LIBRARY AND INFORMATION MANAGEMENT FORUM
JOURNAL OF AHMADU BELLO UNIVERSITY LIBRARY COMPLEX

VOLUME 26 No. 2 2024

Aims and Scope

Library and Information Management Forum - ISSN 1117-7918 is a publication of Ahmadu Bello University Library Complex. It is published two times a year – January and July.

The journal is a peer reviewed publication which aims at publishing articles of interest and value to information management and academics within Library and Information profession. It also publishes articles designed to assist in the teaching of information and library management as academic disciplines. Field experiences and reports are as well encouraged. The journal is designed for academic scholars and information managers as well as those out there seeking updates on current experiences and future prospects on contemporary information and communication environment.

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Every article must be accompanied by an abstract not exceeding 150 words. This should be an abbreviated, accurate representation of the content of the article. Major results, conclusions and recommendations should be reflected in the abstract.
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Marti, J. (2009). New Technology in Banking. In: T. Forester, ed. *The Information Technology Revolution,* Oxford Basil Black Well, p. 250.

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Bygrace, W.D. (2010). Entrepreneurs in a production economy, http://www.netlib.org/inds/kystza.(Accessed 13th July, 2012)

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A processing fee of N5,000.00 (Five thousand Naira) for every manuscript sent is charged while N25,000.00 (Twenty Five Thousand Naira) is charged on each article accepted as publishable.

Subscription

Individuals	N5,000.00 per copy
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EDITORIAL NOTE

This edition of the Library and Information Management Forum features sixteen (16) high quality and peer reviewed articles with contemporary articles in line with global trends as well as specialized content areas in the field of Library and Information Science. Statistically, 3(18.8%) papers focus on Artificial Intelligence, 2(12.5%) paper focus on Academic Libraries, 3(18.8%) of the paper is on Record Management, 1(6.3%) of the paper focus on Utilization of Assistive Technologies, 2(12.5%) of the paper focus on Information Seeking Behavior and Sharing, 1(6.3%) is on Security of Information Resources, 1(6.5%) is on Legal deposit law, 1(6.3%) is on Reference Management Software, 1(6.3%) focus on Gender Based Study while, 1(6.3%) focused on Job Related Stress.

The lead paper by Adedokun, and Adegbite explored Librarians' Identity and Organizational Justice as a Correlate of Turnover Intention in Academic Libraries in Lagos State. Esew, Ogbu and Raji also examined the Challenges of Utilizing Artificial Intelligence for Information Management at the African Center for ICT Training and Innovation, American University of Nigeria, Yola. So also Oso and Diyaolu discussed the Emergence of Artificial Intelligence and Applications for Service delivery in Academic Libraries: An Overview. Furthermore, Maihadishi and Mohammed explored the Influence of Artificial Intelligence tools on innovation in Information Literacy Programmes among Librarians in Some Selected Federal University Libraries in North-West, Nigeria. Similarly, Muhammad, Quadir, Yusuf and Nanoh discussed the Utilization of Reference Management Software: The Purpose and Benefit by Postgraduate Student of Department of Library and information Science (DLIS), ABU Zaria.

On the other hand, Sani, Mohammed, Muhammad and Musa, investigated, the Comprehensive Coverage of Legal Deposit Statutory Law on Thesis and Dissertation for Open Access Digital Repository by National Library of Nigeria. Likewise, Goshie, Bukar and Husaini discussed the Evolving Roles and Competencies of Reference and Research Librarians for Effective Services in Academic Libraries in North-Central Nigeria. While Ahmed, Raji, Sim and Abimaje discussed the Influence of Information Sharing on Identification of Road Transport Accident Victims by National Union of Road Transport Workers and Federal Road Safety Corps in Kwara State, Nigeria. So also, Anthonia and Umar assessed Gender Based Study for Job Performance of Librarians in University Libraries in North-West Nigeria. Ozor, and Alegbeleye investigated, Utilization of Assistive Technology for academic Performance among Visually Impaired Students in North – West Nigeria.

Daniel, Adedokun and Musa explored ICT Availability and Compatibility with Records Management Practices in Universities in Kaduna State. Similarly, Abdulmumini , Aliyu and Yusuf discussed Use of Security System for Protection of Information Resources by Staff of Customer Services Division at kashim Ibrahim Library, Ahmadu Bello University, Zaria. Hussaini also studied the Influence of Job-Related Stress on Service Delivery by Staff of Federal University Libraries in North Western State of Nigeria. Olagunju, Adedokun and Musa assessed Records Utilization and Organization for Promoting Transparency and Accountability in Students Representative Committees at the Faculty of Education, Ahmadu Bello University, Zaria. Furthermore, Abdulkadir, Quadir, Yakubu and Abubakar examined Information Seeking Behaviour of Undergraduate Students in Federal University, Dutsin-ma, Katsina State, Nigeria. While, Yero, Dangani and Esew investigated the Strategies in Preserving Records for Administration of Pension Services by Kaduna State Pension Bureau, Kaduna State, Nigeria.

All the article contained in this edition were peer reviewed by experts in various content areas of Library and Information profession before the acceptance for inclusion.

Sincere gratitude goes to the editorial team of this journal and the reviewers who ensured that this edition sees the light of the day. I therefore, recommend this edition to all stakeholders in the profession to purchase and utilize.

Dr. Amina Oiza Jimoh
Editor – in - Chief

LIBRARIANS' IDENTITY AND ORGANIZATIONAL JUSTICE AS A CORRELATE OF TURNOVER INTENTION IN ACADEMIC LIBRARIES IN LAGOS STATE

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Abstract

There is a rising rate of turnover intention among library professionals which is posing a potential threat to the library as an organisation. However, librarians' decision can be traced towards their identity with the institution. This study set out to identify the level of organizational justice in academic libraries in Lagos State, investigate the identities of librarians in academic libraries in Lagos State, and ascertain the turnover intention among librarians in academic libraries in Lagos State. A descriptive survey research design was adopted. The population of study comprised librarians in academic libraries in Lagos State. A self-structured questionnaire was used to gather data using online Google form and analysis was done using descriptive and inferential statistics with SPSS statistical package. Findings show that academic librarians' perception of organizational justice was high; librarians possessed high level of identity and have moderate turnover intention that is relative to organizational factors. Also, the study found that there is a significant negative correlation between organizational justice and turnover intention and no significant relationship between identity and turnover intention. The study recommends that wages, rewards in form of commendations and in cash should be looked into by government and stakeholders in tertiary institutions; libraries should endeavor to recruit and retain talented employees and librarians should improve on their interpersonal identity.

Keywords: Academic libraries, Identity, Lagos, Librarians, Organizational justice, Turnover intention.

Introduction

> *"The issue of identity is usually ore out of tradition, that has persisted over an appreciable length of time. Like reputation, identity cannot be forced or imposed. [Osanyin, B., 2007 p. 68]"*

Employees tend to switch careers in their quest to find better possibilities and a career that interests them and that will better match them with society's technology use. Today's organizations experience turnover for a variety of reasons, which include job dissatisfaction, lack of career advancement opportunities, low salary, poor organizational culture, inadequate work-life balance and unawareness of employees' professional identity. Employee's turnover intention can be described as employees' willingness to quit an organization (Liu & Onwuegbuzie,2012). Retaining talented employees is vital to the growth and sustainability of an organization, however, attracting and retaining top talented personnel has become a major challenge to organizations (Saufi, et al., 2023).

Librarians' professional identity is a complex construct that encompasses how individuals perceive themselves within the library profession, including their values, beliefs, and sense of belonging. Researchers have shown that career recognition is desired for quality, while businesses are typically more focused on profits and costs, academic institution especially the libraries are more concerned with the quality of the services they deliver than with income or expenses. The process of developing a professional identity is intricate, with people identifying with the evolution, challenges, and harmony between their personal and professional identities (Pham, 2020).

Howbeit, organizational justice in libraries pertains to the fairness and equity perceived by employees in various aspects of their work environment. This perception can affect the professional identity of librarians and library officers in the library.It is the degree to which an employee perceives fairness in the workplace(Adewoyin, 2022).It consists of several dimensions, categorized into distributive, procedural, interpersonal, and informational justice. Employee perception of organization justices can positively or negatively affect employee performance and in turn impact organizational success. Research shows the value of employee loyalty and satisfaction, both of which are obviously impacted by views of fairness, making organizational justice a top priority (Adewoyin, 2022). Proficient leaders understand that they may help staff members reach their maximum potential while luring and keeping the greatest personnel by influencing these impressions through equitable treatment and transparent communication.

Onwubiko (2020) citing Gallup Workforce Panel poll from 2015 noted that 51% of workers are actively looking for a new employment, in fact, the study of Hamzat, et al. (2020) confirms the increasing rate of 66% turnover intentions among library and information professionals. This indicates the level of turnover intentions among employees in organizations today, including academic institutions and the library. Academic institutions and library management need to pay special attention to the issue of turnover intentions, as it is a crucial predictor of actual turnover, to thrive in the current competitive environment (Soyemi& Oloyede, 2022).

Objective of the study

The main objective of the study is to examine the influence of librarian's identity and organizational justice on turnover intention in academic libraries in Lagos state, Nigeria. The specific objectives are to:

1. identify the identities of librarians in academic libraries in Lagos State;
2. investigate the level of organizational justice in academic libraries in Lagos State;
3. find out the turnover intention of librarians

Research questions

1. What are the identities of library professionals in academic libraries in Lagos State?
2. What is the level of organizational justice in academic libraries in Lagos State?
3. What is the rate of turnover intention among library professionals in academic libraries in Lagos State?

Research Hypotheses

The following hypotheses guided the study which were tested at 0.05 level of significance:

$H_0$1: Organizational justice does not have a correlation with turnover intention of academic librarians

$H_0$2: Identity does not have a relationship with turnover intention of academic librarians

Literature Review

Library professionals' turnover intention

Turnover intention among librarians refers to the inclination or desire of librarians to leave their current positions within the library profession. It is a critical aspect of organizational behavior and is often considered a precursor to actual turnover. Turnover intentions, if quickly detected can be averted by the organisation by providing competitive advantages and avoid possible expenses of re-employment. Research studies revealed the consequences of turnover intention on both the employee and organization such as increased recruitment and training costs, loss of institutional knowledge, decreased productivity, disruptions in service delivery, psychological distress, reduced job performance, decreased job satisfaction, and compromised well-being (Hassan, Khani, & El-Gamal, 2020; Abdulwahab, Aminu, & Hashim, 2016).

Turnover intention has a detrimental influence on organizational effectiveness even in cases when they do not result in actual turnover, since employees who experience unmet turnover intentionare more prone to participate in other types of withdrawal behaviors (Vaamonde, Omar &Salessi, 2018). Belete (2018) identified two types of turnover as voluntary turnover and involuntary turnover. Voluntary turnover is an employee's willingness to quit working in an organisation due to personal reasons while involuntary turnover is the action taken by an organisation to forcefully eject an employee out of the organisation system. According to Kim and Lee (2020) turnover intention can be influenced by various factors, including job dissatisfaction, lack of career advancement opportunities, low salary, poor organizational culture, inadequate work-life balance and unawareness of employees' professional identity.

Belete (2018) viewed the causes of turnover intention from the perception of the organization and further identified organizational variables that influence turnover among employees as leadership style, demographic variables, organizational commitment, organizational justices, organizational climate, promotion opportunities, salary, job stress, Job satisfaction and organizational culture. In agreement, Hamzat et al. (2020) reported a high rate 66% of turnover intention among library professionals in Osun state and causes of this high rate of turnover included the influence of ownership structure and leadership style in private universities in Osun state. Accessing the influence of work-life balance on turnover intentions of librarians in universities in South-West, Nigeria. Oloyede and Soyemi (2022) revealed a high-level of turnover intention among librarians.

It also indicated that work-life balance is a contributory factor to librarians' intention to leave their jobs in universities in South-west, Nigeria and recommended that policies should be adopted by library administrators and university management to improve the work-life balance and job satisfaction of librarians to alleviate turnover intentions. Heady, et al. (2020) identified other contributory factors to librarian's turnover intention as work environment, compensation and benefits, job duties and other personal factors. Hamzat and Babarinde (2021) reported emotional intelligence as one of the factors that negatively influences turnover intentions of libraries in private institutions. Masenya (2020) affirmed a high level of turnover intention among public libraries professionals in South-Africa and categorized the influencing factors as personal determinant, organizational determinant and demographic determinant.

Librarians' professional identity

Professional identity entails internalizing one's professional ideals, identifying with one's work, and experiencing psychological unity. It is a crucial component in comprehending people's job choices and paths (Hong, 2010; Trede, Macklin & Bridges, 2012). Employees who possess a strong sense of who they are professionally, typically take pride in what they do and use it as a means of self-realization and personal development (Wang, Xu, Zhang & Li., 2020). Librarians' professional identity is a complex construct that encompasses how individuals perceive themselves within the library profession, including their values, beliefs, and sense of belonging.

This definition underscores the multidimensional nature of professional identity, suggesting that it is not merely a job title but rather a reflection of personal and professional attributes. Cornett, Palermo and Ash (2022) discussed the concept of identity from three different approaches: individual approach, sociocultural approach and post-structural approach. The individual approach view identity from the psychological and developmental perspective of the individual, while the sociocultural approach focuses on individual interaction with their social surrounding and post-structural approach view identity from the combined force of individual and social perspective. In agreement, Goodolf and Godfrey (2020) described professional identity as an adaptive process of development that happens simultaneously at individual level and at the collective/social level.

Social self-concept, interactions with colleagues and patrons, and opportunities for professional development all shape and refine librarians' professional identities (Julien & Genuis, 2011). Physical concept as described by Perez-Marmol, et al., (2021) pertains to the mental construct that an individual develops based on four subdomains: physical attractiveness, physical

strength, physical condition, and sport aptitude. The environment and prior experiences are two factors considered to affect how people perceive the qualities. Transpersonal self-concept refers to experiences in which one's sense of self or identity transcends the individual or personal to include broader facets of existence, the cosmos, humankind, or the psyche (MacDonald, Tsagarakis& Holland, 1984).

The importance of professional identity for librarians' job satisfaction and performance cannot be overemphasized. A robust professional identity fosters a deeper commitment to the profession, leading to higher levels of job satisfaction (Becnel & Hsieh, 2014). Librarians who strongly identify with their profession are more likely to engage in proactive behaviors such as continuous learning, advocacy for library services, and active participation in professional organizations (Julien &Genuis, 2011). Moreover, professional identity serves as a motivational force, driving librarians to excel in their roles and make meaningful contributions to their organizations (Rath, 2007). Librarians' professional identity is a fundamental aspect of their identity formation, influenced by various factors including education, workplace experiences, and professional interactions. Understanding and nurturing professional identity is crucial for cultivating a vibrant and resilient library workforce. Despite the numerous benefits of a strong sense of professional identity to library profession, not much work has been done in harnessing its influence on librarians' turnover intention.

Wang, Xu, Zhang & Li (2020) study on the effect of professional identity on turnover intentions of china hotel employees revealed that professional identity has a negative effect on employee turnover intentions. Sare and Bales (2014) grounded theory study on professional identity of academic librarians summarized perception of professional identity to academic librarians as orienting self (and others) to a shifting profession and driving change in the field. Their study affirmed that academic librarians do not become academic librarians like one switch on a light, and they do not stop being academic librarians when they dramatically shift their work roles. Instead, they are becoming librarians because they operate in a perpetually shifting professional terrain. Gacan (2019) on the crisis of professional identity for librarians, summarized sustaining librarian professional identity as acquiring relevant skills and keeping up to date on technological innovation to remain relevant in the field of librarianship. Contrarily, Pierson, Goulding and Campbell-Meier (2019) systematic review study on librarians professional identity reported that librarians professional identity is based on the following: primary identity; education and training; socialization, which is concurrent throughout development; self-claiming; early practice; professional status, values, and associations; critical incidents; experience and time; communication and ascription of meaning to practice; identity/place dichotomy; transferability; blurring; later practice; and perceptions including stereotypes

Organizational Justice

Organizational justice is a multidimensional construct. It is described as employees' opinion of fairness and injustices within their firm. It is made up of four unique factors: procedural justice, interpersonal justice, informative justice, and distributive justice (Colquitt et al., 2013; Vaamonde, Omar &Salessi, 2018).Organizational justice in libraries pertains to the fairness and equity perceived by employees in various aspects of their work environment. Adewoyin (2022) posited that organizational justice is the extent to which employees perceive outcomes, procedures and interactions in their organization to be fair. It consists of several dimensions, primarily

categorized into distributive, procedural, interpersonal, and informational justice. Distributive justice concerns the fairness of outcomes, such as salary distribution and resource allocation. Procedural justice focuses on the fairness of processes used to make decisions, including transparency and consistency. Interpersonal justice refers to the fairness of interpersonal treatment, such as respectful communication and dignity. Informational justice relates to the fairness of information provided during decision-making processes (Colquitt, 2001). In library settings, organizational justice principles are vital for fostering a positive work environment and enhancing employee satisfaction and commitment. By ensuring fair treatment in decision-making processes, addressing concerns transparently, and promoting respectful interactions, libraries can cultivate a culture of trust and collaboration among staff members (Babin, Boles, & Robin, 2000).

The impact of organizational justice on librarians' attitudes and behaviors is profound. Perceived organizational justice positively correlates with job satisfaction, organizational commitment, and job performance among librarians (Dysvik&Kuvaas, 2013). Moreover, when librarians perceive their workplace as fair and just, they are more likely to exhibit proactive behaviors, such as organizational citizenship and innovative problem-solving, contributing to overall organizational effectiveness (Erdogan & Bauer, 2010).

Idriss, Galoji and Adamu's (2021) study on the organizational justice and employee turnover asserted that organizational justice is a major predictor of employee performance in public tertiary institution in Northeastern Nigeria. In support, Mengstie (2020) and Ozkan (2021) affirmed that organizational justice significantly influences employee turnover intentions. They asserted that distributive justice had a significant distinctive variance linked to turnover intention compared toprocedural, information and interpersonal justice dimensions. Soyemi and Oloyede (2022) affirmed that despite the high degree of organizational justice in universities in South-West, Nigeria, organizational justice positively influenced librarians' turnover intention up to 50.3%.

Methodology

The research design adopted for this study is descriptive survey research. This research design was considered appropriate for this study since the variables of interest have all existed and are studied as they were. Total enumeration was used for all librarians and library officers in academic libraries in Lagos State, Nigeria. To answer the research questions and hypothesis, the researchers designed a physical questionnaire and Google form for the online survey, circulated the instrument through WhatsApp platforms and visiting institutions nearby to collect data physically. This research instrument was used to collect data because of the spread of the universities, to reduce cost of data collection, convenience, time constraint, and to reduce the energy involved in carrying out the study. Data analysis was done using descriptive and inferential statistics with the aid of SPSS software.

Results and Discussion

Table 1: List of participating academic Libraries in Lagos State

S/N	INSTITUTION
1.	Federal College of Education (Technical), Akoka, Lagos
2.	Federal College of Fisheries and Marine Technology, Victoria Island, Lagos
3.	Lagos State University of Education Ijanikin Campus
4.	Lagos State University of Science and Technology, Ikorodu
5.	Lagos State University, Ojo
6.	Nigeria lnstitute of Advanced Legal Studies, Lagos
7.	St. Augustine College of Education, Akoka, Lagos
8.	University of Lagos, Akoka Yaba
9.	Yaba College of Technology, Yaba Lagos

Demographic information of Respondents

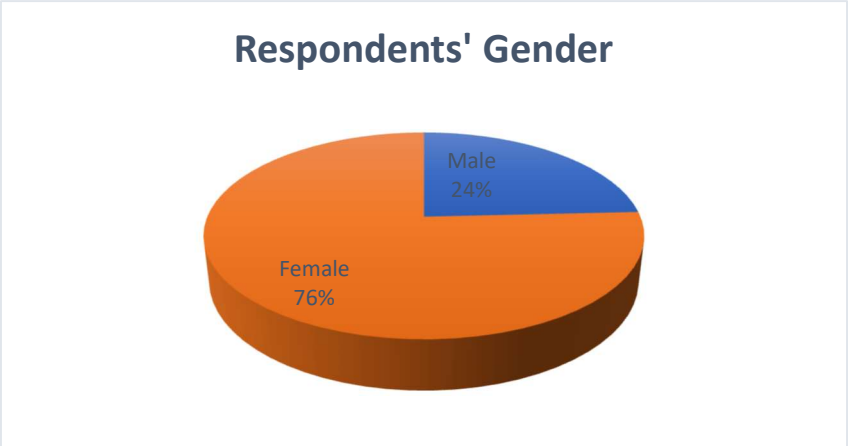

Figure 1: Respondents' Gender

Figure 1 shows that majority of respondents were female which attests to the observation made by many people that librarianship is female dominated.

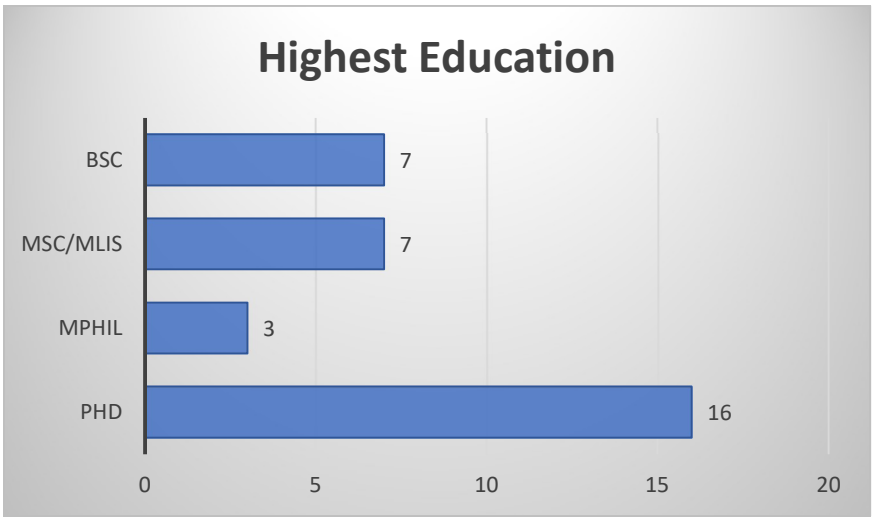

Figure 2: Respondents' Educational Qualification in the Library

Nearly half of the respondents possess PhD degree as shown in Figure 2. This reveals the academic status of the academic librarians in university libraries.

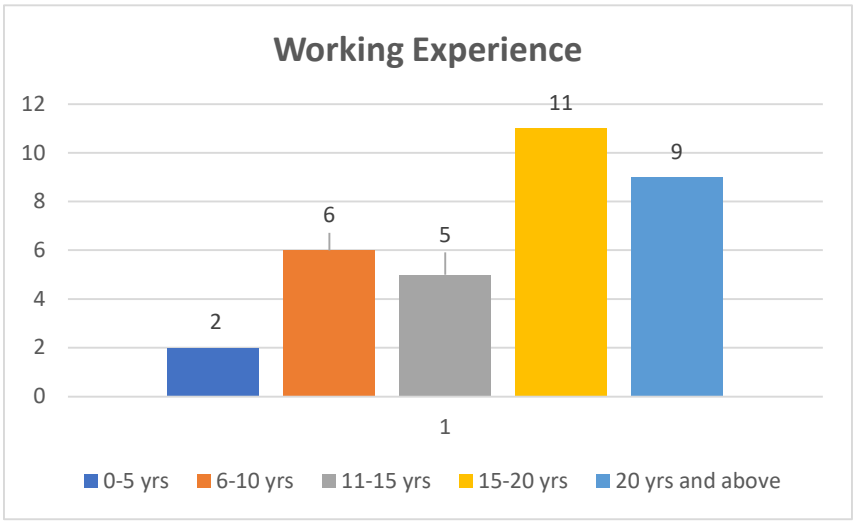

Figure 3: Respondents' working experience in the library

Figure 3 reveals that majority of the respondents had worked for over ten years in the library. This indicates that they are well experienced.

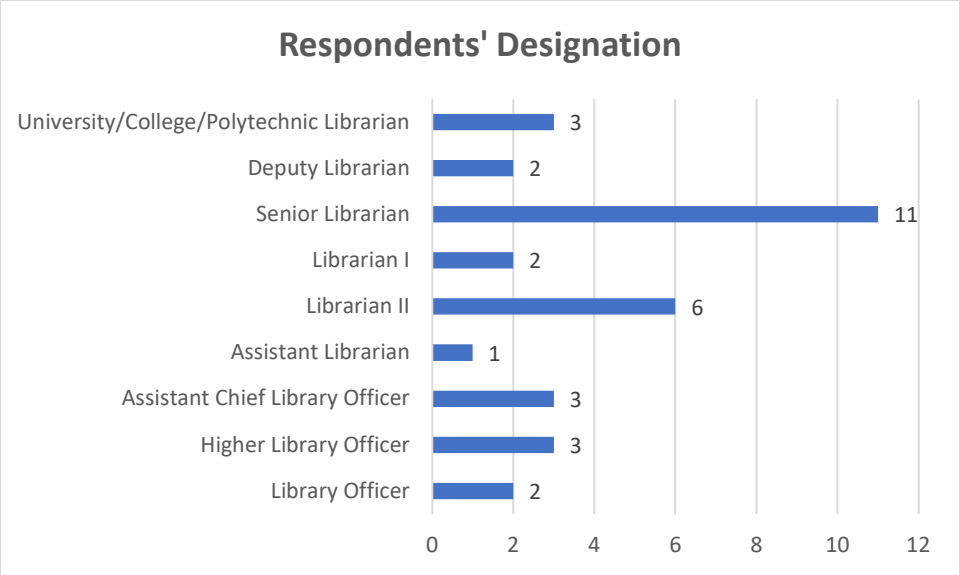

Figure 4: Respondents' designation in the library

Figure 4 shows that all cadres in the library profession participated in the study, out of which those that are in the Senior librarian cadre were the most.

Table 2: Organizational justice of librarians and library officers

N=33

S/N	Statement	X	Std. Dev.
	Distributive Justice		
1.	I think my work schedule is fair	3.09	0.941
2.	I think my level of pay is fair	2.18	0.769
3.	Overall, the rewards, I receive here are quite to be fair	2.18	0.808
	Group mean	**2.48**	
	Procedural Justice		
4.	Job decisions are made by supervisor in an unbiased manner	3.03	0.728
5.	My supervisor makes sure that all employee concerns are heard before job decisions are made	2.58	0.792
6.	All job decisions are applied consistently across all affected employees	2.76	0.614
7.	Employees are allowed to challenge or appeal job decisions made by the supervisor	2.24	0.792
	Group mean	**2.65**	
	Interactional Justice		

8.	When decisions are made about my job, the manager treats me with respect and dignity	2.58	0.614
9.	When decisions are made about my job, the manager deals with me in a truthful manner	2.59	.798
10.	The supervisor offers adequate justification for decisions made about my job	2.66	.745
11.	My supervisor is satisfied with the work I do	3.15	.619
12.	My supervisor understands my job problems and needs	2.85	.566
13.	My supervisor recognizes my potential	3.03	.684
14.	My supervisor uses his or her power to help me solve work	2.70	.684
15.	I have a good working relationship with my supervisor	3.15	.566
	Group mean	**2.84**	
	Average Mean = 2.66		

Table 2 reveals the results of Organisation justice of librarians and library officers in Lagos state academic libraries. It shows that the distributive justice of librarians is low as the group mean is lower than the average score (2.66), claiming that the level of pay and overall rewards are quite not fair (x=2.18); while my job schedule is fair had the highest mean (x=3.09); the group mean being x=2.48. On procedural justice, job decisions are made by the supervisors in an unbiased manner had the highest mean score (x=3.03), followed by all job decisions are applied consistently across all employees (x=2.76) while employees are allowed to challenge or appeal job decisions made by the supervisor had the lowest mean score (x=2.24); the group mean of procedural justice is 2.65.

Results on Interactional justice shows that My supervisor is satisfied with the work I do and I have a good working relationship with my supervisor both have mean score (x=3.15) which is high, followed by my supervisor recognizes my potential (x=3.03), while When decisions are made about my job, the manager deals with me in a truthful manner had the lowest mean (2.58). The grand mean of Interactional justice is **2.84.** This implies that librarians and library officers sense a higher level of interactional justice within the organization and the lowest is in distributive Justice.

Table 3: RQ2: **Librarian's Identity**

S/N	Statement	X	Std. Dev.
	Physical self-concept		
1.	The level of your physical fitness	3.45	0.564
2.	The level of your hygiene	3.42	0.502
3.	The level to which you do your job well	3.64	0.489
	Group mean	**3.50**	
	Social self-concept		

4.	The level to which you have good working relationship with your colleagues	3.48	0.566
5.	The level to which you are free with people	3.52	0.566
6.	The level to which you are appreciated	3.09	0.678
7.	The level of your benevolence	3.36	0.549
	Group mean	**3.36**	
	Academic self-concept		
8.	The quality of your research output	3.15	0.619
9.	The level of your academic linkages	3.09	0.631
10.	The level of your peer recognition	3.09	.723
	Group mean	**3.11**	
	Transpersonal self-concept		
11.	The level to which you can handle unexpected circumstances	3.33	.479
12.	The level to which you have the ability to face difficulty in life	3.30	.529
13.	The level to which you have the feeling of worthlessness and helplessness in life	2.48	1.064
	Group mean	**3.04**	
	Average Mean = 3.25		

Table 3 reveals the results of professional identity among librarians in Lagos academic libraries. It shows that the physical self-concept of librarians is high as the group mean is higher than the average score (3.25), claiming that librarians are physically fit (3.45), they possess a high level of hygiene (3.42) and they do their job well (3.64). Librarian's social self-concept indicated to be relatively high (3.36), as the result indicated that librarians have a good working relationship with their colleagues (3.48), free with people (3.52), although not well appreciated (3.09), they possess a high level of benevolence (3.36).

Academic self-concept of librarians indicated to be relatively low (3.11), as the quality of research output(3.15), level of academic linkages(3.09) and level of peer recognition(3.09) is low. Transpersonal self concept among librarians indicated to be low (3.04). Result revealed that the level to which librarians handle unexpected circumstances (3.33), their ability to face difficulty in life (3.30) and the feeling of worthlessness and helplessness among librarians(2.48) is low. This implies that librarians in Academic institution in Lagos state are more aware of their physical self-concept and there is the need to improve librarians' transpersonal self-concept.

Table 4: Librarians turnover intention

S/N	Statement	X	Std. Dev.	Remark
1.	As soon as I can find a better job, I will quit this organization	2.91	1.156	Agree
2.	I often think about quitting my job	2.48	0.972	Disagree

3.	Which of the following clearly describes your feeling about your future with the organization you are in the next year?	2.52	0.939	Will not leave
4.	How do you feel about leaving this organization?	2.48	1.004	To stay
5.	If you were to choose, would you prefer or not prefer to continue to work in this organization?	2.67	1.137	Prefer not to work here
6.	How important is it to you personally to spend your career in this organization rather than in some other organization?	2.42	0.969	Fairly important
	Average Mean = 2.58			

Table 4 explains the result for employee turnover intention. As soon as I can find a better job, I will quit this organization (Mean=2.91), this implies that everyone loves better thing, better offer;I often think about quitting my job (Mean=2.48), respondents are not thinking about quitting the job they are doing now, this implies that their job is fair. Respondents' feeling about their future in the next year is that they will not leave the organisation; they will also want to stay as against leaving the organisation. Respondents prefer not to work in the organisation they are and they see it as fairly important working in the organisation.

Analysis of Research Hypotheses

$H_0$1: Organisational justice does not have a relationship with turnover intention of academic librarians

Table 5: Relationship between Organisational justice and turnover intention of academic librarians

Variables	Mean	Std. Dev.	N	r	*P*	Remark
Organisational Justice	37.9183	6.4966	33	-.591	.000**	Sig.
Turnover Intention	13.4646	4.6819				

** *Correlation is significant at the 0.01 level (2 tailed)*

A Pearson Product-Moment Correlation was run to determine the relationship between organizational justice and turnover intention of academic librarians. Table 5 shows that there is a significant negative correlation exists between organizational justice and turnover intention (N=33, r=-.591,$p<.005$). This implies that when there is more organizational justice, turnover intention of academic librarians will decrease. The hypothesis is therefore rejected.

$H_0$2: Academic librarians' identity does not correlate with their turnover intention

Table 6: Relationship between identity and turnover intention of academic librarians

Variables	Mean	Std. Dev.	N	r	*P*	Remark
Identity	40.1305	4.7061	33	-.061	.737	Not Sig.
Turnover Intention	13.4646	4.6819				

Table 6 reveals the result of correlation between identity and turnover intention. There was no significant relationship between identity and turnover intention (N=24, r=-.061, $p>.005$). The hypothesis is therefore accepted, that is, there is no significant relationship between identity and turnover intention of academic librarians in Lagos State.

Discussion of findings

There were more female librarians (76%) which attests to a common knowledge that librarianship is female dominated. About 50% of the respondents had PhD degree, majority of the librarians and library officers had over 10 years working experience.

The survey results reveal the level of organizational justice, librarian's identity in relation to turnover intentions in libraries in Lagos state. The result shows that the Grand mean for librarians' perception of organizational justices is 2.66. This implies that librarians have a high level of perception of organizational justice within their organisation, which also influences their job performance. This result is in support of Shan, Ishaq and Shadeen (2015) and Mayowa-Adebara, Oyerinde and Akinola (2018) who reported that organizational justice significantly impacts employee performance and employee commitment. This result also agrees with Adewoyin (2022) study, which indicated that organizational justice positively influences organizational commitment of library personnel in public universities in Nigeria.

The study revealed a high level of librarians' identity in Lagos, although there is the need for improvement on transpersonal self-concept of librarians. This is in support of Pierson, Goulding and Campbell-Meier (2020) study that emphasised the importance of considering the influence of not only critical incidents on identity but critical thought on critical practices, their undertaking and execution.

This study indicated a moderate turnover intention among librarians in Lagos state. This implies that librarians in Lagos state do not necessarily want to leave their profession but seeks for organizations that can provide them with better opportunities. This study is in support of Hamzat et al. (2020) that report a high rate (66%) of turnover intention among library professionals in Osun state and causes of this high rate of turnover included the influence of ownership structure and leadership style in private universities in Osun state. Howbeit, librarians' intention to stay in their current organisation is dependent on some organisational factors.

There exists a positive significant relationship between librarians' organizational justice and turnover intention which indicates that the more justice the librarians perceive to have in their organisation, the less turnover intention. This study hereby corroborates the study by Soyemi and Oloyede (2022) which affirmed that an organizational justice positively influences librarians'

turnover intentions in South-West, Nigeria. Furthermore, the identity of academic librarians does not correlate with turnover intention; this means that their physical, professional or social identity have nothing to do with their turnover intention. This finding is in support of Jiang et.al (2017) and Zhong et al. (2024) studies that asserted that professional identity is negatively associated with turnover intention of social workers and nurses in China.

Conclusion and Recommendation

Library professionals in academic libraries in Lagos possess good physical, social, academic and transpersonal identities. They perceive their organizational justice to be fair with exception of their pay and rewards. Turnover intention of library professionals is somehow low; even though many would love to quit their jobs as soon as they get a better one, yet they prefer to stick to the one at hand probably because jobs are scarce out there. Wages, rewards in form of commendations and in cash should be looked into by the government and stakeholders in tertiary education institutions. Also, library management should be fair in treating the staff with equity. Organizations including Libraries should endeavor to recruit and retain talented employees to sustain their goals and objectives. Library professionals should improve on their interpersonal identity, that is, the way they handle unexpected circumstances. The paper has established that turnover intention of academic librarians is dependent on the organizational justice.

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EXAMINING THE CHALLENGES OF UTILIZING ARTIFICIAL INTELLIGENCE FOR INFORMATION MANAGEMENT AT THE AFRICAN CENTER FOR ICT TRAINING AND INNOVATION, AMERICAN UNIVERSITY OF NIGERIA, YOLA

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Abstract

This article examines the challenges of utilizing artificial Intelligence for Information Management at the African Centre for ICT Training and Innovation, American University of Nigeria, Yola. The objective of this article is to elicit the challenges faced by staff of the African Center for ICT Training and Innovation, American University of Nigeria, Yola when utilizing Artificial Intelligence for Information Management. A self-developed questionnaire was used for data collection which consisted of 5 sections; section A was for demographic data while the other parts dealt with the research questions of the study. The study employed survey research design through the use of quantitative research method. Total enumeration sampling technic was used because of the relatively small size of the population of study. staff of African Center for ICT Training and Innovation, American University of Nigeria, Yola with a total population of 42. The findings of the study revealed that while staff at the African Center for ICT Training and Innovation, American University of Nigeria, Yola, recognize the potential of Artificial Intelligence for Information Management, they face significant challenges, including lack of training and skills, data privacy concerns, resistance to change, and technological limitations. The study concludes that there remains a strong presence of fundamental Information Management Practices and significant improvements resulting from AI adoption. However, challenges such as lack of training, data privacy concerns, and resistance to change must be addressed to fully realize the potential benefits of AI. Recommendations such as comprehensive training and skill development programmes for staff and data privacy and security measures were proffered.

Keywords: Artificial Intelligence, Information, Management Practices, Information and Communication Technology, Training and Innovation

Introduction

In the contemporary landscape of organizational operations, the infusion of Artificial Intelligence (AI) has emerged as a transformative force, revolutionizing various facets of business functions. One such area experiencing a significant paradigm shift is information management practices within organizations (Abu Khurma, Al Darayseh, & Alramamneh, 2022). AI, with its prowess in data processing, pattern recognition, and decision-making, plays a pivotal role in reshaping how organizations gather, analyze, utilize, and safeguard their information assets. At the core of effective information management lies the ability to efficiently capture, store, retrieve, and disseminate data. Traditional methods often grapple with the sheer volume, velocity, and variety of data generated in today's digital age. However, AI technologies, including machine learning algorithms, natural language processing, and predictive analytics, offer a sophisticated framework for managing vast datasets with unprecedented speed and accuracy. Through advanced data mining techniques, AI enables organizations to sift through massive data troves, extracting valuable insights and patterns that drive informed decision-making and strategic planning.

