

Digital Literacy Competency As Determinants of Service Quality Among Library Personnel in Federal Universities in South-west Nigeria

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Abstract:

Library service quality has long been a topic of interest to library personnel but it has become more significant with technological advancement which has opened up various sources of information to rival, or at times, even surpass what the library is capable of offering. This study investigated the correlation between digital literacy competency, and quality of services among library personnel in federal universities in southwest Nigeria. The descriptive survey research design and a mixed method approach was adopted for this study. The population was 243 library personnel (237 library personnel & 6 university librarians) from Federal Universities in Southwest Nigeria. Total enumeration was used. A validated questionnaire was used to elicit response from 237 respondents of the sampled universities, while 6 Librarians were interviewed accordingly. A reliability coefficient value for each variable in this study was recorded as follows; Digital Literacy Competency (DLC) = 0.75; Service Quality (SQ) = 0.82. The study found that Digital literacy competency has a moderate and positive correlation with service quality (Adj. R² = 0.262, F(1, 200) = 72.241, p < 0.05). This study digital literacy competency have moderate and positive correlation with service quality of library personnel in academic libraries in federal universities in Southwest, Nigeria. The study recommended that Library personnel in the federal universities in Southwest, Nigeria should endeavour to engage in training unceasingly so as to stay relevant in the ever-changing world to meet the demand and of the digital age.

Keywords: Digital Literacy Competency, Service Quality, Academic Library, Library Personnel, Federal Universities

Introduction:

Just as corporate organizations operate in a fiercely competitive business environment so does the library operates in a competitive information environment. Academic libraries should focus on exceeding users' expectations to thrive and expand their user base. User perception and expectation studies have grown to be one of the most well-liked research in the field of service quality in many academic libraries¹. Service quality, which is viewed as crucial for service firms to position themselves successfully in a competitive setting, has been determined by consumer expectations and satisfaction. As a result, service quality has taken on more significance to information services providers.

Initially, when the business world realized the need to measure service quality, there was some level of confusion about the exact measures to apply in measuring the quality of services before the SERVQUAL model was developed. The model holds that quality service is characterized by a number of measurable factors such as responsiveness, competence and guarantees, tangibles, and resources all of which have been directly linked to users' satisfaction³. Ten factors that determine the quality of service were identified as a result of a pioneering study. These factors are accessibility, communication, competence, courteousness, credibility, reliability, responsiveness, security, tangible, and understanding or knowing the customer. The initial ten factors were later developed into a scale grouped into five main headings namely; reliability,

responsiveness, empathy, assurance, and tangibles dimensions (Khaola, 2015).

As laid out in the LibQUAL, everything that users expect from the library can be grouped under three main headings of which the first being the affect of service. "The affect of service as is used in the model describes library personnels' hospitable attitudes toward patrons in the library. Affect of service as a construct presents that patrons of libraries anticipate library personnel to consistently be pleasant and instill confidence in information users. Studies have stressed the need for library personnel to be approachable and welcoming (Twum, Yalley, Agyapong, & Ofori, 2021; Fagan, 2014; Kumar & Mahajan, 2019). Nothing less is expected of a library (virtual & physical), a place where many people go in search of knowledge. It is a typical practice in all service providers and other business organizations working with people to guarantee that their "front desk" workers be nice and kind towards the clients. In the context of the library, the library service, technology, and process are also expected to be user-friendly. Ease of use and accessibility are big issues in information professions and libraries are judged based on how smoothly people can access the information resources available in and through the library.

Digital literacy competency is the new concept that replaced digital literacy which is the ability to find, assess, use, and produce content through the use of digital technology, communication tools, and networks. Digital literacy competency has been described as the aptitude for processing digital data and information in a variety of ways and making effective use of it. Also, it is the skill of being productive in a digital setting. Media comprehension, data and image replication, and the capacity to critically assess and apply knowledge learned from digital settings in order to thrive in the modern world (Reisoğlu & Çebi 2020). For library personnel, digital literacy competency includes the ability to identify and expertly use appropriate technologies for information acquisition, organization, preservation, processing, and dissemination. The list is not exhaustive but these functions identified are at the core of library operation and any library personnel capable of pulling them off would have contributed to the quality of service in the library. However, for the sake of universality, there are frameworks developed to measure digital literacy competency.

