

The Human Factor in ICT Resources Management: Assessing Staff Competence and Success in University Libraries in North-west states of Nigeria

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Abstract

This paper highlights “The Human Factor in ICT Resources Management: Assessing Staff Competence and Success in University Libraries in the North West States of Nigeria”, The objectives of the study include; to find out the level of knowledge of ICT staff on the management of ICT resources in University Libraries in the North West States of Nigeria, and to assess the factors that contribute to the success of the management of ICT resources in University Libraries in the North West States of Nigeria. The study adopted quantitative methodology using Cross sectional survey research design. The population of the study comprised of seven (7) university librarians and 89 ICT staff in the university libraries studied. The sample was selected using census sampling techniques. Questionnaire was design using google form and used as an instrument for data collection. The data collected were analyzed descriptively using frequency, mean and standard deviation for the research questions. The findings revealed that ICT staff at the university libraries in the North-West States of Nigeria have a moderate to high level of knowledge about the management of ICT Resources. The findings revealed that the availability of skilled staff, leadership style and engagement of team members are the factors contributing to the successful management of ICT resources by university libraries in the North-west States of Nigeria. The study therefore concluded that university libraries in the North West States of Nigeria have made notable progress in the management of ICT resources, with a moderate level of overall readiness and execution.

Keywords: Federal University Libraries, ICT Resources, Implementation, Information and Communication Technologies Management.

Introduction

In the digital era, the role of Information and Communication Technology (ICT) in university libraries has become indispensable. ICT facilitates seamless access to information, improves resource management, and enhances user experience, making it a critical component of modern library services (Ilori et al., 2020). The integration of ICT into library operations has significantly transformed the way information is acquired, processed, and disseminated, enabling libraries to meet the growing demands of students, researchers, and faculty members. However, the successful implementation of ICT in university libraries is not solely dependent on the availability of technological resources but also on the competence of library staff and the efficiency of ICT management strategies (Dahunsi & Adetunla, 2021). Poor ICT management can lead to inefficiencies in service delivery, underutilization of digital resources, and security vulnerabilities, thereby undermining the overall effectiveness of library services (Harrison et al., 2022).

The effective management of ICT resources requires a well-structured strategic plan that aligns with the goals and objectives of the library. A strategic ICT plan provides a framework for decision-making, outlining the technological infrastructure, policies, and implementation strategies necessary for achieving operational efficiency (Mercer, 2023). Such a plan typically includes a vision statement, mission statement, short-term and long-term objectives, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, an action plan, and key performance indicators (KPIs) to measure progress (Martins, 2024). The formulation and implementation of these strategic plans are crucial for ensuring that libraries can maximize the benefits of ICT while addressing potential challenges such as financial constraints, technological obsolescence, and cybersecurity threats (Obiokafor et al., 2023).

Despite the numerous benefits associated with ICT adoption in university libraries, several challenges hinder its full potential. Many libraries in developing countries struggle with inadequate funding, limited technical expertise among staff, and outdated infrastructure, which affect the smooth implementation of ICT initiatives (Gabriel & Lupiana, 2018). Moreover, data security and privacy concerns pose significant risks, especially when handling sensitive user information (Hoque, 2023). To address these challenges, libraries must invest in continuous staff training,

capacity building, and the adoption of best practices in ICT management. Ensuring that librarians and ICT personnel possess the necessary technical skills and competencies is essential for the successful deployment and maintenance of digital library systems (Ibrahim et al., 2023).

Furthermore, the dynamic nature of ICT necessitates continuous updates and adaptations to keep up with emerging technologies. Libraries that fail to regularly update their software, hardware, and digital resources risk becoming obsolete and inefficient in service delivery (Kulshreshtha, 2018). Therefore, strategic ICT management must not only focus on the implementation of current technologies but also incorporate mechanisms for future scalability and sustainability. Effective ICT management in university libraries requires collaborative efforts between librarians, ICT professionals, and institutional management to ensure that technology investments align with the broader goals of academic institutions (Indeed Editorial Team, 2022).

Given the critical role of ICT in modern library operations and the challenges associated with its management, it is imperative to assess the human factor in ICT management. This study aims to evaluate the competence of library staff and identify key success factors in ICT management within university libraries in Northwestern Nigeria. By analyzing the extent to which ICT strategic plans are implemented and the challenges faced by library personnel, the study seeks to provide insights into best practices for optimizing ICT use in academic libraries. The findings will contribute to improving ICT policies, staff training programs, and the overall efficiency of library services, ensuring that university libraries remain relevant and responsive to the evolving needs of their users.

