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Digital Competencies of Librarians in University Libraries in Nigeria

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Abstract
The study examined the digital competencies of librarians in university libraries in south-south Nigeria. It aimed to ascertain the digital competencies of librarians, methods used in acquiring digital literacy skills and the challenges they face in obtaining these skills. The descriptive survey design was adopted. The sample of the study comprised 200 librarians. An online survey was used to collect data, and 109 responded to the online survey. Data were analysed using SPSS version 23. The findings show that librarians have a high level of basic digital competence skills and that they employ various methods to acquire digital skills. Inconsistent power supply, poor ICT facilities, and lack of ICT training opportunities among others were some of the challenges faced by librarians in acquiring digital skills. It was therefore concluded that university libraries, library associations, and university management should provide in-house training for librarians and provide financial support to attend workshops to continue to improve their digital skills.

Keywords: *Digital competencies, Librarians, University libraries, Nigeria*

1. INTRODUCTION

Academic libraries are a fundamental part of all higher educational institutions which acquire and make accessible current and pertinent information resources. Due to the importance of these resources in delivering library services, they must be handled quickly and made easily accessible to users, especially in the age of digital technology. Before now, library operations and services were carried out manually, but the growth of digital technology has resulted in the computerization of library operations and services (Ogunbodede et al., 2020). The services offered by academic libraries have been redefined globally because of this computerization. The time and geographical restrictions of the conventional library system have been replaced by new possibilities and more efficient electronic delivery methods due to digital technology (Hamad et al., 2020). Additionally, it has made it possible for various people to access library resources and services using myriad electronic devices from anywhere.

Digital technology has completely changed how academic libraries provide services. Academic libraries in developing countries are seeking to adjust their services to the new realities of offering library services because of these technological advancements. As a result of the development of digital technology, librarians are under a lot of pressure to provide for the needs of tech-savvy users. Academic librarians need to have a specific level of digital proficiency to be able to perform their jobs effectively in the modern era and meet the demands of users. Librarians must be digitally competent to face the challenges of digital librarianship and keep up with the rate of change in academic libraries in this digital world (Khan & Bhatti, 2017).

Digital competence is the ability to engage with and use digital technology confidently, critically, and responsibly for learning, at work, and for participation in society (European Union, 2018). In this sense, "digital competencies" refer to the abilities required of librarians to function well in computerized library settings. These abilities include the capacity to utilize computers and other technological tools to find, assess, utilize, store, produce, and exchange information, as well as to communicate and take part in collaborative networks over the Internet. The librarian can work efficiently in a digital library setting. For instance, librarians' abilities to assist library patrons in finding, organizing, understanding, and creating information utilizing digital technologies.

Adepoju (2020) stated that communication skills, information retrieval abilities, design skills, database administration skills, and multitasking skills are among the competencies required by librarians to facilitate students' online education. According to Okiji (2019), knowledge of how to create and manage digital resources, as well as how to use digital library software and scan documents are some of the digital competencies for librarians. Additional skills include resource sharing and helping users find the information they need. Academic librarians must also have these skills to handle library technology facilities and online resources and to make wise judgments about the library's adoption of new technologies (Izuagbe et al., 2019).

1.1 Statement of the Problem

In Nigeria, there is a rising worry that many academic librarians lack the digital skills and expertise necessary to utilize a computer and other technology-related devices (Osinulu, 2021; Emiri, 2015). This can be because most academic libraries in Nigeria don't have the needed digital technologies or don't expose their librarians to the use of technology-related equipment very much. This presents a significant obstacle for librarians trying to develop their digital literacy. Therefore, to remain pertinent in this age, academic librarians must develop their digital skills to improve their job effectiveness and boost library user attendance (George et al., 2022). There is, therefore, a need to examine the level of digital competence among librarians in Nigeria, as the outcomes will be important

for the library management's decision-making regarding hiring practices, training librarians in digital skills, and the necessity of equipping libraries with digital equipment.

1.2 Objectives of the Study

The main objective of the study is to examine the digital competencies of librarians in university libraries in Nigeria. The specific objectives are to:

i. ascertain the level of basic digital competence of librarians,
ii. establish methods utilized by librarians in acquiring digital literacy skills,
iii. determine the challenges faced by librarians in obtaining digital skills.

1.3 Research Questions

The following questions guided the study:

i. What is the level of basic digital competence of librarians?
ii. What are the methods utilized by librarians in acquiring digital literacy skills?
iii. What are the challenges faced by librarians in obtaining digital skills?

2. LITERATURE REVIEW

This section presents some selected literature on digital competencies, methods used to acquire digital skills, and the possible challenges.