One of the most comprehensive framework to measure digital literacy competency were developed by the European Union. The framework called DigComp outlines five dimensions of digital literacy competency namely; information and data literacy, communication and collaboration, digital content creation, Online safety, and problem-solving. The ability to identify information demands and to locate and obtain digital data, information, and content constitute the core of information and data literacy. This means that library personnel should be able to evaluate the usefulness of information source and their contents and collect and maintain order in large quantities of digital information and content (Reisoğlu & Çebi 2020).

The second dimension is collaboration. This means that the digital literacy competency of library personnel includes being able to interact, communicate, and collaborate using digital tools while respecting and learning from differences in background, experience, and perspective of others. A digitally competent library personnel is expected to play his/her part in society by using digital services provided by both their institutions and other related organizations and by being involved in all technology-related activities in their libraries. In addition, collaboration also includes the ability to control one's online identity, reputation, and presence.

Library personnel are also expected to be experts in digital content creation. They should be able to produce and refine digital media with an awareness of how copyright and licenses should be applied, enhance and integrate information and content into an existing body of knowledge, and can clearly communicate computer system instructions. This competency is more important in the provision of digital reference services, research support, and information literacy. In addition, library personnel are expected to be agents in making the digital space safe for themselves and others.

Safety in digital spaces is safeguarding equipment, material, information, and identity. In order to safeguard one's mental and physical health, and to be cognizant of the potential of digital tools to promote communal prosperity and broaden participation in society, one must learn how to

navigate the cyberspace safely and to secure one's identity and sensitive information. This skill also enables an individual to be conscious of how their usage of digital technologies affects the natural world (Trivedi D., Bhatt A., & Dineshbhai S2021). This competency demands that library personnel can responsibly use computer systems without exposing themselves and their organizations to identity thieves, hackers, and online bullies. They should also be able to safeguard the digital information that came into their possession by not misusing them for personal gain and most, importantly, they should not be irresponsible and uncaring in dealing with library patrons and the general public in cyberspace. Perhaps the most important of the competency is using technology to solve problems.

The fifth dimension of digital literacy competency is the ability to use digital resources for problem-solving. The objective of libraries is to meet the information needs of their patrons and library personnel are expected to use their skills and resources at their disposal to solve the information-related problems facing library patrons. Library personnel are expected to be adept at figuring out the information need of library patrons and fixing nagging issues with software and hardware in digital settings. They should also be able to use technology to produce new information and develop new techniques and services through the use of digital means. Most importantly, they should be able to understand their digital literacy competency gaps in order to address them. By doing this, they are also able to help library patrons to improve their digital skills (Trivedi D., Bhatt A., & Dineshbhai S2021)

The combination of all these competencies offers a great opportunity for Nigerian academic libraries to turn around the current situation in which students and lecturers opt for search engines and other information sources for information instead of the library. The current reality is that information and communication tools have created several competitors for the library as a source of information. The source that attracts the largest followers therefore will be one with the highest perceived quality of service¹⁷. It is therefore necessary to under-study the influence of digital literacy competence of librarians as a determinant of service quality among library personnel in Federal University libraries South-west, Nigeria

Statement of the problem

In today's digital era, the role of academic libraries has expanded beyond the traditional functions of cataloging and archiving physical books to include managing digital resources, providing online services, and supporting research through the use of information technologies. In federal universities across South-west Nigeria, library personnel are expected to deliver high-quality services that align with these technological advancements. However, the ability of library personnel to meet these expectations largely depends on their digital literacy competence—the skills and knowledge required to navigate, evaluate, and use digital technologies effectively. Despite the increasing reliance on digital platforms and resources, there is concern that many library personnel in federal universities may lack the necessary digital literacy competencies to fully harness modern technologies for service delivery. As a result, the quality of services provided to students, researchers, and faculty members may be compromised. Challenges such as poor digital resource management, inadequate online information retrieval skills, and limited capacity to utilize library management software can negatively impact user satisfaction and the overall effectiveness of library services. While studies have explored the adoption of digital tools in Nigerian university libraries, there is limited research examining how the digital literacy competence of library personnel influences the quality of services provided. This gap raises critical questions about whether library personnel possess the digital skills necessary to meet the evolving demands of users and how deficiencies in these skills might be affecting service quality. Thus, there is a need to investigate the extent to which digital literacy competence serves as a determinant of service quality among library personnel in federal universities in South-west Nigeria.