Statement of the problem

The effective management of Information and Communication Technology (ICT) resources is fundamental to the successful functioning of university libraries in the digital era. Globally, the success of ICT resource management is significantly influenced by the competence and efficiency of library staff. Proper management of the library's ICT resources is crucial for ensuring the optimal utilization of technological resources, and fostering sustainable library operations (Wright, 2023).

Despite the significance of managing ICT resources, many university libraries in developing countries, including Nigeria, continue to struggle with persistent technological challenges. These include frequent computer malfunctions, outdated

ICT infrastructure, downtime of institutional repositories, and inadequate digital preservation mechanisms. Such issues not only hinder effective library operations but also compromise the ability of libraries to provide seamless access to digital resources, affecting both academic research and learning (Obiokafor et al., 2023). The failure to fully manage ICT resources has led to inefficiencies in service delivery, reduced access to digital materials, and weakened institutional support for research and innovation (Harrison et al., 2022).

While previous studies have extensively examined ICT management from the perspectives of infrastructure availability and technological limitations, the role of library personnel competencies in managing ICT resources has received inadequate scholarly attention. Therefore, this study seeks to assess the human factor in ICT resource management by examining the competence, training needs, and overall effectiveness of ICT staff in managing ICT resources in university libraries in the Northwest states of Nigeria.

Objective of the Study

The following objectives guide the study:

1. To find out the level of knowledge of ICT staff on the management of ICT resources in University Libraries in the North West States of Nigeria
2. To assess the factors that contribute to the success of the management of ICT resources in University Libraries in the North West States of Nigeria

Literature Review

Knowledge of Staff on the management of ICT Resources

In the modern era of rapid economic, technological, social, and political advancements, strategic planning has become essential for libraries to remain relevant and effective. While technological innovations drive growth and development, they also pose significant challenges, particularly in developing countries where technical expertise is often lacking. Without proper strategic planning, library operations may become inadequate, leading to inefficiencies or even institutional failure. Library employees, especially those in ICT departments, must engage in comprehensive planning to assess critical needs, including user requirements, available resources, staff expertise, funding sources, and infrastructural demands (Eyo & Augustine, 2014).

The effectiveness of the management of ICT resources largely depends on the ICT staff's understanding of its implementation. Engaging the library community and utilizing data-driven insights play a significant role in ensuring that staff are well-versed in strategic goals. Research suggests that equipping library employees with data analysis skills and fostering community involvement can enhance their ability to implement strategic initiatives successfully (Miller, 2018; Andersen & Baker, 2019). Additionally, Karadeniz & Yilmaz (2020) highlight the need for a national strategy for libraries, emphasizing that library staff must align their efforts with broader institutional and national goals. Similarly, Vienazindiene & Andriukaitiene (2019) stress the importance of continuous staff training to build competence and efficiency in implementing strategic plans. Staff expertise, individual commitment, and organizational alignment are crucial factors for success, making it necessary to identify and prioritize essential staff competencies.

However, the level of knowledge among library staff regarding the management of ICT resources varies across institutions and regions. In Lithuanian municipal public libraries, employees are beginning to engage with strategic planning but often lack the deeper understanding and capabilities needed to predict and initiate effective plans (Liukinevičienė & Kuodytė, 2021). Conversely, the University of California San Diego Libraries adopted a highly participatory approach to strategic planning, resulting in greater staff involvement, a sense of ownership, and the development of actionable initiatives (Williams et al., 2013). A study in Mainland China revealed that while many library employees recognize the importance of strategic planning and the negative impact of neglecting it, there remains considerable confusion and lack of clarity regarding its implementation (Ke et al., 2012).

Some institutions, such as Embry-Riddle Aeronautical University's Hunt Library, actively involve staff in both the development and execution of their strategic plans. These libraries utilize innovative feedback mechanisms, such as retreats, workshops, and scenario planning, to engage staff in strategic discussions. This approach fosters a culture of collaboration, although it presents both successes and challenges (Casey, 2015). In contrast, Nigerian libraries often struggle with limited cooperation and understanding between management and staff regarding strategic planning. Research by Dahunsi & Adetunla (2021) indicates that library employees in Nigeria are frequently excluded from the planning and decision-making processes, leading to feelings of detachment from the library's overall management structure.