2.1 Librarians' Levels of Digital Competencies

In Jordanian academic libraries, Hamad et al. (2020) examined the impact of librarians' digital literacy on the use of technology. The results showed that librarians had a high degree of digital proficiency and that gender, and other variables have little bearing on academic librarians' digital skills. In another study, Osinulu (2021) did a study on the digital skills of librarians in state and federal colleges in Ogun State, Nigeria. The results indicated that the librarians had a high level of digital literacy proficiency. These studies show that librarians at different university libraries have achieved good digital literacy abilities, and they can function well in digital library environments.

Conversely, several studies have stressed the relatively low and moderate levels of digital competency among librarians. Endouware & Dushu (2021) conducted a study on the digital literacy of academic librarians in Nigerian universities. The findings revealed a poor level of digital literacy among librarians. Similarly, Oguche (2017) evaluated the ICT skills of library staff and found that they possessed an average level of proficiency. These studies underscore the need for appropriate training to enhance librarians' digital capability, enabling them to effectively provide digital library services and meet the evolving needs of users in today's technology-driven world.

2.2 Methods Used in Acquiring Digital Literacy Skills

Sambo et al. (2021) investigated digital literacy abilities among Nigerian librarians. According to the survey, many certified librarians learned digital literacy abilities via self-sponsorship, trial and error. Mulat & Natarajan (2020) examined digital literacy abilities among library personnel in Ethiopian Jimma University libraries. According to the data, librarians learned digital skills via workshops, formal schooling, and YouTube. In a similar study, Emiri (2017) investigated digital literacy skills among university librarians in Edo and Delta States. According to the results, librarians learned digital skills via peer aid, trial and error, information technology courses, and formal schooling. These studies highlight a variety of methods used by librarians to acquire digital literacy skills.

2.3 Challenges in the Acquisition of Digital Literacy Skills

Hamad et al. (2020) identified several key obstacles faced by librarians in Jordan in acquiring digital skills. These challenges include inadequate funding, a lack of financial support from the library administration for attending workshops, and poor library infrastructure. Likewise, Emiri (2015) highlighted the challenges faced by academic librarians in Nigeria, such as a lack of digital facilities, a lack of sponsorship, and an unreliable electricity supply. Okeji et al. (2019) also noted various obstacles to learning digital literacy, including insufficient funds for professional skill development, a lack of ICT facilities, and a shortage of ICT. One of the major obstacles to learning digital literacy is the absence of ICT facilities, inadequate Internet speed, and the absence of comprehensive digital literacy programs and standards (Ukwoma et al., 2016). However, academic libraries, library associations, and the administration of schools must support their librarians by offering in-house training and financial assistance for attending workshops to enhance their digital skills to effectively function in the academic library of the twenty-first century.

3. METHODOLOGY

The study employed a descriptive survey design, targeting 200 librarians in university libraries in south-south Nigeria. The convenience sampling technique was used, where the researchers' selected participants based on ease of access and availability. The first step included sending the online survey to a total of 200 librarians, and 109 librarians responded to the online questionnaire, giving a response rate of 55%. Face and content validity testing, conducted by specialists in measurement, evaluation, and library and information science, ensured the questionnaire's appropriateness for the study. The instrument's reliability was confirmed with a Cronbach's alpha of 0.89. Data analysis was performed using frequency counts, simple percentages, and Statistical Product and Service Solutions (SPSS) version 23. A criterion score of 2.5 was used, and for research question 1, mean scores below 2.5 indicated low-level digital competence skills, while scores 2.5 and above signified high-level skills. For research questions 2 and 3, mean scores above 2.5 were considered agreeable, and those below 2.5 were deemed disagreeable.

4. THE FINDINGS OF THE STUDY

The study's findings presented in Table 1 show that many of the respondents in this study were male.

Table 1: Gender of the Respondents

Gender	Frequency	Percentage (%)
Male	58	53
Female	51	47
Total	**109**	**100**

4.1 The Level of Basic Digital Competence Skills of Librarians

All the items in Table 2 shown below have mean values that are above the criterion mean of (2.5), more so, the grand mean (3.5) is greater than the criterion mean (2.5). This means that librarians in south-south Nigeria have a high level of basic digital competence skills. However, they need to improve their critical thinking skills and their proficiency in advanced digital competence skills to meet the demands of the digital age.

Table 2: Basic Digital competence skills of librarians

S/N	Basic Digital Competence Skills	Mean	S.D.
1.	Online communication skills (e-mail, telephone, instant message, SMS, etc.)	3.6	0.51
2.	Internet surfing/browsing	3.5	0.53
3.	Storing, copying, and retrieving data into a primary and secondary storage device	3.5	0.53
4.	Electronic resources, e.g. e-books, e-journals, etc.	3.4	0.61
5.	Retrieving documents from e-databases/e-journals and websites	3.4	0.62
6.	Search engines and search strategies	3.4	0.54
7.	Ability to download and install software from the Internet	3.4	0.71
8.	Evaluating online information/ web content	3.3	0.68
9.	Basic computing, e.g. word processing, power point, excel, etc.	3.3	0.63
10.	Digitization, e.g. scanning, editing, and uploading	3.3	0.66
11.	Ability to install and update antivirus software	3.2	0.81
12.	Ability to convert Word documents to PDF and PDF to Word formats	3.2	0.81
13.	Ability to use open-source software such as KOHA	3.2	0.80
14.	Uploading documents online	3.2	0.81
15.	Digital content creation in blogs, YouTube, webpages, etc. for different audiences	3.2	0.80
16.	Cloud storage devices e.g. dropbox	2.9	0.85
17.	Critical thinking skills	2.7	0.82
	Grand Mean	**3.5**	**0.68**