Research Questions

1. What is the level of service quality provided by library personnel in academic libraries in federal universities in southwest Nigeria?
2. What is the level of digital literacy competency possessed by library personnel in academic libraries in federal universities in southwest Nigeria?

Hypothesis

The hypothesis was tested at a 0.05 level of significance

- There will be no significant influence of digital literacy competence on service quality of library personnel in academic libraries in federal universities in southwest Nigeria

Literature Review

Library services refer to the various ways in which libraries help their users access information and knowledge. These services can include lending books and other materials, providing access to computers and the internet, offering research assistance, and hosting educational and cultural events. Libraries offer a wide range of services to meet the needs of their users. These services may be provided in person, online, or through a combination of both (Chewe, Zulu, Chitumbo, & Musonda, 2020). Many libraries also offer specialized services, such as support for people with disabilities, assistance with genealogical research, or access to unique and rare collections. Overall, library services are focused on providing users with the resources and support they need to learn, grow, and thrive. These services play a vital role in supporting education, literacy, and personal and professional development (Saunders, 2020). Academic libraries play a crucial role in supporting the education and research missions of universities. These libraries provide a range of services to help students, faculty, and staff access the information and resources they need to succeed. Like any other service provider, library services are targeted at meeting particular needs of the clients and it can only be regarded as quality when it achieves this purpose.

The traditional approach of evaluating the quality of libraries based on the size of their collections is no longer relevant (Ip, & Wagner, 2020). Apparently, several other scholars share this opinion as there have been many metrics that have been introduced over the years to measure the overall quality of library services or to measure particular individual services. One of such metrics is the American Research Libraries (ARL) Statistics. This measurement instrument is a set of metrics to evaluate library collections (volume of print resources, subscription databases, facilities) and the size of funds available to libraries. This tool is regarded as one of the best performing and consistently adopted by libraries in the evaluation of collection and services (Linden, Tudesco, & Dollar, 2018).

The SERVQUAL Model was created and introduced in 1988 by three American marketing experts: Valarie Zeithaml, A. Parasuraman, and Leonard Berry. It was designed as a tool to keep track of and analyze how content an organisation's customers are. The researchers developed a scale called Service Quality (SERVQUAL) to gauge how satisfied customers are with a company's level of service. The tool had a total of 22 statements that may be categorized into the following themes: tangible service; reliability; responsiveness; assurance; empathy (Pekkaya, Pulat İmamoğlu, & Koca, 2019). This tool became popular and it was adopted and adapted by many organizations including libraries. However, with the passage of time, it became obvious that the SERVQUAL was inadequate in measuring the quality of library services. This led to the development of library-specific tools such as LibQual which grouped library services quality measures into three namely, affect of service, library as a place and information control (Wu, Yuan, & Tsai, 2020).

The technological-driven world has left all professions and professionals with no option but to be equipped with necessary competencies if they will remain relevant and maintain a competitive advantage hence, they will go out of existence. Library in creating and sustaining quality of service can also become a victim of the obstructive nature of technological inventions if digital competence is not incorporated into the library school's academic curriculum and libraries as an

information service rendering organization.

Digital literacy is not only important for individuals but also for businesses and organizations such as libraries. In order to remain competitive, academic libraries need personnel who can effectively use digital technologies to collaborate, innovate, and solve problems for the modern library users. Additionally, academic libraries need to be able to communicate with patrons through digital channels, and they need to have the skills to effectively market the library collections and services online (Martzoukou, & Elliott, 2016). The seeming lack of any universally agreed metrics to measure digital literacy has led to the development of various frameworks such as the DigComp.

DigComp is a framework for digital literacy competency that was developed by the European Commission in collaboration with experts from across Europe (Mattar, Ramos, & Lucas, 2022). It provides a comprehensive set of competencies that individuals, educators, and policy makers can use to assess and develop digital skills. The framework is organized into six broad categories: information and data literacy, communication and collaboration, digital content creation, safety and security, problem solving and decision making. Each category includes a set of specific competencies, with clear descriptions and examples of what individuals should be able to do at different levels of proficiency.

