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RESEARCH ARTICLE

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Information Service Delivery in Federal University Libraries in North-West Nigeria:

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ABSTRACT

This study examined information service delivery and the challenges affecting federal university libraries in North-West Nigeria. The study was guided by two objectives: to determine the level of information service delivery and identify the challenges affecting information service delivery in federal university libraries in North-West Nigeria. A descriptive survey research design was adopted. The population comprised 767 library staff from three first-generation federal universities in North-West Nigeria. A sample of 263 respondents was selected using proportionate stratified sampling technique, while 257 copies of the questionnaire were correctly completed and returned, representing a 97.7% response rate. Data were collected using a researcher-developed instrument titled TETFund Intervention, Technological Innovation and Information Service Delivery Questionnaire (TITIISDQ). The instrument was validated by experts in Library and Information Science and Measurement and Evaluation, and reliability was established using Cronbach's alpha coefficient. Data were analyzed using frequency counts, percentages, mean, and standard deviation with Statistical Package for the Social Sciences (SPSS) version 26. The findings revealed that information service delivery in federal university libraries in North-West Nigeria was high (M = 3.26, SD = 0.69). However, the study identified major challenges affecting service delivery, including inadequate funding (M = 3.19, SD = 0.76), low digital literacy among users (M = 3.18, SD = 0.77), poor maintenance culture of library technologies (M = 3.16, SD = 0.81), and inadequate institutional policy support (M = 3.14, SD = 0.85). The study concludes that despite effective service delivery, financial, technological, and organizational constraints require attention. It recommends improved funding, ICT infrastructure development, continuous staff training, and stronger institutional policies to enhance sustainable information service delivery.

Keywords: Information service delivery, University libraries, library challenges, federal universities, and North-West Nigeria.

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Abstract

This study examined information service delivery and the challenges affecting federal university libraries in North-West Nigeria. The study was guided by two objectives: to determine the level of information service delivery and identify the challenges affecting information service delivery in federal university libraries in North-West Nigeria. A descriptive survey research design was adopted. The population comprised 767 library staff from three first-generation federal universities in North-West Nigeria. A sample of 263 respondents was selected using proportionate stratified sampling technique, while 257 copies of the questionnaire were correctly completed and returned, representing a 97.7% response rate. Data were collected using a researcher-developed instrument titled TETFund Intervention, Technological Innovation and Information Service Delivery Questionnaire (TITIISDQ). The instrument was validated by experts in Library and Information Science and Measurement and Evaluation, and reliability was established using Cronbach's alpha coefficient. Data were analyzed using frequency counts, percentages, mean, and standard deviation with Statistical Package for the Social Sciences (SPSS) version 26. The findings revealed that information service delivery in federal university libraries in North-West Nigeria was high (M = 3.26, SD = 0.69). However, the study identified major challenges affecting service delivery, including inadequate funding (M = 3.19, SD = 0.76), low digital literacy among users (M = 3.18, SD = 0.77), poor maintenance culture of library technologies (M = 3.16, SD = 0.81), and inadequate institutional policy support (M = 3.14, SD = 0.85). The study concludes that despite effective service delivery, financial, technological, and organizational constraints require attention. It recommends improved funding, ICT infrastructure development, continuous staff training, and stronger institutional policies to enhance sustainable information service delivery.

Keywords: Information service delivery, University libraries, library challenges, federal universities, and North-West Nigeria.

INTRODUCTION

Academic libraries are established to support teaching, learning, research, and community development through the acquisition, organization, preservation, and dissemination of information resources. The effectiveness of academic libraries depends largely on their ability to provide quality information services that meet the evolving needs of users in a rapidly changing information environment (Aguolu & Aguolu, 2018). As centres of knowledge creation and dissemination, university libraries are expected to provide timely, accessible, reliable, and user-oriented information services capable of supporting academic excellence and national development. The emergence of information and communication technologies (ICTs) has significantly transformed information service delivery in academic libraries worldwide. Contemporary library services have shifted from traditional print-based systems to automated and digital platforms that include integrated library management systems, institutional repositories, electronic databases, online public access catalogues, virtual reference services, and digital libraries (Breeding, 2018; Mairaj & El-Hadi, 2020). These technological developments have improved access to scholarly information and expanded opportunities for remote service delivery.

