, library software packages, library retrieval systems, in-house databases, interlibrary loan, audiovisual services, and RFID (Radio Frequency Identification) to deter library theft. All these are examples of unprecedented changes and transformations that technology has brought in academic libraries and information services (Chaputula & Mutula, 2018).

Technology developments should raise the degree of digital awareness among users and library staff, as well as generate more demand for quicker and more efficient information access and maintenance.

Nevertheless, despite the many advantages that come with using ICT in academic library operations, librarians continue to face challenges and barriers when integrating the many technological tools into library services. This is supported by Otuza et al. (2016) that technologies are not being properly applied in providing services to library users and this may be linked to numerous issues, one of which is the lack of the abilities of workers in the ICT applications. Similarly, Ubogu (2019) reported that librarian's ability in using the technology is very low. Thus, it is important to examine the degree of proficiency and ascertain if library staff members have gained the necessary ICT skills and how those skills have affected the delivery of library services. Therefore, this research explores how ICT can enhance professionalism in academic libraries.

2. LITERATURE REVIEW

A librarian is a professional who train to maintain the library and it's resources, these includes selecting, arranging and processing as well as providing various information services to satisfy user's need. The goal of a librarian is to make available adequate and accurate information at the appropriate time. Therefore, librarians will continue to play a huge role in higher institutions (Reitz, 2005). The advent of ICT in the library has

radically transformed how services are provided. From the period where scrolls were used to paper writing, printing and the internet. Through access to intellectual documents, Nigerian libraries are changing from physical library where people acquire information to virtual spaces without borders.

The integration of ICT in libraries can improve information services with timely and easy way of accessing information. It is also a way of promoting sustainable development in the nation. Adigun (2015) noted that the adoption of ICT has contributed to the growth of library services such as, computers, mobile phones, audio-visuals, CD-ROMs, retrographics and other electronic devices for storage, reproduction and dissemination of information services. It is therefore important for library professionals to possess skills in making use of technological resources. The development of ICT has provided libraries the opportunity for collaboration, networking and avoiding duplication of work (Okiki & Alabi, 2019). The technologies in the library are essential resources that aids delivering valuable information and promoting sustainable development (Naeimah & Houcine, 2024). Automating the library comes with some issues and challenges, however, Nwankwo (2006) stated that automating library services may be the most effective means of assisting users address issues related to queries, referencing services, cataloguing, interlibrary loans and collaborations.

Over the years, librarians have become more professional due to growth and utilization of ICT, which has enhanced services in the library. The process of making information accessible, retrievable and disseminated to patrons has improved as a result of availability of ICT. Additionally Librarians can automate their services, set up effective networks for resource sharing and library collaboration, install management information systems, build institutional repositories of digital local content, and launch ICT-based capacity building programs for library users. Fiankor and Akussah (2012) observed that the quality of research will likely improve, and research production and publishing may rise, if researchers and students in developing nations, particularly in Africa, have the necessary skills and access to pertinent electronic information resources. ICT applications play a key role in library services by providing instant access to information from a variety of sources. ICT not only makes it easier to find the resources where the information you need is readily available, but it also helps you separate the relevant information from numerous and useless information.

The information society's expectations must be met by libraries and library professionals. Professionals in libraries need to be knowledgeable with ICT, online technologies, and its tools. Basic computer skills, operating system knowledge, Microsoft application skills, email proficiency, World Wide Web proficiency, library automation software package use, subscriptions, and online journal access are a few examples of these abilities. Other skills include accessing and retrieving information from online resources, using digital libraries, and using online databases.

Prior to the development of ICT, libraries were cumbersome time-consuming, and unadaptable. However, with the advent of ICT in Nigeria, especially at the university level, many users can access information simultaneously and remotely, bridging the worldwide information gap and paving the way for faculty members to conduct thorough and productive research with students (Ashikuzzaman, 2014).

ICT has altered the conventional approaches to library operations and services, opening up new avenues for library use. By building websites and databases, information may be stored, retrieved, distributed, and organized with the aid of ICT tools. Nowadays, information can be disseminated electronically enabling users to access from a distance.