The competency possessed by library personnel is a critical factor in the quality of service provided by any organization, most especially, service-oriented establishments such as academic libraries. Therefore, it is imperative that library personnel evaluate their skills especially when it comes to digital literacy competency and develop them further in order to provide optimal service. The importance of digital literacy competency can be deduced from the fact that educational institutions all over the world are prioritizing staff capacity development (Roberts, 2018). An author submitted that the continuing update of library and information professionals' competency which equip them to operate effectively in a digital environment should be the main focus of capacity building programs in the contemporary times (Lamid, Oguche, & Paraya, 2017).

The scholar went further to advocate for training in the creation of websites, digitization, consortium collaboration, and the administration of electronic resources. Researchers in the field of library and information science agree that the information field in the digital era is undergoing rapid and continual changes. This is represented in the observation that the advancements in ICT have resulted in a continuous change of information formats and services, and therefore concluded that changes in policy, procedures, objectives, and attitudes of personnel were imperative for effective delivery of quality services (Robertson, 2018)

Methodology

The descriptive survey research design and a mixed method approach was adopted for this study. The population was 243 library personnel (237 library personnel & 6 university librarians) from Federal Universities in Southwest Nigeria. Total enumeration was used. A validated questionnaire was used to elicit response from 237 respondents of the sampled universities, while 6 Librarians were interviewed accordingly. A reliability coefficient value for each variable in this study was recorded as follows; Digital Literacy Competency (DLC) = 0.75; Service Quality (SQ) = 0.82.

Analysis

The demographic profiles of respondents by gender show that 104 (51.5%) were male, 93 (46.0%) were female, and 5 (2.5%) did not disclose their gender, indicating a slight male majority. The age profile reveals that most respondents (43.6%) were between 35 and 44 years, with smaller groups in other age ranges: 50 years and above (15.8%), 30-34 years (13.9%), under 25 years (4.5%), and 25-29 years (4.0%). Two respondents (1.0%) did not disclose their age. In terms of rank or cadre, 47 respondents (23.3%) were Library Officers, 36 (17.8%) were Assistant Librarians, and 34 (16.8%) were Principal Librarians, with smaller percentages in other ranks.

Three respondents (1.5%) did not disclose their rank. Most respondents worked in the readers' services (29.2%) and technical sections (27.7%), with others in the e-library (21.3%) and serials management (16.3%). Eleven respondents (5.4%) did not disclose their library section.

Analysis of Research Questions

Research Question One: What is the level of service quality provided by library personnel in academic libraries in federal universities in Southwest, Nigeria?

Table 1: Analysis of Responses on Level of Service Quality Provided by Library Personnel in Academic Libraries in Federal Universities in Southwest, Nigeria

Affect of service	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
Majority of library personnel in my library understand users' information need	106 (52.5%)	88 (43.6%)	8 (4.0%)	0 (0.0%)	3.49
Majority of library personnel in my library are willing to help users	79 (39.1%)	118 (58.4%)	5 (2.5%)	0 (0.0%)	3.37
Majority of library personnel in my library give users individual attention	78 (38.6%)	115 (56.9%)	9 (4.5%)	0 (0.0%)	3.34
Majority of library personnel in my library instill confidence in users	63 (31.2%)	127 (62.9%)	11 (5.4%)	1 (0.5%)	3.25
Majority of library personnel in my library have enough knowledge to answer user questions	73 (36.1%)	115 (56.9%)	13 (6.4%)	1 (0.5%)	3.29
Weighted Mean					3.35
Library as place	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
My library is conducive for study and learning	93 (46.0%)	106 (52.5%)	3 (1.5%)	0 (0.0%)	3.45
My library has separate spaces for individual and group activities	80 (39.6%)	107 (53.0%)	11 (5.4%)	4 (2.0%)	3.30
My library building is located in a welcoming and comfortable environment	90 (44.6%)	107 (53.0%)	4 (2.0%)	1 (0.5%)	3.42
My library has attractive and aesthetic features	81 (40.1%)	109 (54.0%)	9 (4.5%)	3 (1.5%)	3.33
My library has comfortable furniture and equipment	82 (40.6%)	115 (56.9%)	4 (2.0%)	1 (0.5%)	3.38
Weighted Mean					3.38
Information control	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
My library provides unrestricted access to electronic information resources	80 (39.6%)	108 (53.5%)	11 (5.4%)	3 (1.5%)	3.31
My library has modern equipment that allow users to easily access needed information	81 (40.1%)	109 (54.0%)	11 (5.4%)	1 (0.5%)	3.34
My library has access tools that allow users to find materials on their own	82 (40.6%)	115 (56.9%)	4 (2.0%)	1 (0.5%)	3.38
My library has website/information system that enhance quick access to needed information	86 (42.6%)	109 (54.0%)	4 (2.0%)	3 (1.5%)	3.38
My library makes information resources easily accessible for individual use	83 (41.1%)	112 (55.4%)	7 (3.5%)	0 (0.0%)	3.38
Weighted Mean					3.36
Overall Weighted Mean					3.36