Furthermore, AI augments organizational agility by automating routine information management tasks, liberating human resources to focus on high-value activities. By streamlining processes such as document classification, information retrieval, and content organization, AI-powered systems not only enhance operational efficiency but also mitigate the risk of human errors and biases. This automation fosters a more agile and responsive organizational culture, where timely access to accurate information empowers stakeholders at all levels to adapt swiftly to evolving market dynamics and customer demands (Abu, 2018). The role of Artificial Intelligence extends beyond mere data management to fostering a culture of innovation within organizations. AI-driven insights unearth hidden opportunities and emerging trends, providing a fertile ground for strategic experimentation and creativity. By leveraging AI-powered predictive analytics, organizations can anticipate market shifts, identify untapped customer segments, and tailor their products and services accordingly. This proactive approach not only enhances competitive advantage but also nurtures a culture of continuous improvement and adaptation, vital for long-term success in today's dynamic business landscape.

The integration of Artificial Intelligence into information management practices heralds a new era of efficiency, agility, and innovation within organizations. By harnessing the power of AI-driven analytics, organizations can navigate the complexities of modern data ecosystems with ease, driving strategic decision-making, and fueling sustainable growth. As AI continues to evolve and permeate deeper into organizational structures, its transformative impact on information management practices is poised to redefine the very essence of organizational effectiveness and competitiveness in the digital age (Aburbeian, Owda, & Owda, 2022).

The African Center for ICT Training and Innovation (ACITI) at the American University of Nigeria (AUN) in Yola stands at the forefront of technological advancement and education in Africa (Sambo, 2019). In the context of information management practices, ACITI serves as a beacon of innovation, leveraging Artificial Intelligence (AI) to revolutionize learning methodologies and organizational operations. Within ACITI's academic framework, AI plays a pivotal role in optimizing information management practices for both students and faculty. Through AI-driven analytics, ACITI can analyze vast amounts of educational data, ranging from

student performance metrics to curriculum effectiveness, thereby facilitating data-informed decision-making and curriculum adjustments. This data-driven approach ensures that educational resources are allocated efficiently, fostering a more personalized and adaptive learning experience for students.

Information, integral to every facet of modern society, encompasses data imbued with meaning and significance. Effective information management is the systematic organization, storage, retrieval, and dissemination of this data to support decision-making, innovation, and organizational goals. Information management practices encompass a range of strategies and techniques aimed at optimizing the utilization of information resources. These practices include data governance, metadata management, information security protocols, knowledge management systems, and more. By implementing robust information management practices, organizations can enhance operational efficiency, facilitate collaboration, mitigate risks, and gain competitive advantages. Furthermore, effective information management fosters a culture of data-driven decision-making, enabling stakeholders to derive actionable insights from the vast troves of information available.

In an era characterized by exponential data growth and digital transformation, the significance of information management cannot be overstated. Organizations that prioritize information management are better equipped to navigate complexities, innovate, and thrive in dynamic environments. Thus, cultivating a strategic approach to information management is essential for harnessing the full potential of information assets and driving sustainable success. In the wake of the COVID-19 pandemic, the educational landscape has undergone a seismic shift towards digital learning technologies. Abu Khurma, Al Darayseh, and Alramamneh (2022) examine the utilization of digital learning tools during and after the pandemic, emphasizing their scattered nature and myriad options available. Their analysis delves into effective usage patterns, highlighting the need for strategic integration and management of these technologies to optimize educational outcomes.

Expert systems in artificial intelligence (AI) have emerged as a promising tool in education, as noted by Abu Zaqiyah (2018). These systems leverage AI algorithms to mimic human expertise, offering personalized learning experiences and aiding educators in content delivery and assessment. The integration of expert systems underscores the importance of information management practices in leveraging AI for educational purposes effectively. Meanwhile, Aburbeian, Owda, and Owda (2022) explore the burgeoning realm of the metaverse and its potential implications. Their technology acceptance model survey delves into the prospects of the metaverse, shedding light on its perceived value and challenges. As educational institutions contemplate the integration of immersive virtual environments, robust information management practices will be imperative to navigate this new frontier effectively.

Statement of Problem

In an ideal situation, the integration of Artificial Intelligence (AI) into information management practices within educational institutions such as the African Center for ICT Training and Innovation (ACITI) at the American University of Nigeria, Yola, would be seamless and transformative. AI technologies would empower ACITI to efficiently capture, analyze, and utilize

vast amounts of educational data, thereby enhancing the quality of teaching and learning experiences for students and faculty. With AI-driven insights, ACITI would be able to personalize learning pathways, optimize resource allocation, and foster a culture of innovation and excellence.

However, the reality of AI adoption and implementation within ACITI presents a stark contrast to this ideal scenario. Currently, there exists a notable gap between the potential benefits of AI in information management practices and the actual utilization of AI technologies within the context of ACITI (Sambo, 2019). Limited accessibility and affordability of AI solutions, coupled with challenges related to skills and capacity building among faculty and staff, hinder the effective integration of AI into educational workflows (Kengam, 2020). Moreover, socio-cultural factors and infrastructural constraints further exacerbate the gap, impeding the realization of AI's transformative potential in information management within ACITI and similar institutions.

This gap underscores the urgent need for targeted research and interventions aimed at bridging the divide between the ideal and the current state of AI adoption in educational settings like ACITI. Addressing barriers related to accessibility, affordability, skills development, socio-cultural considerations, and infrastructure constraints is paramount for unlocking the full potential of AI in enhancing information management practices within African educational institutions. By identifying and addressing these challenges, stakeholders can pave the way for a more inclusive, equitable, and innovation-driven educational landscape in Africa, positioning institutions like ACITI at the forefront of technological advancement and educational excellence.

Objective

The study achieved the following objective.

1. To elicit the challenges faced by staff of the African Center for ICT Training and Innovation, American University of Nigeria, Yola when utilizing Artificial Intelligence for Information Management

Literature Review

Concept of Artificial Intelligence

Artificial Intelligence (AI) has emerged as a transformative force in various domains, including education, particularly in the wake of the COVID-19 pandemic. Abu Khurma, Al Darayseh, and Alramamneh (2022) conducted an analysis of the effective usage of digital learning technologies during and after the pandemic, highlighting the scattered and numerous nature of these technologies. This underscores the significance of understanding the role of AI in shaping educational practices.

Challenges Faced in Utilizing Artificial Intelligence for Information Management

The integration of artificial intelligence (AI) into educational contexts has brought about numerous advancements, yet it also presents several challenges in utilizing AI effectively for information management. Cope, Kalantzis, and Searsmith (2020) discuss the complexity of assessing knowledge within AI-enabled learning environments. The dynamic nature of AI systems poses challenges in accurately measuring and evaluating learning outcomes, complicating information management processes related to tracking and assessing student progress.

Furthermore, access to technology remains a significant challenge, particularly in K-12 classrooms, as highlighted by Hébert, Jenson, and Terzopoulos (2021). Disparities in access to AI-enabled tools and resources can hinder educators' ability to implement effective information management practices, limiting the potential benefits of AI for enhancing teaching and learning experiences.

Additionally, Holmes et al. (2019) and Holmes et al. (2021) emphasize the importance of addressing policy implications and ethical considerations in AI integration within educational settings. Policymakers face challenges in developing guidelines and regulations to govern the responsible use of AI, ensuring data privacy, equity, and inclusivity in information management practices. Moreover, Jin (2019) explores the potential application of AI in preschool education, highlighting the need for specialized training and support for educators. The adoption of AI technologies requires educators to acquire new skills and competencies for effectively integrating AI-driven tools into instructional practices, posing challenges in professional development and capacity-building efforts.

Furthermore, usability factors play a crucial role in the successful implementation of AI-driven technologies, as discussed by Lew, Lau, and Leow (2019). Poor usability can impede user acceptance and adoption, hindering information management practices and limiting the effectiveness of AI-enabled tools in educational settings. Additionally, ethical and legal considerations surrounding AI implementation present challenges for educators and policymakers, as noted by Rodrigues (2020) and NITI Ayog (2021). Issues related to data privacy, algorithmic bias, and accountability require careful consideration to ensure responsible AI use and mitigate potential risks associated with information management practices.

One significant challenge is the need for infrastructure and resources to support AI integration, as emphasized by Kengam (2020). Implementing AI-driven technologies requires robust technical infrastructure, including high-speed internet connectivity, computing resources, and software platforms. Educational institutions, particularly those in resource-constrained environments, may face difficulties in acquiring and maintaining the necessary infrastructure to support AI initiatives, hindering their ability to effectively manage educational information using AI tools. Moreover, cultural and organizational factors can impede the adoption of AI in education. Tallvid (2016) discusses teachers' reluctance to embrace pedagogical uses of information and communication technology (ICT) in the classroom. Similarly, Topal, Eren, and Geçer (2021) highlight challenges in integrating chatbot applications in educational contexts due to resistance from educators and stakeholders. Overcoming resistance to change and fostering a culture of innovation are critical for successful AI implementation and information management in education.

Furthermore, ethical considerations surrounding data privacy and security present challenges in AI utilization. Luckin (2017) emphasizes the importance of developing AI-based assessment systems that prioritize fairness, transparency, and accountability. Ensuring that student data is handled responsibly and ethically is essential for maintaining trust and confidence in AI-driven educational initiatives. Additionally, Mahendra (2023) discusses concerns about data privacy and the potential misuse of AI technologies in education, underscoring the need for robust data protection measures and ethical guidelines. The rapid pace of technological advancement

poses challenges in keeping pace with evolving AI capabilities and applications. Singh and Jain (2018) highlight the need for ongoing professional development and training to equip educators with the knowledge and skills required to effectively leverage AI in education. Continuous learning and adaptation are essential for educators to stay abreast of new developments in AI and incorporate emerging technologies into their information management practices effectively.

Research Methodology

The study adopted the quantitative research method through the use of survey research design. Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. Survey research design was adopted here because of the size of the study. A survey design allows the researchers to gather information not available from other sources using data collection instruments such as questionnaires and also provides a mechanism for unbiased representation of populations interest, unlike other methods, survey design allows a sample representation of an entire population whose result was considered on behalf of the general population. The target population of this study included staff of African Center for ICT Training and Innovation, American University of Nigeria, Yola with a total population of 42. For the purpose of this study, total enumeration sampling was used due to the fact the population is small and manageable. The questionnaire was the instrument used for data collection. The data collected were analysed descriptively using simple frequencies and percentages presented on tables for easy comprehension.

Results and Discussion

This section of the study provides the finding of the study and corresponding discussions in line with the objectives of the study.

Response Rate

The total numbers of 42 respondents were targeted by the online survey out of which 38 were completed, retrieved and found useful for the research study while 4 were not returned as shown in table 4.1 below:

Table 1: Response Rate

No. of questionnaire administered	**42**	**100%**
No. of questionnaire returned	38	90.5
No. of questionnaire not returned	4	9.5
Total	**24**	**100 %**

Field Survey (2024)

Cornie (2016), states that the majority of responses represent the significant view of the population therefore a positive response rate of over 70% is regarded as a good score and a criteria for the researcher to draw up data analysis. Table 4.1 shows a high response rate of 90.5%

therefore, according to Cornie (2016), the response rate above allows the researchers to carry out data analysis.

Table 2: Challenges faced by staff of the African Center for ICT Training and Innovation, American University of Nigeria, Yola when utilizing Artificial Intelligence for Information Management

What are the challenges faced by staff of the African Center for ICT Training and Innovation, American University of Nigeria, Yola when utilizing Artificial Intelligence for Information Management?	**SA**	**A**	**DA**	**SDA**	**Total**
Lack of Training and Skills	0(0.0%)	3(7.9%)	14(36.8%)	21(55.3%)	38(100%)
Data Privacy and Security Concerns	6(15.7%)	11(28.9%)	9(23.7%)	12(31.6%)	38(100%)
Resistance to Change	4(10.5%)	3(7.9%)	11(28.9%)	20(52.6%)	38(100%)
Ethical Considerations	38(100%)	0(0.0%)	0(0.0%)	0(0.0%)	38(100%)
Technological Infrastructure Limitations	7(18.4%)	6(15.8%)	21(55.3%)	4(10.5%)	38(100%)

Field Survey (2024)

Table 2 presents the challenges faced by staff at the African Center for ICT Training and Innovation, American University of Nigeria, Yola, when utilizing Artificial Intelligence for Information Management. The table highlights several key obstacles, including Lack of Training and Skills, Data Privacy and Security Concerns, Resistance to Change, Technological Infrastructure Limitations, and Ethical Considerations. Notably, Lack of Training and Skills emerges as the most prominent challenge, with 55.3% of respondents indicating difficulties in this area. Additionally, Data Privacy and Security Concerns, Resistance to Change, and Technological Infrastructure Limitations are significant challenges, each affecting over 30% of respondents. However, Ethical Considerations appear to be less problematic, with all respondents unanimously reporting no challenges in this regard. These findings underscore the complex and multifaceted nature of implementing Artificial Intelligence for Information Management, highlighting the importance of addressing training, security, technological, and ethical concerns to ensure successful adoption and integration.

Findings and Discussions

Findings:

The study shows that while staff at the African Center for ICT Training and Innovation, American University of Nigeria, Yola, recognize the potential of Artificial Intelligence for Information Management, they face significant challenges, including lack of training and skills, data privacy concerns, resistance to change, and technological limitations.

Discussions

Challenges remain in realizing the full potential of AI in improving information management practices in education. Hébert, Jenson, and Terzopoulos (2021) identify access to technology as a major challenge, particularly in K-12 classrooms, which can hinder the effective implementation of AI-enabled learning technologies. Similarly, Alramamnh, Al Darayseh, and Al Saadi (2021) highlight the real status of online training in the UAE from the perspective of teachers, shedding light on the challenges and limitations associated with the adoption of AI-driven educational platforms for information management purposes. Asiri and El Aasar (2022) delve into the practical application of AI through the lens of the technology acceptance model, specifically assessing the integration of AI-driven augmented reality applications in teaching. Their study not only highlights the potential of AI to revolutionize traditional pedagogical methods but also underscores its utility in improving the management and dissemination of educational information.

Furthermore, ethical considerations surrounding data privacy and security present challenges in AI utilization. Luckin (2017) emphasizes the importance of developing AI-based assessment systems that prioritize fairness, transparency, and accountability. Ensuring that student data is handled responsibly and ethically is essential for maintaining trust and confidence in AI-driven educational initiatives. Additionally, Mahendra (2023) discusses concerns about data privacy and the potential misuse of AI technologies in education, underscoring the need for robust data protection measures and ethical guidelines. The rapid pace of technological advancement poses challenges in keeping pace with evolving AI capabilities and applications. Singh and Jain (2018) highlight the need for ongoing professional development and training to equip educators with the knowledge and skills required to effectively leverage AI in education. Continuous learning and adaptation are essential for educators to stay abreast of new developments in AI and incorporate emerging technologies into their information management practices effectively.

Conclusion

This study provides valuable insights into Examining the Challenges of Utilizing Artificial Intelligence for Information Management at the African Center for ICT Training and Innovation, American University of Nigeria, Yola. The findings demonstrate a strong presence of fundamental Information Management Practices and significant improvements resulting from AI adoption. However, challenges such as lack of training, data privacy concerns, and resistance to change must be addressed to fully realize the potential benefits of AI.

Recommendations

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

1. This study highlights a significant challenge related to the lack of training and skills among staff. To address this, the African Center for ICT Training and Innovation should design and implement comprehensive training programs focused on Information Management Practices and Artificial Intelligence technologies. These programs should cover a wide range of topics, including data analysis, information organization, AI algorithms, and ethical considerations. Moreover, these training sessions should be tailored to the specific needs and expertise levels of staff members to ensure maximum effectiveness.

   Also, this study highlights concerns regarding data privacy and security associated with the utilization of Artificial Intelligence. To address these concerns, the center should strengthen its data privacy and security measures by implementing robust policies, procedures, and technologies. This may involve conducting regular data privacy assessments, implementing encryption protocols, establishing access controls and user permissions, monitoring data usage and access, and ensuring compliance with relevant data protection regulations such as GDPR and HIPAA. Additionally, staff should receive training on data privacy best practices and ethical guidelines to ensure responsible handling of sensitive information.

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UTILISATION OF REFERENCE MANAGEMENT SOFTWARE: THE PURPOSE AND BENEFIT BY POSTGRADUATE STUDENT OF DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE (DLIS)ABU ZARIA.

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Abstract

The Study focused on utilization of reference management software: the Purpose and benefits by Postgraduate student of Department of (DLIS)ABU Zaria. In order to carry out this study, two Research Questions were raised and formulated research questions sought to find out: What is the purpose of Utilization of reference management software by postgraduate student in Department of Library and Information Science, Ahmadu Bello University, Zaria? What is benefits of reference management software by postgraduate students of Department of library and Information Science Ahmadu Bello University? The Research method Adopted was quantitative using descriptive survey design. The population of the study comprise 336 postgraduate LIS postgraduate student. The sample was determined systematically by selecting 2018 2019,2022 Session. The sample size of the study is 143 using lois cohen morrison sample size. The data were analyzed using Descriptive statistics and frequency distribution table, The findings revealed that: The Major purpose of Utilizing RMS is for research writing engaged by postgraduate LIS student. The benefit of RMS by postgraduate student was disclosed that; it helps in overcoming frequent error in citation and referencing. Based on the findings, it was recommended that; postgraduate LIS should utilize RMS and be given them training about technicalities on how to utilize the software.

Keywords: Conduct of Research, Postgraduate Students, Reference Management Software, Utilization.

Introduction

According to the Libs Guides EUR (2021), a reference management software can be a very useful tool when doing a literature review, as it helps researchers to organize their references in a systematic way, making it easier to export references from bibliographic databases, create folders to categorize references, and use additional fields to add their own keywords and remarks. Reference management software, such as EndNote, Mendeley, or Zotero, helps in organizing system identifying, clarifying, and organizing system requirements through use these tools can assist in managing information throughout research, creating accurate references and bibliographies, and ensuring the correct format is used for citations. The Purpose of utilizing reference management software refers to the function of acknowledging and citing sources of information used in academic work. This is important for maintaining the integrity and quality of academic writing by giving credit to original creators, showing the development of arguments and engagement with ideas of others, and enabling readers to access original source, Al Mubarak (2017).

Review on the purpose and Benefits of utilizing reference management software highlights its significance in contemporary academic research. According to Bishr et al. (2020), who found that reference management software was frequently adopted by authors of systematic reviews he added that the transparency, reproducibility, and quality of systematic reviews may be enhanced through increased reporting of reference management software usage. The importance of reference management software extends to its ability to help researchers organize and manage large volumes of references systematically.

Moreover, reference management software can improve the efficiency of researchers' workflows. According to Tramullas et al. (2021), reference management software has evolved beyond its traditional definition, becoming an integrated tool of information management that supports scientific research workflows in any given area. Similarly, the University of Canberra Library Guide (2022) suggests that referencing management software is essential for recording and utilizing bibliographic citations, enabling scholars and authors to generate in-text citations and bibliographies time and again.

Finally, the use of reference management software can enhance the quality of academic writing by ensuring accurate citation and bibliographic information. Therefore, the purpose of utilizing reference management software is multifaceted, encompassing the organization, management, and efficiency of researchers' workflows, as well as the accuracy and quality of academic writing.

Statement of the Problem

Using reference management software, researchers quickly identify, cite, and save references. One of the key features of these tools is by guarantying the correctness of the citation information and free up time for researchers when adhering to the strict reference requirements of the target paper or journal (Sarrafzadeh & Hazeri, 2014). The software facilitates quick reference retrieval from online databases, enabling web-based collaborators to work across numerous devices. In addition to being use to manage a large amount of bibliographic data, reference

management software offers cloud storage so that articles can be linked to citations and synchronization services that make papers and citations accessible across many platforms.

Despite the availability and affordability of many references management software, both the citation and referencing of literature used by postgraduate students of the Department of Library and Information Science, Ahmadu Bello University, Zaria remain inappropriate. Inappropriateness in citation, missed references, wrong acknowledgement which are unethical in research writing. The speculation, therefore could be that the extent of use, which determines the mastery may be the lead factor. Therefore, the study seeks to investigate whether the Postgraduate students are using the software, could that be as a result of the extent of use, which determines the mastery of the software among others? This prompted the researcher to investigate (the purpose of use in Reference Management Software).

Objectives of the Study

The objective of this study is to:

1. Find out the purpose of Utilization of reference management software by postgraduate students in the Department of Library and Information Science, Ahmadu Bello University, Zaria.
2. Determine the benefit of reference management software by postgraduate students of the Department of Library and Information Science at Ahmadu Bello University, Zaria

Review of Related Literature

Knowledge of reference management software includes knowledge of the use existence and importance of reference management software and its applications. Studies have highlighted the importance and why researchers utilize the reference management software. Evidence from (Madhuri & Lakshmi, 2021) a study examining knowledge of reference management software among library researchers in India. This study tried to find out how high the use of reference management software used for their research work and which software is easy to use; also, how long such software tools are used. The data was collected using the online survey method. The study revealed that res scientist is familiar with the reference management software (81.8%), the mendeley was the software used by these researchers with alarming satisfaction rate of 35%.it was further stated that the library was responsible for the provision of reference manage, ant software.

Most research scholars (61%) agreed that their libraries provide reference management software tools in libraries, the largest number of research scholars (38.5%) face the problem of insufficient training to use reference management software to draft their requests. In another study, (Singh, 2021) on awareness of reference management software among research scholars of Babasaheb Bhimrao Ambedkar University and Mahatma Gandhi Central University and Mahatma Gandhi Central. Researchers identified reference management software as a useful tool for researchers. The study examined the awareness of academic researchers from the Department of

Library and Information Sciences at Abashed Chimney Amber University (BEAU) and Mahatma Gandhi Central University (MCU). An online questionnaire was used to collect data. Results showed that 97% of respondents know about reference management software and that Zotero is the most popular reference management software among respondents. Most respondents are satisfied with the Zotero features that the recommendation by the management offers.

Khanchandani (2021) examined the awareness and use of reference management tools by the research scholars of the Indian Institute of Technology, Delhi. The study investigated the possible factors and choice of particular reference management software. The findings revealed that most of the research scholars were aware of reference management tools and used them for their academic writing. Most research scholars use Mendeley as a reference. Through the Central Library, IIT Delhi conducted various workshops and training programs to help scholars in scholarly writing. However, some of the researchers indicated that they needed training to use these reference tools. The study was concluded to help understand the needs of researchers regarding the use of reference management tools that should be explored and would help develop training programs for them.

Adeyemi et al., (2020) in a study on awareness and usage of reference management software: perspectives of faculty members of the University of Ilorin, Nigeria. The study examined the awareness and usage of reference management software by faculty members of the University of Ilorin. The findings of the study revealed that End Note and Mendeley were the most used reference management software by faculty members of the University of Ilorin. Results; Faculty members were aware of End Note and Mendeley to a great extent. It was found that there is low usage of reference management software among faculty members of the University of Ilorin; and that most of the faculty members have never used, Bookends, Paper Pile, and Qiqa. The study concluded that there is a positive, significant relationship between awareness and usage of reference management software by faculty members. It recommended that faculty members should be trained on how to make use of the most used reference management software.

Similarly, Ladkat & Lihitkar (2019) examined the use of reference management software and the service librarians provide to their users at Thule Pune University. The study population consisted of university librarians affiliated with Thule Pune University. The study aimed to measure RMS knowledge and citation style, Reference Management Software requests, usage difficulties, usage reasons user limitations, etc. All these aspects are covered in the study. The results showed that End Note was allegedly the commercial product that the librarian suggested to the users. Most librarians prefer open-source software. Examined the use of reference management software and the service librarians provide to their users at Thule Pune University. The study population consisted of university librarians affiliated with Thule Pune University. The study aimed to measure RMS knowledge and citation style, RMS requests, usage difficulties, usage reasons user limitations, etc. All these aspects are covered in the study. The results showed that

End Note was allegedly the commercial product that the librarian suggested to the users. Most librarians prefer open-source software. Zotero was by far the product of choice for librarians. Online support and updating were the important factors counteracting the difficulty of librarian use.

Bugyei et al. (2019) investigated researchers' knowledge and use of Reference Management Software (RMS) at CSIR in Ghana. While awareness was high, actual usage was low, especially among older researchers, with Mendeley being the most popular. Most users learned about RMS through workshops, but many lacked formal training. Key benefits included easy bibliography management, while challenges involved slow internet, lack of training, and technical support.

Usefulness of Reference Management Software for the conduct of research

Reference management software has revolutionized the way researchers, academics, and students organize and manage their references. With its array of powerful features and intuitive interfaces, these software solutions have become indispensable tools in the scholarly world. In this review, the usefulness and benefits of reference management software as highlighted by some authors are explored.

Smith (2022) Agreed that one of the key benefits of reference management software is its time-saving aspect. Smith emphasizes that these tools automate the process of importing and organizing references from various sources, eliminating the need for manual formatting of citations and bibliographies. This streamlines the research process, allowing users to dedicate more time to their research and writing. Additionally, Smith points out that the software's integration of citation styles and automatic generation of in-text citations and bibliographies greatly reduces the likelihood of errors, ensuring accuracy and consistency in academic work.

Jones (2023) highlights the collaborative features of reference management software. Jones describes how these tools facilitate seamless collaboration among researchers by enabling the sharing of references and annotations. By creating shared libraries or groups, team members can access and contribute to a centralized database of references, fostering efficient collaboration and knowledge exchange. Furthermore, Jones notes that the ability to leave comments, annotations, and tags on references enhances communication and coordination within research teams, eliminating the need for lengthy email threads or physical documents.

In a research, Brown & Johnson (2023) discuss the powerful search and discovery capabilities of reference management software. It was pointed out that these tools often provide integrated databases and search engines that allow users to explore and discover relevant literature in their fields of study. By leveraging advanced search algorithms, users can quickly locate articles, papers, and other scholarly resources, saving considerable time and effort. Brown and Johnson (2023) further highlight that many reference management software offer recommendation systems

based on users' reading habits and research interests, further enhancing the research experience and promoting serendipitous discoveries.

Furthermore, Smith & Williams (2022) delve into the organization and categorization features of reference management software. They emphasize that these tools provide comprehensive libraries where users can store and categorize references based on their research topics, projects, or personal preferences. The ability to add tags, keywords, and notes to references facilitates easy retrieval and enhances overall organization. With advanced sorting and filtering options, users can quickly locate specific references or create curated collections for specific research areas.

Methodology

Quantitative research methodology was used for the study, survey design was also adopted, the population of the study comprise of 2018-2022 Academic Session of LIS Postgraduate ABU Zaria which have 336 in number from various programs with the sample size of 143 using Lois Cohen Morrison sample size. A Self structured questionnaire was used as instrument for data collection, face and content validity were employed to ensure accuracy of the instrument's, data were analyzed using statistical package of social science (SPSS 26). Descriptive statistics was used using frequency, percentages mean and standard deviation in analyzing the data.

Population of the Study

Ph.D.	5	5	9	19
Masters & MPhil (Academics)	55	38	31	124
MIM	Nil	Nil	171	171
PGDIM	Nil	Nil	22	22
				Total 336

Results and Discussion of Findings

The researcher sought to find out the purpose of utilization of Reference Management Software by Postgraduate Students List of reasons was provided for them to select from the Table:

Purpose for which postgraduate Student Utilize Reference Management Software.

		Postgraduate											
S/N	**Purpose of utilizing**	**PhD**		**M & MPhil**		**MIM**		**PGDIM**		**Total**		**M**	**SD**
	RMS												
		F	%	F	%	F	%	F	%	F	%		
1	Assignment	7	5.5	32	25.2	34	26.7	7	5.5	80	63	1.6	0.2
2	Research writing	8	6.3	48	37.8	46	32.6	9	7.1	111	87.4	2.2	0.2
3	Normal writing	5	3.9	21	16.5	30	23.6	4	3.1	60	47.2	1.2	0.3
4	Letter writing	0	0.0	6	4.7	18	14.2	2	1.6	26	20.5	0.4	0.01
	Total											5.4	0.71

Source: Field Survey

KEY: RMS=Reference Management Software

PhD=Doctor of Philosophy

MIM &MPhil=Masters of Information Management &Masters of Philosophy

PGDIM=Postgraduate Diploma in Management

M=Mean

SD=Standard deviation

The table presented the purpose for utilizing Reference Management Software by postgraduate students, and the table revealed that research was rated high with 87.4% assignment 63% normal writing and letter writing 47.2% and 20.5% respectively.

It can be inferred that research writing is the main purpose for utilizing Reference Management Software, the implication is because postgraduate students are Soley scholarly write ups and publications delete because frequency and percentage. while letter writing is the least purpose for utilizing Reference Management Software by postgraduate students.

These findings support that of (Philosophy, 2021 & Nitsos, 2021) which stated that reference management software was mostly utilized in research because they have some features that gave them required citation styles and annotations" By implications, it can be said that postgraduate students of department of Library and Information Science did not embedded the

utilization Reference Management Software utilization for the conduct of seamless research work as at entails research assignment which will really hamper their efforts to meet the 21st century.

Usefulness Benefit of utilizing Reference Management Software by Postgraduate Student of DLIS

In order to determine the perceive usefulness of utilizing Reference Management Software by a postgraduate student of DLIS a list of benefits of Reference Management Software was provided for postgraduates to choose from based on their preference or interest.

Table Usefulness Benefit of Utilizing RMS for conduct of research

S/N	Benefit	PhD		M & MPhil		MIM		PGDIM		Total		M	SD
		F	%	F	%	F	%	F	%	F	%		
1	Using RMS enables accomplishment of research task more quickly	6	4.7	42	33.1	54	42.5	5	3.9	107	84.3	2.1	0.3
2	Using RMS improves research perfection	8	6.3	30	23.6	59	46.5	5	39.9	102	80.3	1.9	0.2
3	Using RMS increase research productivity	8	6.3	37	29.1	60	47.2	8	6.3	113	89.0	2.1	0.2
4	Using RMS enhance researchers' effectiveness	7	5.5	26	20.5	33	26.0	5	3.9	71	55.9	1.4	0.2
5	RMS is easy to use	5	3.9	34	26.8	51	40.2	4	3.1	94	74.0	1.8	0.3
6	multitasking capability	4	3.1	31	24.4	47	37.0	3	2.4	85	66.9	1.6	0.4
7	Enables Document recovery/cloud storage	6	4.7	36	28.3	56	44.1	9	7.1	107	84.3	2.0	0.8
8	It helps in overcoming frequent error in citation and referencing	8	6.3	48	37.8	61	48.0	9	7.1	126	99.2	2.4	0.7
9	It makes collaboration broader to researchers	5	3.9	25	19.7	39	30.7	4	3.1	73	57.5	1.4	0.3

Source: Field Survey

KEY: RMS=Reference Management Software
PhD=Doctor of Philosophy
M &MPhil=Masters &Masters of Philosophy
MIM=Masters in Information Management
PGDIM=Postgraduate Diploma in Management
M=Mean
SD=Standard deviation

The table presented the Usefulness of utilizing Reference Management Software by postgraduate students, and the use of reference management software has helped in overcoming frequent error in citation and reference with a response of 99.2%, increase research perfection by followed by using Reference Management Software to increase research perfection by (89.0%), accomplishment of task and enhancement of research effectiveness 84.3% and 55.9% respectively.

It can be inferred that to avoid penalty that are associated with research errors in citation and proper acknowledgement the reference management software was highly used by the postgraduate students.

This finding is variance from that of (Bugyei et al., 2019) as they stated the benefits of utilizing Reference Management Software packages are "To generate automatic reference list, choose numerous citation styles and electronic creation of bibliographies" This implies that perceive usefulness of utilizing Reference Management Software by postgraduate of Department of Library and Information Science for conduct of research is to overcome frequent errors in citation and reference.

Conclusion and Recommendation

In line with the finding of this study, the following recommendations were made.

1. The management of Department of Library and Information Science should ensure that that Postgraduate students are given proper hands-on training on the use of Reference management Software which will enhance their research and Academic activities.
2. The management of Ahmadu Bello University, Zaria, in collaboration with the Department of Library and Information Science, should increase awareness to better equip postgraduate students, enhancing their research skills and effectiveness for avoidance of error free referencing in there research writings.

The study concluded that Reference Management Software plays a crucial role in research writing among postgraduate students of Library and Information Science at ABU Zaria. Its primary purpose is to support research writing, helping students minimize errors in their academic work.

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EMERGENCE OF ARTIFICIAL INTELLIGENCE AND APPLICATIONS FOR SERVICE DELIVERY IN ACADEMIC LIBRARIES: AN OVERVIEW

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Abstract

Artificial intelligence (AI) is ushering in a new era of efficiency, accessibility, and innovation by revolutionizing library services and improving user experience. Artificial intelligence application is one of the most significant modern technologies to emerge in recent years. These applications have significantly altered the role of institutions, particularly the scope of libraries and information. This study examines how artificial intelligence (AI) is changing libraries and bringing in a new era of productivity, accessibility, and creativity. The automation of repetitive chores like organizing and cataloguing, which librarians can now rely on AI algorithms to streamline, is the AI's most noteworthy contribution to libraries. This article presents a review on the application of Artificial Intelligence and the impact of Artificial Intelligence on library services. It further underscores how Artificial Intelligence improves library functions such as cataloguing, information retrieval, user engagement and resource management. The paper will explain the relevance of AI to the development of library services and provide a clear definition and overview of AI and its core applications.

Keywords: Artificial Intelligence, Libraries, Librarians, Robotics, Services

Introduction

It has been established that the emerging trends in Artificial Intelligence (AI) is bringing a whole lot of scientific and technological progress as well as industrial developments. Many aspects of our daily lives are passing through visible transformations courtesy of technologies such as speech recognition, facial processing, image work, natural language processing, machine translation, virtual assistants, and intelligent search. AI has been tremendous with various applications in different scope such as education, transportation, health care, and manufacturing, medical assisted diagnosis, Unmanned Space Vehicles, satellite positioning, and robotic science and technology etc.

In the context of academic libraries, Artificial Intelligence (AI) presents a number of opportunities for optimizing operations, enhancing user experiences, and advancing research capabilities. AI has become a transformative force in a number of sectors, including education and libraries. Therefore, libraries and librarianship still seem to hold a promising gesture towards the potential changes introduced by AI, while the library could also take the full responsibility to adopt AI in a safe, responsible and effective way so as to improve its efficiency and user services. Most previous studies in the debate about AI are directed towards the experience of a particular library or in a single country or region, and rarely consider activity across the global space at the same time or from different cultural backgrounds while most of the academics in Nigeria are yet to incorporate the AI in their operations and routines. This overview delves into the basic principles of AI, its applications in academic libraries, and its potential influence on the future of library services.

Statement of the Problem

The emerging spread of Artificial Intelligence (AI) technologies has transformed numerous industries, including the field of library and information services. While AI offers significant potential to improve library operations through automation, enhanced user experience, and improved resource management, there remains a gap in understanding its practical integration and the associated challenges. Libraries, particularly in developing regions, may struggle with adopting AI systems due to limited infrastructure, financial constraints, and staff capacity to manage these advanced technologies. Additionally, concerns about data privacy, ethical use of AI, and potential job displacement have raised questions about the long-term sustainability of AI integration in libraries. To this end, this study seeks to review the extent to which AI can enhance library functions such as cataloguing, information retrieval, and user engagement. It also aims to identify the challenges faced by libraries in implementing AI-driven systems and to propose strategies for ensuring effective integration. By addressing these concerns, this research aims to provide insights that will guide academic libraries in leveraging AI to improve efficiency, accessibility, and innovation in their services.

Objectives of the study.

The main objectives of this paper is to explain the relevance of AI to the development of library services. The specifics objectives includes the following;

1. to provide a clear definition and overview of AI and its core applications.
2. to explain how these technologies are relevant to the operations of academic libraries.
3. discuss the impact of AI on Library Services:
4. evaluate how AI improves various library functions such as cataloguing, information retrieval, user engagement, and resource management.
5. assess the benefits and challenges associated with AI adoption in libraries.
6. provide examples of successful implementations of AI in academic libraries worldwide.

Literature Review

The review of literature will be divided into six (6) sections, namely;

1. Emergence of Artificial Intelligence and applications in the academic libraries;
2. Understanding Artificial Intelligence,
3. Artificial Intelligence Applications in Academic Libraries,
4. AI's products and services offered by libraries,
5. AI advantages for academic libraries;
6. Obstacles and Things to Think About, Future Prospects;

The Significance of AI in Modern Library Services, AI for Classification and Cataloguing, AI for Information Retrieval and Known Examples and Projects

Understanding Artificial Intelligence

Artificial intelligence is the term used to describe how technology, especially computer systems, can simulate human intelligence processes. According to Mitchell (1997), these processes include learning (acquiring knowledge and applying rules to it), reasoning (using rules to arrive at approximations or firm conclusions), and self-correction. Artificial Intelligence (AI) technologies comprise a diverse array of instruments and methodologies, such as Robotics, Natural Language Processing (NLP), Machine Learning, and Expert Systems.

Using Goodfellow, Bengio, and Courville (2016) instances, algorithms are used in machine learning, a branch of artificial intelligence, to help computers learn from and anticipate data. For applications like chatbots and virtual assistants, natural language processing (NLP) is crucial because it enables robots to comprehend and respond to human language. In AI, robotics refers to the design and construction of robots that are capable of carrying out tasks that are normally performed by people. In certain domains, expert systems replicate human experts' decision-making capabilities. Robot-assisted classification heavily relies on machine learning methods. With the help of these algorithms, robots can now recognize patterns, learn from data, and make judgments with minimal assistance from humans (Russell & Norvig, 2020). Several machine learning methods that are frequently employed in robot-assisted classification include:

1. Supervised Learning: This technique uses labeled data to train a model. Based on Bishop (2006) robots identify objects or activities using methods such as Support Vector Machines (SVM), Decision Trees, and Neural Networks, which are based on previous examples.
2. Unsupervised Learning: Aggarwal (2018) found that robots can recognize patterns and categorize related objects using unsupervised learning methods like Principal Component Analysis (PCA) and K-means clustering when labeled data is not available.
3. Deep Learning: Deep learning, a branch of machine learning, uses multi-layered neural networks to tackle challenging categorization problems (LeCun, Bengio, & Hinton, 2015). Convolutional Neural Networks (CNNs) are particularly useful for classification tasks in images and videos, as they enable robots to identify and classify objects with high precision.
4. Integration of Sensors Robots frequently gather information for classification using a variety of sensors. Typical sensors consist of: Cameras: to collect visual data and classify images and videos. LiDAR: For three-dimensional spatial data, helpful for detecting objects and mapping environments. Infrared sensors: These provide thermal information that helps classify objects according to their heat signatures. Microphones: Allow sound classification for audio data.