Technological resources are available in several higher institution libraries in Nigeria. Most of these libraries have computers, Internet access, CD-ROMs, and software programs like TINLIB, KOHA, and Alice for Windows/ISIS. Unfortunately, majority of the computers are malfunctioning and the internet infrastructure

is down (Obuh, 2009). With no trained staff to fix them, these facilities malfunction as soon as they are put in place. There is no funding for equipment repairs even in cases where skilled workers are on hand. Additionally, there is a constant power outage that occasionally damages ICT equipment, and staff and students lack the requisite ICT skills.

Adetimirin (2019) stated that since the majority of Nigerian institutions are now integrating ICT equipment in their libraries to enhance their services, the use of technologies in the library has increased significantly. It goes without saying that, if properly employed, the degree of ICT infrastructure adoption and use in libraries will boost the effectiveness of resource use and service delivery within the library system.

Ojedokun and Okafor (2015) observed ICT proficiency, learning, and abilities of librarians in a few Nigerian academic libraries. According to the study, a large number of respondents are proficient in word processing and email usage, but they are not familiar with search engines or directories other than yahoo and google. The function of librarians has shifted from being the custodian of knowledge to being knowledge professionals, with the task of creating, processing, preserving, evaluating, and sharing information electronically (Ubogu, 2019).

The unfavorable laissez-faire mindset of instructors, learners and libraries is another problem preventing the expansion and adoption of technology in libraries (Adeniran, 2018). Lack of IT-trained personnel, unstable power supplies, subpar hardware, a lack of maintenance culture, and a low priority for digital technology are further issues impeding the growth of ICT in libraries. Depending on the library's maintenance policy, maintenance can be performed by library employees, outside contractors the library hires, or university-employed ICT professionals. By tackling the obstacles preventing efficient use of ICT, Nigerian libraries can improve their standing in the global IT revolution (Ekong, Igwe, & Ekong, 2016).

Küsters (2022) conducted a study to determine the current state, trends, and prospects among academic librarians in Nigeria, as well as to examine the degree of professionalism in librarianship. 63 librarians from two universities participated in the study, which used a descriptive survey approach. The study identified several obstacles to professionalism and success in Library and Information science (LIS), including a shortage of professional mentors, funds for professional development, sponsorship for workshops and conferences, and uninterrupted internet access.

Also, Obiadazie, Agbanu, and Nwankwo (2022) concentrated on increasing the knowledge and ICT skills of librarians for efficient service delivery and national integration. The study comprises 208 librarians across sixteen libraries. Questionnaire was used to gather data for the study. According to the findings, library professionals require ICT skills in order to create web-based applications, access and distribute databases, e-resources, and emails. Additionally, librarians have ICT abilities, including the ability to type and print papers, send emails, and search the Internet. Additionally, the study found that exchanging ideas with more experienced librarians could help librarians advance their ICT proficiency and expertise.

The impact of ICT on university library services at the University of Ilorin in Nigeria was investigated by Omekwu and Eruvwe (2014). Total enumeration technique was adopted comprising 32 library personnels. According to the study's findings, ICT gadgets are readily available, updated, and maintained, which helps the library and librarians provide their services more effectively. However, the study found that there is problem of funding, a fluctuating power supply, shortage of trained labor, inadequate ICT training, low supply of internet facilities, inconsistent maintenance, and negative government policies.

The degree of adoption of ICT services and facilities was examined by Küsters (2022). 273 librarians were chosen as the study's sample size and data were collected through the use of questionnaire. Frequency counts were adopted for data analysis in order to address the study questions. The study concluded that there exist a

relationship between service provided and the facilities available. A significant investment in ICT and ongoing training and facility upgrades are necessary for the best possible outcome of standard education. The study also revealed that there is adequate ICT facilities and library services. The study concluded that in order for librarians to use the ICT facilities efficiently, they should receive sufficient and constant training.

In the study of the usage and sufficiency of information and communication technologies for high-quality instructional delivery for education programs, Das (2020) discovered that ICT infrastructure must be provided to ensure good educational standard. The implementation of ICT facilities in university libraries is vital to the provision of library services. However, in practice it has not produced positive results. University's adoption of technology for improved library service delivery is very low because many library services are still operated manually.

3. STATEMENT OF THE PROBLEM

The emergence, development, and advancements of ICTs have significantly changed the profession and practice of libraries. Since most library services are becoming ICT-based, librarians are seeing a change in the library environment. However, Nigerian workers in libraries lack expertise, proficiency, and awareness of ICT developments, and thus have a poor maintenance culture. This makes it impossible for librarians to offer the best library services. The aim of this paper is to empower library staff to explore the digital environment and provide high-quality services to remain relevant in this quickly changing technological world.