To enhance effective management, ICT staff must be well-versed in the library's strategic objectives and the role of technology in achieving these goals. Strategic

objectives may include improving user experience, expanding digital collections, increasing information accessibility, or fostering community engagement. A thorough understanding of these objectives allows ICT staff to align technological investments—such as hardware, software, and digital services—with the library’s long-term vision. For example, if a library aims to enhance digital literacy, ICT staff can facilitate online learning platforms, virtual workshops, and digital skills training programs. By aligning ICT initiatives with broader organizational strategies, libraries can optimize their impact and ensure sustainable progress (Allison & Kaye, 2011).

Dahunsi & Adetunla (2021) further emphasize the importance of collaboration between planning teams, library leaders, and university management in fostering a sense of commitment and ownership among staff. Establishing diverse committees to bridge management and staff relations, encouraging staff participation in decision-making, and maintaining open communication channels with institutional leadership can significantly enhance strategic implementation. Such collaborative efforts ensure that all stakeholders remain engaged and contribute meaningfully to the library’s success.

Furthermore, effective communication of strategic plans is essential for successful execution. Research indicates that approximately 95% of employees in an organization do not fully understand their institution’s strategic objectives, which hinders effective implementation (van der Maas, 2017). Encouraging clear communication and ensuring that employees understand how the strategic plan influences their daily responsibilities can bridge this gap. Transparent and straightforward dissemination of strategic goals allows staff to see their roles within the broader institutional framework, fostering greater commitment and efficiency.

Additionally, ICT staff must possess knowledge of information security best practices, given the increasing risks of cyber threats and data breaches. Libraries manage sensitive user information and digital resources, making cybersecurity a top priority. ICT personnel must implement security measures to protect library databases, user privacy, and institutional assets. Effective information security practices uphold the integrity and confidentiality of library services, ensuring that technological advancements do not compromise institutional stability (Amini et al., 2021).

In summary, ICT management is crucial for libraries, particularly in developing nations, to navigate technological advancements and sustain high-quality services.

The successful management of library's ICT resources hinges on staff knowledge, engagement, and cooperation. Research highlights the benefits of participatory planning approaches, as seen in institutions like the University of California San Diego Libraries, while challenges persist in regions with limited collaboration, such as Nigeria. ICT staff play a pivotal role in integrating technology with strategic goals, ensuring that investments are purpose-driven and aligned with institutional objectives. Strong collaboration among library leaders, staff, and university management is essential for fostering commitment and ownership of strategic initiatives. Moreover, clear communication and robust information security practices are vital for effective plan execution in the digital era.

Factors for the Successful Management of ICT Resources

The management of ICT resources is a dynamic, iterative, and multifaceted process involving a series of decisions and activities carried out by managers and employees. These actions are influenced by various interrelated internal and external factors that impact the achievement of strategic objectives. Identifying and addressing these factors enhances an organization's preparedness, ultimately improving its performance and overall success (Salum, 2017).

A range of internal and external factors affect the successful management of ICT resources in university libraries. Internally, key elements include the availability of skilled personnel and adequate budgetary allocation (Harrison et al., 2022). Externally, factors such as economic conditions, political stability, and regulatory changes significantly influence the process (Wachera et al., 2019). Furthermore, personal, professional, and organizational components, including user expectations, librarian expertise, and financial alignment, play critical roles in determining implementation success (Panahi et al., 2019). Additionally, as universities undergo digital transformation, it is crucial to develop networked resources and embrace new technologies (McCready & Clark, 2018).

Several organizational elements also contribute to the success of ICT resource management. These include organizational culture, structure, leadership styles, and resource allocation (Nini & Kihara, 2023). Moreover, the adoption of formalized project management methodologies enhances communication, workflow organization, and resource management, thereby improving strategic execution outcomes (Diego et al., 2017). Understanding and mitigating these influencing factors are essential for universities to manage their ICT effectively and achieve their long-term objectives.

Lynch (2021) highlights that successful management of ICT resources relies on multiple influential factors, foremost among them being active participation from senior management and the engagement of all stakeholders. The expertise of top executives and the prevailing organizational culture are also fundamental to achieving management goals. Given that management is an internal administrative function, libraries must overcome obstacles, foster a conducive organizational culture, motivate personnel, and establish a strong connection between routine activities and strategic initiatives. This requires converting formulated plans into actionable steps that yield the desired outcomes (Musyoka, 2011, as cited in Salum, 2017).