Artificial Intelligence Applications in Academic Libraries.

The introduction of AI into academic libraries has completely changed a number of library functions, including user engagement, resource management, cataloguing, and information retrieval. Important uses consist of:

Improved Cataloguing and Metadata Creation.

Smith (2020) suggested that artificial intelligence (AI) could automate labor-intensive and time-consuming cataloguing tasks by creating metadata, classifying resources, and even identifying content themes. For instance, AI algorithms could analyze large text volumes to create comprehensive and accurate metadata, which would help with resource discovery.

Information Retrieval

Jones and Brown (2019) claimed that AI-powered search engines and recommendation systems improve information retrieval by offering more personalized and accurate search results. Machine learning algorithms would analyze users' search behavior and preferences to suggest relevant resources, so increasing the effectiveness of the search process.

Virtual assistants and chatbots

AI-driven chatbots and virtual assistants provide library patrons with instant assistance by responding to their questions, pointing them in the direction of resources, and guiding them through library services. AI based systems according to Chen et al., (2019) use natural language processing (NLP) to comprehend and reply to customer inquiries instantly, offering round-the-clock reference service.

Analytics for Predictive

Luo (2018) claims that AI gives libraries the ability to employ predictive analytics to foresee user needs and maximize resource management. Libraries can make well-informed decisions about collection expansion, space utilization, and service offerings by examining usage patterns and trends.

AI technologies for digital preservation

AI solutions for digital preservation play a crucial role in maintaining the longevity and accessibility of digital resources. Machine learning algorithms have the ability to recognize and repair damage in digital files, transfer content to new formats automatically, and improve the preservation process as a whole, as demonstrated by Green and Williams (2020).

AI's products and services offered by libraries

Few applications, products, or services based on artificial intelligence or machine learning could be found in the sample academic libraries, which suggests the slow progress of their adoption. This is despite the fact that the study expanded the search from AI-related services to intelligent services during the explorations of libraries' websites. Several libraries claim to have developed intelligent virtual agents or chatbots, but only the smart talking robot Xiaotu developed by Tsinghua University Library and the book inventory robots developed by Nanjing University Library are real AI products.

AI advantages for academic libraries

There are many advantages of using AI in academic libraries, such as:
1. Enhanced Efficiency: AI frees up library employees to concentrate on more strategic and user-focused work by automating repetitive and time-consuming processes. Better resource management and service delivery result from this greater efficiency (Johnson, 2020).

2. Improved User Experience: AI-powered solutions offer customized and simple user interfaces. Libraries can better serve the varied needs of their patrons by providing personalized recommendations and prompt help (Smith & Brown, 2019).

3. Advanced Research skills: According to Chen et al. (2019) researchers can use AI to find previously undiscovered patterns and insights by offering sophisticated tools for data analysis, literature reviews, and knowledge discovery, Artificial Intelligence (AI) improves the research skills of academic libraries.

Obstacles and Things to Think About

The incorporation of artificial intelligence (AI) in academic libraries poses several obstacles and factors yet it has great promise.
1. Ethical and Privacy Concerns: The application of AI brings up moral questions about algorithmic bias, transparency, and data privacy. Green and Williams (2020) reasoned that libraries need to make sure AI programs respect user privacy and adhere to moral principles.

2. Technical Proficiency: AI technology implementation and maintenance call for specific

expertise and according to Luo (2018), it may be necessary for libraries to make investments in personnel training and hiring in AI and data science.

3. Financial Investment: It can be expensive to create and use AI technologies. In order to promote AI programs, libraries must think about the financial consequences and look for financing opportunities (Johnson, 2020).

Future Prospects

Academic libraries stand to benefit greatly from AI in the future as new developments are anticipated to further revolutionize the services offered by libraries. New developments include:

i. AI-Driven Research Support: As AI tools for data analysis, hypothesis development, and research collaboration advance, they will provide researchers with unmatched assistance (Chen et al., 2019).

ii. Virtual and augmented reality (AR and VR): By combining AI with AR and VR, immersive learning and research environments may be created, improving how users interact with data and resources (Smith, 2020).

iii. Improved Interoperability: AI will make it easier for various library platforms and systems to communicate with one another, providing smooth access to a variety of resources and services (Jones & Brown, 2019).

The Significance of AI in Modern Library Services

Using artificial intelligence (AI) to modernise library services has become a critical strategic requirement for academic institutions across the globe. Libraries must change to remain relevant and effective in the face of exponential growth in information and user demands. Artificial Intelligence provides creative ways to improve user experiences, optimize workflows, and improve library services. This study examines, with assistance from pertinent literature, the significance of incorporating AI into library services.

Improved-User-Experience

The notable improvement in user experience is one of the main advantages of integrating AI into library services. Chatbots and virtual assistants driven by AI have the ability to offer immediate assistance, respond to inquiries, and help users find their way around the library's resources (Chen et al., 2019). Smith and Brown (2019) also discovered that AI systems provide individualized and effective service by using natural language processing (NLP) to comprehend and reply to consumer requests. AI is also capable of analyzing user behavior and preferences to generate personalized recommendations, which boosts user engagement and happiness.

Improved information Retrieval

Information retrieval systems are improved by AI, which increases their accuracy and efficiency. Conventional keyword-based search engines frequently provide long, sometimes

irrelevant results. According to Jones and Brown (2019), artificial intelligence (AI), in particular machine learning algorithms, can comprehend the context and semantics of search queries, resulting in more accurate results. These sophisticated search features make it easier for users to locate the information they require fast, which is particularly helpful in academic environments where accuracy and timeliness are crucial.

Automating Typical Tasks

Many standard library functions, including metadata creation, indexing, and cataloguing, can be automated by AI. Johnson (2020) reasoned that automation boosts productivity while freeing up library staff members to work on more intricate and valuable tasks. AI systems, for instance, are capable of analyzing and classifying recent acquisitions to make sure they are properly indexed and readily available to customers. The total productivity of library operations is improved by this degree of automation.

Resource Management Using Predictive Analytics

AI makes it possible for libraries to use predictive analytics to manage resources more effectively. AI can assist libraries in forecasting demand, maximizing collection development, and making well-informed decisions regarding resource allocation by evaluating data on resource usage and user behavior (Luo, 2018). With the help of this predictive capabilities, libraries can better address the demands of their patrons, resulting in higher overall service quality.

Digital Preservation

AI is also very helpful in the crucial field of digital preservation. Digital content preservation may be automated by AI technology, guaranteeing its longevity and accessibility for future generations. According to Green and Williams (2020), machine learning algorithms possess the ability to identify and rectify digital file degradation, streamline format conversions, and oversee extensive digital repositories. Over time, the integrity and usability of digital collections depend on this feature.

Encouraging Higher Education

Artificial intelligence (AI) tools enable high-level research by offering powerful data analysis, literature review, and knowledge finding features. Researchers that find it difficult to manually evaluate massive datasets can utilize artificial intelligence (AI) to find patterns, correlations, and insights (Chen et al., 2019). These cutting-edge instruments increase the potential for novel discoveries and inventions while also improving the caliber of study.

Taking Accessibility into Account

Using AI to modernize library services aids in tackling accessibility concerns as well. Applications powered by AI can be made inclusive and accessible to people with disabilities. For example, AI-powered text-to-speech and speech-to-text apps can help visually impaired people access and use library materials (Smith & Johnson, 2021). Libraries are able to serve a wider audience as a result of their inclusion, which strengthens their position as fair sources of knowledge.

AI for Classification and Cataloguing

In academic libraries, cataloging and categorization of resources are essential tasks. By ensuring that library items are arranged methodically, these procedures facilitate effective access and retrieval. Conventional cataloguing is a time-consuming and labor-intensive process that frequently calls for the careful work of experienced librarians. The emergence of Artificial Intelligence (AI) offers a chance to transform these duties, improving precision, effectiveness, and overall quality of service. The special functions and advantages of AI in academic library cataloguing and categorization are examined in this research. Creating metadata to characterize library resources and enable search and accessibility is known as cataloguing. AI can greatly expedite this process by improving metadata production and automating it.

1. **Automated Creation of Metadata**
   Books, articles, and other resources' content can be automatically analyzed by AI algorithms to provide metadata. Finding important details like author names, publication dates, subjects, and abstracts is part of this procedure. In order to lessen the strain for human catalogers, machine learning models trained on huge datasets, for example, can learn to extract and arrange pertinent information (Smith, 2020). As an illustration being reported by Jones and Brown (2019)., the National Library of Norway put in place an AI system that makes digital newspaper cataloguing automated. This technique greatly expedites the cataloguing process by using machine learning to recognize and classify articles.

2. **Enhanced Precision and Regularity.**
   Library catalogs may suffer from discrepancies and mistakes made by human catalogers. Conversely, AI systems offer reliable and precise metadata production. According to Chen et al. (2019), these systems can be trained to adhere to particular cataloguing guidelines and standards, guaranteeing consistency throughout the catalog. For instance, the Library of Congress investigated the application of AI for cataloging and discovered that these systems could reliably implement cataloguing guidelines, minimizing errors and enhancing the metadata quality of the library as a whole (Smith & Brown, 2019). In a similar vein, classification is placing materials in designated categories or subject headings to make finding and retrieving them easier. AI improves this process by using machine learning and sophisticated algorithms.

3. **Classification of Subjects**
   Based on their content, AI is able to automatically classify materials into subject groups. AI systems may comprehend and analyze the textual content of resources by using Natural Language Processing (NLP) techniques, which then allocate the content to relevant subject categories (Johnson, 2020). Large amounts of information can be effectively organized with the use of this computerized classification.
   Example: To categorize theses and dissertations, as documented by Luo (2018), The University of Toronto Libraries developed an AI-based categorization system that makes use of NLP. Subject headers are appropriately assigned by the system, which enhances the materials' discoverability and structure.

4. **Classification by the Library of Congress and Dewey Decimal**
   AI systems can be taught to use well-known classification schemes, such the Library of Congress Classification (LCC) and the Dewey Decimal System (DDS). By assigning suitable classification numbers based on resource content analysis, these systems make sure that items are arranged in accordance with accepted criteria (Green & Williams, 2020). For instance, Jones and Brown (2019) cited The University of Illinois' AI project which aimed to create a machine learning model that classifies new acquisitions using the Dewey Decimal system. High accuracy was shown by the model, plus the skilled processing which greatly cut down on the time and effort needed for manual classification.

AI for Information Retrieval

Finding and extracting pertinent information from massive databases is a fundamental task of libraries: information retrieval. The exponential expansion of digital content means that standard information retrieval techniques are frequently insufficient to satisfy consumers' changing needs. Artificial intelligence (AI) provides strong instruments and methods to improve information retrieval procedures, increasing their effectiveness, precision, and usability. The special functions and advantages of AI in information retrieval within libraries are examined in this research.

Improving Search Capabilities

Semantic Search and Contextual Understanding: Conventional keyword-based search systems frequently produce long, maybe irrelevant results. By adding semantic search and contextual knowledge, AI improves these systems. AI may comprehend user inquiries by using Natural Language Processing (NLP), which takes into account the context and semantics of the search terms (Chen et al., 2019). As a result, search results are more accurate and pertinent. An example of this is the AI-powered search engine that the Stanford University Libraries have adopted. According to Jones and Brown (2019), this engine employs natural language processing (NLP) to comprehend user intent and deliver contextually appropriate results, hence enhancing the retrieval accuracy of information.

Individualized Search Results: According to Smith and Brown's (2019) research, artificial intelligence (AI) can provide individualized search results by examining user behavior, preferences, and historical search activity. Through user interactions, machine learning algorithms gain knowledge and gradually improve their recommendations to better meet the needs of individual users. Through the reduction of time and effort required to locate pertinent information, personalized search improves user pleasure. As an illustration, Johnson (2020) notes that the New York Public Library uses AI to provide users with tailored search experiences. Users are guaranteed personalized and pertinent recommendations from the system, which makes resource recommendations based on user profiles.

Intelligent Recommendation Systems: Recommendation engines driven by artificial intelligence make recommendations for users on pertinent sites based on their search terms and browsing history. To deliver precise recommendations, these systems make use of content-based and collaborative filtering strategies (Luo, 2018). Artificial intelligence (AI) can forecast and suggest content that users are likely to find helpful by examining patterns in user behavior. To improve the discoverability of pertinent information, the University of Cambridge Libraries

have integrated an AI-driven recommendation system that makes suggestions for books, papers, and other resources based on user preferences and search history (Green & Williams, 2020).

Finding Related information: Smith (2020) alluded to the possibility that artificial intelligence (AI) might recognize connections between various information pieces, assisting users in finding related resources they might not have otherwise found. This capacity is especially helpful for academic research, when it's critical to locate thorough and related data. For example, Chen et al. (2019) noted that the libraries at the Massachusetts Institute of Technology (MIT) use artificial intelligence (AI) to link related research papers, which helps academics find a wider range of pertinent material and fosters deeper insights.

Data Enrichment by Automated Indexing and Classification

AI can automatically create and improve library resource metadata, improving their accessibility and searchability. According to Johnson (2020), machine learning algorithms examine the content of resources to provide precise and comprehensive metadata, hence enhancing the overall effectiveness of information retrieval. Similar to this, Smith and Brown (2019) discovered that The British Library uses AI to automate the digital archives' indexing and classification, improving the findability and accessibility of enormous volumes of historical material.

Dynamic Taxonomies and Thesauri

AI is capable of building and maintaining dynamic taxonomies and thesauri that change in response to new trends and user behavior. By making sure that search terms and classifications are up to date and applicable, these tools enhance the organizing and retrieval of information (Luo, 2018). In order to ensure that its cataloguing system adjusts to new information and trends, the National Library of Australia employs artificial intelligence (AI) to dynamically update its subject headings and classifications (Jones & Brown, 2019).

Processing of Natural Language Query

1. Voice and Text Requests
   Artificial Intelligence allows consumers to communicate with library search engines through oral and written natural language queries. Information retrieval is made more user-friendly and intuitive by this accessibility feature, which also accommodates users who might not be familiar with typical search syntax (Green & Williams, 2020). In order to improve accessibility and user experience, the University of California, Berkeley Libraries have implemented an AI-driven voice search interface that enables users to retrieve information using natural language voice queries.
2. The ability to search in multiple languages
   With the help of AI, users can do multilingual searches and obtain precise results in more than one language. For academic institutions with different user demographics, this capability is very helpful. According to Johnson (2020), the Europeana digital library of the European Union uses artificial intelligence (AI) to offer multilingual search possibilities, enabling users to access resources in multiple languages and encouraging inclusivity.

Known Examples and Projects

1. New York Public Library (NYPL). NYPL has implemented self-service kiosks for check-out and returns, enabling patrons to manage their library transactions independently. This has improved service efficiency and user satisfaction.
2. University of California, Berkeley Library. UC Berkeley's library system uses self-service kiosks for catalog searches and account management. This integration has streamlined user access to library resources and services.
3. Adelaide City Libraries, Australia Adelaide City Libraries use a robotic system named "ALICE" (Automated Library Information Concierge) to guide patrons to different sections of the library and assist with inquiries. ALICE has enhanced the user experience by providing interactive and personalized assistance.
4. Tianjin Binhai Library, China. This library employs an Automated Storage and Retrieval System (ASRS) to manage its extensive collection of books. The system enhances efficiency by automating the storage, retrieval, and shelving processes, making it one of the most technologically advanced libraries in the world. The integration of self-service kiosks and robotics in libraries represents a significant shift towards modernization and technological advancement. These innovations not only enhance operational efficiency but also improve user experience and accessibility. As libraries continue to adopt such technologies, they will better meet the evolving needs of their patrons and remain relevant in the digital age.

Conclusion

Libraries benefit greatly from AI's ability to improve work flow, bibliographic control, search accuracy, offer personalized suggestions, automate indexing, and enable natural language queries when it comes to information retrieval procedures. These developments make libraries more approachable and user-friendly by improving the user experience overall and by boosting the effectiveness of information retrieval. AI technologies will become more and more necessary to integrate into library services as they develop, enabling libraries to better serve the wide range of needs that their patrons have.

Similar to this, AI has the power to completely transform academic libraries by increasing productivity, boosting user satisfaction, and expanding research possibilities. Although there are still obstacles to overcome, integrating AI has several advantages. Academic libraries can become cutting-edge, user-focused, and future-ready organizations by embracing AI and taking a leading position in the changing environment.

Thus, updating and improving the effectiveness, accessibility, and general routines of library operations requires integrating AI into library services. In terms of user experience, information retrieval, task automation, resource management, digital preservation, support for advanced research, and accessibility and cataloguing and classification. AI-driven systems have a lot to offer. Embracing AI will be essential to libraries' continued relevance and efficacy in the digital era as they adapt to user needs and technological improvements.

Suggested Way Forward

The following recommendations offer useful steps that could help to enhance the effective adoption of Artificial Intelligence (AI) in academic library services based on the objectives of this review:

Comprehensive Understanding of AI and Its Applications

Academic institutions should organize workshops, seminars, and certification programs that provide librarians with a clear understanding of AI concepts, machine learning models, and their core applications. This foundational knowledge will enable libraries to make informed decisions regarding AI adoption.

Integrating AI into Library Operations

Libraries should focus on integrating AI technologies into routine operations. For example, AI-based recommendation systems can improve personalized user experiences, while chatbots can enhance reference services by providing 24/7 assistance. Libraries should strategically implement AI tools to enhance cataloguing, book retrieval, and resource management. Automated classification systems powered by AI can improve metadata accuracy, while AI-powered search engines can enhance information discovery.

Evaluation and Performance Assessment

Libraries should adopt performance evaluation frameworks that measure the impact of AI on operational efficiency and user satisfaction. Regular assessments can identify areas for improvement and guide data-driven decisions.

Addressing Benefits and Challenges

Libraries must proactively address key challenges such as data privacy, ethical concerns, and staff readiness. Implementing clear data management policies and investing in staff training programs will ensure AI adoption is secure and effective.

Showcasing Successful AI Implementations

Similarly, Libraries should draw insights from institutions with successful AI integration. Case studies from prominent libraries worldwide can provide valuable lessons and best practices for optimizing AI tools.

These strategies can help libraries to effectively integrate AI technologies, enhance user services, and improve operational efficiency in order to remain relevant, accessible, and innovative in the digital age.

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INFLUENCE OF ARTIFICIAL INTELIGENCE TOOLS ON INNOVATION IN INFORMATION LITERACY PROGRAMMES AMONG LIBRARIANS IN SOME SELECTED FEDERAL UNIVERSITY LIBRARIES IN NORTH-WEST, NIGERIA

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Abstract

The study investigated the influence of artificial intelligence on innovation in information literacy programs among university librarians in some selected federal university libraries in North-West, Nigeria. The objectives of the study include to identity the type of Artificial Intelligence tools adopted for innovation in information literacy programs among university librarians in selected federal universities in North-West Nigeria, to assess the influence of artificial intelligence on the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria. The study adopted descriptive survey research design. The population of the study was 145 librarians selected from the three selected federal university libraries in North West, Nigeria Census sampling was used as the population is small and manageable. Questionnaire was developed and was used as the research instrument for collecting data in this study. The data collected were analyzed using descriptive statistics such as frequency distribution, percentages, mean and standard deviation. Findings reveal that Machine learning, Natural Language Processing (NLP) tools, AI-driven plagiarism detection tools, AI-powered search engines and Computer Vision technology are types of Artificial Intelligence adopted for Innovation in Information Literacy Programs among Librarians in selected Federal Universities in North-West Nigeria, Artificial intelligence has influence on the effectiveness of information literacy programs among librarians in selected federal universities in North-West Nigeria and lack of adequate training and skills in AI technologies, Insufficient funding and resources, Limited access to advanced AI tools and technologies, Resistance to change among librarians and faculty members, The high cost of AI implementation and maintenance and Inadequate technical infrastructure are the challenges faced by university librarians in adopting artificial intelligence in enhancing information literacy programs among university librarians in selected federal universities in North-West Nigeria. The study concluded that adoption of Artificial intelligence tool in information literacy programs among librarians in selected federal universities in North-West Nigeria demonstrates a significant shift towards integrating advanced AI technologies to enhance the effectiveness and efficiency of educational resources. The study recommended that among others that the librarians in selected Federal Universities in North-West Nigeria should prioritize the implementation of targeted professional development programs focused on advanced AI technologies, including Natural Language Processing (NLP) tools, AI-driven plagiarism detection tools, AI-powered search engines, and Computer Vision technology.

Keywords: Artificial intelligence, innovation, information literacy programs, librarians**,** Federal University Libraries.

Introduction

Technology has revolutionized and reshaped every aspect of human life. In the 21st century, the rapid advancement of technology has profoundly impacted various sectors, including education and information management. Among these technological advancements is Artificial Intelligence (AI). Artificial Intelligence (AI) has emerged as a transformative force, reshaping traditional practices and introducing innovative solutions across multiple domains. Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are designed to think, learn, and perform tasks typically requiring human cognitive functions. Nwakunor (2021) describes Artificial Intelligence as the use of computer-controlled robots designed to emulate human intelligence. These robots operate electronically through computers, replicating the cognitive abilities of the human mind. According to Nwakunor (2021), Artificial Intelligence not only records but also analyzes every action taken by the user.

The roots of Artificial Intelligence (AI) can be traced back to John McCarthy's research in 1955, which was based on the premise that machines could replicate all aspects of learning and other forms of intelligence (Wang, 2018). According to the Merriam-Webster English Dictionary (2018), AI is defined as "a part of computer science that deals with giving machines the ability to appear as though they possess natural human intelligence." These human-like abilities in AI are enhanced through learning from experience and adaptation over time. The rapid advancement of Artificial Intelligence (AI) has significantly transformed various library services through innovation**.** Innovation is the process of translating ideas into new or improved products, services, or processes that create value for society**.** Innovation in the library context refers to the adoption of new ideas, practices, and technologies to enhance library services, improve user experiences, and meet the evolving needs of patrons (Borgman, 2020). Libraries, traditionally seen as repositories of books and information, have increasingly embraced innovation to remain relevant in the digital age. Libraries have launched a variety of cutting-edge services and programs, including information literacy.

Information literacy are sets of skills and competencies necessary to effectively locate, evaluate, and use information. Information literacy as defined by the American Library Association (ALA) is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (American Library Association, 2022). This skill set is crucial in an era where information is abundant and easily accessible but varies significantly in quality and reliability. As the information landscape grows increasingly complex with the proliferation of digital resources, libraries have developed comprehensive information literacy programs to teach patrons how to effectively find, evaluate, and use information. These programs are essential in a digital age where the ability to critically assess information is crucial. Libraries, which serve as crucial hubs for knowledge acquisition and dissemination, are increasingly adopting AI technologies to enhance their operations and services (Julien & Genuis, 2021). Information literacy programs in academic libraries are designed to help users develop critical thinking and information-seeking skills necessary for academic success and lifelong learning. With the integration of AI, these programs can be more personalized, efficient, and responsive to the needs of users. For university librarians, leveraging AI could lead to innovative approaches in delivering information literacy programs,

ultimately improving the quality of education and research output. In the context of North-West Nigeria, where access to resources and technological infrastructure can be limited, the adoption of AI in library services, particularly in information literacy programs, could bridge significant gaps in education. However, the extent to which AI has influenced innovation in these programs among university librarians in federal universities in this region remains underexplored.

Statement of the Problem

Information literacy programs are critical in equipping students and researchers with the skills necessary to effectively locate, evaluate, and utilize information. Equally, the relevance of AI in enhancing information literacy programs in academic libraries, particularly those in universities in North-West Nigeria, is evident. However, a study by Aminu (2024) revealed that federal university libraries in this region have not extensively adopted AI technologies, despite their potential to improve library operations. The study identified available AI technologies such as social media, Online Public Access Catalogues (OPAC), search engines, and security scanners. Yet, it concluded that the adoption of more advanced AI technologies remains limited, indicating challenges in embracing digital innovations within these institutions. Tella (2020) stressed that libraries in the developed countries have accepted and used AI technologies virtually in all spheres of life whereas those in developing countries are still struggling to find their feet.

The researcher also observed that some university libraries within North-West Nigeria face challenges related to outdated methods and limited resources which hinder the effectiveness of information literacy programs, limiting their reach and impact. Librarians in some Federal Universities in Nigeria have begun to incorporate artificial technologies in the library system so as to meet up with the current trends in the worldwide. Despite the potential benefits, the adoption of AI in academic libraries in Nigeria, particularly in the North-West region, has been slow and uneven. Several factors contribute to this slow adoption, including a lack of awareness and expertise among librarians, inadequate infrastructure, and concerns about the cost and sustainability of implementing AI technologies (Lawal, 2021).

Moreover, there is limited empirical research on the impact of AI on information literacy programs in this region, making it difficult to assess the extent to which AI can drive innovation and improve educational outcomes which is in line Aminu (2024) examined the adoption of AI technologies in federal university libraries in North-West Nigeria, identifying tools such as social media platforms, Online Public Access Catalogues (OPAC), search engines, and security scanners. However, the study did not delve into how these technologies impact information literacy programs. The research concluded that despite the availability of certain AI tools, their adoption remains limited, and there is a need for broader integration of advanced AI technologies in library operations. Therefore, the present study aims to fill the gap by investigating the influence of artificial intelligence on innovation in information literacy programmes among university librarians in some selected federal universities libraries in North-West, Nigeria.

Research Questions

The following research questions were formulated to guide the study

1. What types of Artificial Intelligence tools are adopted for innovation in information literacy programs among university librarians in selected federal universities in North-West Nigeria?
2. How do Artificial Intelligence tools influence the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria?
3. What challenges do librarians face in adopting Artificial Intelligence to enhance information literacy programs in selected federal universities in North-West Nigeria?

Objectives of the study

The specific objectives of the study are to:

1. To identity the type of Artificial Intelligence tools adopted for innovation in information literacy programs among university librarians in selected federal universities in North-West Nigeria.
2. To assess the influence of artificial intelligence on the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria.
3. To examine the challenges faced by university librarians in adopting artificial intelligence in enhancing information literacy programs among university librarians in selected federal universities in North-West Nigeria

Methodology

This study adopted descriptive survey design. Descriptive survey design sets out to describe and to interpret what is. It aimed to describe the state of affairs as it exists. The study population consisted of 145 librarians in the selected Federal University Libraries in North-West namely: Ahmadu Bello University Zaria (75), Bayero University (40), Kano and Usman Danfodio University, Sokoto (30). Census sampling is the population is manageable. This is affirmed by Saka (2020) that the whole population can be used if it is manageable. A structured questionnaire designed by the researcher on a four-point rating scale of strongly agreed (SA), agreed (A), disagreed (D) and strongly disagreed (D) was used as instrument for data with a bench mark of 2.50. 145 questionnaire were distributed to the respondents out of which 140 (96.6%) were returned and the data collected were analyzed using descriptive statistics such as frequency distribution, percentages, mean and standard deviation.

Result and Discussion

Question 1: What types of Artificial Intelligence tools are adopted for innovation in information literacy programs among university librarians in selected federal universities in North-West Nigeria?

Table 1: Types of Artificial Intelligence tools are adopted for Innovation in Information Literacy Programs among University Librarians in selected Federal Universities in North-West Nigeria

S/N	Items	SA	A	D	SD	Mean	Std	Decision
1	Machine Learning is widely adopted in our university's information literacy programs to enhance the personalization of learning experiences.	90(64.2%)	20 (14.3%)	20 (14.3%)	10 (7.1%)	3.36	0.97	Agreed
2	Natural Language Processing (NLP) tools, such as chatbots, are effectively integrated into our information literacy programs to assist students with research queries.	45 (32.1)	12(8.6%)	70 (50%)	13(9.3%)	2.64	1.03	Agreed
3	AI-driven plagiarism detection tools are an essential part of our information	80(57.1%)	21(15%)	23(16.4%)	16(11.4%)	3.18	1.01	Agreed

	literacy instruction.							
4	Our library uses AI-powered search engines to improve information retrieval during information literacy sessions.	65(46.4%)	32(22.9%)	12 (8.6%)	31(22.1%)	2.94	1.19	Agreed
5	Computer Vision technology is effectively utilized to create engaging visual resources for information literacy programs.	60(42.9)	35 (25%)	15 (10.7%)	30 (21.4%)	2.89	1.16	Agreed
	Weighted mean					**3.00**	**1.07**	**Agreed**

KEY: SA – Strongly Agree 4; **A** – Agree 3; **D** – Disagree 2; **SD** – Strongly Disagree 1

Types of Artificial Intelligence are adopted for Innovation in Information Literacy Programs among University Librarians in selected Federal Universities in North-West Nigeria is presented in Table 1. The first item shows that 90 (64.2%) of the respondents strongly agreed that machine Learning is widely adopted in our university's information literacy programs to enhance the personalization of learning experiences, 20 (14.3%) of the respondents agreed, 20(14.3%) of the respondents disagreed while 10(7.15) of the respondents strongly disagreed. Therefore, from the mean score of 3.36 which is greater than the bench mark of 2.50 and a standard deviation of 0.97, it shows that machine Learning is widely adopted in our university's information literacy programs to enhance the personalization of learning experiences. The second item shows that 45 (32.1%) of the respondents strongly agreed that natural language processing (NLP) tools, such as chatbots, are effectively integrated into our information literacy programs to assist students with research queries, 12 (8.6%) of the respondents agreed, 70(50%) of the respondents disagreed while 13 (9.3%) of the respondents strongly disagreed. Therefore, from the mean score of 2.64 which is greater than the bench mark of 2.50 and a standard deviation of 1.03 shows that Natural Language

Processing (NLP) tools, such as chatbots, are effectively integrated into our information literacy programs to assist students with research queries.

The result from research question one revealed that Machine learning, Natural Language Processing (NLP) tools, AI-driven plagiarism detection tools, AI-powered search engines and Computer Vision technology are types of Artificial Intelligence adopted for Innovation in Information Literacy Programs among University Librarians in selected Federal Universities in North-West Nigeria. This finding is in line with the findings of Zhu and Yin (2021) who found that ML algorithms have been successfully implemented in university libraries to enhance the delivery of customized information services, leading to improved student outcomes in information literacy. The findings also concurred with the Wang et al. (2020) found that the integration of NLP in library services significantly improved user satisfaction by providing real-time assistance and reducing response times. The findings is also in line with Park and Yang (2019) who highlighted the role of AI-driven plagiarism detection tools in reducing plagiarism incidents in academic institutions, thereby reinforcing ethical academic practices. For instance, a comprehensive study by Weber-Wulff et al. (2023) evaluated 14 AI detection tools, including Turnitin and PlagiarismCheck, and found that these tools were neither accurate nor reliable. The study revealed a tendency for these tools to misclassify AI-generated content as human-written, and their performance significantly declined when faced with content obfuscation techniques.

Question 2: How does Artificial Intelligence influence the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria?

Table 2: Influence of Artificial Intelligence on the Effectiveness of Information Literacy Programs among University Librarians in selected Federal Universities in North-West Nigeria

S/N	Items	SA	A	D	SD	Mean	Std	Decision
1	AI tools have enhanced the accuracy of information retrieval during our information literacy sessions.	91 (65%)	19 (13.6%)	15(10.7%)	15(10.7%)	3.33	1.04	Agreed
2	The integration of AI tools in information literacy programs has increased the efficiency of research skills training for students.	80(57.1%)	10(7.1%)	30(21.4%)	20(14.3%)	3.07	1.16	Agreed
3	AI-driven resources have	85(60.7%)	25(17.9%)	16(11.4%)	14(10%)	3.29	0.94	Agreed

	enhanced the accessibility of information literacy programs for students with diverse learning needs.							
4	AI applications in information literacy programs have made it easier for students to understand and apply complex research concepts.	75(53.8%)	30(21.4%)	10(7.1%)	25(17.9%)	3.11	1.14	Agreed
5	AI tools have streamlined the process of delivering information literacy content, making it more efficient and effective.	65(46.4%)	30(21.4%)	25(17.9%)	20(14.3%)	3.00	1.10	Agreed
	Weighted mean					3.16	1.08	Agreed

KEY: SA – Strongly Agree 4; **A** – Agree 3; **D** – Disagree 2; **SD** – Strongly Disagree 1

Table 2 presents the influence of artificial intelligence on the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria**.** The first item shows that 91 (65%) of the respondents strongly agreed that AI tools have enhanced the accuracy of information retrieval during our information literacy sessions, 19 (13.6%) of the respondents agreed, 15 (10.7%) of the respondents disagreed while 15 (10.7%) of the respondents strongly disagreed. Therefore, from the mean score of 3.33 which is greater than the bench mark of 2.50 and a standard deviation of 1.04, it shows that AI tools have enhanced the accuracy of information retrieval during our information literacy sessions. The third item shows that 85 (60.7%) of the respondents strongly agreed that AI-driven resources have enhanced the accessibility of information literacy programs for students with diverse learning needs, 25 (17.9%) of the respondents agreed, 16 (11.4%) of the respondents disagreed while 14 (10%) of the respondents strongly agreed. Therefore, from the mean score of 3.29 which is greater than the bench mark of 2.50 and a standard deviation of 0.94 shows that AI-driven resources have enhanced the accessibility of information literacy programs for students with diverse learning needs. The fourth item shows that 75 (53.8%) of the respondents strongly agreed that AI applications in information literacy programs have made it easier for students to understand and apply complex research concepts, 30 (21.4%) of the respondents agreed, 10(7.1%) of the respondents disagreed while 25 (17.9%) of the respondents strongly agreed. Therefore, from the mean score of 3.11 which

is greater than the bench mark of 2.50 and a standard deviation of 1.14 it shows that AI applications in information literacy programs have made it easier for students to understand and apply complex research concepts.

The fifth item shows that 65 (46.4%) of the respondents strongly agreed that AI tools have streamlined the process of delivering information literacy content, making it more efficient and effective, 30 (21.4%) of the respondents agreed, 25(17.9%) of the respondents disagreed while 20 (214.3%) of the respondents strongly agreed. Therefore, from the mean score of 3.00 which is greater than the bench mark of 2.50 and a standard deviation of 1.10 shows that AI tools have streamlined the process of delivering information literacy content, making it more efficient and effective. From the weighted mean of 3.16 which is greater than the 2.50 for the bench mark, implies that Artificial intelligence has influence on the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria.
The result from research question two revealed Artificial intelligence has influence on the effectiveness of information literacy programs among university librarians in selected federal universities in North-West Nigeria. The findings agreed with the findings of Baker & Siemens (2019) who reported that AI improve the accuracy of information retrieval and enhance the effectiveness of educational programs by providing more relevant data to students and educators. This finding is also related to the findings of Tsalapatas & Papatheodorou (2021) who found that AI tools facilitate personalized learning experiences by adapting to individual student needs and preferences.

Question 3: What challenges do university librarians face in adopting Artificial Intelligence to enhance information literacy programs in selected federal universities in North-West Nigeria?

Table 3: Challenges faced by university librarians in adopting **artificial intelligence** in enhancing information literacy programs among university librarians in selected federal universities in North-West Nigeria

S/N	Items	SA	A	D	SD	mean	Std	Decision
1	Lack of adequate training and skills in AI technologies is a major challenge in adopting AI for information literacy programs.	89(63.6%)	26 (18.6%)	10 (7.15%)	15 (10.7%)	3.35	1.01	Agreed
2	Insufficient funding and resources hinder the implementation	75(53.6%)	30(21.4%)	15(10.7%)	20(14.3%)	3.14	1.09	Agreed

	of AI in information literacy programs.							
3	Limited access to advanced AI tools and technologies is a significant barrier to enhancing information literacy programs	85(60.7%)	25(17.9%)	16(11.4%)	14(10%)	3.29	0.94	Agreed
4	Resistance to change among librarians and faculty members poses a challenge to the adoption of AI in information literacy programs.	75(53.6%)	30(21.4%)	10(7.1%)	25(17.9%	3.11	1.14	Agreed
5	The high cost of AI implementation and maintenance is a significant challenge for university libraries.	65(46.4%)	30(21.4%)	25(17.9%)	20(14.3%)	3.00	1.10	Agreed
6	Inadequate technical infrastructure limits the effective adoption of AI in information literacy programs.	55(39.3%)	65(46.45)	10(7.1%)	10(7.1%)	3.18	0.85	Agreed
	Weighted mean					3.18	1.02	

KEY: SA – Strongly Agree 4; **A** – Agree 3; **D** – Disagree 2; **SD** – Strongly Disagree 1

The challenges faced by university librarians in adopting **artificial intelligence** in enhancing information literacy programs among university librarians in selected federal universities in North-West Nigeria is presented in Table 3. The first item shows that 89 (63.6%) of the respondents strongly agreed that lack of adequate training and skills in AI technologies is a major challenge in adopting AI for information literacy programs. Therefore, from the mean score of 3.35 which is greater than the bench mark of 2.50 and a standard deviation of 0.97 shows that lack of adequate training and skills in AI technologies is a major challenge in adopting AI for information literacy programs. The second item shows that 75 (53.6%) of the respondents strongly agreed that insufficient funding and resources hinder the implementation of AI in information literacy programs. Therefore, from the mean score of 31.4 which is greater than the bench mark of 2.50 and a standard deviation of 1.09, shows that insufficient funding and resources hinder the implementation of AI in information literacy programs.