4. OBJECTIVES OF THE STUDY

The study seeks to answer question bothering on the problems and opportunities of using technology in enhancing the practice of librarianship. The specific objectives of the study are to.

1. Examine the level of automation in the libraries.
2. Evaluate the effectiveness and efficiency of the ICT facilities.
3. Explore library staff attitude towards the use of ICT in the libraries.
4. Examine the mode of maintenance of ICT facilities in the libraries.
5. Examine the challenges facing libraries in the use of ICT.

5. RESEARCH QUESTIONS

1. What is the level of automation in libraries?
2. How efficient and effective are the ICT facilities?
3. What is the attitude of staff towards the use of technology in the library?
4. What is the mode of maintaining technological resources in academic libraries?
5. What are the challenges facing librarians in using ICT?

6. METHODOLOGY

Four higher institutions in south-west Nigeria were used in the study. Two federal higher institutions (Obafemi Awolowo University, Ile-Ife and University of Lagos) and two private universities (Lead city, Ibadan and Landmark University, Omuaran). Total population sampling was used for the survey. Eighty two (82) questionnaires were distributed to librarians and library officers in the four universities and seventy seven (77) were returned for analysis. Open-ended questionnaire was used in collecting information from the target population. The questionnaire was divided into six sections. The first section obtained information on respondent's demographic

characteristics while the second obtained information about the degree of automation in the library. The third section obtained information about effectiveness and efficiency of ICT facilities. The fourth section obtained information about the attitude of library staff in using ICT in the library, the fifth obtained information about the maintenance of ICT equipment while the sixth section obtained information about the challenges facing libraries in using ICT. The data assembled were analyzed using frequencies and percentages.

7. RESULTS AND DISCUSSION

7.1. Section A: Demographic Information

Section “A” containing Table 1 to 3 shows the socio-demographic characteristics of respondents. The tables showed that 31 library officers and 46 librarians took part in the study. Work experience bracket of 6-10 years have the highest percentage with 28% and 54% of the respondents are female.

Table 1. Designation.

Designation	Frequency	Percentage
Library officer	31	40
Librarian II	13	16
Librarian I	14	18
Senior librarian	11	14
Principal librarian	7	9
Deputy university librarian	1	1

Table 2. Gender.

Gender	Frequency	Percentage
Male	36	46
Female	41	54

Table 3. Work experience.

Work experience	Frequency	Percentage
1-5	16	20
6-10	22	28
11-15	11	14
16-20	9	11
21-25	11	14
26-30	6	7
31-35	2	2.5
36 & above		

7.2. Section B: Degree of Automation in the Library

Table 4 revealed the different types of library management software in use in the universities. While Lead city and Obafemi Awolowo University makes use of Koha library software, Land mark makes use of Alexandria and University of Lagos makes use of New Gen Lib. Table 5 revealed that only 26% of respondents have a fully automated library, this is in line with Fatoki (2004) who observed the importance and benefits of having ICT available in the university libraries and the need for librarians to possess skills in ICT.

Table 4. Type of library management software (LMS) in the library.

University	LMS
Obafemi Awolowo University	KOHA
University of Lagos	New Gen Lib
Lead city University	KOHA
Landmark University	Alexandria

Table 5. Level of automation in the library.

Level of automation	Frequency	Percentage
Fully automated	20	26
Partially automated	57	74

7.3. Section C

Table 6 reveals the degree of effectiveness of technology in libraries. 92% feels electronic information resources are available to users, this is in line with Omekwu and Eruvwe (2014) who observed that numerous information resources are available, and information users can benefit from them. 89% of respondents subscribes to databases in their libraries, this is in line with Nwankwo (2006) who stated that Applying ICTs to library resources and services may be the most effective approach to support researchers and address issues related to literature searches. 71% of respondents indicated that library resources are easily accessible and retrieved.

Table 6. Effectiveness of ICT in libraries.