Despite these developments, effective information service delivery remains a major challenge for many academic libraries, particularly in developing countries. Several studies have reported that inadequate ICT infrastructure, insufficient funding, irregular electricity supply, poor internet connectivity, limited staff training, and weak institutional support continue to hinder library operations and reduce service quality (Ocholla & Shongwe, 2020; Otike & Asanyo, 2022). These constraints often prevent libraries from fully utilizing available technologies to satisfy the information needs of users.

In Nigeria, successive interventions by the Tertiary Education Trust Fund (TETFund) have improved library infrastructure, ICT facilities, staff development, and acquisition of information resources. Nevertheless, many university libraries still experience operational challenges that affect effective information service delivery (Sani & Musa, 2022; Sulaiman, 2024). Problems relating

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to inadequate maintenance of ICT facilities, poor digital infrastructure, insufficient funding, and limited technological capacity continue to limit the efficiency of library services.

Federal university libraries in North-West Nigeria are not exempt from these challenges. Although considerable efforts have been made to modernize library services through technological innovations and TETFund interventions, many libraries continue to face infrastructural and organizational constraints that affect their ability to provide efficient and sustainable information services. Understanding these challenges is necessary for improving library operations and enhancing user satisfaction. This study therefore examined the challenges affecting information service delivery in federal university libraries in North-West Nigeria.

Statement of the Problem

Academic libraries are expected to provide timely, reliable, and technology-driven information services that support teaching, learning, and research. However, despite improvements in library development through TETFund interventions and technological innovations, effective information service delivery remains a challenge in many Nigerian university libraries. Previous studies have identified inadequate funding, poor ICT infrastructure, unreliable internet connectivity, irregular electricity supply, inadequate staff training, and limited institutional support as major barriers to efficient library services (Igbeka & Ola, 2021; Otike & Asanyo, 2022). Although federal university libraries in North-West Nigeria have benefited from various interventions aimed at improving library infrastructure and technology, there is evidence that several operational challenges continue to affect the quality and accessibility of information services. Issues such as insufficient ICT facilities, poor maintenance culture, inadequate technological funding, weak institutional policies, and low digital literacy among users may reduce the effectiveness of available library resources and services (Mohammed & Abdullahi, 2021; Sulaiman, 2024).While many studies have examined TETFund intervention, technological innovation, and information service delivery independently, limited empirical evidence exists regarding the specific challenges confronting information service delivery in federal university libraries in North-West Nigeria. This gap in the literature necessitated the present study.

Objectives of the Study

The study was guided by the following objectives:

- To determine the level of information service delivery in federal university libraries in North-West Nigeria.
- To identify the challenges affecting information service delivery in federal university libraries in North-West Nigeria.

Review of Related Literature

Information Service Delivery

Information service delivery is conceptualized as the outcome of the processes through which libraries meet the information needs of their users. Drawing on the service quality literature in library and information science, particularly the LibQUAL+ framework (Thompson, Cook, & Heath, 2020), information service delivery is assessed along several dimensions: the accessibility and availability of information resources; the responsiveness and helpfulness of library staff; the reliability and functionality of library systems and equipment; the provision of user education and support; and the overall quality of the library experience from the user's perspective.

In this study, information service delivery is assessed from the perspective of librarians rather than users. This approach is justified on several grounds. First, librarians, by virtue of their professional training and daily interaction with users, are well-positioned to assess the quality of the services they provide. Second, librarians' assessments of service delivery have been shown to correlate with user satisfaction, suggesting that self-assessment by service providers can serve as a valid proxy for service quality (Mairaj & El-Hadi, 2020). Third, focusing on librarians aligns with the study's interest in understanding the mechanisms through which TETFund intervention and technological innovation influence service outcomes, mechanisms that operate through the knowledge, skills, and behaviours of librarians.