The six item shows that 55 (39.3%) of the respondents strongly agreed on inadequate technical infrastructure limits the effective adoption of AI in information literacy programs 65 (46.45%) of the respondents agreed, 10 (7.1%) of the respondents disagreed while 10(7.1%) of the respondents strongly disagreed. Therefore, from the mean score of 3.18 which is greater than the bench mark of 2.50 and a standard deviation of 0.85, it shows that inadequate technical infrastructure limits the effective adoption of AI in information literacy programs. From the weighted mean of 3.18 which is greater than the 2.50 for the bench mark, this implies that Lack of adequate training and skills in AI technologies, Insufficient funding and resources, Limited access to advanced AI tools and technologies, Resistance to change among librarians and faculty members, The high cost of AI implementation and maintenance and Inadequate technical infrastructure are the challenges faced by university librarians in adopting artificial intelligence in enhancing information literacy programs among university librarians in selected federal universities in North-West Nigeria**.**

The result from research question three revealed that lack of adequate training and skills in AI technologies, Insufficient funding and resources, Limited access to advanced AI tools and technologies, Resistance to change among librarians and faculty members, The high cost of AI implementation and maintenance and Inadequate technical infrastructure are the challenges faced by university librarians in adopting artificial intelligence in enhancing information literacy programs among university librarians in selected federal universities in North-West Nigeria. These findings agreed with Boulton, & Armitage (2019) who highlighted that inadequate training can hinder the effective implementation of advanced technologies in library settings.

Conclusions

Based on the findings from the study, it was concluded the adoption of Artificial intelligence tool in information literacy programs among university librarians in selected federal universities in North-West Nigeria demonstrates a significant shift towards integrating advanced AI technologies to enhance the effectiveness and efficiency of educational resources by improving the quality of information retrieval, personalizing learning experiences, and providing timely feedback on academic integrity. However, the challenges faced by university librarians in adopting Artificial Intelligence (AI) for enhancing information literacy programs in selected federal universities in North-West Nigeria—such as lack of adequate training, insufficient funding, limited

access to advanced tools, resistance to change, high costs, and inadequate technical infrastructure impede the full implementation Artificial intelligence tool in information literacy programs among university librarians in selected federal universities in North-West Nigeria

Recommendations

Based on the findings, the researcher recommended that:

1. The University librarians in selected Federal Universities in North-West Nigeria should prioritize the implementation of targeted professional development programs focused on advanced AI technologies, including Natural Language Processing (NLP) tools, AI-driven plagiarism detection tools, AI-powered search engines, and Computer Vision technology.
2. The University Librarians in selected federal universities in North-West Nigeria should establish a continuous evaluation and feedback mechanism for AI tools and applications. This should involve regularly assessing the impact of AI technologies on program outcomes, collecting feedback from users, and making data-driven adjustments to optimize the integration of AI.
3. The university administrators should develop a comprehensive support plan that includes securing dedicated funding for AI initiatives, establishing partnerships with technology providers for access to advanced tools, and implementing robust professional development programs for librarians and faculty.

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COMPREHENSIVE COVERAGE OF LEGAL DEPOSIT STATUTORY LAW ON THESIS AND DISSERTATION FOR OPEN ACCESS DIGITAL REPOSITORY BY NATIONAL LIBRARY OF NIGERIA

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Abstract

*The paper investigates Compressive Coverage of Legal Deposit Statutory Law on Thesis and Dissertation for Open Access Digital Repository by National Library of Nigeria**.** Four research questions were raised in respect to what types of intellectual resources are covered with legal deposit statutory law by National Library of Nigeria?, what types of digital repository technologies available for adoption of legal deposit statutory law for open access on thesis and dissertation?, to what extent at which the adoption of legal deposit statutory law compatibly facilitates use of Thesis and Dissertations for Open Access Digital Repository what, what are the challenges complexly faced by National Library of Nigeria while adopting legal deposit statutory law on Thesis and Dissertations for Open Access Digital Repository. Quantitative methodology was adopted using cross-sectional survey strategy. 226 questionnaires were administered and 161 retuned and found worthy for analysis. The study discovered that types of intellectual resources are covered with legal deposit statutory law by National Library of Nigeria among others were print information resources, references information resources, serial information resources, thesis and dissertation information resources etc. with above 50% decision variable, the type of open access digital technology available is National Repository @power by eko-konnect with 144(89.4%) which is above 50% decision variable while all the rest are below 50% respectably. The Extent at which the adoption of legal deposit statutory law Nigeria facilitate Use of Thesis and Dissertations for Open Access Digital Repository, is very high and positive, especially as the cumulative mean level of 4.437 being higher than the decision mean of 3.000, the challenges found in the study were Lack of Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation; Lack of Awareness Surrounding Thesis and Dissertation Policy; Lack of Skilled Staff for Adoption of Open Access; Lack of Clear Policy Statement on Due Time for collection.*

Keywords: Compressive, Coverage, Legal Deposit, Open Access, Digital Repository Thesis Dissertation

Introduction

Legal deposit statutory law is a regulation given by a government mostly concerned with books and various types of print resources. With the advance publication in technological era and digital resources now legal deposit includes other forms of digital resources. Legal deposit was ordained firstly by France government in 1537 (Iqbal, Qutab, Soroya, 2015). There are many objectives attached to the Legal deposit statutory law, but the significant one is preserving the cultural heritage of country while others are creating the national bibliographic control, management of states library chapters and support other libraries with newly published information resources (Saleem, Kindi, & Rahbi, 2017)**.** National Library of Nigeria established in 1964 by the decree (no. 29 of 1970) that obviously states that "it shall be the duty of the Board as much as its resources allow to accumulate, preserve and expand a collection of periodicals, books, newspapers, pamphlets, films, maps recordings, musical scores, and other matter as the Board considers suitable for a library of the uppermost standing and to make the services of the National Library accessible to members of the public.

"*The National Library is the legal depository in the country for all United Nations (U.N.) and African Union (A.U.,) publication. It is the only library in the country that is invested with legal deposit powers in respect of all published materials in the country. This in practical terms means that the Federal Government must by law deposit twenty-five copies of everything that it publishes; ten copies of State Government publications and three copies by every commercial publisher" (Ufuoma, 2015).*

Matthew & Okeagu (2009) mentioned the significance of National Library to be providing access to information resources, working in partnership with stakeholders, structuring knowledge, imparting skills, preserving heritage and inspiring trust which are all crucial for the knowledge economy. This is true because sustainable development implies the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs. White (2000) while examining the importance of national library in national and individual development concluded that, the libraries exist to amass and organize the work done by best minds regardless of when and where significant contributions originate.

The library aids high-grade manpower in keeping up to date and performing at the peak of efficiency. The Library supports the intellectual freedom. Free reading nurtures the genius of the nation. This is a very undeniable and infallible truth. Without the existence of libraries in national and individual development, the system is bound to fail and collapse. This can be so risky because the possibility of the system excelling and meeting up its goals will be absolutely zero. Also, the importance of national libraries cannot be overemphasized in the areas of research, educational development, etc, as asserted by Oke (2008) that, "The importance of National Library in the areas of research, assignments, upgrading one's value, personal studies, gaining more knowledge, preparing for paper presentations, educational development and so on, is inevitable and indispensable".

This is as a result of the fact that the needed and useful information is found embedded in the pages of book resources and in the non-book resources of the library. National Library is very essential for its recreational capability; many library users go to the library to have leisure of some

kind, such like watching magnificent documentaries, discoveries, play some splendid games, reading interesting novels and periodicals (newspapers, magazines, etc).

Information and Communication Technologies (ICTs) development have also contributed to the evolution of how information is accessed by affecting the documentation format of intellectual content, access and subsequent dissemination. Therefore, it is safe to say that ICTs have dramatically influenced research practices in terms of scholarly communications by enhancing communication among scientists, access to information of all kinds, and the provision of a greater variety of publication and dissemination platforms.

Open Access Digital Repository OADR is a digital platform and archive of the intellectual product created by the government agency or tertiary instructions for faculty, research staff, and students and made it accessible to end users both within and outside of the institution, without barriers to access of its content. Open Access Digital Repository can include e-prints or other types of digital works by authors in a single academic department or school or the whole institution. Digital Repository (DR) is set of services and technologies that provide the means to collect, manage, provide access to, disseminate, and preserve digital materials produced at an institution. Similarly, Fowoyo (2014) asserts that a Digital Repository brings together working papers, thesis, dissertations, published articles and the collective institutional research under one umbrella with the goal of facilitating access and preserving the resource.

Statement of the Problem

Open Access Digital Repository has transformed services delivery in tertiary institutions in Nigeria but success story will be more effective if there is national digital repository that consist all the intellectual products of the nation. Thesis and dissertation are the most intellectual product which pass thorough scholarly supervisions, reviewing, editing, and proofreading. Inclusion of Thesis and dissertation into legal deposit statutory law for Open Access Digital Repository will make the national products more visible, available, accessible, and secure the maximum benefit of national research output. Where adopted, this can proffer continuity benefits for the academic circles, scholarly communication and knowledge asset.

The researcher feels that there is wide gap in the legal deposit statutory law at national level which has to be addressed the issue scientifically. In light of the above the researcher feels responsible to undertake research on Comprehensive Coverage of Legal Deposit Statutory Law on Thesis and Dissertation for Open Access Digital Repository by National Library of Nigeria. The Idea of this research is to create connection between National library of Nigeria and other relevant stakeholders through the use of legal deposit statutory law. Many researches were conducted on open access digital repository but there is no single research that makes an attempt on legal deposit statutory law on thesis and dissertation in Nigeria.

Research Questions

1) Identify the types of intellectual resources are covered with legal deposit statutory law by National Library of Nigeria
2) Identify the types of digital repository technologies available for adoption of legal deposit statutory law for open access on thesis and dissertation by National Library of Nigeria
3) Ascertain the extent at which the adoption of legal deposit statutory law compatibly facilitates use of Thesis and Dissertations for Open Access Digital Repository by the National Library of Nigeria
4) Identify the challenges complexly faced by National Library of Nigeria while adopting legal deposit statutory law on Thesis and Dissertations for Open Access Digital Repository

Review of Related Literature

The National Library of Nigeria as the apex library of the nation and the bibliographic agency is therefore responsible for collection and preservation in a format, the record of intellectual output of Nigerians, and maintains the key objective of making such information accessible to the citizenry and beyond. This is achieved majorly through legal depository practices, which form part of the bibliographic control efforts of the National Library of Nigeria.

Collection of legal deposit and also enhancing compliance of publishers and authors with legal deposit obligations through the enforcement of the law engenders effective legal depository practices of the National Library of Nigeria. Since 1970, the National Library of Nigeria has been responsible for collection of legal deposit of the country's publication output. The National Library of Nigeria equally developed modalities for enhancement of compliance of publishers and authors, as any law that is not enforced cannot be called law in its right sense and cannot also achieve its purpose of enactment.

According to Lariviere (2000), legal deposit is defined as 'a statutory obligation which requires that any organisation, commercial, or public, and any individual producing any form of documentation in multiple copies, be obliged to deposit one or more copies with a recognised national institution. Omolayole (2003) opined that section 4 of the National Library Act No.29 of 1970 confers on the library the depository obligation of the nation with the implication that resources published in the country must be deposited in the National Library of Nigeria. The authors also asserted that the legal deposit law prescribes the number of copies of publications to be deposited with the NLN, which comprises 3 copies of commercially produced book, 10 copies of publications by or on behalf of a state government, and 20 copies of Federal government publications. It is stated that two copies of such publications should be kept in the NLN for permanent preservation, while one copy should be submitted to the University College, Ibadan (presently, University of Ibadan), for continuity.

The introduction of electronic legal deposit in UK is arguably the greatest transformation which national libraries have undergone in our professional lifetimes. Jensen, (2021) argues that many institutions have successfully implemented technical, structural, and cultural transformative change, while there is more to do, and challenges remain. When it comes to transfer however, the

ability to give users meaningful access to the legal deposit collections, the picture is rather different: much good work is being done, but the Transformative potential of electronic legal deposit has not been realised for our users. His study explores the broader cultural background specifically in the United Kingdom against which the relevant legislation was shaped to understand better what steps could be taken in the future to redress this imbalance.

Mohammed, (2009) a digital repository is an online archive in which authors and academics can deposit their work, with the intention that it will be openly available in digital form. The term 'digital repository' may also be used to refer to the organisation which is responsible for the long-term maintenance of digital resources and for making these resources available to the public or specified communities of users. Lynch, (2002) identifies five different types of repositories:

Institutional repositories: A repository established by a particular university or other research institution is known as an institutional repository. It can be intended to collect and preserve the intellectual output on an institution in digital form.

Departmental repositories: A repository established for the use of a particular academic department or laboratory is properly called a departmental repository, though the term institutional repository is also used.

Subject repositories: A repository established to collect and preserve material in a particular subject is called a subject repository; they can be organized by a government, a government department, or by a research institution, or be autonomous.

National repositories: A repository for general use by scholars working in a particular country is a national repository, but such repositories can also be organized on a more local basis.
Material repositories: A repository can also be intended for a particular type of material, such as this repository or a newspaper repository.

Globally, according to Registry of Open Access Repository (2023) generated report that there is Four Thousand Seven Hundred and Fifty-Three (4753) Repositories across the Globe out of which Three Thousand Eight Hundred and Ninety-Five are Institutional Repositories, the report also indicates there is Three Hundred and Fifty-Seven (357) E-Thesis Repositories, Four Hundred and Nine (409) in respect to others repositories which include the National Repositories. In Africa there is only seventeen (17) countries with Open Access Digital as report further stated, in Nigeria, despite the population of the country and the huge number of tertiary institutions in general and universities in particular, the country has only seventeen (17) Registered Digital Repositories out of which only CBN has registered with Registry of Open Access Repository (ROAR) as at January, 2023 as a governmental repository.

Research Methodology

For the purpose of this study, the research methodology adopted is quantitative research methodology. Quantitative research methodology is a scientific investigation of observable phenomena via statistical, mathematical or computational technique. It is appropriate for this study, because the data that will be generated from the study is in numeric forms. The research design adopted for this study is the cross-sectional survey design. This is a form of descriptive survey design used when dealing with a very systematic collection of data or information from population or a sample of the population through the use of personal interview, opinion scale, or questionnaires. Out of total population Five Hundred and Forty-Eight (548) of this study, 41.8 % (226) will be used as sample of the study. This is in agreement with Krejcie & Morgan sample size table (1970) who explained that if a population of the study is Five Hundred and Fifty (550) Two Hundred and Twenty-Six (226) should be used for the study. The technique use for the study is simple random sampling; this will give everyone equal chance for participation in this study.

Result and Findings

The results presented in a tabular form using frequency of options and mean and standard deviations were presented for the analysis. Out of Two Hundred and Twenty-Six (226), One Hundred and Sixty-One (161) were duly retuned and analyzed. The results presented in a tabular form using frequency of options and mean and standard deviations were presented for the analysis. Research questions 3 was cumulated for their mean and compared with a standard /decision mean of 3.000 since the items are in 5 Liker scale options. Carrying points of 5, 4, 3, 2 and 1 respectively, computed thus: (5+4+3+2+1)/5 = 3.000 while questions 1, & 2, 4 were analyzed in nominal variable using frequency and percentage, 50% and above were used for a positive decision while anything below 50% regards as negative decision.

Table 1: Type of Information Resources Covered with Legal Depository Statutory Law

S/N	Type of Information Resources	A	NA	Freq.	Perc.	Decision
1	Audio visual materials (E.g. CD Rom / Diskettes / recordings)	√		161	100	Positive
2	Almanacs	√		159	98.8	Positive
3	Annual reports	√		159	98.8	Positive
4	Print and Electronic Books	√		161	100	Positive
5	Compendium of conferences / congresses / Workshops	√		158	98.1	Positive
6	Conference Papers)	√		157	97.5	Positive
7	Government resources (E.g. gazettes)	√		157	97.5	Positive
8	Maps	√		156	96.9	Positive
9	Musical scores	√		160	99.4	Positive
10	Non- peer-reviewed articles published in a journal	√		158	98.1	Positive
	Online Periodical Resources			161	100	Positive
11	Peer-reviewed articles published in a journal	√		158	98.1	Positive
12	Print Periodicals (E.g. Year Books, Monographic series)	√		160	99.4	Positive

13	Research Reports	√		158	98.1	Positive
14	Metadata Repository	√		160	99.4	Positive
15	Print and Electronic Serials (E.g. Journals, News papers, Magazines)	√		159	98.8	Positive
16	Teaching materials / Lectures note	√		153	95.0	Positive
17	Theses/Dissertation	√		153	95.0	Positive

Field Survey, 2024

Table 1 show the Type of Information Resources Covered with Legal Depository Statutory Law with view of respondents are positive, the entire Information Resources listed above with variable scored 50% and above, this implied that there is lack of comprehensiveness in the compliance with the legal deposit statutory law it can be due to the nature of thesis and dissertation as research reports or lack of will from those has the responsibility for collection or it can be due to the lack of clear policy of collection of thesis and dissertation by National Library of Nigeria, this in agreement with Akidi and Omekwu (2019) which established that a lacuna exists in comprehensiveness of coverage of legal deposit collection, which consequently affects the comprehensive coverage of resources listed in the National Bibliography of Nigeria.

Table 2: Types of digital repository technologies available for adoption of legal deposit statutory law for open access on thesis and dissertation by National Library of Nigeria

S/N	Type of Repository Technologies Available	A	NA	Freq.	Perc.	Decision
1	Dspace			10	6.2	Negative
2	Open Registry	√		1	.6	Negative
3	National Repository @powered by Eko-Konnect	√		144	89.4	Positive
4	Digital Information Archive System (DIAS)	√		2	1.2	Negative
5	Eprints	√		1	.6	Negative
6	PANDORA Digital Archiving System (PANDAS)		X			Negative
7	Lots of Copies Keep Stuff Safe (LOCKSS)		X			Negative
8	Fedora™ (Flexible Extensible Digital Object Repository Architecture)		X			Negative
9	Digital Asset Management Repository		X			Negative
10	Preservation Repository	√		2	1.2	Negative
11	Dark Archive		X			Negative
12	Consortial Digital Repository		X			Negative
13	Discipline-Oriented Repository		X			Negative
14	Metadata Repository		X			Negative
15	AquaDocs		X			Negative
16	Biodiversity Heritage Library OAI Repository		X			Negative
17	CSIRO Data Access Portal	√		1	.6	Negative
18	Digital Commons @ Michigan Tech		X			Negative
19	eScholarship - University of California Repository		X			Negative
20	fedOA (Federico II Open Archive)		X			Negative
21	FULIR		X			Negative

22	Digital Repository of South China Sea Institute of Oceanology, CAS (scsio-IR)		X			Negative
23	National Research Foundation IR: South African Institute for Aquatic Biodiversity		X			Negative
24	NERC Open Research Archive		X			Negative
25	NOAA Digital Repository		X			Negative
26	ScholarsArchive@OSU		X			Negative
27	SERPENT Media Archive		X			Negative
28	SPREP Virtual Library		X			Negative
29	Texas ScholarWorks		X			Negative
30	DiVA: Digital Scientific Archive of SMHI		X			Negative

Field Survey, 2024

The question of What types of digital repository technology is available for adoption of legal deposit statutory law for open access on thesis and dissertation is answered in table 2, a total number of 144(89.4%) which represent the highest set gave National Repository @power by eko-connect as the available digital repository technology for adoption of legal deposit statutory law for open access on thesis and dissertation, a set of 11(6.8%) respondents revealed DSpace as the available digital repository technology, Preservation Repository is given by 2 respondents as the available digital repository technology available, 1(0.6%) respondent each revealed Open Registry, CSIRO Data Access Portal, Digital Information Archive System (DIAS) and EPrints as the type of digital repository technology is available for adoption of legal deposit statutory law for open access on thesis and dissertation. As decision percentage regarding the availability of open access digital technology only National Repository @power by eko-connect is available 144(89.4%) which is above 50% decision variable while all the rest are below 50% respectably.

This imply that there is growth of domestic governmental digital repository in Nigeria, the finding is in agreement with Ufuoma, (2015) who clearly explains that among the various types of repositories, governmental repositories are still less although their number has considerably increased.

Table 3: Extent at which the adoption of legal deposit statutory law Nigeria will facilitate Use of Thesis and Dissertations for Open Access Digital Repository

S/N	**Facilitating Use of Thesis/Dissertation**	**SA**	**A**	**MA**	**D**	**U**	**Mean**	**STD**
1	The adoption of OADR can facilitate utilization of Thesis and Dissertations through remote access via online requests	97	61	1	2	0	4.571	0.577
4	The adoption of OADR can facilitate utilization of Thesis and Dissertations through Legal Deposits from all degree awarding tertiary institutions in Nigeria	66	87	6	2	0	4.348	0.615

3	The adoption of OADR can facilitate utilization of Thesis and Dissertations through Legal Deposits which improves visibility of citation with the removal of open access restrictions	71	80	4	4	1	4.323	0.711
4	The adoption of OADR can facilitate utilization of Thesis and Dissertations through Legal Deposits from different parts of the country as open access policy	95	57	4	4	0	4.491	0.672
5	The adoption of OADR can facilitate utilization of Thesis and Dissertations through Legal Deposits which exposes research findings in a large potential readership	93	61	4	3	0	4.516	0.643
6	The adoption of OADR can facilitate utilization of Thesis and Dissertations which allow the depositor to grant the repository the right to enter into licensing arrangements with end-users	89	64	2	6	0	4.466	0.707
7	The adoption of OADR can facilitate utilization of Thesis and Dissertations allow the depositor to grant to end-users the right to print copies of the work (reproduce the work) for non-commercial use	98	51	7	5	0	4.503	0.725
8	The adoption of OADR can facilitate utilization of Thesis and Dissertations allow the depositor to attach a Creative Commons licence to the work, and state which Creative Commons licence for use	87	62	5	7	0	4.422	0.755
9	The adoption of OADR can facilitate utilization of Thesis and Dissertations allow uploading an article to a digital repository that is available for access via the internet	89	59	7	6	0	4.435	0.748
10	The adoption of OADR can facilitate utilization of Thesis and Dissertations grant the repository the non-exclusive right to reproduce materials available to end-users in the digital repository	65	86	3	7	0	4.298	0.714
	Cumulative mean						4.437	

Decision mean =3.000

Field Survey, 2024

The Extent at which the adoption of legal deposit statutory law Nigeria facilitate Use of Thesis and Dissertations for Open Access Digital Repository, is very high and positive, especially as the cumulative mean level of 4.437 being higher than the decision mean of 3.000, specifically most asserted that The adoption of OADR can facilitate utilization of Thesis and Dissertations through remote access via online requests as this had the highest mean response of 4.571 with details showing that while 97 strongly agreed, 61 agreed as against 1 that moderately agreed and the rest 2 disagreed with this view. Also, they asserted that the adoption of OADR can facilitate

utilization of Thesis and Dissertations through Legal Deposits which exposes research findings in a large potential readership as this item had the second highest mean response of 4.516 with details showing that while 93 strongly agreed, while 61 agreed as against 4 that moderately agreed while the rest 3 disagreed with this view.

In summary, The Extent at which the adoption of legal deposit statutory law Nigeria facilitate Use of Thesis and Dissertations for Open Access Digital Repository, is very high and positive, especially as most agreed that The adoption of OADR can facilitate utilization of Thesis and Dissertations through remote access via online requests and the adoption of OADR can facilitate utilization of Thesis and Dissertations through Legal Deposits which exposes research findings in a large potential readership. The finding is in agreement with Abrizah, Noorhidawati, & Kiran, (2010) who explained that through OADR, the visibility of and accessibility to research works from both undergraduates and postgraduate students can be made easily accessible and without restrictions. Removal of information access restrictions through OADR implies that developing countries scholars' problems of access to scholarly work may greatly be eased.

Table 4: The challenges faced by National Library of Nigeria while adopting legal deposit statutory law on Thesis and Dissertations for Open Access Digital Repository

S/N	**Challenges**	CH	N CH.	Freq.	Perc.	Decision
1	Lack of Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation	√		160	99.4	Positive
2	Lack of Awareness Surrounding Thesis and Dissertation Policy	√		141	87.6	Positive
3	Lack of Equipment for Adoption of Open Access Thesis and Dissertation Policy	√		30	18.6	Negative
4	Lack of Technical skill for Adoption of Open Access	√		34	21.1	Negative
5	Lack of Technological Hardware for Digital Repository	√		33	20.5	Negative
6	Lack of Dedicated Operating Systems for Digital Repository	√		44	27.3	Negative
7	Lack of Funds	√		43	26.7	Negative
8	Lack of Skilled Staff for Adoption of Open Access	√		100	62.1	Positive
9	Lack of System for Acquiring Thesis and Dissertation in Digital Format	√		139	86.3	Positive
10	Lack Authority and Responsibility for Acquiring E-Thesis and Dissertation	√		49	30.4	Negative
11	Lack of Clear Policy for Access and Use of E-Thesis and Dissertation	√		139	86.3	Positive
12	Lack of Knowledge of Converting Thesis and Dissertation from Print to Digital Form	√		41	25.5	Negative
13	Lack of Digital Preservation Policy Strategy on Thesis and Dissertation	√		159	98.8	Positive
14	Lack of Implementation Standards	√		159	98.8	Positive

Field Survey, 2024

Table 4 show that the major challenge as selected by 38(23.6%) respondents is given to Lack of Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation; Lack of Awareness Surrounding Thesis and Dissertation Policy; Lack of Funds; Lack of Skilled Staff for Adoption of Open Access; Lack of Clear Policy Statement on Due Time for collection closely followed by 21(13.0%) that Lack of Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation; Lack of Awareness Surrounding Thesis and Dissertation Policy; Lack of Equipment for Adoption of Open Access Thesis and Dissertation Policy; Lack of Technical skill for Adoption.

The finding is aligned with Adimorah in Akidi (2008) observed that from available statistics, it is very obvious that not all the information resources published in Nigeria are deposited with the National Library of Nigeria. Similar report from Adio (2006) study revealed among others ineffectiveness of legal deposit laws in Nigeria; that resources deposited are mainly books neglecting other information resources; that publishers are nonchalant in fulfilling the depository obligations; and that public awareness of this law is poor and also that the depository agency is poorly funded.

Summary of the findings

1) The types of intellectual resources are covered with legal deposit statutory law by National Library of Nigeria among others were print information resources, references information resources, serial information resources, thesis and dissertation information resources etc. with above 50% decision variable

2) The type of open access digital technology available is National Repository @power by eko-konnect with 144(89.4%) which is above 50% decision variable while all the rest are below 50% respectably

3) The Extent at which the adoption of legal deposit statutory law Nigeria facilitate Use of Thesis and Dissertations for Open Access Digital Repository, is very high and positive, especially as the cumulative mean level of 4.437 being higher than the decision mean of 3.000

4) The challenges found in the study were Lack of Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation; Lack of Awareness Surrounding Thesis and Dissertation Policy; Lack of Skilled Staff for Adoption of Open Access; Lack of Clear Policy Statement on Due Time for collection.

Conclusion

It can be concluded that of adoption of legal deposit statutory law on thesis and dissertations is relatively high among the respondents but often face some challenges such as to Lack of Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation; Lack of Awareness Surrounding Thesis and Dissertation Policy; Lack of Funds; Lack of Skilled Staff for Adoption of Open Access; Lack of Clear Policy Statement on Due Time among others.

Recommendations

The study recommended that:

1) More publicity and awareness should be created on Clear Policy for Legal Deposit Statutory Law on Thesis and Dissertation.
2) Emphasis should be maintained on the strategies for sustainability of the Legal Deposit Statutory Law on Thesis and Dissertation
3) Publicity and awareness should be created on compliance to legal deposit law for open access digital repository on thesis and dissertation
4) Integration of institutional repositories with National Repository for open access thesis and dissertation through open and linked data between institutional repositories with National Repository for open access thesis and dissertation

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EVOLVING ROLES AND COMPETENCIES OF REFERENCE AND RESEARCH LIBRARIANS FOR EFFECTIVE SERVICES IN ACADEMIC LIBRARIES IN NORTH-CENTRAL NIGERIA

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Abstract

The study is on the Evolving Roles and Competencies of Reference and Research Librarians for Effective Services in Academic Libraries in North- Central Nigeria. Reference service has long been recognized as an indispensable part of the functions of a library and information system. It is provided to the users in search of information deemed appropriate to meet their information needs. The new role assumed by the reference librarians, as a result of innovations, would make it imperative for them to provide such reference services as would ensure the maximum use of sources for the benefit of the users. These innovations have deep impact on the roles, competencies, skills and knowledge of library and information professionals. The paper discussed the various competencies for reference and research librarians such as Camtasia, web design and libguides. The paper further enumerated and discusses the various evolving ICT tools for virtual reference services such as; chat softwares, video conferencing software and emails. The paper highlighted the challenges for the acquisition of modern skills for reference and research librarian such as; cost of internet connectivity, poor ICT infrastructure and lack of ICT skills. The paper also concluded that superb internet connectivity should be made available to allow the librarians make usage of the evolving computer-based applications available for the reference and research librarians. The study further recommended that Librarians should be provided with modern infrastructures to avoid poor utilization of computer-based applications and regular training and retooling should be put in place to constantly allow the librarians to embrace new technology.

Keywords: Competencies, Virtual referencing, Competencies, Reference service, ICT

Introduction

Librarians have traditionally met user education, collection development, and current awareness service obligations, as well as reference service obligations, by devoting physical resources to the provision of information services. Libraries and librarians must consider and comprehend numerous aspects of services that have emerged since the advent of information and communication technology (ICT). Many individuals nowadays utilize the internet as their main source of information, with books being their hindmost haunt owing to time and monetary restraints. (ALA,2017)

A librarian identifies materials to be digitized, clears copyright issues, digitizes, provides metadata, and acquires software to make such resources available, as well as its maintenance in form of digital library. Users can simultaneously search and use the information for teaching, learning and research.

The traditional reference system involves a face-to-face interaction between the librarian and the user. The user poses his queries to the librarian who scrutinizes them through reference interview. Through the user's body language, the librarian is able to obtain clues that could enable him limit the user's needs. On the other hand, reference service in an on-line environment operates quite differently.

Roles of Reference and Research Librarians in the Digital Age

Reference service has long been recognized as an indispensable part of the functions of a library and information system. It is provided to the users in search of information deemed appropriate to meet their information needs. It is personal assistance provided by library staff, particularly the reference librarian. The reference librarian connects the user and the document or/and information. The role of the reference librarian is very important in the process of providing reference service. He/she must not only be highly qualified but should also acquire suitable skills and competencies. The reference librarians should also be able to accept new challenges and opportunities. Reference librarian should accept new opportunities and demonstrate that his/her knowledge and skills can solve a variety of information problems.

In the last decade, libraries have become more sophisticated and more ICT- dependent. In the present times of Internet, where information is available in abundance, the reference librarian no more sits amidst the reference sources waiting for the users to approach him/her. As the world of information is undergoing a rapid change, reference librarians now work with the information by learning about its storage, retrieval, evaluation and dissemination. Development and application of information communication technology is playing a significant role in restructuring the traditional libraries into innovative digital libraries. (Houston,2016).

In addition, there has been shift from; human dependent library operations to machine dependent activities, data processing to knowledge processing; • Stand-alone systems to networked systems, document-centered information to user-centered information, print resources to electronic resources, and online information retrieval to CD-ROM databases. These are some of the shifts which are happening in the library and information profession. These are also changing

the role of reference librarian. Librarians worldwide have been adjusting to the shifts mentioned above, particularly from the printed era to the digital era. The new role assumed by the reference librarians, as a result of innovations, would make it imperative for them to provide such reference services as would ensure the maximum use of sources for the benefit of the users.

These innovations have deep impact on the roles, competencies, skills and knowledge of library and information professionals. The reference librarian should be able to provide digital reference service 24x7 days regardless of location through e-mail, instant messaging, and video-conferencing, etc. However, as technology continues to develop, different generations of users will be working in different ways. (Mugyabuso, I.J., 2023).

The new role assumed by the reference librarians, as a result of innovations, would make it imperative for them to provide such reference services as would ensure the maximum use of sources for the benefit of the users. These innovations have deep impact on the roles, competencies, skills and knowledge of library and information professionals. These skills and competencies are rooted in the past of librarianship, but obviously they will take the profession far into the future because they are the basis for the continued survival and growth in this information age. Reference service is essentially personal service its quality depends on the knowledge, skills, and personal traits of the person delivering that service. (Laja,2019).

Reference and research librarians are those who assist, advice and instruct users in accessing all forms of recorded knowledge. The assistance, advice and instruction include both direct and indirect service to patrons. A reference librarian needs to be comfortable and confident with using and learning new technologies. They need to be able to use various software and applications to manage, organize, and disseminate information. Also, they need to be able to use various devices and equipment to access, create, and share information. For example, they must need to use scanners, printers, copiers, tablets, e-readers, or cameras. They also need to be aware of the trends and innovations in information technology, and how they affect their profession and that of their users, virtually all aspects of library operation are affected by Information and Communication Technology. For example, libraries have moved from card catalogues to on-line catalogues. With so many changes in the practice of librarianship, reference service has also changed. Today, librarians not only help their users at the reference desk but also in cyber space (Achebe 2010).

Furthermore, virtual reference, digital reference, e- reference are newer internet reference Information services. This technology mediated reference service and has emerged as a result of various factors among which are the advent and wide use of the internet and asynchronous services. (Ezema and Ugwuanyi, 2014).

Many professions use competency outlines to improve individual and organizational achievement as well as to offer a foundation for future workforce planning. Competencies are frequently made up of lists or clusters of information, abilities, and mindsets that define and contribute to professional success. Libraries, for example, attempt to go beyond adaptation in their surroundings to foster types of generative ("active") learning that increase the capacity to create and develop competency mindsets that enable generative learning which are regarded as vital since

their goal is to promote learning, growth, and development in organizations as a whole, as well as in individuals. (Kathleen and Guistini, 2020)
Federal Library and Information Centre Committee Library of Congress FLICC (2008) defined competencies as the skills and abilities that contribute to success in one's specific career. Competencies were linked to performance and the monetary value of the work done. Competencies could also be used to create job descriptions, job advertisements, training and education programs, and performance evaluation programs. According to Federal Librarian Competencies (2008), academic librarians should be acquainted with the consecutive skills in an online setting: apple and Microsoft systems, management systems, serials management software, library integrated systems, a wide range of classroom software applications, e-reserves bibliographic instruction software, and instructional design products.

Competencies are behaviors that excellent performers exhibit consistently and effectively. A behavioral basis is necessary because effective assessment of competencies depends on observed behavior. In order to do their jobs successfully and effectively, librarians should possess a diversity of internet skills. Amidst the competencies were online competencies skills and technology, which was a useful tool for identifying job titles, tasks, and talents (including technology knowledge) (Liu and Briggs, 2015).

Statement of the Problem

According to the UNESCO/IFLA public library 1994 credo, the librarian "is an active mediator between users and resources." To maximize resources and reach as many librarians as possible across the country, librarians should be kept up to date on IFLA policy and standards. The policy requires librarians to acquire competencies as well as additional training through a train the trainer method. New technologies were transforming the services provided by librarians. Librarians, in turn, require new skills to keep up with these new technological developments.

Evolving Competencies of Research and Reference Librarian for effective service delivery

Reference and research librarians should be familiar with library applications and integrated library systems, as well as Camtasia, libguides, and free sources of information or other screen casting software. Important reference technological competencies that reference and research librarians require to possess includes; web design, web maintenance, chat/IM, hardware troubleshooting, and software troubleshooting and online searching. The ability to create learning materials online, extensive knowledge of apple devices, modern/developing trends in technologies and information literacy instruction, collaboration, innovation, digital literacy, critical thinking, communication, and cross-cultural awareness were among the competencies required for instruction and outreach librarians in the twenty-first century librarianship (Jasween, 2020).

According to Bakkar cited in Mole (2023), it is a service that allows librarians and library users to interact with each other through the internet by chat, e-mail or instant messaging. Many reference resources are now in electronic forms and the conventional print materials are now digitally store. Virtual reference service is defined as the provision of reference and information services involving collaboration between user and librarian in a computer-based medium (Mole,2023). Owoeye cited in Mole, (2023) describes virtual reference service as the internet-based question and answer services which connect users with experts in a variety of subject areas

such as law. This service are designed to provide quick and convenient access to information resources and support to users who may not be able to visit physical library or who prefer to seek help remotely.

Libguides

Libguides is the most popular, most flexible content management & curation platform for libraries. It is a flexible platform for creating and sharing guides, maintaining A-Z lists, and publishing blogs. LibGuides offers additional powerful features for customizing, managing, and organizing content.

Key LibGuides Features includes; building an unlimited number of guides, helps to share library-specific reusable assets to easily share catalog items, A-Z databases, and other media, built-in modern blogging tool, fully customizable, multi-lingual look & feel options and profile boxes that highlight librarians' subject expertise, subject**,** topic and course guides such as**;** Create curated guides to help patrons start library research. Promote library content and resources and embed guides at the point of need. Embedding targeted library content into your courseware platform at scale is easy with the LibGuides CMS LTI tool.

Additionally, the LibGuides A-Z tool increases database visibility and usage with robust browsing and search options for the database content. Promote and embed subject-specific databases on other pages, manage database trials, highlight new database additions, and more. (Okoli,U.G. 2021)

Information Literacy and Library Instruction

1. Build targeted guides for library instruction programs. Enhance information literacy programs with relevant guides to help connect users with library content. Embed media-rich content to supplement library teaching. Combine with LibWizard for even more library instruction features.

2. Create and maintain websites and blogs. Create library websites that fully match your institution's branding and domain. Our SEO techniques ensure your LibGuides web pages are indexed and highly ranked by all major search engines. APIs allow ingesting of LibGuides content into your discovery layer.

3. Build Cloud-based, secure staff intranet: Integrate with our LibAuth layer which plugs into your ID/authentication platform for fine-tuned access to LibGuides content. Staff can collaborate building and organizing institutional knowledge in one, secure content platform.

4. LTI Connector for LMS Integration: With our LTI integration, you can map your LibGuides content to courses at your institution, so students automatically see the targeted course content you create in LibGuides right alongside their other LMS content, automatically.