Items	Yes	%	No	%
Electronic information resources are accessible to users.	71	92	6	8
My library subscribe to databases	69	89	8	11
Library information resources are easily accessible and retrieved	55	71	22	29
Library services are easily carried out and discharged	53	69	24	31

7.4. Section D

Table 7 shows staff attitude towards ICT use. 68% of the respondents believes that using computer will enhance job productivity, this is in line with Okiki and Alabi (2019) who stated that ICT is inevitable in all discipline and profession. 72% is of the opinion that it is necessary to be knowledgeable in the use of ICT facilities. This supports Fiankor and Akussah (2012) assertion that when faculty and students in developing nations, particularly in Africa, possess the necessary skills and accessibility to pertinent digital resources, their research may be of higher quality and encourage a rise in publication and research productivity. Additionally, 79% of respondents think that library services are made easier by the use of ICT equipment. This is also consistent with the submission of Omekwu and Eruvwe (2014) who noted that ICT use in libraries has improved services more than ever. Nonetheless, 48% of respondents prefer to communicate orally than over ICT.

Table 7. Staff attitude on the use of ICT.

Items	Agree	%	Strongly agree	%	Disagree	%	Strongly disagree	%
Using computer will enhance my job productivity	15	19	38	49	0	0	24	31
I enjoy working with computers	15	19	34	44	0	0	28	37
ICT literacy is a necessity for my job	25	32	31	40	21	28	0	0
I would like to learn more about computers	32	42	23	29	22	29	0	0
Using ICT makes library services easy.	40	51	21	28	11	14	5	6
Working with computer makes me feel tensed	10	13	0	0	48	62	19	25
Using a computer is often frustrating	7	9	2	3	47	61	21	27
I prefer communicating physically with users rather than using ICT facilities	31	40	6	8	36	47	4	5

7.5. Section E

Table 8 shows the level of maintenance of ICT facilities in the library. Only 60% reported that a maintenance policy for ICT equipments is ready. According to Obuh (2009) he stated that ICT facilities are not working and the internet facilities are not properly maintained. Also 78% stated that their facilities are maintained by staff in the library. This is in line (Adeniran, 2018) who stated that problems staff encounter in the development of ICT in libraries include lack of trained IT staff. Also 66% of librarians and library officers prefers to outsource the maintenance.

Table 8. Maintenance of ICT facilities.

Items	Yes	%	No	%
Is there a maintenance policy for ICT equipment	46	60	31	40
ICT equipment are maintained in-house in your library	60	78	17	12
I prefer to outsource ICT equipment	51	66	26	34

7.6. Section F

Table 9 states the problems faced by librarians in utilizing ICT. 79% identified inadequate funding as a major problem librarians are facing in utilizing ICT. Also 81% of the respondents identified unreliable power supply as another hindrance being faced in the library. This is in line with Obuh (2009) who stated that there are insufficient funds for equipment repairs and frequent power outages, which can occasionally result in harm to ICT equipment. Additionally, according to 72% of the respondents, inadequate planning is another problem impeding the development of professionalism in libraries. Finally, 70% thought that the technical expertise of the ICT equipment should be investigated.

Table 9. Problems faced by libraries in utilizing ICT.

Items	Agree	%	Strongly agree	%	Disagree	%	Strongly disagree	%
Inadequate funding	48	62	13	17	9	12	7	9
Hardware breakdown	52	68	11	14	14	18	0	0
Software issues	50	65	13	17	13	17	1	1
Unreliable power supply	54	71	8	10	8	10	7	9
Lack of trained staff	41	53	0	0	23	30	13	17
Lack of adequate planning	43	56	15	19	11	14	8	10
Unacceptable standard of LMS	31	40	0	0	45	58	1	1
Technical know-how	54	70	0	0	10	13	13	17
Lack of motivation	40	52	13	17	12	16	12	16
Inadequate management support	54	70	12	16	6	8	5	6

8. RECOMMENDATIONS

1. Funds must be made available to university libraries on a regular basis towards achieving fully automated libraries with subsequent funds made available for their maintenance.
2. There must be formulation and implementation of policies that will encourage the development of ICT in academic libraries
3. There should be regular training and retraining of library personnel. An effective automated library relies on the ability of staff to operate technologies. The required training includes techniques for data entry, use of library software, internet browsing and other operations.

9. CONCLUSION

It is impossible to overstate the value of ICT in libraries. In order to increase professionalism and user happiness, ICT use in library services is essential. ICT significantly increases librarian productivity. To improve library delivery services and stay relevant to information users, library personnel must train themselves to have the necessary library automation abilities.

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