Igbeka and Ola (2021) investigated the factors influencing information service delivery in Federal Universities' Libraries across the six geopolitical zones. The study used a survey of librarians and library users, and the data revealed that funding, staff competence, technology availability, and institutional support were the most important predictors of service delivery quality. The study found regional variations in service delivery, with libraries in the southern zones generally rated higher than those in the northern zones. The authors called for targeted interventions to address the specific challenges facing libraries in different regions.

The 1990s were a period of prolonged crisis for academic libraries. The chronic underfunding was compounded by other challenges, including political instability, frequent strikes by academic and non-academic staff unions, and a general deterioration of physical infrastructure. Library buildings fell into disrepair, ICT infrastructure was virtually non-existent, and many qualified

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librarians left the country in search of better opportunities abroad. The term "book famine" was coined to describe the desperate situation of University libraries unable to provide current information resources to their users (Mohammed & Abdullahi, 2021).

The establishment of the Education Tax Fund (ETF) in 1993, under the Education Tax Act No. 7 of 1993, marked the beginning of a policy response to the funding crisis. The ETF was funded by a two percent tax on the assessable profits of companies registered in Nigeria. However, the Fund's early years were marked by limited disbursements and concerns about transparency and governance. It was not until the early 2000s that the ETF began to have a significant impact on tertiary institution infrastructure, including libraries (Ogunrombi & Oladokun, 2020).

The transformation of the ETF into the Tertiary Education Trust Fund (TETFund) in 2011, through the TETFund Establishment Act, represented a strengthening of the interventionist framework. The Act expanded the mandate of the Fund, increased its resources, and established clearer guidelines for the disbursement and utilization of funds. Libraries were explicitly recognized as a priority area for intervention, and beneficiary institutions were required to allocate a portion of their annual intervention to library development (TETFund, 2020).

However, the historical trajectory also reveals persistent challenges. Despite significant TETFund investment, many University libraries continue to report serious deficiencies in their collections, services, and technological infrastructure. A recurring theme in the literature is the gap between the procurement of resources and their effective utilization. Libraries receive books that remain unprocessed, computers that break down and are not repaired, and databases for which users lack adequate training. These challenges point to the need for a more nuanced understanding of the mechanisms that translate funding into service outcomes, which is the central concern of this study.

The North-West zone illustrates both the achievements and the challenges of TETFund intervention. Ahmadu Bello University, Zaria, with its long history and large library system, has been a major beneficiary of TETFund, using the funds to upgrade its physical infrastructure, expand its electronic resources, and train its staff. Bayero University, Kano, has similarly used TETFund support to modernize its library services, including the establishment of a digital library. The newer Federal universities in the zone, however, have faced greater challenges in maximizing the impact of TETFund intervention, given their more limited baseline infrastructure and human capacity (Sani & Musa, 2022).

METHODOLOGY

This study adopted a descriptive survey research design to examine the level of information service delivery and the challenges affecting information service delivery in federal university libraries in North-West Nigeria. The survey design was considered appropriate because it enabled the collection of data from respondents in their natural work environment without manipulating any of the variables under investigation.

The population of the study comprised 767 library staff drawn from the three first-generation federal university libraries in North-West Nigeria, namely Ahmadu Bello University, Zaria; Bayero University, Kano; and Usmanu Danfodiyo University, Sokoto. A sample size of 263 respondents was determined using the Yamane formula and selected through proportionate stratified sampling technique. Out of the 263 copies of the questionnaire administered, 257 were correctly completed and returned, representing a 97.7% response rate.

Data were collected using a researcher-developed instrument titled TETFund Intervention, Technological Innovation and Information Service Delivery Questionnaire (TITIISDQ). For this paper, two sections of the instrument were utilized. The first section measured the level of information service delivery using ten items rated on a four-point Likert scale ranging from 1 = Strongly Disagree (SD) to 4 = Strongly Agree (SA). The second section assessed the challenges affecting information service delivery using eight items rated on a four-point scale ranging from 1 = Not a Challenge (NC) to 4 = Very Severe Challenge (VSC).