Decision rule: < 2.5 = low; 2.5 = moderate; > 2.5 = high

Table above revealed that on the average, the responses indicate a mean value of 3.29. The weighted mean has a value of 3.35 which suggest that the respondents agreed to high level of

affect of service. On the average, the responses indicate a mean value of 3.38 which was high. The weighted mean has a value of 3.38 which also suggest that the respondents agreed to high level of library as place. More so, On the average, the responses indicate a mean value of 3.38. The weighted mean has a value of 3.36 which suggest that the respondents agreed to a high level of information control. The overall weighted mean for level of service quality provided by library personnel in academic libraries in federal universities in Southwest, Nigeria is 3.36. This suggests that there is high level of service quality by library personnel in academic libraries in federal universities in Southwest, Nigeria.

Research Question Two: What is the level of digital literacy competency possessed by library personnel in academic libraries in federal universities in Southwest, Nigeria?

Table 2: Level of digital literacy competency possessed by library personnel in academic libraries in federal universities in Southwest, Nigeria

Information and data literacy	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean
I am able to articulate my information needs while using the internet	93 (46.0%)	100 (49.5%)	9 (4.5%)	0 (0.0%)	3.42
I am able to search for any digital content in online environments	76 (37.6%)	117 (57.9%)	8 (4.0%)	1 (0.5%)	3.33
I have the needed skills to analyze, compare and critically evaluate the credibility of sources I use	80 (39.6%)	109 (54.0%)	13 (6.4%)	0 (0.0%)	3.33
I have the needed skills to store, manage and organize digital information resources	83 (41.1%)	106 (52.5%)	11 (5.4%)	2 (1.0%)	3.34
Weighted Mean					3.36
Communication and collaboration	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean
I have the needed skills to use the internet to connect with others using various digital devices and software	77 (38.1%)	107 (53.0%)	15 (7.4%)	3 (1.5%)	3.28
I have the needed skills to select appropriate digital technologies to share data, information and digital content	80 (39.6%)	105 (52.0%)	16 (7.9%)	1 (0.5%)	3.31
I have the needed skills to select relevant digital tools and technologies for collaborative process	82 (40.6%)	101 (50.0%)	13 (6.4%)	6 (3.0%)	3.28
I am aware of the proper mode of behavior while using digital technologies and interacting in digital environments	76 (37.6%)	109 (54.0%)	12 (5.9%)	5 (2.5%)	3.27
Weighted Mean					3.29
Digital content creation	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean
I have the skills to create and edit digital content in different formats	84 (41.6%)	93 (46.0%)	19 (9.4%)	6 (3.0%)	3.26
I have the skills to modify, refine and integrate new information and content into an existing body of knowledge to create new, original and relevant content and knowledge	80 (39.6%)	94 (46.5%)	21 (10.4%)	7 (3.5%)	3.22
I can give understandable instructions to retrieve information from a computer system	74 (36.6%)	108 (53.5%)	13 (6.4%)	7 (3.5%)	3.23

I understand how copyright and licenses apply to data, information and digital content	80 (39.6%)	99 (49.0%)	19 (9.4%)	4 (2.0%)	3.26
Weighted Mean					3.24
Overall Weighted Mean					3.30

Decision rule: $< 2.5 = \text{low}$; $2.5 = \text{moderate}$; $> 2.5 = \text{high}$

On the average, the responses indicate a mean value of 3.34. The weighted mean has a value of 3.36 which suggest that the respondents agreed to high level of information and data literacy.