From another perspective, Kathryn (2019) identifies critical factors for successful ICT resource management, including the establishment of clear objectives, systematic reporting, goal alignment across units, measurable performance indicators, and actionable improvement strategies. The involvement of key stakeholders, such as the Chancellor's Office, in supporting and overseeing implementation efforts is also crucial. Similarly, George (2020) underscores the significance of individuals, processes, and the actual plan in achieving strategic success. Kavousi and Salamzadeh (2016) prioritize factors such as administrative procedures, managerial processes, inter-organizational culture, and external environmental influences. Additionally, resources, governance structures, leadership attributes, and board characteristics have been cited as integral components of successful management (Umar et al., 2020).

Panahi et al. (2020) further emphasize the role of personal, professional, and institutional elements, including librarian competencies, scientific achievements, budgetary alignment, and user expectations. Nagra (2017) underscores the impact of internal elements such as financial resources, staffing, and interdisciplinary collaboration, alongside external factors like user behavior and engagement with academic departments. management plan evaluation processes involve assessing these internal and external factors, measuring performance, and implementing necessary adjustments to address environmental uncertainties. Given the dynamic nature of ICT resources management, motivational drivers are essential to ensuring executive leadership commitment to successful execution (Omuse et al., 2018). Professional attributes, including scientific contributions and communication skills, alongside librarian personality traits and user involvement, further contribute to successful ICT resource management (Miller, 2018).

Among all the influencing factors, organizational culture emerges as the most critical determinant of management success. This can be attributed to its profound impact on the values, beliefs, customs, and behaviors that define an institution. Organizational culture shapes the work environment, employee attitudes, and overall institutional atmosphere. It is reflected in communication styles, leadership approaches, team dynamics, and responses to challenges, ultimately determining the effectiveness of ICT resources management.

Research Methodology

This study employed a quantitative approach within the positivist paradigm, using a cross-sectional survey design to collect numerical data for statistical analysis (Creswell, 2014; Saunders et al., 2019). The target population included seven university librarians and 89 ICT staff from federal university libraries in Northwest Nigeria. A census sampling technique was used to ensure comprehensive representation (Neuman, 2014). A structured questionnaire (Google Forms) was used, validated through face and content validation and tested in a pilot study at Abubakar Tafawa Balewa University (ATBU) Library, Bauchi, yielding a Cronbach's Alpha of 0.852, indicating high reliability (Taber, 2018).

The questionnaire link was distributed via WhatsApp to research assistants in each university, who followed up over an eight-week period. Email tracking ensured data integrity (Dillman et al., 2014). Data were analyzed using SPSS, with descriptive statistics (frequency, percentage, mean, standard deviation) summarizing responses. A mean benchmark of 3.00 on the Likert scale guided interpretation (Sekaran & Bougie, 2016). By applying these rigorous methods, the study ensured the reliability and validity of its findings on ICT resource management in university libraries.

Results and Discussions

Response Rate

Ninety-six (96) respondents (university librarians and ICT staff) were expected to respond to the questionnaire (google form) developed by the researcher. A total of sixty-nine (72%) response of the questionnaire (google form) were recorded and found of useful for the study. The response rate of the respondents according to their respective university libraries is being presented in the table 1.

Table 1: Response Rate

University Libraries	No of Expected Response	Response Recorded	Percentage of Response Recorded
Kashim Ibrahim Library (ABUZ)	27	21	21.9
Bayero University Library Kano	21	16	16.7
Federal University Library Dutse	4	2	2.1
Abdullahi Fodio Library Sokoto	14	9	9,4
Federal University Library Birnin Kebbi	8	5	5.2
Federal University Library Gusau	7	5	5.2
Federal University Library Dutsinma	15	11	11.5
Total	96	69	72%

Source: *field Data (2024)*

The data presented in Table 1 indicates varying response rates to the shared questionnaires (Google Form) across different university libraries in the North West States of Nigeria. Specifically, Kashim Ibrahim Library (Ahmadu Bello University, Zaria) recorded the highest response rate at 21.9%, followed by Bayero University Library, Kano at 16.2%, and Federal University Dutsin-Ma Library at 11.5%. Conversely, Federal University Library Dutse exhibited the lowest response rate at 2.1%. Out of a total of 96 respondents, 69 responded, yielding an overall response rate of approximately 72%. This high response rate can be attributed to factors such as the effective design and distribution of the questionnaires, the relevance of the study to the respondents, and the strategic follow-up with participants to ensure their engagement. Additionally, the use of digital platforms like Google Forms likely enhanced accessibility and convenience for participants, contributing significantly to the robust and reliable data collected for analysis.