The instrument was subjected to face and content validation by three experts, comprising two specialists in Library and Information Science and one specialist in Measurement and Evaluation. A pilot study was conducted using librarians from a federal university outside the study area, and the reliability of the instrument was established using Cronbach's alpha coefficient, which indicated satisfactory internal consistency.

Data were analyzed using descriptive statistics comprising frequency counts, percentages, mean, and standard deviation. A criterion mean of 2.50 was adopted as the benchmark for decision-making. Mean scores of 2.50 and above were interpreted as indicating a high level of information service delivery or agreement that an item constituted a challenge, whereas mean scores below 2.50 indicated a low level or disagreement. Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 26.

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RESULTS AND DISCUSSION

What is the level of information service delivery in federal university libraries in North-West Nigeria?

Table 1: Level of Information Service Delivery in Federal University Libraries in North-West Nigeria

S/N	Items	SD	D	A	SA	M	SD
	Information requests are handled promptly.	8(3.1)	12(4.7)	133(51.8)	104(40.5)	3.30	0.70
	The library provides timely and responsive reference services to users.	7(2.7)	12(4.7)	139(54.1)	99 (38.5)	3.28	0.68
	Library services meet users' information needs effectively.	4(1.6)	11(4.3)	147(57.2)	95 (37.0)	3.30	0.62
	Digital library services (remote access to e-resources, online catalogue) are reliably available to users.	8(3.1)	20(7.8)	125(48.6)	104(40.5)	3.26	0.73
	Information resources are accessible when needed.	5 (1.9)	17 (6.6)	144 (56.0)	91 (35.4)	3.25	0.66
	Users frequently utilize available information services.	9 (3.5)	13 (5.1)	137 (53.3)	98 (38.1)	3.26	0.71
	The library provides up-to-date information resources that support teaching and research.	6 (2.3)	19 (7.4)	135 (52.5)	97 (37.7)	3.26	0.69
	Users receive accurate information when requested.	8 (3.1)	22 (8.6)	141 (54.9)	86 (33.5)	3.19	0.72
	Information services are delivered efficiently.	5 (1.9)	22 (8.6)	123 (47.9)	107 (41.6)	3.29	0.71
	Users are satisfied with information services provided.	7 (2.7)	21 (8.2)	135 (52.5)	94 (36.6)	3.23	0.71
	Grand Mean					3.26	0.69

Table 1 presents respondents' perceptions of the level of information service delivery in federal university libraries in North-West Nigeria. The findings indicate that all the items recorded mean ratings above the criterion mean of 2.50, yielding a grand mean of 3.26 (SD = 0.69). This indicates that respondents generally agreed that information service delivery in the selected university libraries is effective.

Specifically, information requests are handled promptly and library services meet users' information needs effectively jointly recorded the highest mean score (M = 3.30), with standard deviations of 0.70 and 0.62, respectively. For prompt handling of information requests, 104 respondents (40.5%) strongly agreed and 133 respondents (51.8%) agreed, while 95 respondents (37.0%) strongly agreed and 147 respondents (57.2%) agreed that library services effectively meet users' information needs. These findings suggest that promptness and effectiveness are key strengths of information service delivery in the libraries studied.

Similarly, respondents agreed that information services are delivered efficiently (M = 3.29, SD = 0.71), with 107 respondents (41.6%) strongly agreeing and 123 respondents (47.9%) agreeing. They also agreed that the library provides timely and responsive reference services to users (M = 3.28, SD = 0.68), where 99 respondents (38.5%) strongly agreed and 139 respondents (54.1%) agreed. In addition, respondents affirmed that digital library services are reliably available (M = 3.26, SD = 0.73), users frequently utilize available information services (M = 3.26, SD = 0.71), and the library provides up-to-date information resources that support teaching and research (M = 3.26, SD = 0.69).