Camtasia

Camtasia is a video editing and recording software that allows users to capture their computer screen, webcam, and audio. It can be used to create a variety of videos, including tutorials, demonstrations, and lectures. Camtasia offers a range of features, including: **Screen recording**: Capture your screen, camera, mic, and system audio as separate tracks, **editing tools**: Add transition effects, text callouts, and other media components, **interactive videos**: Add quizzes to assess understanding and provide feedback, **templates**, use templates to create videos, **PowerPoint integration**, record directly from Microsoft PowerPoint **Asset library**: Access icons, intro templates, motion backgrounds, music tracks, and more

Captioning: Automatically create caption files from your video's transcription
Camtasia is available for Windows and Mac computers, and is available in multiple languages.

Camtasia redefines screen recording with industry-leading clarity, capturing screen, camera, mic, and system audio as independent. (Nancy, 2017)

1. **Screen recording**: Capture your screen, camera, mic, and system audio as separate tracks
2. **Editing tools**: Add transition effects, text callouts, and other media components
3. **Interactive videos**: Add quizzes to assess understanding and provide feedback
4. **Templates**: Use templates to create videos
5. **PowerPoint integration**: Record directly from Microsoft PowerPoint
6. **Asset library**: Access icons, intro templates, motion backgrounds, music tracks, and more
7. **Captioning**: Automatically create caption files from your video's transcription

Camtasia is available for Windows and Mac computers, and is available in multiple languages. Camtasia is a recording software that allows you to record and clip whatever is happening on your screen: perfect for filming webinars or video tutorials.

Web design

Web design encompasses many different skills and disciplines in the production and maintenance of websites. The different areas of web design include web graphic design; user interface design (UI design); authoring, including standardized code and proprietary software; user experience design (UX design); and search engine optimization. Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all.[1] The term "web design" is normally used to describe the design process relating to the front-end (client side) design of a website including writing markup. Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and be up to date with web accessibility guidelines.(Mole,2023)

Components of Reference and Research Librarians

Here are some components of research and instruction librarians' work:

1. **Assignment design and consultation**

Librarians can help students design assignments that encourage information, data, and digital literacy. They can also create customized research sessions to meet the needs of students.

2. **Information literacy**

Information literacy is a major component of research literacy in education. It helps students develop the ability to acquire knowledge and participate in projects.

3. **Research guides**

Library staff can create research guides that provide overviews of topics, organize resources, and provide procedural information for conducting research.

4. **Evaluating sources**

Evaluating sources is an important aspect of research. It helps students critically analyze the accuracy, reliability, validity, authority, point of view, or bias of sources.

5. **Literature Reviews**

Literature reviews are an essential component of research. They help identify gaps in knowledge, provide direction for future research, and support or challenge research questions or hypotheses.

6. **References**

Referencing is an essential part of writing research or scientific papers. All sources of information should be referred to from the text and cited in the reference section.

Related Researches

According to Bolton (2014), libraries in Africa should integrate mobile phone services to their resources. It is particularly critical when it comes to the information literacy through an outreach campaign or text reference. Several academic and research libraries is still striving to find librarians who have understood technologies used for electronic information. Academic libraries now offer online reference services, individual consultations, chat services, email, and numerous social network services to suit this evolving demand. Emiri (2015),

Role of ICT in Virtual Reference Services

Information and Communication Technology has enabled libraries to offer virtual reference services, such as chat, email and video call referencing, providing patron with in remote access to library staff for assistant and support. Through information communication technology, there are several tools used for virtual reference services, including;

1. **Chat Software**: Libraries can use chat software to provide real-time assistance to users.

Some commonly used chat software includes library answer, spring share, question point.

2. **Email**: Libraries can offer email reference services where users can send their questions and receive answers via email.

3. **Video Conferencing Software**: Libraries can use video conferencing software like Zoom or Skpe to provide face-to-face assistance to users remotely.

4. **Text Messaging**: Libraries can use text messaging services to provide quick and easy assistance to users via mobile devices.

Challenges of Evolving roles and Competencies of Reference and Research Librarians

1. Cost of internet connectivity: In a developing country like Nigeria where students are used to a system where library use is free for the virtual library may be problematic.

2. Poor infrastructure: The cost of internet may be compounded by the enormity of funds needed to establish and maintain a virtual library in a country where ICT infrastructure is poorly developed.

3. Low ICT skills: Many students do not have information literacy skills to assist them to understand and use various information sources.

4. Poor information literacy skills: Many students do not have information literacy skills to assist them to understand and use various information sources. (Adayi, 2019)

Conclusion

The subject of ICT in libraries and other field appear to have been over-flogged, but even if it is so, it is worth it. The phenomenon has become a way of life and any attempt to boycott is at one's peril. Greater attention must be paid to the universities, particularly the libraries which are the life line of the universities. With a sustained financial investment for: networking of university libraries, provision of virtual libraries, training of skilled manpower, provision of necessary infrastructures and proper management, the Nigerian universities and indeed the society will be lifted out of the doldrums. Any society that fails to invest in information will sooner than latter pay dearly for it. The effectiveness of digital reference services in academic libraries can be enhanced through deliberate actions by all stakeholders in the academic system, which include following measures; Adequate funding of academic libraries by government in order to facilitate the acquisition of relevant Information and Communication Technology (ICT) tools for enhanced digital reference services provision. This is because the academic libraries require ICT tools to function in a digital environment where digital reference services are parameter for users' satisfaction.

Way Forward

1. Adequate internet facilities should be made available to the libraries and users
2. Adequate modern ICT infrastructures should be put in place for the libraries
3. Regular training and retooling should be made available.
4. There should be adequate information literacy skills on the application and use of modern technologies

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INFLUENCE OF INFORMATION SHARING ON IDENTIFICATION OF ROAD TRANSPORT ACCIDENT VICTIMS BY NATIONAL UNION OF ROAD TRANSPORT WORKERS AND FEDERAL ROAD SAFETY CORPS IN KWARA STATE, NIGERIA

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Abstract

This study examines the influence of information sharing on the identification of road transport accident victims by the National Union of Road Transport Workers (NURTW) and the Federal Road Safety Corps (FRSC) in Kwara State, Nigeria. The study was guided by three research questions: the types of information shared, the channels used, and the extent to which information sharing influences victim identification. A quantitative research method was employed, utilizing a cross-sectional survey design across three geo-political zones: Kwara Central, Kwara South, and Kwara North. The study population comprised 2,954 staff members from both organizations, with a sample size of 278 respondents. Findings revealed that passenger names, gender, phone numbers, residential addresses, and next of kin contact details were the primary information shared. Radio, television, and newspapers were the major channels used for dissemination. Additionally, information sharing was found to enhance victim identification by notifying relatives, updating them on victims' conditions, saving time in locating victims, and enabling quick aid from law enforcement and emergency responders. The study concludes that effective information sharing significantly improves accident victim identification. It recommends that the Kwara State Ministry of Transportation facilitate collaboration between NURTW, FRSC, and vehicle owners. Additionally, efforts should be made to encourage passengers to provide valid information at transport parks, and the government should develop a digital system to enhance accident-related information sharing.

Keywords: FRSC, Information Sharing, NURTW, Road Transport Accidents and Victim Identification,

Introduction

Information sharing refers to the exchange of data between individuals, organizations, and technologies. It has become a key area of interest in information behavior research due to its role in enhancing organizational efficiency and performance. Information sharing occurs at different levels interpersonal, intra-organizational, and inter-organizational (Sardjoe, 2011). People share information daily through various means, including face-to-face interactions, social media, and formal organizational channels. At the governmental level, countries exchange critical information to support decision-making processes (Tajla, 2002). According to Sonnenwald (2006) and Calo et al. (2012), information sharing enables individuals, organizations, and governments to access and utilize data collected by others, either proactively or upon request for day to day activity especially, saving life.

One of the most critical areas where information sharing can save lives is in road transport accident (RTA) management. Road traffic accidents are a major global public health concern. According to the World Health Organization (WHO, 2018), RTAs account for approximately 1.35 million deaths annually, making road injuries the leading cause of death among individuals aged 5–29 years. In Nigeria, RTA-related fatalities are among the highest in Africa, with injuries and deaths continuing to rise (Onyemaechi & Ofoma, 2017). The WHO estimates that Nigeria records 1,042 deaths per 100,000 vehicles annually, a stark contrast to the United States (15) and the United Kingdom (7). RTAs are the third leading cause of overall deaths in Nigeria and the most common cause of trauma-related fatalities and disabilities.

Several factors contribute to RTAs, including impaired driving due to alcohol and drug use. Research suggests that alcohol consumption significantly increases the risk of road crashes by impairing driving capabilities (Pluddemann et al., 2004). Additionally, minor tranquilizers such as benzodiazepines have been linked to an increased likelihood of accidents (Gururaj, 2004). Given the high incidence of RTAs in Nigeria, effective management and rapid response are crucial in reducing casualties and improving victim identification processes.

In Nigeria, the Federal Road Safety Corps (FRSC) and the National Union of Road Transport Workers (NURTW) play pivotal roles in road transport safety and accident response. The FRSC is responsible for enforcing road safety laws, responding to accidents, and evacuating victims to nearby health facilities. Additionally, the FRSC is often tasked with notifying families of accident victims. On the other hand, the NURTW, an independent trade union representing road transport workers, plays a vital role in the sector by regulating transport operations, collecting passenger information at motor parks, and advocating for workers' welfare. Since the NURTW maintains records of passengers boarding vehicles from designated parks, this data could be instrumental in identifying accident victims.

Despite the presence of these two organizations, delays and inefficiencies in victim identification persist, leading to prolonged distress for families searching for missing relatives involved in RTAs. This challenge is particularly evident in Kwara State, Nigeria, where an increasing number of accident victims remain unidentified due to inadequate information sharing between FRSC and NURTW. The lack of a well-structured information-sharing system results in unnecessary financial, emotional, and logistical burdens for affected families.

To effectively manage RTAs and improve victim identification, seamless information exchange between FRSC and NURTW is essential. Accurate and timely information sharing can enhance emergency response efforts, facilitate quicker identification of accident victims, and reduce the challenges faced by families searching for their loved ones. According to Abugessaisa (2008), timely access to accident-related information helps assess the severity of RTAs and provides critical insights for policy and intervention strategies.

Given these concerns, this study aims to examine the influence of information sharing on the identification of RTA victims by the National Union of Road Transport Workers and the Federal Road Safety Corps in Kwara State, Nigeria. By evaluating the effectiveness of current information-sharing practices and identifying areas for improvement, the study seeks to contribute to enhanced accident response strategies, ultimately reducing the suffering of victims and their families.

Statement of the Problem

Road traffic accidents (RTAs) can be described as unplanned occurrences involving vehicle crashes that result in injuries, loss of lives, and damage to property. RTAs are having a worsening effect on our society and economy. They claim a significant toll on human life and remain one of the most serious public health challenges globally. According to World Health Organization (2023), road traffic injuries are the leading cause of death among people aged 5–29 years and are a major burden on national health systems and economies. Worldwide, the number of people killed in RTA each year is estimated at almost 1.2 million while the number of people injured could be as high as 50 million (WHO, 2004).

Currently, motor vehicle accidents rank 9thinorderof disease burden and are projected to be ranked 3rd in the year 2020. Managing RTAs in Nigeria requires the prompt and accurate delivery of information about these RTAs. This information will help in assessing the current situation and it also gives a good indication the severity of RTAs at any point in time (Abugessaisa, 2008). However, it has been observed by the researcher that there are increase in the number of victims of Road Transport Accidents throughout the nook sand crannies in Kwara State, Nigeria. This among others leads to trauma to the families of victims, spending money, time and energy in the search of their relatives who might be involved in Road Transport Accidents in an unidentified condition. Based on this, there searcher intends to carry out this study. This study focused on the influence of Information Sharing on Identification of Road Transport Accident Victims by National Union of Road Transport Workers and Federal Road Safety Corps in KwaraState, Nigeria.

Objectives of the Study

The following are the objectives of this study:

1. To identify the types of information shared between NURTW and FRSC officials when there is Road Transport Accident in Kwara State, Nigeria.
2. To find out the channels used in sharing information for identification of Road Transport accident victims by NURTW and FRSC in Kwara State, Nigeria.
3. To determine the extent at which information sharing influences the identification of road Transport Accident victims by NURTW and FRSC in Kwara State, Nigeria.

Literature Review

According to World Health Organization (2023), Road Traffic Accidents (RTAs) are a significant global public health concern, particularly in low- and middle-income countries (LMICs). Adeyemi and Adewole (2017) examined RTA risk factors among inter-state drivers in Lagos, Nigeria, assessing their knowledge of road traffic signs. A cross-sectional survey of 422 commercial drivers found that rear-end collisions were the most common, with human error as the primary cause. Most accidents occurred in the afternoon, and while respondents had good knowledge of traffic signs, over-speeding was identified as a major contributing factor. The study highlights key causes of RTAs and the need for improved road safety measures.

Information sharing plays a crucial role in both professional and everyday contexts, influencing decision-making, efficiency, and organizational performance. While some individuals or organizations openly share information, others may withhold or selectively disclose data due to privacy concerns, competition, or lack of trust. Research on information sharing highlights three key levels: interpersonal, intra-organizational, and inter-organizational (Talja, 2002). Effective information sharing is particularly critical in road safety management, where timely access to accident-related data can significantly enhance emergency response and victim identification. In the event of a Road Traffic Accident (RTA), immediate steps should be taken, including assessing the situation, securing the accident site, and administering first aid to prevent further harm. Proper information dissemination enables authorities to respond swiftly and coordinate rescue operations. According to Vuori and Okkonen (2012), information sharing can take various forms, influenced by strategic intent, social interactions, and organizational culture.

The National Union of Road Transport Workers (NURTW) and the Federal Road Safety Corps (FRSC) collaborate by sharing vital information on accident location, cause, severity, vehicle details, passenger data, and travel routes. This efficient exchange enables quicker response times, accurate victim identification, and effective communication with families contributing to improved accident management and road safety outcomes in Nigeria. Various digital platforms play a crucial role in disseminating accident-related information, enabling swift responses and accurate victim identification. According to Oberiri (2016), platforms like Facebook, Twitter,

Wikipedia, 2go, and WhatsApp support real-time updates, media sharing, and public archiving making them effective tools for emergency communication and awareness.

Social media platforms enhance interactivity, enabling communication through emailing, messaging, entertainment, online forums, and advertisements. Their role in real-time information exchange makes them valuable in road accident management. Traditional media also play a crucial role. Asemah (2011**)** describes them as channels conveying information to large audiences through television (NTA, AIT, Channels TV) and radio (BBC, TSBS, TNT FM, Okin Radio). These media serve functions such as surveillance, cultural transmission, and agenda-setting in road safety. Babajide (2013) explored the credibility of social media information, identifying different categories: sensitive, sensational, political, and casual content. The study found that users rely on cues to assess credibility, emphasizing the need for organizations to enhance targeted engagement and information accuracy. Proper use of these channels improves efficiency and effectiveness in road accident management.

In a study conducted by Abugessaisa (2008), a three-tier model was presented to support the sharing of road safety-related information and a set of applications and analysis tools. The overall aim of the research was to build and maintain an information-sharing platform, and to construct mechanisms that can support road safety professionals and researcher sin their efforts to prevent road accidents. According to Abugessaisa, (2008) GLOBESAFE is a platform for information sharing among road safety organizations in different countries developed during his research. He observed that in many countries there is under-reporting of road accidents, deaths and injuries, no collection of data at all, or low quality of information. Potential knowledge is hidden, due to the large accumulation of traffic and accident data.

This limits the investigative tasks of road safety experts and thus decreases the utilization of databases. All these factors can have serious effects on the analysis of the road safety situation, as well as on the results of the analyses. Several approaches were used for the study. To develop an effective information-sharing platform for road safety, requirement elicitation methods were used to identify system needs, enabling the creation of a conceptual model, standardized vocabulary, applications, and access modes. The system's implementation followed an **iterative prototyping** approach, incorporating usability testing to assess user interaction and satisfaction.

A system-thinking approach and the technology acceptance model were applied to analyze the Swedish traffic data acquisition system. Additionally, visual data mining methods were introduced to uncover hidden patterns in road traffic and accident databases. These techniques contributed to the design of a data-sharing platform, enhancing decision-making and road safety planning. The system-thinking approach further improved understanding of accident data reporting and dissemination.

Similarly, Santa and Skamata (2009) developed a context-aware vehicular system integrating Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) communication. This system detects road safety hazards, adapting information based on vehicle context and driver preferences. Using user profiles and inference techniques, vehicles receive customized safety alerts and points of interest (POIs). These studies highlight the growing role of infrastructure-based communication in road safety management. Improved data-sharing platforms and smart road technologies can significantly enhance traffic monitoring, accident prevention, and victim identification. Information sharing plays a crucial role in enhancing efficiency and effectiveness across both public and private organizations.

Sardjoe (2017) explored the complexity of inter-organizational information sharing, examining factors that influence data exchange between organizations. Using a case study approach and a literature review from Google Scholar, Web of Science, and Scopus, the study identified key barriers, including legislation and policies, concerns over data misuse, competing interests, trust issues, and the need for physical interactions. These findings are particularly relevant to this study, which focuses on information exchange between the National Union of Road Transport Workers (NURTW) and the Federal Road Safety Corps (FRSC) in Nigeria.

Similarly, Huda, Nik, and Nik (2017) examined government agency information sharing in Malaysia using the Government Information Sharing Framework (GISF). Through semi-structured interviews, the study identified environmental, inter-organizational, organizational, and technological factors affecting data exchange. These include barriers, benefits, stewardship, roles, management support, and ICT capabilities. Understanding these dimensions is critical for enhancing collaboration between NURTW and FRSC, ensuring efficient accident response and victim identification through structured and transparent information-sharing mechanisms.

Methodology

Quantitative research methodology was adopted for this study to save time and resources. Cross-sectional survey research design will be adopted for this study. This design is deemed appropriate for this study because it allows the researcher to collect data from different locations in the study area. The study population includes all staff of the National Union of Road Transport Workers (NURTW), numbering 2,500, and the Federal Road Safety Corps (FRSC) in Kwara State, Nigeria, with a total of 454 personnel. A multistage random sampling technique was adopted, and 485 respondents were selected to represent the population. Of this number, 278 participants were drawn from NURTW and 207 from FRSC, resulting in a combined total of 485 respondents for the study sample.

Results and Discussion

Table 1: Types of Information Shared between NURTW and FRSC Officials for Identification of Road Transport Accidents victims in Kwara State, Nigeria

S/N	Types of Information Shared between NURTW and FRSC Officials for Identification of Road Transport Accidents victims in Kwara State, Nigeria	NURTW			FRSC			TOTAL	
		KC	KN	KS	KC	KN	KS	Freq	%
1.	Information about the Place of the accident	97 (38.5)	72 (28.6)	82 (32.5)	64 (34.2)	77 (41.2)	58 (31.0)	450	206.0
2.	Information about the fatality of the accident	83 (32.9)	60 (23.8)	51 (20.2)	48 (25.7)	51 (27.3)	41 (21.9)	334	151.8
3.	Information about the cause	40 (15.9)	38 (15.1)	22 (8.7)	28 (14.9)	46 (25.7)	32 (17.1)	205	96.2
4.	Information about vehicle registration details	60 (23.8)	38 (15.1)	19 (7.5)	28 (14.9)	48 (25.7)	22 (11.8)	215	98.8
5.	Information about number of the passengers	83 (32.9)	76 (30.2)	69 (27.4)	67 (35.8)	72 (38.5)	48 (25.7)	415	190.5
6.	Information about the take off point	95 (37.7)	72 (28.6)	87 (34.5)	65 (34.6)	77 (41.2)	58 (31.0)	454	207.6
7.	Information about destination of the vehicle.	50 (19.8)	36 (14.3)	19 (7.5)	28 (14.9)	48 (25.7)	22 (11.8)	203	94.0
8.	Information about passenger address	42 (16.7)	37 (14.7)	51 (20.2)	47 (25.1)	41 (21.9)	43 (22.9)	261	122.9
9.	Information about passenger next of kin	81 (32.1)	65 (25.8)	51 (20.2)	45 (24.1)	51 (27.3)	41 (21.9)	334	151.8
10.	Information about passenger gender	50 (19.8)	38 (15.1)	19 (7.5)	28 (14.9)	38 (15.1)	32 (17.1)	205	96.2
11.	Information about passenger phone number	71 (28.2)	76 (30.2)	77 (30.6)	67 (35.8)	72 (38.5)	48 (25.7)	411	189.0

Source: Field analysis, 2024

Table 1 presents the types of information shared between the National Union of Road Transport Workers (NURTW) and the Federal Road Safety Corps (FRSC) for identifying road transport accident victims in Kwara State, Nigeria. The findings revealed that the most frequently shared information included the takeoff point (454; 207.6%), place of the accident (450; 206.0%), and number of passengers (415; 190.5%). This aligns with Adeyemi and Adewole (2017), who emphasized the importance of passenger details in accident victim identification.

However, the study also found that information about the vehicle's destination (203; 94.0%), accident cause (205; 96.2%), and passenger gender (205; 96.2%) received minimal attention. This suggests that these details are considered less critical for victim identification, the findings imply that takeoff point, accident location, and number of passengers are prioritized for victim identification by NURTW and FRSC. In contrast, vehicle destination, accident cause, and passenger gender receive less attention, suggesting gaps in information sharing. Enhancing the sharing of these details could improve victim identification and accident management in Kwara State. The results highlight the need for structured data collection to ensure that essential passenger information is available, reducing the difficulty in identifying accident victims who lack proper documentation.

Table 2: Channels Used in Sharing Information for identification of Road Transport Accidents victims between NURTW and FRSC in Kwara State, Nigeria

S/N	Channels Used in Sharing Information for identification of Road Transport Accidents victims between NURTW and FRSC in Kwara State, Nigeria	NURTW			FRSC			TOTAL	
		KC	KN	KS	KC	KN	KS	Freq	%
1.	Television	81 (32.1)	76 (30.2)	69 (27.4)	67 (35.8)	72 (38.5)	48 (25.7)	413	189.7
2.	Radio	92 (36.5)	72 (28.6)	87 (34.5)	65 (34.6)	77 (41.2)	58 (31.0)	451	206.4
3.	Newspaper	81 (32.1)	62 (24.6)	51 (20.2)	48 (25.7)	51 (27.3)	41 (21.9)	334	151.8
4.	Facebook	40 (15.9)	38 (15.1)	19 (7.5)	28 (14.9)	48 (25.7)	32 (17.1)	205	96.2
5.	Twitter	32 (12.7)	37 (14.7)	51 (20.2)	47 (25.1)	51 (27.3)	43 (22.9)	261	122.9
6.	WhatsApp	28 (11.1)	32 (12.7)	41 (16.3)	32 (17.1)	51 (27.3)	45 (24.1)	229	108.6

Source: Field analyses, 2024

Note: In the cells, the numerator = frequency, denominator = percentage

Table 2 presents the responses of the respondents on the channels used by the National Union of Road Transport Workers (NURTW) and the Federal Road Safety Corps (FRSC) to share information for identifying road transport accident victims in Kwara State, Nigeria. The findings showed that radio and television were the most commonly used channels across the three senatorial zones.

For NURTW officials, radio was the primary channel in Kwara Central (92; 36.5%) and Kwara South (87; 34.5%), while television was dominant in Kwara North (76; 30.2%). Similarly, for FRSC officials, radio was the leading channel in Kwara North (77; 41.2%) and Kwara South (58; 31.0%), whereas television was more frequently used in Kwara Central (67; 35.8%). The findings indicate that radio and television are the primary channels used by NURTW and FRSC to share information for accident victim identification in Kwara State. This highlights the importance of mass media in disseminating critical information across different zones, suggesting that leveraging these channels can enhance timely communication and improve accident response efforts.

The results confirm Sylvia (2005), who emphasized that radio and television provide essential information, awareness, and education to communities. Additionally, social media platforms like Facebook, Twitter, and WhatsApp were also identified as alternative channels for information sharing.

Table 3: Extent through which Information Sharing Influence the Identification of Road Transport Accidents Victims by NURTW and FRSC in Kwara State, Nigeria

S/N	Extent through which Information Sharing Influence the Identification of Road Transport Accidents Victims by NURTW and FRSC in Kwara State, Nigeria	NURTW			FRSC			TOTAL	
		KC Highly Influence	KN Influence	KS Rarely Influence	KC Highly Influence	KN Influence	KS Rarely Influence	Freq.	%
1.	Information sharing leads to notification about the road transport accident to victim's relatives	92 (36.5)	78 (30.9)	81 (32.1)	58 (31.0)	74 (39.6)	52 (27.8)	435	197.9%
2.	Information sharing helps the relatives to know the present status of the road transport accidents victims	83 (32.9)	72 (28.6)	48 (19.0)	51 (27.3)	63 (33.7)	31 (16.6)	348	158.1%
3.	Information sharing leads to the identification of the final place of road transport accident to victim to the relatives	45 (17.9)	31 (12.3)	28 (11.1)	31 (16.6)	42 (22.5)	33 (17.6)	210	98 %
4.	Information sharing assists in providing quick aid to the road transport accident	72 (28.6)	41 (16.3)	39 (15.5)	41 (21.9)	50 (26.7)	44 (23.5)	287	132.5%

	victims by Police and other government agents								
5.	Information sharing assists in saving the time of the relatives in searching for the road transport accident victim's whereabouts	62 (24.6)	50 (19.8)	48 (19.0)	34 (18.2)	71 (37.9)	21 (11.2)	286	130.7%
6.	Information sharing assists in saving the resources of the relatives in searching for the road transport accident victim's whereabouts	31 (12.3)	47 (18.7)	50 (19.8)	19 (10.2)	41 (21.9)	55 (29.4)	243	112.3%

Source: Field analyses, 2024
Key: Rarely Influence is merged with Not Influence, as Rarely Influence

Table 3 presents the extent through which information sharing influences the identification of road transport accident victims by the National Union of Road Transport Workers (NURTW) and the Federal Road Safety Corps (FRSC) in Kwara State, Nigeria. The findings revealed that the primary impact of information sharing was notifying victims' relatives about the accident.

For NURTW officials**,** this was the most common outcome in Kwara Central (92; 36.5%), Kwara South (81; 32.1%), and Kwara North (78; 30.9%). Similarly, for FRSC officials, notification of relatives was the main impact in Kwara North (74; 39.6%) and Kwara Central (58; 31.0%), while in Kwara South (55; 29.4%), information sharing helped families save resources in searching for accident victims.

These findings align with Karlson et al. (2017**),** who examined how inter-organizational information sharing reshapes social and organizational factors over time**.** The results highlight the importance of structured data sharing in enhancing accident response and victim identification.

Summary of Findings

1. Majority of the respondents indicated that the types of information shared for the identification of road transport accident victims were information about the takeoff point, information about the Place of the accident and information about number of the passengers, among other types of information shared.

2. From the data analyzed, it was revealed that most of the respondents showed the Radio, Television and Newspaper were the Sources Used in Sharing Information for identification of Road Transport Accidents victims by NURTW and FRSC in Kwara State, Nigeria.

3. Information sharing helps notify victims' relatives, update them on victims' status, save time in locating victims, and facilitate quick aid by authorities. This underscores the importance of efficient communication between NURTW and FRSC in enhancing accident response and victim identification in Kwara State, Nigeria.

Conclusion

The study concludes that information sharing significantly influences the identification of road transport accident victims in Kwara State, Nigeria. NURTW officials primarily collect passengers' names, gender, and phone numbers. Radio, television, and newspapers are key information-sharing channels. Additionally, notifying victims' relatives is a major outcome. However, challenges persist in ensuring effective information exchange between NURTW and FRSC for victim identification.

Recommendations

In line with the findings of this study, the following recommendations were made. That there is the need for:

1. The Kwara State government, NURTW and FRSC should make it a must that each of the driver must collect and keep the information of the passengers before the journey. This can be used to share information for easy identification of road transport accident victims in the state.
2. NURTW and other government agencies hereby recommended for motivating the passenger to always go to the park and give valid information.
3. Government should develop system that will aid in information sharing for identification of road transport accidents victims.

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ASSESMENT OF GENDER BASED STUDY FOR JOB PERFORMANCE OF LIBRARIANS IN UNIVERSITY LIBRARIES IN NORTH-WEST NIGERIA.

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Abstract

The study assessed the relationship between gender, age, and educational qualification and job performance of librarians in university libraries in North- West Nigeria. The study used three hypotheses. The research employed a correlational survey design. The population of the study was 880 librarians in the federal university libraries in North- West Nigeria. The study utilized a sample of 682 librarians randomly selected from the federal university Libraries. Data collection was done using a research- developed job performance questionnaire (JPQ). Based on the findings of the study, the researcher recommended among others that management of universities should implement policies promoting equal opportunities, flexible work arrangements, and mentorship programs to support librarians in all genders. Conclusions were drawn.

Keyword: Gender, librarian, and job performance

Introduction

University library provides support services to its parental organization through its professional and paraprofessional's staff, who are librarians and library officers respectively. They perform core functions such as acquisition, organization, preservation, retrievals and dissemination of information to targeted users. Some of the tasks performed by them range from collection development, cataloging, classification, reference, acquisition, budgeting, organization, serials controlling, online searching including the delivery of library services and dissemination of information in the right format, at the right time and in the right quantity (Macele & Burke, 2019, Oyedipe & Popoola, 2020).

However, these functions are fundamental to the existence of library in Nigerian universities and staff expected to perform maximally. Age plays a significant role in determining job performance, as it influences various physical, cognitive, and emotional attributes essential for workplace success. The relationship between age and job performance is not linear; rather, it depends on factors such as experience, adaptability, job demands, and industry requirement. However, Gender is referred to as the psychological and emotional characteristic of being male and female (Uzonwanne, 2015).

Education qualifications refer to the credentials or certifications that an individual has obtained through formal education. These qualifications can include degrees, diplomas, certificates, and other form of academic recognition that signify the completion of specific educational programs or training. They often serve as evidence of person's knowledge, skills, and competencies in particular fields or subjects, and frequently required by employers when hiring for jobs or advancing in a carrier

Job performance is a commonly used concept in industrial and organizational psychology. It reflects the extent to which the day-to-day work is being carried out and ways employees perform their work. In addition, Motowidlo (2017) refers to job performance as the total expected value to the organization of the discrete behavioral episode that an individual performs over a stipulated period of time that relates to organizational outcome and success and it is not one-dimensional, this implies those behaviors and actions that are under the control of the workers and contribute to the organization's goals. Job performance in order words concerns how one carries out his tasks, duties and responsibilities associated with a particular job, that is an output of a staff on the job, measurable in terms of quality and quantity of job performed.

Hakala (2016) gave the following performance indicators: effectiveness, efficiency, profits, value, innovation, creativity and work-relationship, in the present study, demographic variables of librarians are referred to as their quantifiable characteristics that cover age, gender, and education. Therefore, this present study seeks to find out the relationship among librarians demographic variables and their job performance in the university libraries in North-Western Nigeria.

Statement of the Problem

The usefulness of a library to its users depends more on the attendants than its physical facilities. Most libraries users depend heavily on the guidance they receive from library staff

members. Thus, the dedication and good work of each librarian add up over time to improve the overall effectiveness of the library. This means that positive job performance increases the overall effectiveness of an organization such as university library system.

Every organization desire optimal performance of its employees for improved productivity and libraries are not exception to this norm. However, the researcher who worked in some libraries in the North- West Geo-political zone of Nigeria noticed that the poor performance among librarians affects productivity in most of the libraries in the zone. As noted in the background to this study, many factors affect performance in an organization. However, demographic variables are of great interest to the researcher because of his work experience in the libraries in the region. Therefore, the institution is intend to determine the relationship which exists between demographic variables of librarians and their job performance. This can facilitate future planning, forecasting and decision making among different libraries and organizations in North- West Nigeria.

Unless the above problem is addressed, library users may continue to have negative perceptions of the library. This may result in poor image of the library in universities where library is expected to make significant contributions to teaching-learning and research. In addition, library support from the university administration in terms of intervention for development may be affected. Hence, the problem of this study therefore is to explore the relationship that exist between librarian's demographic variables and their job performance in the university libraries in North-Western Nigeria.

Hypotheses

The main purpose of this study is to determine the demographic variables as correlates of job performance of librarians in Federal University Libraries in North-Western Nigeria. Specifically, this study seeks to determine to find answer to following hypotheses:

Ho_1: There is no significant relationship that exist between gender and job performance of librarians in the Federal universities in North-West Nigeria.

Ho_2: There is no significant relationship that exist between age and job performance of librarians in the Federal universities in North-West Nigeria.

Ho_3: There is no significant relationship that exist between educational qualification and job performance of librarians in the Federal universities in North-West Nigeria.

Review of Literature

Gender and Job Performance

Another variable of interest in this study is gender. Gender is the state of being male or female in relation to the social and cultural roles that are considered appropriate for men and women in any society. Job performance is indirectly related to gender in the operation of rules norms and symbols concerning masculinity and feminist found in social interaction as well as in social organization and institutions. Though apparently in societal symptoms, there are unequal participation of women and men in public and private activities, for example, low value and unpaid household work predominantly carried out by women (Ridgeway, 2011).

Gender is referred to as the psychological and emotional characteristic if being male and female (Uzonwanne, 2015). Whether gender effects job performance or not, it is one of the most talked about issues in recent organizational behavior literature (Goh and Low 1991; Mason, 1995).

There are perhaps other views on gender differences in organizations. Kantor (2015) believe that gender is something that is external to the occupation when he maintains that men are more likely to be located on job ladders which have a high ceiling and which, therefore, provide greater opportunities for promotion. Consequently, the gender differences in opportunity structure explains the observed different in the carrier behavior of men and women in organization. If women are provided with the same opportunities as men, their behavior should be more similar. On the contrary, Opprenhener (2016) believes that gender is an institutionalized characteristic of the work place and maintains that when employers seek to hire a secretary, they are looking for a women secretary, since in the 20th century being female has come to be perceived as a necessary attribute for performing secretarial work. Thus, gender is not something that is external to the occupation or organization rather it is inherent in rules, roles and responsibilities of the organization (Davies, 2015), for example, organization commitment can be measured in terms of the number of hours a person is physically present on the job or those (men) who are free to spend extra hours in the organization (Bailyn, 2017).

Men and women differ significantly in their characteristic. Males and females differ automatically. As a rule, males are more physically active than females. The world of ‘’men’s work’’ and ‘’women’s work are as different as east west; they are vastly unequal in power, pay, and prestige. This has made comparisons of performance between the two genders to come late. Men and women differ to the biological differences between male and female, the list of actual differences is potentially long. Obviously, males and females differ automatically females tend to be more verbal them males. Men value independence and achievement. Men always want to be on their own while women value intimacy and attachment. Women always want to have a close personal relationship with something. While men are action-oriented while women are people-oriented, they take care of others and domestic duties.

According to Elleus (2019), disproportionate male female ratios some professions make it difficult for several women to interact well with their male colleagues. This reason for this, being that, men tend to see women who are in the same profession with them as rivals and not colleagues. This is due to the social orientation of the men to regard women as primarily home makers who are biological different from men, as a result of this assumed biological difference women cannot therefore be competent nor have ability to perform in the male dominated professions. Due to the societal orientation of individuals, the type of tasks given to both male and female also differ. Tasks and chores are often assigned according to what parents perceive as gender appropriate, with boys more often assigned to outdoor task and girls more often assigned to inside tasks.

Gender is another variable that can potentially affect the attitudes and perception of employees at the work places. A few studies have already asserted that though the library professional is open for all gender it mostly female (Carmichael 2017, Wiche, 2019). Although librarianship is a female dominated profession, both males and female within the profession suffer from work related pressures based on the practice of gender bias’’ (Greer et al, 2010) several studies have shown that some differences exist in the level of dissatisfaction between male and

female library staff. Graddick and Farr (2016), for example, pointed out that female often view themselves is being treated worse than males in the work place. Kirkland (2011) augured that most of the women in libraries suffer from a deprivation of inside information, challenging, assignments, and recognition in their organization. Ajayi (2016) found that most male academic librarians have higher job performance than their female colleagues. Oyeniran and Akphor honor, (2019) stated that male librarians working in the university libraries in Nigeria contributed more than their female counterpart in term of performance. The gender differences had a positive influence on the job performance of librarianship in the university libraries in Nigeria.

Age and Job performance

Age plays a significant role in determining job performance, as it influences various physical, cognitive, and emotional attributes essential for workplace success. The relationship between age and job performance is not linear; rather, it depends on factors such as experience, adaptability, job demands, and industry requirements. Age is a variable in this study. It's the length of time a person lives from birth (Kenku and Aluko, 2020) which plays a crucial role describing how an individual change over time and subsequently may affect how performance changes over time. Age is the number of years something has been alive or in existence. Some researchers (Johnson, 2005, Skibekk, 2005) argued that age can have both advantage and disadvantage for organizations, as such number of studies have been carried out on age and employees job performance. However, the outcome of such studies produced mixed results. For instance, Teoresco (2000) reported that there was no significant evidence that age determined a drop in academic staff job performance. In a similar development, Scott (2005) stated that wisdom does not decline with age and older workers generally have a comparative advantage over younger workers in judicial task. The competence and capabilities of old and younger employees vary depending on their occupational field and activity. It can therefore be argued that the type and nature of work an individual is involve in, will to an extent determine the person's performance.

Education Qualification and Job Performance

Education qualifications refer to the credentials or certifications that an individual has obtained through formal education. These qualifications can include degrees, diplomas, certificates, and other form of academic recognition that signify the completion of specific educational programs or training. They often serve as evidence of person's knowledge, skills, and competencies in particular fields or subjects, and frequently required by employers when hiring for jobs or advancing in a carrier

The level of education of an individual staff could be important factors in the job performance in library services. Hornby (2000) defined education as a process of teaching, learning especially in school to improve knowledge and developed skills. The international standard classification of education (ISCED, 2013), saw the term level of education as broad selection of educational ladder and progress from elementary school to the highest level of learning, embracing all fields and programs that occur at any stage of education. The term could also refer to educational attainment or qualification (ISCED) in Asuguo, 2017) Losh, (2013), contended that education do play a key role in achieving community development in the process of globalization through technological development.