Table 1.1 Level of Knowledge of ICT Staff on the Management of ICT Resources by University Libraries in the North West States of Nigeria

knowledge of staff on the management of ICT Resources	SA		A		NnD		D		SD		TOTAL		MEAN	SD
	F	%	F	%	F	%	F	%	F	%	F	%		
The library has an ICT plan in the library strategic plan	7	10.1	4	58.0	1	24.0	8	11.6	0	0.0	69	10.0	3.67	0.21
2.The library strategic plan has objectives, and the steps required for successful implementation of the ICT plan	5	7.25	4	59.1	1	25.0	2	2.9	6	8.70	69	10.0	3.54	0.31
3.ICT staff are actively involved in the implementation of the ICT strategic plans	2	2.9	0	0	9	13.0	5	7.6	5	7.25	69	10.0	2.14	0.74
4.The ICT staff effectively communicate their role in the implementation process.	2	2.9	2	2.9	5	8.6	4	5.8	5	7.25	69	10.0	2.88	0.80
Grand total/Mean	1	6	8	3	9	4	6	7	1	6	27	6	3.06	0.11

Source: field Data (2024)

The table revealed that the highest mean 3.67 of the libraries has an ICT plan in the library strategic plan implies that while the libraries have made some progress in incorporating an ICT plan into their strategic plan, and the lowest mean 2.12 of ICT staff are actively involved in the management of ICT resources. This implies that while the libraries have made some progress in incorporating an ICT plan into their strategic plan, there is a significant gap when it comes to the actual involvement of ICT staff in implementing these plans.

The finding indicates that ICT staff have a moderate to high level of knowledge about the management of their ICT resources but need improvement in their involvement and communication. The finding is in agreement with Miller (2018), who states that involving ICT staff in the strategic planning process through surveys and staff education ensures their active participation and knowledge and skills for effective management of ICT resource. Similarly, Allison and Kaye (2011) highlight that ICT staff with a clear knowledge and skills of ICT resource management can align their activities with long-term objectives, thereby improving user experience and information accessibility. In disparity, the study by Nwankwo (2020) highlights that while ICT staff have basic knowledge and skills, there are significant gaps in advanced competencies necessary for effective management of ICT resource. This suggests a discrepancy between general knowledge and the advanced competencies required.

The implication of this finding is that while ICT staff may possess solid knowledge of library strategic plans and their implementation, the lack of active involvement and poor communication among staff can undermine the effectiveness and success of ICT resource management. This gap in participation and communication reflects a misalignment with strategic goals, leading to incomplete or delayed execution and an inability to address emerging challenges effectively. From the perspective of knowledge as a construct, this highlights the critical need for leveraging staff expertise through active engagement and clear communication. Enhancing these aspects ensures that the knowledge held by ICT staff is effectively applied to align with strategic objectives, enabling seamless integration of ICT resources and maximizing the impact of strategic plans in libraries.

Table 1.2: Factors that Contribute to the Successful Management of ICT Resources by University Libraries in the Northwest States of Nigeria

Contributing Factors to the Successful management of ICT Resources	KIL(ABUZ)		BULK		FULBK		FULD		FULDMA		FULG		AFLS			TOTAL	MEAN	SD
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%		
availability of skilled staff	20	95.2	16	100	5	100	1	50	11	100.00	3	60	7	77.78	63	91.3	4.94	1.37
adequate budget allocation	11	52.4	9	56.3	5	100	1	50	4	36.36	3	4.35	7	77.78	40	57.97	4.63	1.29
organizational culture	12	57.1	5	31.3	2	40	1	50	3	27.27	1	1.45	4	44.44	28	40.58	5.11	1.30
Organizational Structure	1	4.76	1	6.25	1	20	1	50	1	9.09	1	1.45	2	22.22	8	11.59	3.63	2.28
Leadership Styles	14	66.7	16	100	5	100	2	100	7	63.64	3	4.35	7	77.78	54	78.26	4.83	0.62
participation of upper management	9	42.9	6	37.5	2	40	1	50	4	36.36	2	2.9	4	44.44	28	40.58	4.75	1.32
engagement of team members	15	71.4	9	56.3	5	100	2	100	5	45.45	3	4.35	5	55.56	44	63.77	4.95	0.58
Economic	7	33.3	7	43.8	2	40	1	50	1	9.09	2	2.9	4	44.44	24	34.78	4.83	1.37
political conditions	6	28.6	5	31.3	2	40	1	50	2	18.18	2	2.9	2	22.22	20	28.99	4.90	1.19
Personal	8	38.1	4	25	2	40	1	50	4	36.36	2	2.9	2	22.22	23	33.33	4.87	1.25
Professional	12	57.1	7	43.8	2	40	2	100	3	27.27	3	4.35	7	77.78	36	52.17	4.61	0.84
Grand total/Mean	115		85		33		14		45		25		51		368		4.82	0.09