Also, respondents agreed that information resources are accessible when needed (M = 3.25, SD = 0.66), with 144 respondents (56.0%) agreeing and 91 respondents (35.4%) strongly agreeing. They also expressed satisfaction with the information services provided (M = 3.23, SD = 0.71), while users receive accurate information when requested recorded the lowest mean score (M = 3.19, SD = 0.72). Nevertheless, this value remained well above the criterion mean, indicating that respondents still agreed that information provided by the libraries is accurate and reliable. The findings demonstrate that information service delivery in federal university libraries in North-West Nigeria is of a high standard. The high ratings for prompt handling of information requests, effective reference services, accessibility of information resources, availability of digital library services, and users' satisfaction indicate that the libraries are effectively meeting the information needs of their users. These results further suggest that investments in library resources, digital technologies, and service improvement initiatives have contributed positively to the quality and effectiveness of information service delivery in the study area.

Research Question 2: What challenges affect information service delivery in federal university libraries in North-West Nigeria?

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Table 2: Challenges Affecting Information Service Delivery in Federal University Libraries in North-West Nigeria

S/N	Items	Not Challenge	Moderate Challenge	Severe Challenge	Very Severe Challenge	M	SD
	Inadequate or irregular power supply affecting ICT-based services.	22 (8.6)	22 (8.6)	134 (52.1)	79 (30.7)	3.05	0.86
	Low internet bandwidth and poor network connectivity.	23 (8.9)	16 (6.2)	137 (53.3)	81 (31.5)	3.07	0.86
	Insufficient ICT infrastructure (computers, servers, software).	29 (11.3)	11 (4.3)	128 (49.8)	89 (34.6)	3.08	0.92
	Lack of continuous training for librarians on emerging technologies.	22 (8.6)	22 (8.6)	132 (51.4)	81 (31.5)	3.06	0.86
	Insufficient funding for technological and information service development.	12 (4.7)	18 (7.0)	136 (52.9)	91 (35.4)	3.19	0.76
	Poor maintenance culture for existing library technologies.	17 (6.6)	16 (6.2)	132 (51.4)	92 (35.8)	3.16	0.81
	Low digital literacy skills among library users.	14 (5.4)	15 (5.8)	139 (54.1)	89 (34.6)	3.18	0.77
	Absence of institutional policies supporting innovative information services.	19 (7.4)	21 (8.2)	123 (47.9)	94 (36.6)	3.14	0.85
	Grand Mean					3.12	0.84

Table 2 presents respondents' perceptions of the challenges affecting information service delivery in federal university libraries in North-West Nigeria. The findings indicate that all the identified challenges recorded mean ratings above the criterion mean of 2.50, yielding a grand mean of 3.12 (SD = 0.84). This indicates that respondents generally perceived the listed factors as severe challenges affecting effective information service delivery.

Among the identified challenges, insufficient funding for technological and information service development recorded the highest mean score (M = 3.19, SD = 0.76). Specifically, 91 respondents (35.4%) rated it as a very severe challenge, while 136 respondents (52.9%) considered it a severe challenge. This finding suggests that inadequate financial resources remain the most critical barrier to the acquisition, maintenance, and sustainability of modern library technologies and services.

The second highest-rated challenge was low digital literacy skills among library users (M = 3.18, SD = 0.77), with 89 respondents (34.6%) identifying it as a very severe challenge and 139 respondents (54.1%) identifying it as a severe challenge. This implies that many users lack the digital competencies required to effectively utilize available electronic information resources and digital library services.

Similarly, respondents identified poor maintenance culture for existing library technologies (M = 3.16, SD = 0.81) and the absence of institutional policies supporting innovative information services (M = 3.14, SD = 0.85) as major constraints to effective information service delivery. In addition, insufficient ICT infrastructure, including computers, servers, and software (M = 3.08, SD = 0.92), low internet bandwidth and poor network connectivity (M = 3.07, SD = 0.86), lack of continuous training for librarians on emerging technologies (M = 3.06, SD = 0.86), and inadequate or irregular power supply affecting ICT-based services (M = 3.05, SD = 0.86) were all rated above the criterion mean, indicating that they constitute significant operational challenges in the university libraries.