Education in general term according to National Teachers Institute Manual (2011), it is also a process of transmitting societal goals, values and able attitude from one generation to another, in order to equip them in with desirable mode of life in the society in which they live. Did in Ariko (2017) Saw education as systematic organized education model, structured and administered according to a given set of laws and norms. Therefore, presenting a rather regard curriculum as regard objective content and methodology, human being learns because of the capacity to attain a certain level of maturity and has through learning constantly improved upon his knowledge. Therefore, the librarian's level of education cannot be over looked in this information age, especially in this era were curriculum of librarianship has been modified to include the imaging technologies in librarianship. This is because through education, knowledge is acquired, awareness is creative and ignorance is removed.

Educational qualification is important demographic variables that could affect the job performance of librarians as pointed out by (Fernawald, 2011). The finding at times might be inconsistent in the literature. It appears that there are significant differences between the job performance of employee and their educational level. Nicholson (1998) in his study believed that investment in education is undertaken as a way for young of people to acquired knowledge and skills. It assumed that the higher the qualification the better the job performance. Thus, educational qualification is linked to job performance of library personal. Babalola (2014) in his study carried out research on librarian's job performance in colleges of education in Nigeria. The findings identified educational qualification(s) as a significant influence on the job performance. This shows that there is a significant relationship between the educational level and job performance of librarians.

Research Method

The research design adopted for this study was correlational survey design. The targeted population for this study comprises 880 librarians in federal university libraries in North- West Nigeria. The sample size of the study is 682 librarians which was drawn from the parent population. Questionnaire was used as instrument for data collection. Data collected were analyzed using descriptive statistics.

Result

Hypothesis one: There is no significant relationship existing between gender and job performance of librarians in the universities in North-West Nigeria.

T-test on the relationship existing between gender and job performance of librarians in the universities

Paired Variables	N	Mean	SD	t_{cal}	*df*	*P*-value	Decision
Gender-Job Performance	670	-1.60954	1.06407	-39.15	668	0.000	Rejected

Table 1 shows the result of the t-test on significant relationship between gender and the job performance of librarians in universities in North-West Nigeria. With a sample size of 670 and degrees of freedom (df) of 668, the calculated t-value is 39.15, and the p-value is 0.000 ($p < 0.05$).

This indicates that the null hypothesis, which states that there is no significant relationship between gender and job performance, is rejected. Thus, there is significant relationship between gender and job performance of librarians in the universities in North-West Nigeria.

Hypothesis two: There is no significant relationship between Age and job performance of librarians in the universities in North-West Nigeria.

T-test on the relationship between age and job performance of librarians in the universities

Paired Variables	N	mean	SD	t_{cal}	*df*	*P*-value	Decision
Age-Job Performance	670	-.50954	1.35757	-9.715	668	0.000	Rejected

Table 2 shows the result of the t-test on significant relationship between age and the job performance of librarians in universities in North-West Nigeria. With a sample size of 670 and degrees of freedom (df) of 668, the calculated t-value is -9.715, and the p-value is 0.000 ($p < 0.05$). This indicates that the null hypothesis, which states that there is no significant relationship between age and job performance, is rejected. Thus, there is significant relationship existing between age and job performance of librarians in the university libraries in North-West Nigeria. **Hypothesis three**: There is no significant relationship existing between educational qualification and job performance of librarians in the universities in North-West Nigeria.

T-test on the relationship existing between educational qualification and job performance of librarians in the universities

Paired Variables	N	mean	SD	t_{cal}	*df*	*P*-value	Decision
Qualification-Job Performance	670	-.36626	1.57303	-6.027	668	0.000	Rejected

Table 3 shows the result of the t-test on significant relationship between educational qualification and the job performance of librarians in universities in North-West Nigeria. With a sample size of 670 and degrees of freedom (df) of 668, the calculated t-value is -6.027, and the p-value is 0.000 ($p < 0.05$). This indicates that the null hypothesis, which states that there is no significant relationship between educational qualification and job performance, is rejected. Thus, there is significant relationship existing between educational qualification and job performance of librarians in the universities in North-West Nigeria.

Discussion of findings

Relationship between gender and job performance of librarians

The present study revealed that a significant relationship exists between gender and the job performance of librarians in universities in North-West Nigeria. This lays credence to the need for gender-inclusive policies and practices in the workplace. Universities could implement measures to ensure equal access to professional growth opportunities, such as promotions and leadership roles, regardless of gender. Additionally, creating supportive work environments that address gender-specific challenges, such as flexible work hours and mentoring programs for women, could help reduce performance disparities and improve job satisfaction and productivity for all librarians.

This finding agrees with Kantor (2015) who found that gender influences job roles, with men more likely to be placed in positions that offer greater promotion opportunities. Kantor further suggests that gender differences in career opportunities explain the varying career behaviors of men and women. If women are given the same opportunities as men, their work behavior should align more closely. In contrast, Oppernhener (2016) views gender as an institutionalized characteristic within the workplace. For example, when employers seek to hire secretaries, they often look for female candidates, reflecting a longstanding perception that being female is an essential attribute for secretarial roles. Therefore, gender is not external to the job or organization; rather, it is embedded in the rules, roles, and responsibilities of the workplace (Davies, 2015). Organizational commitment is often associated with gender and time spent at work and men, who are more likely to have the freedom to stay longer hours at work are often perceived as more committed (Bailyn, 2017) and have high job performance rate.

Studies examining gender differences in job performance have largely focused on performance evaluations based on supervisor ratings (Argental, 2016). However, these evaluations are prone to bias and may be influenced by gender stereotypes (Maurare and Taylor, 2016) or negative assumptions about women's abilities. Elleus (2019) notes that male-dominated professions often create challenges for women, as men may view female colleagues as rivals rather than peers. This dynamic stems from societal beliefs that women, due to biological differences, are primarily homemakers and are less capable in traditionally male professions. Additionally, gender-based socialization affects the tasks assigned to men and women, with boys typically given outdoor tasks and girls assigned indoor chores based on perceived gender-appropriate roles.

Relationship between age and job performance of librarians

The findings of the study on the relationship between age and job performance revealed that a significant relationship between the two variables among librarians in the universities in North-West Nigeria. This has shown worker's age to be a significant factor in the level of performance exhibited in work place. This finding is supported by Skibekk (2005) who reported that age can have both advantage and disadvantages for organizations, as such number of studies have been carried out on age and employees job performance. This finding is supported by Teoresco (2000) who reported that there was no significant evidence that age determined a drop in academic staff job performance.

Adeogun (2010) also found that money did not motivate the aged group to increase performance of employees at multicar rural for profit institutions of higher learning in US. In trying to establish the relationship between age and performance, Pounder (2010) observed that the average age of people in the work place is getting higher, with increasing number of middle-aged and less old worker employed in many different jobs. In line with this, Anumakka and Seemugenyi (2013) found the age bracket of the majority of workers in academic institution to fall between 20 and 39 years. Attention of researchers was also drawn to other age-related factors of job performance such as mental abilities. Age-variation and mental abilities are likely to affect productivity levels because they are one of the most important determinants of education and work success (Barret and Depinet, 1991). This finding contradicts the finding of Johnson and Parker (2018) who reported that averaging across available studies revealed virtually no relationship between age and job performance.

Relationship between Educational Qualification and Job Performance of Librarians

The finding revealed that significant relationship exists between educational qualification and job performance of librarians in the universities in North-West Nigeria. This finding is agrees with Fernawald (2011) who revealed that educational qualification is important demographic variables that could affect the job performance of librarians. Babalola (2014) in his study carried out research on librarian's job performance in colleges of education in Nigeria. The findings identified educational qualification(s) has a significant influence on job performance. This shows that there is a significant relationship between the educational level and job performance of librarians.

In contrary, Allen (2013) revealed that the level of education does not seem to be constantly related to employees with a higher-level job performance. Armah and Amoah (2017) also found that no significant difference exists in job performance between librarians with varying levels of formal education. The study emphasized that job performance was measured based on service delivery, resource management, and user satisfaction, and these aspects were unaffected by the librarians' educational qualifications. Dessler (2013) also revealed that practical experience gained on the job significantly impacts employee performance, while formal educational qualifications have a limited effect on job productivity.

Conclusion

Based on the results from the analysis of data and discussion of findings it was concluded that gender significantly impacts the job performance of librarians in universities in North-West Nigeria. Additionally, age is a crucial determinant of job performance, with performance levels differing across age groups due to factors such as experience, adaptability, or other age-related variables. The level of education of an individual staff could be important factors in the job performance in library services.

Recommendations

Based on the findings and conclusion of the study, the following recommendations were made:

1. Management of universities should implement policies promoting equal opportunities, flexible work arrangements, and mentorship programs to support librarians of all genders.
2. Management of universities should offer training programs catering to the needs of different age groups, focusing on technological adaptability, experience, and skill development.
3. Universities librarians should prioritize recruitment focus on educational qualifications as these qualifications will be a predictive of better job performance.

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UTILIZATION OF ASSISTIVE TECHNOLOGY FOR ACADEMIC PERFORMANCE AMONG VISUALLY IMPAIRED STUDENTS IN NORTH –WEST NIGER

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Abstract

This paper examined the impact of assistive technology on the academic performance of visually impaired secondary school students in Northwest Nigeria. The methodology includes a review of existing literature, surveys conducted among students and direct observations in selected Secondary schools in the North West Nigeria. Research Question include, what is the level of academic performance of visually impaired students in North- West, Nigeria? What is the level of familiarity of the types of Assistive technologies for visually impaired students in North- West, Nigeria? The findings revealed that assistive devices significantly enhance Academic Performance of visually impaired student, contributing to improved academic outcomes. Furthermore, the study highlights existing challenges, including limited access to technology, inadequate training for users, and the need for more inclusive education policies. Contributing to improved academic outcomes.

Keyword: Assistive Technology, Academic Performance, Visual Impairment, Secondary School

Introduction

Majority of the physically handicapped children in the North-Western Nigeria do not have the same access to high-quality education as children without disabilities. Such disabled children are marginalized, abandoned, and excluded from society, forcing them to practice difficult survival skills like begging for food, clothes and shelters. Schools are saddle with the responsibility to meet students' needs through range of activities and processes involved in quality teaching and learning delivery. However, even though quality teaching and learning occupies a significant place in meeting the academic performance of visual impaired students, observations and studies have shown low level of academic performance as foreseen in poor demands of the students on current behavioral needs (Abubakar, 2017).

Academic institutions admit students of varying age brackets, including those with visual impairments. Al-Zoubi, et al. (2015) viewed the academic performance of a student in terms of educational research. Academic performance is determined by their test-taking results at any given time. Academic performance is the end outcome of education and measures how well a student, instructor, or institution has accomplished their academic goals. However, there is no universal agreement as the conduct of a student that is observable and measurable in a certain circumstance. On how it should be tested or which components—procedural knowledge, such as skills, or declarative knowledge, such as facts is most crucial this is typically calculated using test (Maganga, 2016).

Academic performance is the extent to which a student, teacher or institution has attained their short or long-term educational goals (Maganga, 2016). Completion of educational benchmarks such as secondary school, diploma and bachelor's degrees represent academic achievement. Kudari, (2016) explained that schools are established with the goal of imparting knowledge and skills to those who go through them and behind all this is the idea of enhancing good academic performance, which is measured by the examination results. Students with visual impairment are people who receive their education through alternative ways to vision. Opiess et al (2017) reported that twelve (12) out of every 1,000 kids receive special schooling in some way due to visual impairments. Students with visual impairments require special attention in order to bring them at par with their mates. Secondary school is the phase shortly following early elementary education that aims to cultivate critical thinking, moral/ethical principles, among other things, for a better future life and higher education pursuit.

Assistive technology is utilized across various areas to support individuals with disabilities, elderly individuals, and those with chronic conditions. It can improve the access and independence healthcare and education, and increase social participation. Assistive Technology refers to devices, tools, or software designed to assist individuals with disabilities in performing tasks, enhancing their independence, and facilitating their participation in various activities, including education. AT plays a crucial role in providing visually impaired students with tools that bridge the gap between their abilities and the academic environment. Examples include screen readers, Braille displays, and voice recognition software. In terms of autonomy, independence, quality of life, and social inclusion, cook (2015) claimed that Assistive technology is an interdisciplinary field of study that includes tools, resources, techniques, strategies, practices, and services for people with visual impairments. According to Okoh, and Opeyemi (2022) AT are also seen as assistive devices,

these devices are produced product, or generally available product, that is used by or for persons with disability, for participation; to protect, support, train, measure or substitute for body functions/structures and activities; or to prevent impairments, activity limitations or participation restrictions. Assistive technology is utilized across various areas to support individuals with disabilities, elderly individuals, and those with chronic conditions. It can improve the access and independence healthcare and education, and increase social participation.

Assistive technology aids learning process of the visually impaired not minding the age the individual got blind. Not only does the ageing process affect the requirement for assistive technology, it also depends on the type and degree of disability. Based on UNESCO (2019), it can be inferred that individuals using AT are mostly those with impairments, and those afflicted with non-communicable diseases. According to research, people disabled or not could have productive, independent lives with Assistive Technology, which would lessen the need for social services, long-term care, isolation, and reliance on family members (Silman et al., 2017; Senjam, 2019). People with disabilities who face social and intellectual obstacles as a result of society's inability to meet their varied demands are assisted by assistive technology (AT) (Kisanga, 2019).

Literature Review

A software, system, gadget, or even a product might be considered an assistive technology. In whatever form it takes, it is the greatest invention made by science since it bridges the gap left by a person's disability. Assistive technology is a general term used to refer to systems and services involved in the provision of assistive goods or services, according to the World Health Organization (2018).

A study by Jamali-Phiri et al. (2021) in Malawi discovered that the environment around the user is one of the elements influencing the usage of ATs by children with impairments. It is possible to confirm that this environment includes "external motivation" and "user attitudes." According to Huang and Yao's (2020) Taiwanese study, users' attitudes regarding usage and subjective norms significantly influence their behavioral intention to utilize technologies. WHO added that these technologies help and improve a person with a disability's ability to function independently, which would improve their self-esteem and general health? Braaille technology, hearing aids, talking dictionaries, books on tape or CD, magnifying glasses, signaling devices, styluses, video magnifiers, and adjustable tables are a few prominent examples of assistive technologies.

Among other things, text-to-speech technology, writing frames, screen reading software, wrist rests, electronic organizers, math simulation, to mention but a few. The results of an empirical study by Dominic, Joshua, and Eyitayo (2020) in northwest Nigeria showed that most special education schools lack the assistive technologies needed to support children with disabilities. The degree of use of these technologies was impacted by their unavailability. The authors suggested, among other things, providing special education schools with sufficient resource following that, Abdullahi & Nweke (2021) suggested that in order to help students with impairments succeed academically, they need receive sufficient training on how to use assistive technology. The government or school administration should choose affordable assistive technology; other funding

sources should be found for the purchase of assistive technology as well. To purchase assistive technology and incorporating instruction on its use into the curriculum.

Objectives of the Study

The main objective of this study is to investigate the influence of Assistive Technology on academic performance of visually impaired students in North-West, Nigeria. The specific objectives are to:

1. Determine the level of academic performance of visually impaired students in North-West, Nigeria,
2. Identify the level of familiarity of the types of assistive technologies for visually impaired students in North- West, Nigeria,
3 Find out the extent of assistive technologies on visually impaired students in North-West, Nigeria

Research Questions

Based on the above-mentioned specific objectives, the following are the research questions formulated to provide answers to the study. They are:

1. What is the level of academic performance of visually impaired students in North- West, Nigeria?
2. What is the level of familiarity of the types of Aassistive ttechnologies for visually impaired students in North- West, Nigeria?
3. What is the extent of aassistive technologies on visually impaired students in North-West, Nigeria?

Research Methodology

The study adopted a survey research design. The primary population of this study consisted of five hundred and forty-seven thousand (547) visual impaired students while the secondary population of the present study were the five (5) States in the North-West namely, Kano, Katsina, Sokoto, Kebbi, Zamfara, and Jigawa. However, this study was conducted on the visually- impaired students in six special education secondary schools with visually- impaired students in North- west zone of Nigeria. Simple random sampling was used in selecting the number of respondents for the quantitative study from each of the 6 states to represent the visually impaired students in the North-West. A total of 232 students were randomly selected.

A structured questionnaire was the instruments employed in this study for data collection. The questionnaire was divided into two A and B. Section A was created by the researcher to gather the respondents' gender, age, Class level, marital status, and Level of visual impairment. While Section B is a scale to measure the relationship between academic performance and assistive technology of the visually impaired students in the North-West, Nigeria. The researcher obtained permission from the principal of the school to carry out the research on the students. After

permission was granted, the researcher consulted the class teachers to acquaint them with the purpose of the research work in order to guarantee their maximum support. Before the administration of the instrument, the students were equally given proper instruction and their supports were also sought for the responding to the questionnaire. To validate the instrument, the researcher ensured that the items on the questionnaire correspond with the objectives of the study in order to ascertain the face and content validity of the instrument. To achieve this purpose, the researcher used 4 experts, two in special education and two in measurement and evaluation. In order to determine the reliability of the instrument, the researcher carried out a pilot study and data obtained were computed using Cronbach Alpha method. The internal consistency of the instrument was found to be 0.71. Data obtained were analyzed using descriptive statistics frequency count.

Results

Research Question One: What is the level of academic performance of visually impaired students in North- West, Nigeria?

Table 4.2: *Level of academic performance of visually impaired students in North-West, Nigeria.*

Academic performance of visually impaired students	**Very high level (4)**	**High level (3)**	**Low level (2)**	**Very low level (1)**	**Mean**	**Std.**
Exams					**2.90**	**0.728**
I have the highest score or grade in all our subjects	51 (27.9%)	78 (42.6%)	52 (28.4%)	2 (1.1%)	2.97	0.780
I finish my exam within the time given	39 (21.3%)	100 (54.6%)	44 (24.0%)	0	2.97	0.675
I find my exam questions easy to answer	30 (16.4%)	100 (54.6%)	51 (27.9%)	2 (1.1%)	2.86	0.686
I always come first Position in class in my exam result	38 (20.8%)	75 (41.0%)	68 (37.2%)	2 (1.1%)	2.81	0.769
Assignment/Activities					**2.90**	**0.631**
I always enjoy homework and activities in the class	24 (13.1%)	113 (61.7%)	45 (24.6%)	1 (0.5%)	2.87	0.621
I apply more effort when I do difficult assignment	28 (15.3%)	113 (61.7%)	42 (23.0%)	0	2.92	0.615

I am always with assignment and activities	32 (17.5%)	103 (56.3%)	48 (26.2%)	0	2.91	0.657
Class Participation					**2.89**	**0.690**
I pay attention and listen during every discussion	36 (19.7%)	106 (57.9%)	39 (21.3%)	2 (1.1%)	2.96	0.674
I find it easy to participate in most class discussions	37 (20.2%)	101 (55.2%)	44 (24.0%)	1 (0.5%)	2.95	0.682
I actively participate in every discussion	32 (17.5%)	94 (51.4%)	56 (30.6%)	1 (0.5%)	2.86	0.697
I can use the Assistive technology tools effective during learning season in the class	28 (15.3%)	90 (49.2%)	63 (34.4%)	2 (1.1%)	2.79	0.706
Average Overall Mean					**2.90**	**0.683**

Source: Researcher's Field Survey, 2024

Decision rule: 1 – 1.74 = Very low, 1.75 – 2.49 = Low, 2.50 – 3.24 = High, 3.25 – 4 = Very high

The analysis of the academic performance of visually impaired students in North-West, Nigeria, as shown in Table above, indicates that their performance is at a high level across various academic activities, with an overall mean of ($\bar{x}$ = 2.90) on a 4-point Likert-type scale.

Specifically, the highest academic performance was recorded in examinations, with students demonstrating strong confidence in finishing exams within the allotted time ($\bar{x}$ = 2.97) and achieving high scores ($\bar{x}$ = 2.97). This suggests that many visually impaired students in this region are capable of effectively managing their examination time and achieving commendable results. For assignments and activities, the mean scores indicate a similarly high level of performance. Students showed enthusiasm for homework and class activities ($\bar{x}$ = 2.87) and exerted extra effort when facing difficult assignments ($\bar{x}$ = 2.92), implying strong motivation and engagement in academic work. In terms of class participation, students also performed at a high level, paying attention during discussions ($\bar{x}$ = 2.96) and actively engaging in classroom interactions ($\bar{x}$ = 2.86). However, the use of assistive technology tools during learning sessions had the lowest mean score ($\bar{x}$ = 2.79), suggesting some challenges in leveraging technological tools effectively.

Overall, this analysis suggests that visually impaired students in North-West, Nigeria, demonstrate a high level of academic performance across different academic activities. Their ability to excel in exams, assignments, and classroom participation highlights their adaptability

and commitment to academic success. However, efforts should be made to improve their proficiency in assistive technology tools, which could further enhance their learning experience.

Research Question Two: What is the level of familiarity of the types of assistive technologies for visually impaired students in North- West, Nigeria?

Table: *Level of familiarity of the types of assistive technologies for visually impaired students in North-West, Nigeria.*

Level of familiarity of assistive technologies	**Very high familiarity (4)**	**High familiarity (3)**	**Low familiarity (2)**	**Very low familiarity (1)**	**Mean**	**Std.**
Braille Displays	74 (40.4%)	67 (36.6%)	33 (18.0%)	9 (4.9%)	3.13	0.877
Screen Magnification Software	28 (15.3%)	75 (41.0%)	69 (37.7%)	11 (6.0%)	2.66	0.810
Text-to-Speech (TTS) Software	18 (9.8%)	81 (44.3%)	72 (39.3%)	12 (6.6%)	2.57	0.759
Screen Reading Software	10 (5.5%)	83 (45.4%)	79 (43.2%)	11 (6.0%)	2.50	0.694
Optical-Character Recognition Device (OCR)	10 (5.5%)	65 (35.5%)	93 (50.8%)	15 (8.2%)	2.38	0.716
Average Overall Mean					**2.65**	**0.77**

Source: Researcher's Field Survey, 2024

Decision rule: 1 – 1.74 = Very low familiarity, 1.75 – 2.49 = Low familiarity, 2.50 – 3.24 = High familiarity, 3.25 – 4 = Very high familiarity

Table above shows the analysis of the level of familiarity with assistive technologies among visually impaired students in North-West, Nigeria, shows an overall high familiarity ($\bar{x}$ = 2.65), indicating that students are generally aware of these technologies. Braille displays had the highest familiarity ($\bar{x}$ = 3.13), with most students reporting either high or very high familiarity. This suggests that Braille-based learning tools are widely recognized and used among visually impaired students. Screen magnification software ($\bar{x}$ = 2.66), text-to-speech (TTS) software ($\bar{x}$ = 2.57), and screen reading software ($\bar{x}$ = 2.50) all fall within the high familiarity range.

However, their slightly lower mean scores compared to Braille displays indicate that while these technologies are known, they may not be as extensively utilized or understood. The optical character recognition (OCR) device recorded the lowest familiarity level ($\bar{x}$ = 2.38), placing it within the low familiarity category. This suggests that OCR technology, which helps convert printed text into digital formats, is less known or accessible to visually impaired students in the region.

The findings suggest that while visually impaired students in North-West, Nigeria, have a good level of familiarity with assistive technologies, there is a need for increased awareness and training on less familiar tools, particularly OCR devices. Improving access to and understanding of these technologies could enhance students' learning experiences and academic performance.

Research Question Three: *Extent of assistive technologies on visually impaired students*

Assistive technologies	Very high extent (4)	High extent (3)	Low extent (2)	Very low extent (1)	Mean	Std.
Braille Displays					**3.23**	**0.794**
Encourage easy learning to students to a	83 (45.4%)	67 (36.6%)	30 (16.4%)	3 (1.6%)	3.26	0.788
They are Convenient for classroom management by the teachers to a	78 (42.6%)	73 (39.9%)	28 (15.3%)	4 (2.2%)	3.23	0.786
The convenience to use of the facilities (for both teachers and Students) is to a	78 (42.6%)	68 (37.2%)	36 (19.7%)	1 (0.5%)	3.22	0.775
The equipment provides an effective environment for smooth learning to a	81 (44.3%)	63 (34.4%)	35 (19.1%)	4 (2.2%)	3.21	0.826
Screen Reading Software					**2.73**	**0.656**
SRS helps students to use computers and smartphones is to a	16 (8.7%)	108 (59.0%)	54 (29.5%)	5 (2.7%)	2.74	0.652
SRS is Essential for accessing digital content such as text, image and element to a	19 (10.4%)	101 (55.2%)	59 (32.2%0	4 (2.2%)	2.74	0.669
SRS helps to boldly display text on a screen to a	14 (7.7%)	110 (60.1%)	54 (29.5%)	5 (2.7%)	2.73	0.639
SRS is effective in converting braille text out-put to the students during learning to a	15 (8.2%)	105 (57.4%)	57 (31.1%)	6 (3.3%)	2.70	0.663
Screen Magnification Software					**2.68**	**0.748**
Is an up-to-date equipment that enhance readability and vision to visually impaired students to a	34 (18.6%)	75 (41.0%)	69 (37.7%)	5 (2.7%)	2.75	0.784
enlarges text, images, and other visual elements on a screen, making it easier for students with low vision to read and understand digital content to a	23 (12.6%)	80 (43.7%)	74 (40.4%)	6 (3.3%)	2.66	0.739
Adjust color schemes and contrast, which is especially helpful for students with additional visual	19 (10.4%)	85 (46.4%)	72 (39.3%)	7 (3.8%)	2.63	0.720

impairments such as color blindness or sensitivity to light to a						
Text-to-Speech (TTS) Software					**2.68**	**0.661**
Knowledge displayed in answering all teachers' questions by the students at the school is to a	20 (10.9%)	94 (51.4%)	65 (35.5%)	4 (2.2%)	2.71	0.686
Making extra efforts at meeting students educations' needs via talking device service is to a	21 (11.5%)	93 (50.8%)	64 (35.0%)	5 (2.7%)	2.71	0.702
The understanding of specific needs of its students and providing students with exact teaching and learning materials is to a	17 (9.3%)	96 (52.5%)	66 (36.1%)	4 (2.2%)	2.69	0.668
These devices help teachers to provide crucial learning outcome to a	12 (6.6%)	102 (55.7%)	67 (36.6%)	2 (1.1%)	2.68	0.611
The students, having their talking devices helps their learning to a: --	13 (7.1%)	93 (50.8%)	74 (40.4%)	3 (1.6%)	2.63	0.640
Optical-Character Recognition Device (OCR)					**2.39**	**0.757**
OCR recognizing students' written text or characters in the class to a	11 (6.0%)	79 (43.2%)	83 (45.4%)	10 (5.5%)	2.50	0.694
OCR helps Converting printed text, handwriting, and images into machine-readable formats that can be read aloud to a	14 (7.7%)	68 (37.2%)	91 (49.7%)	10 (5.5%)	2.47	0.717
OCR helps to Scan documents, text, and writing and convert them into digital content to a	13 (7.1%)	70 (38.3%)	89 (48.6%)	11 (6.0%)	2.46	0.717
OCR helps in Speedily correcting wrong spelling or print information to a	16 (8.7%)	57 (31.1%)	105 (57.4%)	5 (2.7%)	2.46	0.693
OCR helps in providing scan-free textbooks to students to a	14 (7.7%)	47 (25.7%)	56 (30.6%)	66 (36.1%)	2.05	0.962
Average Overall Mean					**2.74**	**0.723**

Source: Researcher's Field Survey, 2024

Decision rule: 1 – 1.74 = Very low extent, 1.75 – 2.49 = Low extent, 2.50 – 3.24 = High extent, 3.25 – 4 = Very high extent

Table 4.4 explains the analysis of the extent of assistive technologies used by visually impaired students in North-West, Nigeria. The Result shows that the use of assistive technology is to a high extent ($\bar{x} = 2.74$), indicating that these technologies play a significant role in enhancing students' learning experiences. The analysis indicates that Braille displays are the most extensively used assistive technology among visually impaired students in North-West, Nigeria, with a mean score of ($\bar{x} = 3.23$), which falls within the high extent category. They are particularly beneficial in encouraging easy learning ($\bar{x} = 3.26$) and assisting teachers in classroom management ($\bar{x} = 3.23$),

highlighting their strong impact on the students' educational experiences. Screen Reading Software (SRS) also plays a significant role in aiding visually impaired students, with a mean score of 2.73, indicating a high extent of use.

This software helps students navigate computers and smartphones ($\bar{x} = 2.74$), access digital content ($\bar{x} = 2.74$), and convert Braille text to speech ($\bar{x} = 2.70$). However, its slightly lower score compared to Braille displays suggests that some students may still require additional training or access to fully leverage its benefits. Similarly, Screen Magnification Software is used to a high extent ($\bar{x} = 2.68$), particularly in enhancing readability ($\bar{x} = 2.75$) and adjusting color contrast for students with additional visual impairments ($\bar{x} = 2.63$). Despite its usefulness, the findings suggest that it is not as widely utilized as Braille displays or screen reading software.

Text-to-Speech (TTS) Software, with a mean score of 2.68, is another assistive technology used to a high extent. It proves beneficial in helping students answer teachers' questions ($\bar{x} = 2.71$) and meeting their educational needs ($\bar{x} = 2.71$). However, its moderate mean score suggests that some students may still face challenges in effectively using TTS for their learning needs. On the other hand, Optical Character Recognition (OCR) Devices have the lowest extent of usage, with a mean score of 2.39, indicating a low extent of use. While OCR helps in recognizing handwritten text ($\bar{x} = 2.50$) and converting printed text into digital formats ($\bar{x} = 2.47$), its lower scores suggest that students may have limited access to or familiarity with this technology. The least utilized function of OCR devices was providing scan-free textbooks ($\bar{x} = 2.05$), indicating a significant gap in their use for educational content accessibility.

Overall, the findings suggest that Braille displays, screen reading software, and text-to-speech software are the most widely used assistive technologies among visually impaired students, while screen magnification software and OCR devices are used to a lesser extent. This highlights the need for increased awareness, availability, and training to improve the accessibility and effectiveness of these technologies, particularly OCR devices, in enhancing the learning experiences of visually impaired students in North-West, Nigeria.

Discussion of Findings

The study examined the influence of assistive technology on academic performance of visually impaired students in North-West, Nigeria. This section discusses the findings of this study in line with previous studies. This section is in line with the findings of the three (3) research questions which guided the conduct of this study.

The analysis of the academic performance of visually impaired students in North-West, Nigeria reveals a high level of achievement across various academic activities. This finding aligns with recent studies emphasizing the positive impact of assistive technologies and supportive educational environments on the academic outcomes of students with visual impairments. For instance, a study by Shahed et al. (2016) investigated the relationship between academic performance, self-efficacy, and perceived social support among visually impaired students. The study found significant correlations between these variables, suggesting that higher levels of self-efficacy and social support contribute positively to academic achievement. Notably, the research also highlighted gender differences, with female students outperforming their male counterparts.

The study emphasized that the use of technological aids is crucial for enhancing the academic success of visually impaired students, as these tools help compensate for visual deficits and support effective learning. Contrastingly, a study conducted in Sokoto metropolis, North-Western Nigeria, found that visual impairment negatively impacted academic performance among primary school children. The research indicated that students with visual impairments had lower average academic performance compared to their sighted peers, primarily due to uncorrected refractive errors and other vision-related issues. The high academic performance observed in the current analysis may be attributed to the effective implementation of assistive technologies and inclusive educational practices in the region.

The outcome of research question two shows that the level of familiarity with assistive technologies among visually impaired students in North-West, Nigeria, is an overall high familiarity, indicating that students are generally aware of these technologies. The analysis indicates that visually impaired students in North-West Nigeria exhibit a high level of familiarity with assistive technologies. This finding aligns with recent advancements in assistive technologies, such as the development of tactile devices like the Dot Pad, which displays Braille text and graphics in real-time, enhancing digital accessibility for the visually impaired. However, a study by Okonji and Ogwezzy (2018) revealed that while 36% of visually impaired adults in southern Nigeria were aware of assistive computer technologies, only 17.4% had good knowledge of their usage. This contrast suggests regional differences in awareness and usage, possibly due to varying access to resources, training programs, or institutional support

The outcome of the study in research question three shows that visually impaired students in North-West Nigeria exhibit high academic performance and this finding aligns with recent research in similar contexts. For instance, a study by Komolafe Adebayo Francis (2020) examined the impact of assistive technologies on the learning outcomes of visually impaired students in Lagos State, Nigeria. The research revealed a positive correlation between the use of audio and non-optical devices and students' performance in social studies, suggesting that assistive technologies significantly enhance academic outcomes for visually impaired learners. Similarly, research conducted at Aminu Saleh College of Education in Azare, Bauchi State, investigated the use of assistive technology by students with visual impairments.

The findings indicated that the utilization of assistive technologies is positively related to academic performance, underscoring their importance in supporting the educational achievements of visually impaired students. These studies collectively highlight that the effective use of assistive technologies plays a crucial role in enhancing the academic performance of visually impaired students in Nigeria. The high level of familiarity and usage of these technologies among students in North-West Nigeria, as identified in the current study, further corroborates the positive impact of assistive tools on learning outcomes. In summary, the high academic performance observed among visually impaired students in North-West Nigeria is consistent with findings from recent studies, which emphasize the beneficial role of assistive technologies in supporting the educational success of these learners.

Conclusion

Visually impaired students in North-West Nigeria are increasingly leveraging assistive technology and proactive information-seeking behavior to improve their academic performance.

Despite challenges such as limited access to assistive tools and inadequate institutional support, students who utilize screen readers, braille devices, and digital learning resources demonstrate significant improvements in their educational outcomes. The study highlights the critical role of assistive technology, accessible information channels, and institutional backing in fostering an inclusive learning environment. Investing in assistive technologies, enhancing digital accessibility, and strengthening institutional support systems will further empower visually impaired students, ensuring their academic success and broader societal contributions.

The findings showed that level of familiarity of assistive technology is high, extent of assistive technologies used is high and the level of information seeking behaviour is high. Based on the findings of this study, the study concluded that assistive technologies play important role in the academic performance of visually impaired students in North-West, Nigeria.

Recommendation

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

1. Since the academic performance of visually impaired students in North-West Nigeria is high, institutions should maintain and further improve support services, including personalized tutoring, accessible learning materials, and mentorship programs to sustain their success.
2. Given the high level of familiarity with assistive technologies, universities and policymakers should ensure that these tools are widely available and regularly updated to meet evolving educational needs.
3. While the extent of assistive technology use is high, institutions should integrate these tools into mainstream academic programs and provide training for students and educators to maximize their effectiveness.
4. Since assistive technologies significantly influence academic performance, government and educational stakeholders should increase funding for modern assistive devices, software, and digital learning resources tailored to visually impaired students.

5 To mitigate challenges such as limited access to assistive tools, unstable electricity, and poor internet connectivity, educational institutions should partner with government agencies and non-governmental organizations to improve infrastructure, provide alternative power solutions, and enhance digital learning environments. Additionally, teacher training programs should be strengthened to ensure effective engagement with visually impaired students.

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State Nigeria International Journal of Research and Innovation in Social Science (IJRISS) |Volume VI, Issue V, May 2022|ISSN 2454-6186

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EXPLORING ICT AVAILABILITY AND COMPATIBILITY WITH RECORDS MANAGEMENT PRACTICES IN UNIVERSITIES IN KADUNA STATE

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Abstract

This study investigated the adoption of Information and Communication Technology (ICT) for records management in universities in Kaduna State, Nigeria. Specifically, it examined the types of ICT devices available; to determine the records management practices in use; and ascertain the extent to which ICT is compatible with those practices. Quantitative research approach was employed using a cross-sectional survey design. The simple size of the study was 257 Registry staff across the selected universities in Kaduna State, the study adopted the total enumeration sampling technique with data collected through a self-developed, closed-ended questionnaire. Analysis of data was done using the statistical package foe social science (SPSS), IBM Version 26. Findings revealed that types of available ICT devices are: computers, scanners, and hard drives, while compact disks, DVDs, cameras, and biometric devices were not available. The records management methods used were alphabetical and alphanumerical systems. ICT devices were found to be compatible with records creation but less so with records organization and storage. The study concluded that ICT adoption for records management in the institutions under study is still limited and underdeveloped. It recommends increased budgetary support for ICT infrastructure, and regular in-house training to reduce compatibility issues and enhance effective records management among others.

Keywords: Information and Communication Technology (ICT), ICT Devices, Records Management, Registry Staff, Universities

Introduction

Records management plays a pivotal role in the administration of universities, enabling transparency, accountability, and efficiency in institutional operations. With the surge in information generation within academic institutions, the traditional approach to managing records has proven inadequate. This has necessitated the adoption of Information and Communication Technology (ICT) to ensure proper handling of records. According to Abdulrahman (2015), effective records management is fundamental to university governance, influencing timely decision-making and enhancing service delivery.

In Kaduna State, the availability of ICT devices such as computers, scanners, hard drives, compact disks, digital versatile disks, cameras, and biometric devices has facilitated the transition from manual to digital records management systems. These tools are integral to automating records-related processes, reducing human error, and improving access to records. Bentil (2018) and Emmanuel (2021) highlighted the importance of ICT infrastructure in enabling digitization and enhancing the accessibility and retrieval of records. Assessing the availability of these devices in Kaduna State universities provides insight into the institutions capacity to manage records in the digital age using direct methods.

Moreover, the methods used to manage record such as alphabetical, alphanumeric, numerical, and chronological; none determine how efficiently information is retrieved and stored. Asogwa *el al.* (2021) note that adopting systematic records management practices is essential for ensuring accuracy and consistency. Understanding which records management practices are prevalent in Kaduna State universities can uncover operational strengths and gaps that impact records accessibility and usage.

The compatibility of ICT tools with existing records management practices is another critical Proper integration can streamline operations in records creation, organization, and storage. Chaputula (2022) and Chauhan *et al.* (2018) argued that aligning digital tools with traditional practices enhances productivity and secures information integrity. However, a lack of compatibility often results in inefficiencies and underutilization of ICT investments. This study evaluated how well ICT tools align with current records management methods in Kaduna State universities.