On the average, the responses indicate a mean value of 3.27. The weighted mean has a value of 3.29 which also suggest that the respondents agreed to high level of communication and collaboration. Furthermore, on the average, the responses indicate a mean value of 3.26. The weighted mean has a value of 3.24 which suggest that the respondents agreed to a high level of digital content creation. The overall weighted mean for the level of digital literacy competency possessed by library personnel in academic libraries in federal universities in Southwest, Nigeria is 3.30. This result suggests that there is high level of digital literacy competency possessed by library personnel in academic libraries in federal universities in Southwest, Nigeria.

Regression analysis for influence of digital literacy competency on service quality of library personnel in academic libraries in federal universities in Southwest, Nigeria

a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.515 ^a	.265	.262	.30207

a. Predictors: (Constant), Digital Literacy Competency

b. ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.592	1	6.592	72.241	.000 ^a
	Residual	18.249	200	.091		
	Total	24.841	201			

a. Predictors: (Constant), Digital Literacy Competency

b. Dependent Variable: Service Quality

c. Coefficients^a

	Unstandardized Coefficients	Standardized Coefficients		
Model	B	Std. Error	Beta	t
1	(Constant)	2.049	.155	13.181
	Digital Literacy Competency	.397	.047	8.499

a. Dependent Variable: Service Quality

Digital literacy competency has a moderate positive correlation with service quality ($R = 0.515$) among library personnel in academic libraries in federal universities in Southwest Nigeria. The coefficient of determination ($\text{Adj. } R^2 = 0.262$) indicates that digital literacy competency accounts for 26.2% of the variance in service quality, with 73.8% attributed to other factors. The model is significant overall ($F(1, 200) = 72.241$, $p < 0.05$). Additionally, a unit increase in digital literacy competency leads to a 0.397 increase in service quality ($B = 0.397$, $p < 0.05$). Thus, the null

hypothesis is rejected, confirming a significant relationship.

Interview Responses:

Questions on Service Quality

The University Librarians offered various perspectives on the quality of service in their libraries. The University Librarian of the University of Lagos described the service quality as high, supported by user feedback praising library personnel. Similarly, the University Librarians of Obafemi Awolowo University and Federal University of Technology, Akure, also reported commendable and excellent service quality. However, the University Librarian of Federal University of Agriculture, Abeokuta, noted that the quality is "moderately high," reflecting ongoing improvements, while the University Librarian of the University of Ibadan echoed that the quality is relative. The University Librarian of Federal University, Oye-Ekiti, acknowledged the challenges posed by staff shortages but affirmed that the existing staff still strive to deliver quality services.

Regarding complaints, the University Librarians of University of Lagos and Federal University, Oye-Ekiti, highlighted feedback mechanisms, including comment boxes and interactions at the circulation desk. Federal University of Technology, Akure, reported a good service relationship with clients, while the University Librarian of University of Ibadan said feedback is regularly received. In contrast, the University Librarians of Obafemi Awolowo University and Federal University of Agriculture, Abeokuta, stated they rarely receive complaints, with Abeokuta focusing on encouraging reading habits among users.

Questions on Digital literacy

University librarians shared insights on digital literacy levels and feedback from library users. At the University of Lagos, digital literacy is moderately above average, while Obafemi Awolowo University and Federal University of Agriculture, Abeokuta, both reported moderately high levels. The University Librarian of Federal University of Technology, Akure, emphasized a high digital literacy level, noting librarians' commitment to staying updated in the digital age. The University Librarian of the University of Ibadan mentioned growing competency due to rapid IT advancements, while Federal University, Oye-Ekiti emphasized that ICT compliance is mandatory for all librarians to stay relevant.

Regarding user feedback, the University of Lagos received both positive comments and constructive criticism. Obafemi Awolowo University and Federal University of Technology, Akure, noted generally positive feedback, with Akure claiming to have one of the best libraries in the state. Federal University of Agriculture, Abeokuta, received 78% positive feedback. The University of Ibadan reported high positive feedback for electronic services but noted dissatisfaction with internet and power outages. Finally, Federal University, Oye-Ekiti, observed that most feedback ends up with the circulation librarian, with positive feedback being predominant.

Discussion of Findings

The study revealed a high level of service quality provided by library personnel in academic libraries of federal universities in Southwest Nigeria, with an overall weighted mean of 3.36. This was supported by interviews that noted library staff, though insufficient in number, delivered quality services to the best of their abilities.