The findings demonstrate that although federal university libraries in North-West Nigeria have made considerable progress in adopting technological innovations and improving information service delivery, persistent financial, infrastructural, technological, human capacity, and policy-related challenges continue to hinder optimal service provision. Addressing these challenges through increased funding, improved ICT infrastructure, regular capacity-building programmes, reliable power supply, enhanced internet connectivity, stronger institutional policies, and improved digital literacy among users would further strengthen the quality and effectiveness of information service delivery in the studied university libraries.

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DISCUSSION OF FINDINGS

The study revealed that the level of information service delivery in federal university libraries in North-West Nigeria was high. This finding indicates that respondents perceived library services to be prompt, reliable, accessible, and capable of meeting users' information needs effectively. The finding supports Nitecki and Hernon (2020), who concluded that reliable and responsive library services are essential indicators of service quality and user satisfaction in academic libraries. The finding also agrees with Afebende and Enyi (2022), who maintained that improvements in library infrastructure and technology enhance service quality and user satisfaction. However, the finding contrasts with Abubakar and Suleiman (2019), who reported only moderate user satisfaction with library services at Usmanu Danfodiyo University due to inadequate current information resources and poor functionality of library equipment. The difference may reflect recent improvements in library funding, ICT infrastructure, and electronic information resources resulting from TETFund interventions and technological advancements.

The findings identified inadequate funding, insufficient ICT infrastructure, poor internet connectivity, irregular electricity supply, inadequate staff training, poor maintenance culture, low digital literacy among users, and inadequate institutional policy support as the major challenges affecting information service delivery in federal university libraries. This finding agrees with Taylor and Francis (2021), who identified funding, technology availability, staff competence, and physical infrastructure as major determinants of library service quality. The finding also corroborates Otike and Asanyo (2022), who identified inadequate funding, outdated technology, shortage of professional staff, and weak institutional support as major constraints to effective service delivery in East African university libraries. Similarly, the finding supports Igbeka and Ola (2021), who found that funding, technology, staff competence, and institutional support significantly influence information service delivery in Nigerian federal university libraries.

CONCLUSION

This study investigated information service delivery and the challenges affecting federal university libraries in North-West Nigeria. The findings demonstrated that information service delivery in the selected federal university libraries was generally high, indicating that these libraries have continued to provide timely, accessible, and user-oriented services that support academic activities, research advancement, and knowledge dissemination. The availability of responsive reference services, prompt handling of information requests, accessibility of information resources, and provision of digital library services contributed significantly to the effectiveness of library operations.

Despite this positive outcome, the study revealed that information service delivery is constrained by several persistent challenges. Inadequate funding emerged as the most critical challenge, followed by low digital literacy among users, poor maintenance culture of technological facilities, insufficient ICT infrastructure, weak institutional policy support, inadequate staff training, poor internet connectivity, and unreliable power supply. These challenges suggest that the sustainability and future effectiveness of information services depend not only on the availability of technologies but also on adequate financial investment, institutional commitment, and continuous capacity development. The study concludes that federal university libraries in North-West Nigeria have made considerable progress in delivering information services; however, achieving a more resilient, technology-driven, and user-centred information environment requires strategic interventions that address existing infrastructural, financial, and human capacity limitations. Strengthening these areas will enable university libraries to maximize their contribution to teaching, learning, research, and national development.

Recommendations

Based on the findings of the study, the following recommendations are made:

- Federal and university authorities should provide sustainable funding for library development to enhance the acquisition of electronic resources, upgrading of ICT infrastructure, and maintenance of technology-driven information services.
- University libraries should develop comprehensive ICT maintenance and sustainability plans to ensure the effective functioning of digital platforms, online catalogues, institutional repositories, and other technology-based services.
- Library management should implement continuous professional development programmes to improve librarians' competencies in emerging technologies, digital resource management, and innovative service delivery approaches.
- University authorities should formulate and implement supportive institutional policies that promote digital transformation, innovation, and the effective integration of ICT into library operations.
- Federal university libraries should strengthen user digital literacy initiatives through regular orientation programmes, information literacy training, and user support services to enhance effective utilization of available information resources.

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The authors declare no competing financial or non-financial interests.

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All analytical datasets and materials are available upon reasonable request.

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