Despite the promising benefits, the use of ICT for records management comes with notable challenges. These include inadequate infrastructure, lack of technical expertise, funding limitations, and policy inconsistencies (Adu & Ngulube, 2017; Guto, 2020). Hashim *et al.* (2022) emphasized the role of regulatory frameworks in promoting sustainable electronic records management. Understanding the above challenges is key to crafting practical strategies that support the seamless integration of ICT in university records management.

Statement of the Problem

In an ideal university environment, records management systems should be fully integrated with modern Information and Communication Technology (ICT) tools to ensure efficient, accurate, and timely access to institutional records. ICT enhances the creation, organization,

storage, and retrieval of records, thereby promoting transparency, accountability, and evidence-based decision-making. According to Enakrire (2020), the proper application of ICT in records management not only reduces physical storage challenges but also improves data security and workflow automation in academic institutions. However, the situation in universities across Kaduna State appears to deviate from this ideal. Despite the growing awareness of ICT's role in information management, many universities still face critical challenges such as limited access to modern ICT devices, poor compatibility between available technologies and records management practices, and a general lack of structured methods for organizing records. Studies by Adu and Ngulube (2017) reveal that infrastructural gaps, limited digital literacy, and inadequate policies hinder the effective deployment of ICT in records management within public institutions in sub-Saharan Africa. This discrepancy between the expected and actual state of ICT-based records management necessitates a detailed investigation into the availability of ICT tools, the current records management practices, and the extent of compatibility between the two within Kaduna State universities.

Research Question

The following research question guided the study:

1.1 What types of Information and Communication Technology devices are available for records management in the selected Universities in Kaduna State?
1.2 What are the records management practices used in the selected Universities in Kaduna State?
1.3 To what extent are ICT compatible with records management practices in the selected Universities in Kaduna?

Literature Review

Types of ICT Devices Available for Records Management in Universities

Effective records management in today's universities is increasingly dependent on the deployment of various Information and Communication Technology (ICT) devices. These tools play a critical role in the creation, organization, storage, retrieval, and protection of academic and administrative records. The availability and appropriate use of these devices determine the efficiency and accuracy of institutional data management.

Computers, CDs, Digital Versatile Disks (DVDs) and hard drives, are key ICT devices used in universities for managing records as discussed thus:

Computers are the backbone of digital records management systems. They are essential for the creation, editing, storage, and retrieval of both textual and multimedia records. In a university setting, computers serve as the primary interface for electronic document processing, database management, email communication, and access to cloud-based storage solutions. According to Enakrire (2020), computers enhance records accessibility and allow staff to manage large volumes of student and administrative data efficiently. They also serve as servers in networked environments, hosting records management systems and facilitating multi-user access. Scanners are vital tools for converting physical documents into digital formats. This digitization process

enables easier storage, search ability, and sharing of records. In universities, scanners help preserve aging documents, student transcripts, and administrative files by transforming them into electronic versions. Bentil (2018) emphasizes that the use of scanners minimizes the risk of physical deterioration and loss of records, while improving access and backup capabilities. Scanned documents can also be integrated into document management systems for indexing and classification.

Hard drives, particularly external ones, are used to store digital records locally. They provide backup options for sensitive institutional records such as student data, examination results, and staff information. Hard drives are favored for their large storage capacity and portability, making them useful in scenarios where internet connectivity may be limited. Adu and Ngulube (2017) noted that while cloud storage is gaining popularity, hard drives remain a critical backup medium in many African universities due to their affordability and ease of use. Compact Disks (CDs) offer an optical method of storing data and are often used to archive important documents and academic records for future reference. Though considered less modern than cloud or hard drive storage, CDs are still utilized in some universities, especially where there is a lack of updated infrastructure. Asogwa, Ezeani, and Asogwa (2021) observed that while the use of CDs is declining, they remain in use due to their low cost and ability to be stored physically alongside traditional paper records.

Similar to CDs, Digital Versatile Disks (DVDs) offer larger storage capacity and are suitable for storing multimedia records such as lecture recordings, video tutorials, and administrative presentations. Chaputula (2022) noted that DVDs are often employed in contexts where digital archiving is being introduced gradually, and internet infrastructure is underdeveloped. They also serve as an alternative data transfer medium where file size exceeds the capacity of standard CDs. Digital cameras and webcams are increasingly used in universities for capturing visual records such as photos of physical infrastructure, events, and biometric images for identification purposes. In records management, cameras are useful in documenting evidence for audits, security, and asset management. According to Dano and Ibrahim (2021), digital cameras also play a role in creating digital versions of physical records through photography, particularly in archives or record centers with preservation goals.

Biometric devices, including fingerprint scanners and facial recognition systems, are used to manage access to records and enhance security in information systems. These devices are often integrated with staff and student databases to monitor attendance, grant system access, and verify identity. Hashim, Ahmad and Eshak (2022) explained that biometric authentication adds a layer of protection to digital record systems, making unauthorized access more difficult. In some universities, biometric systems are also used to control access to physical records storage rooms and ICT facilities. Therefore, the availability and use of these ICT devices are central to the modernization of records management in universities. However, their effectiveness depends on institutional investment, infrastructure readiness, and staff competence in utilizing the technologies. The presence of these devices alone does not guarantee efficient records management unless they are properly integrated into a well-structured information management system.

Record management is a key component of an information governance plan. According to (Paul, 2024), Records management practices refer to the supervision and administration of digital or paper records, regardless of format. In universities, where large volumes of academic, administrative, and financial data are generated daily, proper records management is crucial for efficient service delivery, accountability, and regulatory compliance. These practices ensure that records are systematically organized to facilitate easy access and prevent loss or misuse. The following are the major records management practices commonly employed in Nigerian and other African universities:

Although alphabetical filing is a more conservative method, the production, acquisition, maintenance, use, storage, retrieval, archiving, and final disposal of records are all part of the larger range of records management methods used in educational institutions. In both physical and hybrid record-keeping environments, alphabetical classification is an essential tactic for guaranteeing systematic access and accountability, even in the face of growing use of digital information systems (Olukayode et al., 2023). This system, records are arranged based on the first letter of a name—typically a student's surname or department. This method is simple, cost-effective, and requires minimal technical expertise. (Sa'ad et al., 2024) found that alphabetical arrangements remain prevalent in many Nigerian secondary and tertiary schools because they are easy to understand and apply, particularly in environments where ICT integration is still in progress. Despite its simplicity, this method can become inefficient in systems with a high volume of similar names or poor spelling consistency

Alphanumeric filing systems provide a structured and adaptable method for managing records, particularly in environments with diverse and voluminous data. By combining the flexibility of letters and numbers, organizations can achieve efficient classification and retrieval of records. According to Bentil (2018), alphanumeric systems enhance file traceability and reduce duplication errors, especially in administrative departments dealing with both student records and faculty documentation. This method also facilitates digital indexing when records are migrated into electronic records management systems (ERMS).

Numerical filing systems assign unique identifiers to each record, facilitating efficient organization and retrieval, particularly in high-volume environments such as admissions, examinations, and finance offices. This method enhances confidentiality by obscuring personal identifiers, aligning with best practices in Nigerian records management. However, the method requires a robust index or register to cross-reference names and numbers, and errors in indexing can hinder file retrieval. Chronological filing arranges records according to dates—either the date of creation, receipt, or action taken. It is particularly relevant in administrative offices, legal units, and academic departments for managing minutes of meetings, correspondences, memos, and student progress records. Adu (2020) observed that chronological filing is helpful for tracking document timelines and ensuring compliance with institutional and legal retention schedules. However, without effective date labeling and archiving practices, this system can become disorganized, especially if physical space or digital storage structures are poorly maintained.

In practice, universities may adopt a combination of these methods depending on the type of records, department needs, and the level of ICT adoption. As Asogwa, Ezeani, and Asogwa (2021) point out, hybrid recordkeeping systems—where paper-based methods are complemented with digital tools—are becoming increasingly common in African universities. This transitional approach enables institutions to preserve institutional memory while gradually adapting to global best practices in digital records management.

The integration of Information and Communication Technology (ICT) into records management practices has become a cornerstone for improving efficiency, accessibility, and accountability in university administration. ICT compatibility with records management refers to how well digital tools and technologies align with traditional or existing recordkeeping methods to enhance accuracy, retrieval, and long-term preservation. Effective ICT integration can modernize outdated practices, mitigate the risks of manual handling, and support real-time data access across departments (Chaputula, 2022).

The process of records creation has seen significant improvement with the adoption of ICT. Traditional records were created manually through handwritten or typewritten documents, which were prone to errors, duplication, and damage. However, with ICT tools such as word processors, database applications, and electronic forms, universities can now generate digital records that are accurate, standardized, and easily editable (Hashim, Ahmad & Eshak, 2022). Modern records creation in universities includes the digital input of student data, examination results, financial reports, and human resource documents. According to Enakrire (2020), digital tools allow for automatic data validation and instant updates, reducing delays and inconsistencies. Additionally, the use of ICT supports the creation of metadata, which enhances the categorization and discoverability of records in digital systems. Thus, ICT provides a seamless interface for both the creation and initial classification of records in higher education institutions.

Record organization involves the systematic arrangement of records for ease of retrieval, reference, and decision-making. ICT has introduced advanced methods of organizing records that go beyond manual file cabinets and shelf labels. Through digital records management systems (RMS), universities can now classify records based on multiple attributes—such as subject, date, category, or user-defined tags (Adu & Ngulube, 2017). For example, student academic records can be organized by course, semester, or department within a university's ERP system. These systems are capable of filtering and sorting information, making it easier for users to locate specific documents. Asogwa, Ezeani, and Asogwa (2021) observed that in many Nigerian universities, ICT-based systems enable the classification of records into folders and subfolders with access control features to protect sensitive information. Furthermore, ICT compatibility facilitates cross-departmental information sharing. Systems can be configured to allow selective access, ensuring that academic, administrative, and financial units can collaborate effectively while maintaining data integrity.

ICT has revolutionized the storage of records by shifting reliance from physical files to digital repositories. In the traditional system, paper documents were stored in cabinets and vaults, which consumed space and were vulnerable to theft, fire, and environmental damage. With ICT, universities now employ cloud storage, external hard drives, dedicated servers, and document

management systems to store their records securely (Bentil, 2018). Digital storage not only enhances security through encryption and backup mechanisms but also improves the accessibility and longevity of records. Dano and Ibrahim (2021) highlight that tertiary institutions in Nigeria are increasingly adopting electronic document and records management systems (EDRMS), which support version control, audit trails, and automated retention schedules. Moreover, ICT storage solutions allow for disaster recovery and continuity planning. Systems can automatically back up data to remote locations, ensuring that critical academic and administrative records are not lost due to hardware failure or cyber-attacks (Hawash et al., 2020). The compatibility of ICT with storage practices thus ensures that universities can maintain their records efficiently and compliantly with global information governance standards.

Therefore, the compatibility of ICT with records creation, organization, and storage in universities greatly enhances the capacity of institutions to manage information in a fast, secure, and sustainable manner. While challenges such as funding, infrastructure, and technical expertise may hinder full adoption, the benefits of ICT integration into records management practices are evident and increasingly indispensable in the digital age.

Methodology

The research methodology adopted for this study was the quantitative methodology and cross-sectional survey research design. The population consisted of 257 Registry Unit Staff in both Ahmadu Bello University and Kaduna State University. Self- developed questionnaire was used as the instrument for data collection. Two hundred and fifty- seven copies of the questionnaires were administered, and the technique used for selecting the sample size was purposive sampling technique. Data collected was analyzed using descriptive statistics.

Result and discussions

Types of Information and Communication Technology devices that are available for records management in Universities within Kaduna State

This objective sought to identify the types of ICT devices available for records management in the studied universities within the state, respondents were required to indicate the types of ICT devices that are available for records management in the studied universities. Their responses are summarized in Table 1.

Table 1: ICT Devices Available for Records Management in the Universities

ICT Infrastructural devices	Available		Not Available	
	Freq.(A.B.U)	Percent	Freq.(KASU)	Percent
Computers	196	89.1	24	10.9
Scanners	141	64.1	79	35.9
Hard-drives	78	35.5	142	64.5
Compact Disks	40	18.2	180	81.8
Digital Versatile Disks	34	15.5	186	84.5
Cameras	42	19.1	178	80.9

Biometric Infrastructural devices	17	7.7	203	92.3

Source: Field survey, 2024

Table 1 revealed that 89.1% of the respondents were of the view that computers were available for their record management in the universities. Only 10.9% of the respondents were of the opinion that computers were not available to them for records management. Scanners were the subsequent ICT devices that were available to the respondents for record management in the universities. Of the total respondents, 64.1% were of the view that scanners were available to them for record management. Other ICT devices that were relatively available for record management in the universities were Hard-drives (35.5%), Cameras (19.1%), Compact Disks (18.2%), and Digital Versatile Disks (15.5%), and Biometric devices (7.7%) respectively.

This implies that Computers, Scanners and Hard-drives were the most accessible ICT devices for records management in the selected universities. Other ICT devices like Compact Disks, Digital Versatile Disks (DVD), Cameras and Biometric Devices were rarely available for use in the universities' records management. This finding is consistent with the study by Oladokun et al. (2022) who found that ICT facilities available for managing students' records in the school include computers, printers, handsets, photocopiers, and diskettes, among others.
The implication of this finding is that even with the availability of Computers and scanners in university registries, they are not used for electronic records management. This alludes to two issues as opined by Mukred et al (2021). Either these ICT are not compatible with their work in the registry or the ICT are complex to use for managing records.

Records Management Practices used in the Universities in Kaduna State

This objective sought to determine the records management practices used in the universities, respondents indicated the records management practices in their universities. Their responses are captured in Table 2

Table 2 Records management practices in the universities in Kaduna State

Sn	Records Management Practices	Used		Not used	
		Freq.(A.B.U)	Percent	Freq.(KASU)	Percent
1	Alphabetically	145	65.9	75	34.1
2	Alphanumeric	128	58.2	92	41.8
3	Numerically	36	16.4	184	83.6
4	Chronologically	29	13.2	191	86.8
5	None at all	20	9.1	200	90.9

Source: Field survey, 2024

Table 2 revealed that records management practises in which the arrangement is always alphabetically done is the dominant approach used in the universities. In Table 4.4, 65.9% used this approach in their records management. But 34.1% did not agree to have used the approach. The next most popular practice was the use of alphanumeric arrangement for the record management practices. This method was used by 58.2% of the respondents and was less popular as 41.8% of the respondents did not agree to have used it in their records management. Others like

Numerical, Chronological approaches were hardly used as only 16.4% and 13.2% of the respondents agreed to have used them respectively in their records management in the selected universities.

The selected universities mainly employed alphabetical and alphanumerical technique for records management practices by the universities. This finding is in line with the study by Abdulrahman (2015) who recommended based on the findings of his study that adequate records management practices like alphabetic, numeric and alphanumeric filing systems should be adopted.

This implies that the alphabetical and alphanumerical records management approaches are largely manual, which can be time-consuming and labor-intensive. This reliance on manual processes can lead to inefficiencies in filing, retrieval, and updating of records, ultimately slowing down administrative processes and affecting overall productivity. Also, as universities expand and the volume of records increases, alphabetical and alphanumerical systems become less scalable in their ability to accommodate this expansion and volume of records. ICT-based records management systems are better suited for handling large volumes of data, offering advanced search functionalities, and integrating with other digital platforms.

Extent to which ICT Compatible with Records Management Practices in Universities in Kaduna State

To ascertain the extent of compatibility of ICT devices with the records management practices in the universities, respondents were required to indicate on a Likert scale of fully compatible, partially compatible and not compatible. Table 3 shows their responses.

Table 3: Extent to which ICT compatible with Records Management practices in Selected Universities in Kaduna State

S/N	Records management practices	Fully compatible		Partially compactible		Not compactible	
		Freq.(A.B.U)	%	Freq.(KASU)	%	Freq.	%
1	Records Creation	136	61.8	42	19.1	42	19.1
2	Records Organisation	63	28.6	64	29.1	93	42.3
3	Storage of records	51	23.2	23	10.5	146	66.4

Source: Field survey, 2024

Respondents were of the view that the available ICT devices were compatible with records creation in the management practices of the universities. This was expressed by 61.8% of the respondents as indicated in Table 3 said the ICT devices were fully compatible. Only 19.1% of the respondents were of the view that the ICT devices were partially compatible and 19.1% were of the opinion that they were not compatible with records creation in the management practices. For record organization, 42.3% of the respondents were of the view that the available ICT devices were not compatible and 29.1% said they were partially compatible. Only 28.6% of the respondents said they were compatible with the records management practices of the universities. In areas of storage, 66.4% said the available ICT devices were not compatible while 10.5% said they were partially compatible and 23.2% said they were fully compatible. It could be deduced that the available ICT devices were only compatible for records creation in the records management practices of the selected universities.

This finding is in line with the study by Muhammed and Olajide (2020) who found that ICT devices were exceptionally compatible and has impact on generation and retrieval of student records in the selected tertiary institutions studied in Kwara State, Nigeria. The finding suggests that ICT adoption is restricted to records creation, with minimal application in other critical areas of records management, such as storage, retrieval, classification, and archiving. This limited scope reduces the potential benefits of ICT, such as enhanced data accessibility, better organization, and streamlined workflows. This implies that without fully integrating ICT into the entire records management process, universities studied may continue to rely on manual or semi-manual methods for retrieving and accessing records. This can lead to delays in accessing information, inefficiencies in handling records, and increased administrative burdens on staff.

Conclusion

It could be concluded that the adoption of ICT for records management in the selected universities is limited and underdeveloped due to several key factors. The universities primarily rely on basic ICT devices, such as computers and scanners, which are mainly used for records creation rather than comprehensive records management that includes storage, organization, and retrieval. The reliance on traditional methods, such as alphabetical and alphanumerical approaches, filing, and shelving, indicates that the records management practices remain largely manual, with minimal integration of ICT solutions.

Recommendations

The following recommendations were made in line with the findings of this study:

1. Universities should invest in a wider range of ICT devices such as compact disk (CDs), Digital Versatile Discs (DVDs), Cameras, and Biometric Devices, this will help improve records management beyond just creation, ensuring effective storage, organization and security.
2. Institutions should integrate modern records management software and digital storage solutions compatible with ICT devices to enhance records organization and retrieval. Cloud storage and database management systems should be considered for better storage solutions.
3. Universities should procure ICT devices and software that support all aspects of records management, including creation, storage, retrieval, and security. Existing devices should also be upgraded or integrated with software that enhances their compatibility.

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USE OF SECURITY SYSTEM FOR PROTECTION OF INFORMATION RESOURCES BY STAFF OF CUSTOMER SERVICES DIVISION AT KASHIM IBRAHIM LIBRARY, AHMADU BELLO UNIVERSITY, ZARIA

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Abstract

This study examine "Use of Security System for Protection of Information Resources by Staff ff Customer Services Division at Kashim Ibrahim Library, Ahmadu Bello University, Zaria" in conducting the study three research questions were formulated, what type of security system are for protection of information resources by customer services division staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria, what are the uses of security system for protection of information resources by customer services division staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria. The methodology adopted for the study was quantitative research method with a survey research design. The target population of the study comprises of 52 respondents, the data collected for this study were presented and analyzed using descriptive statistics (frequency tables and percentages). The findings show that, closed-circuit television (CCTV) systems and RFID were the main types of security system used for protection of information resources among others, the study found that, to avoid unauthorized access to information-bearing materials, to fulfill library goal, managing security challenges, monitor access to the library site among others, The study concluded that Based on the findings of this Study, the following recommendations are made in the light of the findings of the study, it was concluded that the majority of the uses of security system for protection of information resources. The study recommended that the management should provide other key, locks, video surveillance, guards, magnetic tackle, lighting at late night and 3M technology among others, the management should provide more cameras are to monitor the public areas of the library, monitor and record evidence on clientele, employee misconduct, maintain the library's external perimeters, mitigate risk and ensure access among others, The management should provide more measures on Information overload, technical and non-technical issues, leakage of credit card information among others.

Keywords: Use, Security System, Protection, Information, Resources

Introduction

Security is an important and complex challenge in contemporary societies. Not only do individuals require security and safety of their lives and properties, but also security of valuable resources like those in the library, particularly university libraries that strive to provide information resources in both print and non-print materials to support the educational services of the university community and humanity at large. "Availability of effective and efficient security system in the library and other information centers are key actors in providing unhindered security system in Library and information systems and services are key actors in providing unhindered access to essential resources for research, decision making, and economic, cultural advance. Information security (sometimes referred to as InfoSec) covers the tools and processes that organizations use to protect information.

This includes policy settings that prevent unauthorized people from accessing business or personal information. InfoSec is a growing and evolving field that covers a wide range of fields, from network and infrastructure security to testing auditing and protection of systematic application of principles in safeguarding the Information resource in the institutions to prolong the life of all collection of materials that have been stored. Information security system is crucial for protecting information resources from unauthorized access, use, disclosure, disruption, modification, or destruction, ensuring confidentiality, integrity, and availability. Shikuzzaman (2024) protecting physical Information resource is a complex and ongoing process that requires careful attention to environmental control, proper storage, and responsible handling, Gupta and Madhusudham (2018) observed that library security is a broad term and can be defined as the arrangements provided for safe and secure facilities for library staff, library resources, equipment, and library users. Library security practices encompass both technical and non-technical issues to safeguard organizational assets from a variety of threats. Library security is one of the big threats faced by library professionals and library staff to preserve and conserve information resources secured.

Security is essential in the sphere of life. Library and information security necessitates guarding against and preventing unauthorized removal, damage and loss of resources which typically occurs as a result of intruders or unknown' interference. These consists of a process designed to protect library from loss or damage and unwanted removal of materials as well as providing safe atmosphere for people, Over the years, different approaches has been put in place to curtail security menaces and reclaiming library and information resources from so many challenges as noted by Ibrahim (2023) such challenges include providing library with security systems, provision of storage system and so on.

Statement of the problem

Security system is a devices and procedures designed to protect people, property, or information resources from unauthorized access, damage, or theft, for library materials (book and non-book material) is of utmost importance to the librarians and information specialist to reduce, preserve and conserve information resources secured or avoid unauthorized access to information-bearing materials available in the library to avoid deterioration and security threats to intellectual property which have been a recurring phenomenon to the information resources that played a

significant role in our daily activities. Electronic security systems are devices that secure library resources with the help of electrical equipment such as electronic surveillance cameras (CCTV), 3M electronic security systems (electronic security gates), radio frequency identification (RFID) systems, biometric systems, and other technology are implemented in libraries (Gupta and Mudhusudhan, 2017).

Studies have shown that information resources are been misplaced, However, the researcher observed that information resources are been misplaced tiered or theft due to lack of electronic security system installed in the reading areas of the libraries. Therefore many terms inadequate security measures to control behaviors and the loss of books and unauthorized borrowing, non-return of books in circulation units other documents like the staff, technical and administrative problems, habitual and behavioral problem of patron, hiding of books and architectural when dealing with resources and no strictness in handling and un-authorized access by anybody within the library over the years, there have been issues related to misplacing, mutilation of books, hiding of books and misplacement, or missing, of information resources and non-return of books, vandalism of library property other documents that should help in a researchers or student from varicose field so that could be which lead to fall exam, interview test, needed for research study.

Idris and Duru (2023) described the many kinds of information resource security threats that could exist as well as the steps taken to address them in university libraries in Katsina State. The study found a variety of challenges, including patron disruption, theft of library materials, damage to library materials, and poorly protected facilities. The study also revealed the steps taken to address the issue of information resources threat in university libraries in Katsina State, including the use of electronic access control, CCTV, RFID, a mark of ownership, checking in and out, hiring more library staff and security personnel, and protecting windows and doors Thus, researchers to investigate the use of security system for protection of information resources by staff of customer services division at Kashim Ibrahim Library, Ahmadu Bello University, Zaria

Research question

1. What type of security system is available or protection of information resources by customer services division staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria?
2. What Types of security systems are used for protecting Information Resources by Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria?
3. What are the challenges encounters in the use of Security Systems by staff of Customer Services Division at Kashim Ibrahim library, Ahmadu Bello University, Zaria?

Literature review

Orji and Alex-Nmecha (2022) the numerous physical, environmental, and digital data security systems utilized for library security as well as the various security methods employed in contemporary libraries were highlighted in this study. The study examined some of the electronic security technologies used in libraries, including CCTV, RFID, 3M security systems, smart cards, biometrics, access control systems, electromagnetic systems, etc. Ani (2010), security systems are the condition of being protected physically, emotionally, and psychologically as well as from other harms, attacks, and terror which could be considered as non-desirable. Security and preservation of physical records and archival materials is a complex and ongoing process that requires careful attention to environmental control, proper storage, and responsible handling of the following best practices in these areas, archivists can ensure that the valuable records and historical materials they manage are preserved for future generations. Implementing these strategies protects the integrity of archival collections and makes them accessible and usable for research, education, and cultural enrichment (Ashikuzzaman 2024)

Security systems are used to protect information resources, physical security involves measures taken to protect tangible assets, infrastructure, and personnel from unauthorized access, theft, vandalism, or harm. This type of security encompasses a wide range of strategies, including Access control systems, Security guards, Surveillance cameras, fencing and barriers and Alarm systems. Physical security is essential for businesses, residences, government facilities, and public spaces to deter potential threats and ensure the safety of individuals and property. Kumbhar and Veer (2016) submitted that the various library security technologies and systems available today include RFID, 3M technology, Magnetic tackle tape, web cameras etc. manual systems are surveillance, key and locks, surveillance, guards, lighting at late night etc. Academic libraries are libraries attached to institutions of higher learning or tertiary institutions such as universities, colleges of education, polytechnics and colleges of technologies. Crime and library security control in academic libraries have taken on a serious dimension by serious-minded librarians.

The increased accessibility to library collections by potential library users increased the threats of theft and mutilation. In many instances, the greater the financial value of the book the prospect of its vulnerability to theft. The statistics of book theft and losses are, however, scanty, if not unknown, in Nigerian academic libraries. Fire extinguisher & security equipment: A fire extinguisher is an active hearth protection machine used to extinguish or manipulate small fires, regularly in emergencies. Maidabino (2010) asserts that the issue of collection security is of growing concern to university libraries and librarians. An academic library, in particular, seeks to provide information resources in both print and non-print to support the educational services of the university community and humanity at large. Berek (2016) defined an electronic as a system connected to the integrated library system that brings completely independent theft protection into effect of unique identification of books or other documents. This system assists libraries in controlling, minimizing or avoiding library material theft and unethical losses. Examples of electronic security systems used by academic libraries are Radio Frequency Identification (RFID) systems (both transponder and reader), electronic surveillance cameras (CCTV), Fire/Smoke sensors, moisture sensors, 3M electronic security exit detectors, perimeter alarm systems, etc, he also emphasize that library Security System for the safety of the library's collection is realized in

three forms: preservation, preventive protection and recovery protection Ramana (2010) contributed that, "closed Circuit Television (CCTV) uses in the libraries can enhance the ability to control the book thefts and tearing off the pages from the books and magazines. Records also access cards can be used in conjunction with video surveillance to control and monitor large collections and equipment. Further, explain that access cards can be integrated as photo ID cards for library employees and can be used as temporary keys for library clientele to have access to restricted areas.

The access system can also be used for monitoring employee time and attendance, and security patrols of the property and can limit access to sensitive areas in the library, enhance safety and protect valuable library assets and access control solutions range from simple authorized access systems to advanced closed-circuit monitoring and exception reports delivered through secure internet connections. Khurshid (2015) stated that electronic security systems for libraries cover access control, radio frequency identification systems (RFID), and electronic alarm systems, smoke detectors, flame detectors, security sensors, burglary protection, video surveillance, CCTV, biometric identification and database management programs can be used to control vandalism in the library. The use of an electromagnetic security (EM) surveillance system for managing security challenges arising from theft and vandalism, electromagnetic security (EM) is another most used library security measure worldwide in the protection of books and other media from vandal activities (Adamu and Abdullahi 2018).

The use of information security systems for the permanent Preservation of Records and archival Documents provides a safe and secure environment not only for library staff, resources and users (Nath and Deka, 2020) and Kumar and Mamta (2019) stressed that the security of library materials (book and non-book material) are of utmost importance to the librarians and information specialist to reduce or avoid unauthorized access to information-bearing materials available in the library (Omose protecting the library documents, staff and users, reading rooms and workflow are the most important areas of the library security system (Tkejimi, Ijiekhuamhen & Ojeme 2015). Library resources are the information-bearing materials that enable the library to fulfil its goal of meeting the information needs of its users. Ajegbomogun (2014) posits that overall, how policies, programmes, procedures, or measures are deployed to mitigate risk and ensure access to library resources is not encouraging; a security practice simply refers to the different types of actions and measures or practices adopted to stop a crime randall and newel (2014) identified three main ways the library views its use of the CCTV cameras firstly, the cameras are used to maintain the library's external perimeters so that the security can monitor access to the library site, particularly at night. The exterior cameras are motion-activated at night, to assist security in identifying sectors where an intruder may be trying to scale the fence. Secondly, an element of the CCTV cameras is to monitor the public areas of the library and observe what is happening in the library. Security systems use a swingarm or pair of uprights called a security gate activated by a magnetic strip affixed to each item, which must be desensitized by circulation staff checked out to avoid triggering the alarm. Some security systems include a counting device for gathering statistics on traffic patterns.

Abubakar, Abdullahi, Dewa, Barkindo and Zubairu (2020) cited Nancy (2016) uses of electronic security to combat book theft and the experiences involved in their installation in the

United States. Nancy further stressed that the adoption of video surveillance and closed-circuit television (CCTV) systems serve as a way to monitor vandalism in the library. The system can also be used to monitor and record evidence on clientele and employee misconduct. The two basic elements of electronic surveillance, primarily, are the device or trigger that is fitted into each book-hardback, paperback or journal, cassettes, records or discs.

In most of time the library staffs encountered some challenge in using security systems for as telecommunication or electronic security systems that have greatly helped the libraries to provide maximum security for their resources and equipment, so also, there are problems and difficulties faced by libraries and information Centre's on the use of telecommunication security systems and devices. As stated by Voters (2007), the problems are: Inadequate fund in libraries and information Centre's lack the financial; resources to purchase and install the telecommunication security systems and devices that can help to protect the level of security required as a result of the budgetary allocations from their parent organization, lack of literate or skilled personnel: libraries and information centre's lack skilled personnel that can operate, teach and instruct the use of these telecommunication security systems even when they are made available in the library, poor power supply in telecommunication security systems or devices need electricity to power them and due to the poor power supply, these systems often time are not working and as such are incapable of performing their expected task of securing the library and its collection, hardware and software failure are the major threats to the use of telecommunication security systems in the library. When there is software failure or hardware breakdown that may require an engineer who may not be available to put them in place when due, then the library system and its collections are at risk libraries in remote areas do not have access to telecommunication security system because they cannot afford the money to purchase the devices and cannot adequately cater for them.

Information systems security challenges are one of the growing concerns affecting information resources by librarians. Tesa and Henrique (2014) fund that the challenges in Information security protection organizations deal with various information security risks, terrorist attacks, fires, and floods can destroy information processing facilities and critical documents. Theft and loss of organizational information can impact activities' reputation, profitability, users' confidence and overall economic growth. For example, a security flaw such as the leakage of credit card information cans a card payment. Ismail and Zainab (2011) observed that library materials can damaged by various factors such as environment, atmospheric hazards, natural calamities, and user and staff behaviour and that valuable resources of the libraries need extra care in terms of security, library security is one of the threats faced by library professionals and library staff in preserving and conserving information resources and library security is a simple technique and effective method of protecting information resources.

Gupta and Madhusudham (2018) observed that library security is the arrangements that provide safe and secure facilities for library staff, library resources, equipment, and library users. Aina (2013) opined that the use of electronic resources management systems to safeguard resources is the advent of information and communication technology (ICT) now has made libraries preserve their information resources through electronic methods. Information in printed format is recorded on a computer using compact disk (CD) diskettes, and flash drives through

digitization of library information resources. Furthermore, internet services enable libraries to acquire but preserve the storage media that is accessed through browsing and downloading to protect the information resource from disaster.

The majority of people consider security associated with a system as protection against theft and deliberate destruction. While taking into consideration the concept of security for planning, besides theft and deliberate steps of destruction, other types of threats which can be man-made or natural such as accidents by fire, flood, earthquake, and tsunami should be taken into consideration. Such types of fatal steps taken by people or naturally occurring are unwanted and unaffordable for the library and its security.

The events of accidents cause loss of materials and other equipment, and missing collections (Parul Gupta, 2018). Library security practices encompass both technical and non-technical issues to safeguard organizational assets from a variety of threats. Information systems (IS) in libraries support the delivery of images, services and collections to local and remote patrons and this availability over the internet inevitably exposes it to security threats that academic libraries have been faced with varying degrees of criminal behaviors in the use of their resources especially materials.

Methodology

The research methodology adopted was Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations because is more concerned with systematic (Pritha Bhandari 2023). Cross sectional survey research design was adopted for the study. The population comprise of (30) staff of Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria was used as sample of the study. Self-Structured questionnaire was used for data collection. The data used to answer the research question was analyzed using frequency and percentage at 50% benchmark for acceptances.

Table 1: Types of Security System available for protection of Information Resources in Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria

S/N		Customer Services Division Staffs units					f	%
	Types of security system available for protection of information resources by staff of Customer Services Division	People with special need	Book reserved	Board Game	Shelf maintenance	Service delivery		
1	3M Technology	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(6.6)	1	(6.6%)
2	RFID	1(3.3)	2(13.3)	1(6.6)	2(13.3)	5(33.3)	11	(75.3%)
3	Magnetic tackle tape	0(0.0)	1(6.6)	0(0.0)	0(0.0)	2(13.3)	3	(20%)
4	Key and locks	0(0.0)	1(6.6)	0(0.0)	3(20)	3(20)	7	(46%)

5	Manual systems are Surveillance	1(6.6)	2(13.3)	0(0.0)	1(6.6)	4(26.6)	8	(53.3%)
6	Video surveillance	0(0.0)	1(6.6)	1(6.6)	2(13.3)	3(20)	7	(46%)
7	Guards	1(6.6)	1(6.6)	0(0.0)	1(6.6)	2(13.3)	5	(33.3%)
8	Lighting at late night	0(0.0)	0(0.0)	0(0.0)	0(0.0)	2(13.3)	2	(13.3)
9	Combat book theft	0(0.0)	1(6.6)	0(0.0)	0(0.0)	0(0.0)	1	(6.6%)
10	Closed-circuit television (CCTV) systems	1(6.6)	3(20)	0(0.0)	2(13.3)	6(40)	12	(80%)

Source: *Field Survey 2024*

Table 1 revealed that, closed-circuit television (CCTV) systems with 12(80%) had the highest percentage on the types of security system used for protection of information resources by Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria, followed by RFID with 11(75.3%) %), followed by manual systems are surveillance with 8(53.3%), while, key and locks and video surveillance with 7(46%) then, guards with 5(33.3%) followed by magnetic tackle tape with 3(20%), then, lighting at late night with 2(13.3%), followed by 3M technology and combat book theft with 1(6.6%) that have the bench mark below 50%

Table 3: Types of Security Systems used for Protecting Information Resources by Staff of Customer Services Division at Kashim Ibrahim Library, Ahmadu Bello University, Zaria

S/N		**Customer Services Division Staffs units**					**f**	**%**
	Types of Security Systems used for protecting Information Resources	People with special need	Book reserved	Board Game	Shelf maintenance	Service delivery		
1	avoid unauthorized access to information-bearing materials	2(13.3)	5(33.3)	0(0.0)	2(13.3)	3(20)	11	(75.3%)
2	to fulfill library goal	0(0.0)	3(20)	0(0.0)	2(13.3)	3(20)	8	(53.3%)
3	maintain the library's external perimeters	0(0.0)	1(6.6)	0(0.0)	1(6.6)	2(13.3)	4	**(**26.6%**)**
4	managing security challenges	1(6.6)	2(13.3)	1(6.6)	2(13.3)	2(13.3)	8	(53.3%)

5	mitigate risk and ensure access	0(0.0)	1(6.6)	0(0.0)	1(6.6)	1(6.6)	3	(20%)
6	monitor access to the library site	0(0.0)	2(13.3)	0(0.0)	2(13.3)	4(26.6)	8	(53.3%)
7	cameras is to monitor the public areas of the library	1(6.6)	2(13.3)	0(0.0)	1(6.6)	2(13.3)	6	(40%)
8	counting device for gathering statistics on traffic patterns	0(0.0)	2(13.3)	0(0.0)	0(0.0)	1(6.6)	3	(20%)
9	monitor and record evidence on clientele and employee misconduct	0(0.0)	1(6.6)	2(13.3)	0(0.0)	2(13.3)	5	(33.3%)

Source: *Field Survey 2024*

Table 2 revealed that, avoid unauthorized access to information-bearing materials types of security systems are used for protecting Information Resources by Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria. followed by to fulfill library goal, managing security challenges, monitor access to the library site and provide maximum security with 8(53.3%) each. While, cameras is to monitor the public areas of the library with 6(40%), followed by monitor and record evidence on clientele and employee misconduct with 5(33.3%), followed by maintain the library's external perimeters with 4**(**26.6%**).** Then, mitigate risk and ensure access and counting device for gathering statistics on traffic patterns with 3(20%) that have the bench mark below 50%

Table 3: Challenges encountered in the use of Security Systems by staff of Customer Services Division at Kashim Ibrahim Library, Ahmadu Bello University, Zaria

S/N		**Customer Services Division Staff units**					**f**	**%**
	Challenge Staffs encountered for using Security Systems for protection of Information Resources by Customer Services Division	People with special need	Book reserved	Board Game	Shelf maintenance	Service delivery		

1	Information Overload	0(0.0)	3(20)	0(0.0)	2(13.3)	4(26.6)	9	(60%)
3	Poor power supply	1(6.6)	3(20)	1(6.6)	3(20)	4(26.6)	12	(80%)
4	Lack of literate or skilled personnel	1(6.6)	3(20)	1(6.6)	3(20)	4(26.6)	13	(86.6%)
5	Inadequate fund	2(13.3)	2(13.3)	1(6.6)	2(13.3)	5( )	12	(80%)
6	technical and non-technical issues	1(6.6)	1(6.6)	1(6.6)	3(20)	3(20)	9	(60%)
7	Hardware and software failure	1(6.6)	2(13.3)	0(0.0)	3(20)	4(26.6)	10	(66.6%)
8	use of telecommunication security system in the library	1(6.6)	0(0.0)	1(6.6)	0(0.0)	1(6.6)	3	(20%)

Source: *Field Survey 2024*

Table 3 revealed that, lack of literate or skilled personnel with 13(86.6%) had the highest percentage on the challenge staffs encountered for using security systems for protection of information resources by customer services division staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria, followed by poor power supply and Inadequate fund with 12(80%) each. Followed by hardware and software failure with 10(66.6%), followed by information overload and technical and non-technical issues with 9(60%). While, use of telecommunication security system in the library have the bench mark below 50%

Summary of the findings

1. The study found that closed-circuit television (CCTV) systems were the types of security system used for protection of information resources by Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria

2. The study found that avoid unauthorized access to information-bearing materials on types of security systems are used for protecting Information Resources by Customer Services Division Staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria

3. The study found that lack of literate or skilled personnel, poor power supply, inadequate fund, hardware, software failure, information overload and technical and non-technical issues on the challenge staffs encountered for using security systems for protection of information resources by customer services division staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria.