A corroborative study examined academic staff's perception of library service quality using SERVQUAL dimensions, finding library staff to be helpful, instilling confidence, and positively impacting teaching, learning, and research, with overall satisfaction rated just above average (Kiran, 2010). Conversely, another study using SERVQUAL found tangible aspects of service quality exceeded expectations, but components like reliability, responsiveness, assurance, and empathy fell below expectations (Panday, 2018).

Further, a gap analysis of libraries at the Islamic Azad University revealed that users highly

valued "operation time," "staff," and "circulation," while "press" and "audiovisual materials" were deemed less important. Libraries surveyed had average perceived quality, with "staff," "information literacy," and "environment" performing better, while some libraries like "Theology and Philosophy" and "Medical Engineering" lagged in service quality (Babalhavaeji, Isfandyari-Moghaddam Aqili, & Shakooii, 2017).

Whether positive or negative, libraries play a crucial role in the learning process across all education levels. Essential functions include providing references, a conducive environment, and offering good service. E-library services connected to external agencies add value to overall service quality.

Furthermore, the overall weighted mean of 3.30 indicates a high level of digital literacy competency among library personnel in academic libraries in federal universities in Southwest, Nigeria. This quantitative result is supported by qualitative findings, where personnel are regarded as moderately competent in digital skills. However, it was noted that libraries, as evolving institutions, require their personnel to continuously improve their digital literacy to stay relevant. In contrast, some studies have uncovered deficiencies in computer literacy among library personnel and a lack of sufficient training programs. These studies emphasize the need for comprehensive training initiatives that extend beyond ICT skills, covering areas such as management, communication, and teaching. Continuous education is seen as essential for enhancing the professionalism of Library and Information Science (LIS) practitioners (Akers, 2019)

Scholars have highlighted the integration of Information and Communication Technology (ICT) into library services as critical for meeting customer needs (Essien, Lu, Abredu, & Zotoo, 2022). For example, a study showed that ICT use significantly impacts the quality of services at Jiangsu University (JU) and the University of Ghana (UG) libraries. Library personnel with ICT skills, such as web application, networking, and cloud technology skills, are more proficient in delivering efficient services (Daniels, Wiche, & Nsirim, 2023). However, a study on ICT skills among library personnel in South-South Nigeria revealed gaps in proficiency, particularly in system management, web applications, digital tools, and troubleshooting (Oyovwe-Tinuoye, Omeluzor, & Patrick, 2021). This points to the need for continuous training and retraining to keep up with technological advancements, which are essential for maintaining service quality and professional relevance.

The results from the test of Hypothesis indicate that digital literacy competency accounts for 26.2% ($\text{Adj. } R^2 = 0.262$) of the total variance in service quality among library personnel in academic libraries in federal universities in Southwest Nigeria. This significant finding leads to the rejection of the null hypothesis, affirming a substantial relationship between digital literacy competency and service quality¹⁸. The study's findings confirm that digital literacy competency plays a critical role in enhancing the service quality of library personnel, demonstrating the need for ongoing training and development in digital skills.

Summary

The study titled 'Digital Competence as Determinants of Service Quality among Library Personnel in Federal University, South-west Nigeria' found that:

1. High level service quality based on the constructs of LibQual model (Affect of Service, Information Control and Library as a Place). However, there is room for improvement
2. High level Digital competence was also found based on three (Information and data literacy, Communication and collaboration and Digital content creation) out of the five constructs of Digcom framework of the European model for digital literacy.
3. The high level service quality found was influenced by Digital competence as revealed by the hypothesis tested.

Conclusion

Academic library services revolve around the gathering, organization, preservation, interpretation, and dissemination of information to support their clients in their quest to create

more knowledge. To achieve this, libraries offer services such as reference services (both online and offline), circulation services, research advisory services, bibliographic compilation, indexing and abstracting services, information retrieval services, and a host of other services targeted at ensuring that the information needs of their clients are met adequately. To offer such services in the digital age there is a dire need for digital competence which that obviously become the survival skill of the 21st century.

Recommendations

1. The management should frequently organize an awareness program for staff to fit into the current development and innovation
2. In the evolving world, the importance of digital literacy competency cannot be overemphasized, hence personnel in academic libraries should endeavor to stay updated.

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