Source: field Data (2024)

Table 1.2 revealed that the availability of skilled staff is the highest factor contributing to the successful management of ICT resources with a total frequency of 46, representing 91.3% while among the university libraries BULK, FULBK and FULDMA had the highest response rate of (100%), KIL (ABUZ) (95.2%), AFLS (77.78%), FULG (60%). leadership styles representing 78.26% is the second highest contributing factor, among the university library BULK, FULBK and FULD had the highest response rate of (100%), AFLS 77.78, KIL (ABUZ) 66.7, FULDMA 63.64 and FULG had the lowest (4.35%) response in terms of leadership styles. While Organizational Structure have a lowest among the university libraries with (22.22%).

The findings revealed that the availability of skilled staff is a critical factor contributing to the successful management of ICT resources by university libraries in the Northwest states of Nigeria. This is in agreement with Harrison et al. (2022) who Identifies internal factors such as the availability of skilled staff and adequate budget allocation as critical to the successful management of ICT resources in university libraries. And again Panahi et al. (2020): Highlights the importance of personal, professional, and organizational factors, including skilled staff and budget alignment. On the contrary Nini & Kihara (2023): Emphasizes organizational culture, structure, leadership styles, and resource allocation as the primary contributors to successful management of ICT resources, without specifically prioritizing skilled staff. Lynch (2021) stresses the active participation of management, team engagement, and organizational culture as more influential than staffing.

The implication of this finding is that while the availability of skilled staff is acknowledged as a critical factor in the successful management of ICT resources in university libraries, its impact is interdependent on other complementary elements such as budget allocation, organizational culture, leadership, and team engagement. The alignment with studies emphasizing skilled staff underscores its foundational role in enabling effective management. However, contrasting views highlight the necessity of a holistic approach that integrates skilled staffing with robust leadership, cohesive organizational culture, and participatory management practices to achieve comprehensive and sustainable outcomes in ICT resource management. This suggests that focusing solely on skilled staff without addressing broader organizational dynamics may limit the effectiveness of management.

Summary of the Finding

The following were the major findings of the study:

1. ICT staff at the university libraries in the North West States of Nigeria have a moderate to high level of knowledge about the management of ICT resources
2. The findings revealed that the availability of skilled staff, leadership style and engagement of team members are the factors contributing to the successful management of ICT resources by university libraries in the Northwest states of Nigeria.

Conclusion

The study reveals that ICT staff in university libraries across the Northwest states of Nigeria have a moderate to high level of knowledge in managing ICT resources. Successful ICT resource management is driven by skilled staff, effective leadership, and team engagement. To enhance ICT services, universities should invest in continuous training, adopt strong leadership practices, and promote teamwork to optimize digital resource utilization and improve library operations.

Recommendations

In line with the findings of this study, the following recommendations were made:

1. University libraries in the North West States of Nigeria should take proactive steps to increase the active involvement of ICT staff in the management of their ICT resources. This can be achieved by involving ICT staff early in the planning process, ensuring their input is considered when setting goals and objectives. Additionally, regular workshops and training sessions should be organized to ensure ICT staff have a clear understanding of the library plan's goals and their role in the management. This involvement will foster a sense of ownership and commitment, enhancing the successful management of the ICTs.
2. University libraries in the North West States of Nigeria should strengthen their organizational structures to provide better support for the management of ICT resources. This can be achieved by establishing clear roles and responsibilities within the library, ensuring that key positions related to ICT management are filled with qualified professionals. Libraries should create a dedicated ICT department or enhance the existing one, providing it with the necessary resources and authority to drive the management of ICT resources.

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