4.2 Methods Utilized by Librarians in Acquiring Digital Literacy Skills

All the items in Table 3 have mean values that are above the criterion mean of (2.5), more so, the grand mean (3.2) is greater than the criterion mean (2.5). This means that librarians in south-south Nigeria are using a variety of methods to acquire digital skills. This is a good sign, as it suggests that they are committed to staying up to date on the latest trends in digital technology.

Table 3: Methods Utilized by Librarians in Acquiring Digital Literacy Skills

S/N	Methods of Acquiring Digital Skills	Mean	S.D.
1.	Self-sponsorship	3.6	0.49
2.	Trial and error	3.4	0.51
3.	YouTube	3.3	0.79
4.	Colleagues/friends	3.0	0.70
5.	Workshops	2.9	0.63
	Grand Mean	**3.2**	**0.62**

4.3 Challenges Faced by Librarians in Acquiring Digital Skills

Items 1-6 have mean values that are above the criterion mean of (2.5), while items 7 and 8 have mean values lesser than the criterion mean. This means that librarians in south-south Nigeria face several challenges in acquiring digital skills. These challenges can make it difficult for librarians to keep up with the latest trends in digital technology and provide quality services to their users. On the other hand, challenges such as lack of commitment on the path to learning ICT skills and technophobia were seen as less significant, as their mean values are below the criterion mean.

Table 4: Challenges in acquiring digital skills

S/N	Challenges in Acquiring Digital Skills	Mean	S.D
1.	Inconsistent power supply	3.1	0.87
2.	Poor ICT facilities	3.0	0.81
3.	Lack of ICT training opportunities	2.9	0.86
4.	High cost of ICT literacy training	2.9	0.78
5.	Lack of sponsorship from my Institution	2.9	0.97
6.	Overload of working hours	2.6	0.72
7.	Lack of commitment on my path to learning ICT skills	2.2	0.90
8.	Technophobia	2.0	0.96
	Grand Mean	**2.7**	**0.86**

5. DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

Research question one showed that librarians under study possess high levels of basic digital competence skills. This shows that they are at ease with utilising digital technologies to provide library services and they are well-equipped to work successfully in the digital library environment. Having the necessary digital skills makes it possible for librarians to carry out their responsibilities with efficiency, which has a positive impact on job performance and increases library usage. This result is consistent with that of Osinulu (2021), who discovered that librarians possessed a high level of digital competence. According to research question two, librarians gain digital skills using a variety of techniques, including self-sponsorship for computer training, trial and error, YouTube, learning from colleagues and acquaintances, and attending workshops. The prevalence of self-sponsorship and trial-and-error procedures and the use of internet resources such as YouTube demonstrates librarians' commitment to professional growth. The reason that workshops are not the most popular means of gaining digital skills may be owing to their high cost. This conclusion is consistent with the findings of Sambo et al. (2021), who found that many certified librarians learned digital literacy abilities via self-sponsorship and trial and error, among other things. Research question three revealed that erratic power supplies, subpar ICT facilities, a lack of ICT training opportunities, a high cost for ICT literacy training, a lack of institutional sponsorship, and an excessive amount of work hours are some of the difficulties faced by librarians in learning digital skills. This conforms with the findings of Okeji et al. (2019) and Emiri (2015) who noted that a lack of ICT facilities, a lack of sponsorship, and an erratic energy supply are some of the issues preventing the development of digital literacy skills in academic libraries. The study precisely concentrated on librarians in South-South Nigeria and discovered that they have a high level of digital competency which is considered new and significant at these universities.

The study concluded that librarians in the study possess high levels of basic digital competency, and they used a variety of methods to develop those skills. The problems experienced by librarians in learning digital skills, however, included unstable power supplies, subpar ICT facilities, a lack of ICT training opportunities, a high cost for ICT literacy training, a lack of institutional support, and an excess of working hours. The hypothesis test shows a statistically significant difference between male and female librarians' levels of digital competence, which is in favour of the male. Given the above findings, it was recommended that university libraries, library associations, and school administrators should:

i. offer in-house training,
ii. provide financial support to librarians to attend workshops to improve their digital skills,
iii. and encourage female librarians to increase their digital literacy.

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