Conclusion

Based on the findings of this Study, the following recommendations are made in the light of the findings of the study, it was concluded that the majority of the uses of security system for protection of information resources by customer services division staff at Kashim Ibrahim library, Ahmadu Bello University, Zaria are not much utilized by the division. Therefore, the need to be utilizes them in order to improve on the protection of information resources.

Recommendations

1. The management should provide other Key, locks, video surveillance, guards, Magnetic tackle, lighting at late night and 3M Technology and combat book theft.

2. The Management should provide more Cameras are to monitor the public areas of the library, monitor and record evidence on clientele, employee misconduct, maintain the library's external perimeters, mitigate risk and ensure access and counting device for gathering statistics on traffic patterns.

3. The Management should provide more measures on Information Overload, technical and non-technical issues, leakage of credit card information, and use of telecommunication security system in the library and system breakdown without engineer.

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INFLUENCE OF JOB-RELATED STRESS ON SERVICE DELIVERY BY STAFF OF FEDERAL UNIVERSITY LIBRARIES IN NORTH WESTHERN STATE OF NIGERIA

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Abstract

This study examined the Influence of Job-related Stress on Service Delivery on Staff of Federal University Libraries in North Western States of Nigeria. One research question was raised in the study research, which include among others: to find out the influence of job-related stress for service delivery by staff of Federal University Libraries in North Western States of Nigeria. The quantitative method and descriptive research design were adopted. The population of the study consisted of 613 staff irrespective of their cadre from the various Federal Universities concerned and a total proportionate sample of 384 library staff respectively were gathered from Ahmadu Bello University Zaria, Bayero University, Kano State and Usmanu Danfodiyo University, Sokoto. A structured questionnaire was used as instrument for study. Proportionate simple random sampling technique was used to gather data and descriptive statistics, measures of central tendency such as mean was used to analyse the data which were presented in frequencies, percentages and mean. The benchmark for determining the mean was pegged at 2.5. The findings of the study revealed that majority of the library staff confirmed that more than half of the respondents from ABU, BUK and UDUS discovered that stress has influenced service delivery among library staff which led to decreased concentration and focus, decreased job performance, unable to meet job demands, insufficient monitoring rewards e.t.c It concluded that job-related stress affects library staff in the Federal University Libraries in North Western State of Nigeria which seriously impair the standard of service provision. However, stress levels increase in workers when they don't feel like they fit in because of their workload, lack of resources, or unsupportive workplace. It recommended that the management of ABU, BUK and UDUS should apply time management and prioritization, self-care and wellness, communication and support, professional development and growth and to advise staff to always go for their annual leave when it is time to do so to reduce job-related stress elements that may likely influence health and service delivery.

Keywords: Federal University Libraries, Influence, Job Related Stress, North Western States, Service Delivery.

Introduction

Job-related stress in libraries has gained increasing attention as libraries have evolved from quiet places for book collection to multifaceted information hubs that offer a variety of resources and services. The environment in modern libraries can be bustling, with patrons seeking not only books but also digital resources, technology assistance, and collaborative spaces. This transformation has led to the recognition of the need to manage stress for both library staff and patrons (Hoffmann, et al., 2023).

Thus, everyone may experience job-related stress in one way or the other within the library, family, business, organizations, work or any social or economic activity. Modern living is accompanied with, not only innumerable means of comfort, but also an overabundance of increasing complexities and competitiveness in living standards that tax the human body and mind. Library staff often have too many of these demands placed on their time such that they become worried about the uncertain future, and have little time for themselves and their family.

In the fast changing world today, no individual is free from stress and no profession is stress free (Sharma & Bagga, 2016; Andreassi, 2013; cited in Kodua-Ntim, Adjei, & Akussah (2021). This suggests that one of the most important issues of today's struggling world is stress and psychological pressure considered by physicians, psychologists and management behavioural science researchers as human, physical and mental disorders generators (Andreassi, 2013; cited in Kodua-Ntim, Adjei, & Akussah, 2021). Librarians in academic libraries are not exempted from stress. They carry out the duties of acquiring, processing and preserving library materials for accessibility to staff, students and Researchers (ILO, 2016)

However, the 21st century is the century of LIS professionals who face relentless challenges in their work environs (Suleiman, 2021). Many jobs in a library require staff to lift, carry and shelve heavy books and push or pull carts loaded with books. All of these activities can put stress on various parts of the musculoskeletal system and, specifically can cause injuries of the upper extremities and back hence, library jobs are repetitive in nature; therefore, doing a monotonous job that lacks variety will no doubt lead to high occupational stress levels (Ekwelem, 2015; cited in Kodua-Ntim, Adjei, & Akussah, 2021).

Worldwide, the World Health Organization as an epidemic of twenty-first century health (George, 2016) has referred to stress. For that reason, stress and pressure are the changes our body goes through as we adapt to our ever-changing environment (Rajiv, 2017). In fact, there are new professional problems that pose a threat or pressure to librarians, particularly Academic librarians. These include new prospects and the changing role of librarians owing to the dynamic nature of information and its diffusion in the university system, resulting from the development of information technology in libraries and information practice.

Stress can originate from three different places: the body, the mind, and the workplace. Poor nutrition, sleep deprivation, and exhaustion can all contribute to physical stress. A person's mental condition, which may include anxieties, expectations, regrets, etc., can be linked to mental stress (Dhanush, 2011). According to Summit and Sudhir (2016), in Suleiman (2021b), a library is a location where all types of information are always accessible to all users and may be collected,

saved, accessed, and consumed. This is made possible by the services of Information and Communication Technology (ICT). Academic libraries are those that were developed at institutions with a strong scientific foundation, including universities, teacher training programs, technical schools, etc. In order to accomplish the broad goals of the comprehensive education and research agenda, it's primary responsibility is to offer sources of information and services (Suleiman, 2019 cited in Suleiman, 2021a).

The act of promptly, effectively, and efficiently assisting library patrons is known as service delivery by library staff. It includes a broad variety of tasks, such as: Responding to inquiries from users assisting patrons in locating and utilizing library resources, providing guidance on the utilization of library services and technologies, distributing and taking back library materials, promoting the services and programs offered by the library e.t.c (Webb et al., 2007; Anene, & Nancy, 2024). This study intends to bridge that wide knowledge gaps that exist among Academic Librarians in North Western States of Nigeria.

Statement of the Problem

Stress affects virtually everyone and University Librarians are not far behind, especially when it comes to library productivity. Stress has negatively affected the life and health of academic librarians, as different learning methods and academic programs have been introduced into academics, resulting in greater challenges for the librarians compared to their predecessors. Untreated stress leads to emotional depression and poor health for librarians; this inevitably led to poor job performance, as well as poor services, leading to user frustration (ILO, 2016).

Various studies by Rajiv (2017) and Patel (2016) have shown that Academic librarians are subjected to great stress and pressure in their work when library staffs are faced with a situation that they cannot handle. This leads us to wonder if librarians experiencing stress in academic libraries was due to the proliferation of information and communication technologies that have been introduced into the library system to facilitate their work and services, or if it was due to inadequate awareness on how to manage stress, or whether it was due to bad perception about stress, or whether it was due to writing research papers etc.
Hence, the need for this study on the Influence of Job-Related Stress On Service Delivery By Staff Of Federal University Libraries In North Western State Of Nigeria

Research Questions

1. What is the influence of job-related stress on service delivery by staff of Federal University Libraries of North Western States of Nigeria?

Literature Review

Oyeniran, (2023) and Dina (2016) viewed how stress influences librarians and library staff, they posited that unmanaged stress can harm library employees and librarians in a number of ways, including:

Decreased concentration and focus: Stress can impair judgment and make it harder to finish activities quickly, which can affect user interactions and research support.

Emotional tiredness: Prolonged stress can cause burnout, which lowers motivation, indifference, and a bad attitude toward customers.

Reduced ability to communicate: Being under stress can make it difficult to communicate with customers in an effective manner, which can cause misunderstandings and dissatisfaction for both parties. Somvir, (2013; McKechnie & Correia, 2016; Egunsola & Iwhiwhu, 2018) posited that unmanaged stress can negatively affect library employees in a number of ways, including:

Decreased Job Performance: Stress can make it difficult for employees to focus, which can result in more mistakes and less efficiency in tasks like resource organization and reference assistance.

Diminished Interpersonal Skills: Stress can cause impatience and annoyance, which makes it difficult for staff to engage with library patrons in a constructive way and may result in a bad user experience.

Higher Absenteeism: Prolonged stress can lead to burnout and absenteeism, which can affect service availability and put extra strain on coworkers. Zhao (2018) in Ilonze (2024) stated that employees under excessive pressure at work suffer from the following effects: they become less motivated and lose interest in their work, which is why performance charts show a negative trend; they become unable to meet job demands; their sense of relaxation turns to exhaustion; their sense of satisfaction is replaced with feelings of stress; and so on. Ali, Raheem, and Imamuddin (2014), cited in Oyeniran (2023), examined the effect of job stress on job performance in a private university in Karachi, Pakistan. Important information was gathered using a questionnaire. The hypotheses were tested using the multiple linear regression approach. The results showed that the main causes of work-related stress among employees are role conflict or ambiguity, workload and insufficient monitoring rewards.

The results also shows that stress at work lowers staff productivity and overall job performance. Long-term stress can negatively impact librarians and library employees in a number of ways. Diminished Cognitive Function: Stress causes attention and concentration to decline, which increases errors in tasks like finding information and providing reference. Diminished Interpersonal Skills: Stress can impede the user experience by causing impatience, annoyance, and trouble establishing a rapport with customers (McKnight, 2013). Higher Absenteeism: Burnout and absenteeism are two factors that can result from prolonged stress, which can affect service availability and put strain on coworkers (Afolabi, Oladipo, & Oni, 2019).

In a private university, Ali, Raheem, and Imamuddin (2014), referenced in Oyeniran (2023), examined the effect of job stress on job performance. KaracIn a private university in Karachi, Pakistan, Ali, Raheem, and Imamuddin (2014), referenced in Oyeniran (2023), examined the effect of job stress on job performance. Important information was gathered using a questionnaire. The hypotheses were tested using the multiple linear regression approach. Important

information was gathered using a questionnaire. The results showed that the main causes of work-related stress among employees are workload, role conflict or ambiguity, and insufficient monitoring rewards. Stress at work lowers staff productivity and overall job performance. Brown and Garcia (2022) conducted a study on the Impact of Stress on Library Service Quality: A Review of Literature.

This review provides insights into areas for development by synthesizing the material currently available to understand the influence of stress on the quality of services provided by libraries. As proposed by Wang and Chen (2024) on "Stress Management Interventions and Their Effects on Service Delivery: A Meta-Analysis of Library Staff Studies" that a meta-analysis assesses the effects of different stress management strategies used by library staff members on the provision of services.

Thomas and Adams (2024) carried out a study on the impact of stress management training programs on service delivery. The study shows how stress management training programs improve service delivery outcomes by presenting real data from public libraries. The researcher's stands is that the articles offers a comprehensive analysis of the detrimental effects of stress on library employees and service performance. The argument that unmanaged stress can significantly affect performance and service quality is strengthened by the wide spectrum of studies and viewpoints. A more thorough examination of particular library responsibilities, a more sophisticated discussion of stress-reduction techniques, and an awareness of the cultural background would all improve the review, although, stress impacts the person as well as the library overall, resulting in a drop in staff performance and service quality, according to the quoted academics, who are mainly in agreement. This analysis would be more balanced and useful if it included useful fixe actions.

Dina (2016) conducted a study on the Effect of stress on Professional Librarians Job Performance in Nigerian University Libraries. The study's goal was to draw attention to the relationship between stress and work performance and to support stress management strategies as a way to improve library service delivery on university digital commons. This study was conducted at Lagos state university, Ojo and University of Lagos, Akoka, state, to look at the impact of stress on professional librarians' job performance, in this study, a descriptive survey design was used. The research study's sample size consisted of fifty (50) students from Lagos state university, Ojo and University of Lagos, Akoka.

The technique of simple random sampling was used meticulously and the designed survey of fifteen items on a 5-point likert scale. The results demonstrated that extreme stress can have an impact on a professional librarian's quality of job performance in respect to job demand and expectations. The productivity and goals of the university library will undoubtedly be impacted by the absence of a professional librarian due to stress at work. One of the main issues affecting professional librarians' dedication, well-being, and productivity at work is occupational stress, these have been a numerous negative effect on university libraries and professional librarians, including the potential for substantial resource loss for university libraries and major physical and physiological sickness for professional librarians. It was suggested that university librarians and the management team ensure and support the general well-being and stability of their professional librarians by making sure that an environment that is conducive to effective job performance is

always supported. Oyeniran (2023) conducted a study on the Impact of Job Stress on Job Performance of Librarians in Selected Public University Libraries in Nigeria. The goal of the study was to investigate the effect of work-related stress on librarians' job performance in a subset of Nigerian public university libraries with a population of two hundred and sixty (260) librarians from all of the public university libraries in South West, Nigeria, it used a descriptive research design.

A survey concerning the consequences of job stress and how it affects librarians' job performance was proposed and approved. Two research questions and one hypothesis were developed and addressed. The instrument's internal consistency was estimated using Cronbach Alpha reliability, which was used to determine the instrument's reliability. Thirty (30) librarians from the University of Nigeria, Nsukka's Nnamdi Azikwe Library used the split half reliability, and the result was 0.78. The data were analyzed using frequency counts and standard deviation.

The results showed that university librarians in South West, Nigeria, endure a high degree of work-related stress. The study also found a significant negative relationship between job stress and job performance, suggesting that higher job stress levels are a real factor in the decline in librarians' job performance in Nigerian university libraries. Based on these findings, the study recommended that library managers are urged to regularly host conferences, workshops, seminars, and other types of training on the efficient management of stress in order to raise the bar for librarians' job performance. It is also be mandatory for librarians to attend such training.

Methodology

The quantitative approach and descriptive research design were adopted for the study on the Influence of Job-related stress on Service Delivery by Staff of Federal University Libraries in North Western States of Nigeria. As indicated by Ali (2006), Osmosidi (2007), Ogbonna (2016) & Kida (2014), the design was used because it allows for the study of representative samples and the extraction of results and generalizations about the population that cannot be examined completely in research processes.

The population of the study consisted of 613 staff irrespective of their cadre from the various Federal Universities concerned and a total proportionate sample of 384 library staff respectively were gathered from Ahmadu Bello University Zaria, Bayero University, Kano State and Usmanu Danfodiyo University, Sokoto. A structured questionnaire was used as instrument for study. Proportionate simple random sampling technique was used to gather data and descriptive statistics, measures of central tendency such as mean was used to analyse the data which were presented in frequencies, percentages and mean. The benchmark for determining the mean was pegged at 2.5.

Results and Discussion

Table 1: Perception of Staff on Job-related Stress for Service Delivery of Federal University Libraries of North Western States of Nigeria N=337

S/N	Perception of Staff on causes of Job-related Stress	Universities						Total	Mean
		ABU		BUK		UDUS			
		Freq	%	Freq	%	Freq	%		
1	Stress is a response to change in the environment	118	65.9%	59	65.5%	45	66.2%	222	3.30
2	Prolonged stress can have harmful physiological and psychological problem	146	81.6%	73	81.1%	56	82.4%	275	4.08
3	Communication with students can be either stressful or pleasant, subject to the context.	104	58.1%	52	57.7%	39	57.4%	195	2.89
4	The need to regulate the uproar level, adjusts student behavior, and poised the needs of diverse user groups	75	41.9%	38	42.2%	29	42.6%	142	2.11
5	Stress leads to fatigue	137	76.5%	69	76.7%	52	76.5%	258	3.83
6	ICT use may be associated with stress.	61	34.1%	31	34.4%	23	33.8%	115	1.71
7	People who work with ICT often express their frustration and anxiety when their system does not deliver the required information immediately.	90	50.3%	45	50%	34	50%	169	2.51
8	Environmental factor such as noise, annul leave forfeiture accumulate to stress	127	70.9%	64	71.1%	48	70.6%	239	3.55

Source: Field survey, 2024

Table 1 above showed the Perception of Staff on the causes of Job-related Stress for Service Delivery of Federal University of North Western States of Nigeria. However, the findings revealed that majority of the respondents from the three federal university libraries ABU, BUK and UDUS showed that all the respondents from the three universities agreed that they perceive stress as

harmful physiological and psychological problem with a mean of (x = 4.08), Stress leads to fatigue (x = 3.83), Stress is a response to change in the environment (x = 3.30), Environmental factor such as noise, leave forfeiture accumulate to stress (x = 3.55), However, they respondents also perceived that communication with students can be either stressful or pleasant, subject to the context indicating a mean of (x =2.83), People who work with ICT indicating a mean of (x =2.51). All the above were picked because they all had a mean score which was higher than 2.5 benchmark. However, the benchmark for the determining the criterion mean of the perception of job-related stress of staff for service delivery of federal university of North Western Universities of Nigeria was pegged at 2.5 benchmark.

However, the findings of the study further revealed that only few of the respondents with less than 2.5 mean do not perceive Job-related Stress for Service Delivery of Federal University libraries of North Western States of Nigeria to have effect on staff such as the need to regulate the uproar level, adjusts student behavior, and poised the needs of diverse user groups (x = 2.11), and ICT use may be associated with stress (x = 1.71).

From the results above, it can be deduced that a greater number of the respondents from the three universities showed a high level of perception among the respondents in the three universities under study. This study is in agreement with the study of Ekwelem (2015), who stated that stress can have negative physiological and psychological repercussions. By implication is that since the respondents perceive what causes stress, proper measures have to be put in place to prevent stresses that would have negative consequences on service delivery in the three libraries under study.

Summary of the findings

1. That majority of the respondents from ABU, BUK and UDUS discovered that stress has influenced service delivery among library staff which led to decreased concentration and focus, decreased job performance, unable to meet job demands, insufficient monitoring rewards e.t.c

Conclusion

It can be concluded that job-related stress affects library staff in the Federal University Libraries in North Western State of Nigeria which seriously impair the standard of service provision. Stress levels increase in workers when they don't feel like they fit in because of their workload, lack of resources, or unsupportive workplace. However, the findings also revealed that job-related stress Influenced Service Delivery among library staff through decreased concentration and focus, Decreased Job Performance, Insufficient monitoring rewards e.t.c.

Recommendations

1. That the management of ABU, BUK and UDUS should apply time management and prioritization, self-care and wellness, communication and support, professional development and growth and to advise staff to always go for their annual leave when it is time to do so to reduce job-related stress elements that may likely influence health and service delivery.

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ASSESSMENT OF RECORDS UTILIZATION AND ORGANIZATION FOR PROMOTING TRANSPARENCY AND ACCOUNTABILITY IN STUDENTS REPRESENTATIVE COMMITTEES AT THE FACULTY OF EDUCATION, AHMADU BELLO UNIVERSITY, ZARIA

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Abstract

This study investigated records management practices for transparency and accountability in affairs of Students Representative committees in Faculty of Education, Ahmadu Bello University, Zaria. In order to achieve this, three research questions were raised and answered to include: what types of records are generated for transparency and accountability in affairs of students representative committees in faculty of education, Ahmadu Bello University, Zaria? for what purpose are the records used for transparency and accountability in affairs of students representative committees in faculty of education, Ahmadu Bello University, Zaria.? in what ways are records organized for transparency and accountability in affairs of students representative committees in faculty of education, Ahmadu Bello University, Zaria.? Quantitative research method was used in this study. The population of this study comprised the entire executive members of students' representative committees in Faculty of Education, Ahmadu Bello University, and totaling forty (40) in number. The researcher used self-developed questionnaire for collecting data. Findings revealed that major types of records generated for transparency and accountability in affairs of Students Representative Committees were students' records, financial records, registration records and leadership position records. Purposes of records generated were mainly for ensuring transparency and accountability in their operations for transactional purposes. Records organized for transparency and accountability were mainly numeric and alphabetical order. It was concluded that the records management practices of the Students Representative Committees in the Faculty of Education can be considered generally good. The study recommended among others, the committee should develop a comprehensive record-keeping policy that mandates the documentation of all significant activities, including detailed meeting minutes, event records, and audit trails. The committee should establish a centralized digital record management system that allows easy access and retrieval of records for analysis.

Keywords: Accountability, Records, Records management, Students Representative Committee, Transparency

Introduction

Records management serves as the backbone of institutional governance and administrative efficiency, particularly in academic environments where the need for transparency and accountability is paramount. Within Nigerian universities, effective records management supports the continuity of operations, accurate decision-making, and responsible leadership, especially in student-led organizations such as the Students Representative Committees (SRCs) (Aina, 2018; Oluwatoyin, 2018). In the Faculty of Education at Ahmadu Bello University, Zaria, SRCs are actively involved in planning and executing various activities which generate significant records that must be systematically managed.

Studies have shown that a variety of records are typically generated by SRCs, including financial records, student records, registration records, event records, internal and external records, audit reports, leadership records, income and expenditure statements, rules and regulations, and minutes of meetings (Agada & Abdulrahim, 2022). These records are essential not only for documenting activities but also for promoting transparency and accountability in decision-making and governance.

The utilization of these records spans a broad spectrum of purposes, including conducting official transactions, ensuring transparency, making references, reconciling financial reports, evaluating leadership performance, tracking resource usage, identifying areas of mismanagement, and holding individuals accountable (Ahmed & Yusuf, 2020; Zayyana et al., 2021). When properly maintained, such records can significantly contribute to the effectiveness of student governance and strengthen institutional trust.

However, the value of these records depends heavily on how well they are organized. Standard methods such as alphabetical, numerical, alphanumeric, chronological, and subject-based arrangements are often recommended for efficient storage and retrieval (ISO 15489-1, 2016). Poor record organization can hinder access to vital information, reduce administrative efficiency, and compromise accountability efforts (Okonedo, Olatokun & Opesade, 2020; Makhura, 2020).

Despite these best practices, SRCs often face challenges in managing records effectively due to inadequate infrastructure, lack of technical skills, poor retrieval tools, and absence of standardized guidelines (Yakubu et al., 2021; Nwankwo & Okeke, 2021). As highlighted by Agada and Abdulrahim (2022), even when finding aids are used, inconsistencies in their application affect the ease of information retrieval in the Faculty of Education.

Therefore, it becomes essential to explore the types of records generated by the SRC, the purposes they serve, and how they are organized within the Faculty of Education, Ahmadu Bello University, Zaria. Understanding these dimensions will provide insights into the current practices, highlight gaps, and inform recommendations for enhancing transparency and accountability through improved records management.

Statement of the Problem

Effective records management is fundamental to fostering transparency and accountability, particularly within student governance structures. Properly generated, organized, and utilized records serve as essential tools for decision-making, monitoring leadership performance, managing finances, and ensuring responsible administration (ISO 15489-1, 2016; Oluwatoyin, 2018). According to Aina (2018) and Ahmed and Yusuf (2020), student representative committees can enhance trust and legitimacy by maintaining detailed records such as financial reports, meeting minutes, and event documentation. These records provide a historical trail that helps in resolving disputes, justifying expenditures, and improving leadership continuity. When records are systematically arranged whether alphabetically, numerically, or chronologically they contribute significantly to information retrieval and institutional accountability (Zayyana et al., 2021).

Despite these expectations, existing empirical studies show that student committees, especially within Nigerian universities, often fall short in adopting comprehensive records management practices. Research by Okonedo et al. (2020) reveals that poor infrastructure, lack of training, and disorganized filing systems are common limitations facing student-led bodies. Agada and Abdulrahim (2022) further noted inconsistencies in the arrangement and utilization of finding aids in the Faculty of Education at Ahmadu Bello University, which impairs efficient information retrieval. Moreover, most existing studies have focused on administrative or institutional records, with limited attention paid to records generated and used specifically by student representative committees (Makhura, 2020; Nwankwo & Okeke, 2021; Yakubu et al., 2021). This study, therefore, addresses this gap by examining the types of records generated, their purposes, and organizational methods employed by student representatives in the Faculty of Education, Ahmadu Bello University, Zaria, to enhance transparency and accountability in student governance.

1.2 Research Questions

The following are the research questions raised for this study.

1. What types of Records are generated for Transparency and Accountability in Affairs of Students Representative Committees in Faculty of Education, Ahmadu Bello University, Zaria?
2. For what purpose are the Records used for Transparency and Accountability in Affairs of Students Representative Committees in Faculty of Education, Ahmadu Bello University, Zaria?
3. In what ways are Records organized for Transparency and Accountability in Affairs of Students Representative Committees in Faculty of Education, Ahmadu Bello University, Zaria?

Literature Review

Types of Records Generation for Transparency and Accountability

Students' representative committees create records to support the activities that they carry out. However, if these records are not properly managed, they will not provide the necessary support and information needed which might cause problems for the institution. To provide an efficient and effective administration that ensures that the business runs as smoothly as possible, there should be proper records management.

Student Representative Committees (SRCs) generate various types of records to maintain transparency and accountability in student governance. Financial records encompass all documents related to financial transactions, such as budgets, expense reports, and financial statements, which are crucial for managing funds. Students records include personal and academic information essential for administrative purposes and decision-making. Studies have shown that well-maintained student records contribute significantly to improved educational outcomes and institutional credibility (Johnson & Christensen, 2017). Registration records, which document student enrollment in various programs and activities, are vital for managing student participation and ensuring organized enrollment processes

Other essential records generated by SRCs include event records, internal records, and external records. Event records, which document the planning and attendance of SRC-organized events, are useful for organizing future activities and maintaining a history of student engagement (; Afolabi, 2021). Internal records, generated for internal use such as operational documents and internal communications, ensure smooth operations and communication within the SRC (Nakpodia, 2011; Barde et al., 2019). External records, documenting interactions with external bodies and organizations, facilitate collaborations and partnerships (Mabera, 2020).

Audit records and position leaders records are also critical for the SRC's operations. Audit records, which include documents related to financial audits, are crucial for financial transparency and accountability, although they often receive less emphasis (Nakpodia, 2011). Position leaders records document the roles and responsibilities of student leaders, helping to maintain a structured hierarchy within the SRC. Records of income and expenditure records detail the sources of income and expenditures of the SRC, essential for tracking and managing funds received and spent (Smith & Brown, 2018; Johnson & Christensen, 2017).

Finally, rule and regulations records and minutes of meetings are vital for maintaining order and documenting decisions within the SRC. Rule and regulations records outline the guidelines governing the SRC, ensuring compliance with established norms (Afolabi, 2021). Minutes of meetings, which record discussions and decisions made during SRC meetings, provide a detailed account for reference and accountability (Mabera, 2020). Effective record-keeping practices are essential for the comprehensive documentation and smooth functioning of SRCs, as supported by recent literature. Improved training and better management practices are necessary to address challenges in maintaining these records efficiently.

Purpose of Utilization of Record for Transparency and Accountability

Records are vital tools for promoting transparency and accountability in any organization, including student representative committees in universities. The purpose of utilizing records goes beyond simple documentation; they serve as evidence of transactions, decision-making, and administrative activities that support governance integrity. According to ISO 15489-1 (2016), records must be created and maintained to provide reliable information that can be retrieved to demonstrate compliance, support operational decisions, and enable auditability. In the context of student governance, these records ensure that financial dealings, leadership decisions, and resource allocations are traceable and verifiable.

One key purpose of record utilization is to facilitate transparency in the use of committee resources. Oluwatoyin (2018) emphasizes that when records such as financial statements, minutes of meetings, and audit reports are accessible, stakeholders—including students and faculty—can track how funds and resources are spent. This openness discourages mismanagement and builds trust in student leadership. Similarly, Ahmed and Yusuf (2020) assert that proper use of records enables committees to judge leadership performance and evaluate policy outcomes, thereby reinforcing accountability mechanisms.

Records also play a critical role in resolving disputes and supporting retrospective reviews of decisions made by student leaders. Aina (2018) notes that well-documented records are essential for referencing past actions, which helps in making informed decisions and planning future activities. Furthermore, the ability to identify discrepancies or instances of mismanagement through careful analysis of records allows stakeholders to hold responsible parties accountable (Okonedo, Olatokun & Opesade, 2020). This proactive use of records enhances institutional memory and ensures continuity in leadership practices. As Agada and Abdulrahim (2022) observed in their study of the Faculty of Education at Ahmadu Bello University, record utilization is not merely a clerical task—it is a strategic activity that ensures transparency, promotes accountability, and sustains the credibility of student governance systems.

Records Organization for Transparency and Accountability

It is generally believed that the ability of an organization or institution in managing its records could be a prerequisite to effective administration. ARMA (2022) held the view that proper records could help institutions to manage their information efficiently, fulfill their mandate, protect them from litigation, preserve their corporate memory and foster accountability and good governance.

Records organization is the storage and retrieval mechanism of information that aids an organization in making decisions. Records are essentially the basic principles for the development of any institution. The manufacturing of computers and the advent of Internet connectivity have revolutionized work activities and have created new avenues for work and work practices. Thus, the role of records and records management personnel has changed significantly in terms of information retrieval, creating, storing and dissemination of information.

Efficient records management provides the basis for accountability, transparency, protection of rights and entitlements, anti-corruption strategies, poverty reduction and effective management of resources. The keeping of records in an institution have in the past few years become critical not only for historical purposes but also and more importantly for current and future managerial and policy development. In summary, Records can be used as tools and instruments to understand organizations and to use them as basis for improvement, comparison with other agencies and secure resources.

Methodology

The study employed a quantitative research approach using a cross-sectional survey design. The population comprised undergraduate student representatives from the Faculty of Education at Ahmadu Bello University, Zaria. Specifically, the target population included the executive members of the Student Representative Committees (SRC) across the eight departments within the faculty. Each department had an SRC consisting of five executive members, Chairman, Secretary, Financial Secretary, Public Relations Officer, and Treasurer bringing the total to 40 respondents. The researcher with one research assistant used two weeks to distribute the copies of questionnaire. All 40 questionnaires administered were duly completed and returned, resulting in a 100% response rate. Data collected were analyzed using frequency counts and simple percentages. For interpretation, a benchmark of 50% and above was considered a positive and accepted response, while responses below 50% were categorized as negative.

Result and discussions

Types of Records generated for Transparency and Accountability in Affairs of Students Representative Committees in Faculty of Education, Ahmadu Bello University, Zaria

To identify the types of Records Generated for Transparency and Accountability in Affairs of the Students' Representative Committees in the Faculty of Education, where respondents were asked to choose or indicate from the questions provided on the types of records generated. The responses were itemized in Table 1 in which frequency and percentage is used.

Table 1 Types of Records Generated by Students' Representatives for Transparency and Accountability in Faculty of Education, Ahmadu Bello University, Zaria.

S/N	Types of Records Generated by Student Representative Committee for Transparency and Accountability	Frequency	Percentage
1	Financial records	30	75.0
2	Students' records	35	87.5
3	Registration records	29	72.5
4	Event records	8	20.0
5	Internal records	4	10.0
6	External records	2	5.0
7	Audit records	6	15.0
8	Students leadership's records	20	50.0
9	Records of income	10	25.0

10	Expenditure records	8	20.0
11	Rule and regulations records	10	25.0
12	Minutes of meetings	11	27.5

Source: Field survey, 2024

Table 1 revealed that students' records topped most of the records generated by students' representative committees in the Faculty of Education. These types of records were acknowledged by 87.5% of the respondents involved in the study. Next to students' records in order of magnitude were financial records, which 75.0% of the respondents agreed were generated for transparency and accountability in the management of the students' affairs within the faculty. The third ranking records generated by the students' representatives were those relating to registrations. In the table, 72.5% of the respondents agreed that these types of records were generated for transparency and accountability in the management of the students' affairs. Another type of record acknowledged by 50.0% of the respondents that was generated is students' leadership records. These four types of records were the major ones generated by the students' representatives and were acknowledged in the study.

Others did not receive acknowledgment from most of the respondents with less than 50% response rate. These included minutes of meetings (27.5%), records of income (25.0%), rule and regulation records (25.0%), event records (20.0%), expenditure records (20.0%), audit records (15.0%), internal records (10.0%), and external records (5.0%).

The findings from Table 1 highlight a significant emphasis on generating records that directly impact students' academic and administrative experiences, such as student records, financial records, and registration records. This prioritization aligns with the need for transparency and accountability in managing student affairs, ensuring that critical aspects of student life are well-documented and easily accessible. However, the relatively lower acknowledgment of other records, such as minutes of meetings and audit records, suggests a potential gap in comprehensive documentation practices within the Faculty of Education.

The emphasis on certain types of records over others has several implications. Firstly, it indicates a clear focus on areas that directly affect students' day-to-day activities and academic progress. This focus can enhance trust and satisfaction among students regarding the management of their affairs. However, the lack of emphasis on other records could lead to inefficiencies and potential issues in areas such as financial auditing, regulatory compliance, and institutional transparency. To address this, the Faculty of Education may need to implement more robust record-keeping practices across all areas to ensure a holistic approach to documentation and accountability.

The findings of this study corroborate previous research that underscores the importance of maintaining detailed student and financial records in educational institutions. Prior studies have shown that effective record management in these areas is crucial for transparency, accountability, and the overall efficiency of administrative processes. For example, research by Johnson and Christensen (2017) found that well-maintained student records contribute significantly to improved educational outcomes and institutional credibility. Similarly, studies on financial

management in education, such as those by Bandy (2023), emphasize the role of financial records in ensuring accountability and proper resource allocation. The lower emphasis on records like minutes of meetings and audit records also aligns with findings from other studies, which suggest that administrative documentation often receives less attention compared to more immediately impactful records.

Purpose of Records Used for Transparency and Accountability in Affairs Students Representative Committees in Faculty of Education, Ahmadu Bello University, Zaria

To find out the use of Records created for Transparency and Accountability in Affairs of Students Representative Committees in the Faculty, the opinions of the respondents on the purposes for record generations are tabulated in Frequencies and percentages as follows.

Table 2: Purposes for which Records are generated by Students' Representatives Committees for Transparency and Accountability in Faculty of Education, Ahmadu Bello University, Zaria.

S/N	Purpose for which Records are Generated	Frequency	Percentage
1	To carryout transaction	24	60.0
2	To ensure transparency	27	67.5
3	To make reference purpose	20	50.0
4	To establish balance between income and expenditure	11	27.5
5	To judge the quality of leadership of position holders	12	30.0
6	To identify how resources are spent in running the affairs of the committee	11	27.5
7	To identify area of mismanagement and resource of the committee	10	25.0
8	To bring to book the position holder who mismanage the resource of the committee	15	37.5

Source: Field survey, 2024

The study revealed that the primary purposes of record generation by the Students' Representative Committees in the Faculty of Education, Ahmadu Bello University, Zaria, were to ensure transparency and accountability (67.5%), to carry out transactions of students' affairs (60.0%), and for reference purposes (50.0%). These responses, each with 50% or more agreement from participants, demonstrate the core areas where records are valued and actively utilized in student governance.

In contrast, several other purposes of records usage were rated below 50%. Only 25.0% of respondents agreed that records are used to identify how resources are spent in the running of committee affairs. Just 27.5% indicated records were used to establish a balance between income and expenditure, while 37.5% acknowledged their use in holding position holders accountable for

mismanagement. Furthermore, 97.5% disagreed that records were created for any other unspecified purposes, highlighting a limited scope of application beyond the most direct uses.

The findings of the study show that records are primarily generated and used by student representative committees to promote transparency and accountability in their operations, and to support transactional activities. This aligns with Agada and Abdulrahim (2022), who emphasized that structured records management enhances the credibility and transparency of student-led organizations in academic institutions. Similarly, Makhura (2020) noted that effective recordkeeping is critical in ensuring that student organizations operate in a transparent and accountable manner, especially when managing public or collective resources.

However, the relatively low emphasis placed on using records for financial oversight, such as identifying mismanagement or balancing income and expenditure, suggests a narrow approach to records utilization. This could imply that student representatives may lack awareness or training in the broader benefits of comprehensive records management. The implications are significant—without utilizing records to monitor financial health or evaluate leadership accountability, there is a risk of oversight lapses that can lead to inefficiencies, mismanagement, or a lack of trust in student governance structures. Strengthening the capacity of student leaders to understand and implement holistic recordkeeping practices can promote better governance, support institutional goals, and safeguard the interests of the student body.

Ways in which Records are Organized for Transparency and Accountability in Affairs Students Representative Committees in Faculty of Education, Ahmadu Bello University, Zaria

To identify the ways Records are organized for Transparency and Accountability by the students representative Committees, their opinions on the processes of records organization were rated in Table 3 The expressed percentages are as follows.

Table 3: Ways in which Records are Organized for Transparency and Accountability in Students Representatives Committees in Faculty of Education, Ahmadu Bello University, Zaria.

S/N	Ways in which records are organized	Frequency	Percentage
1	Alphabetic order	13	32.5
2	Numeric order	16	40.0
3	Alpha numeric order	5	12.5
4	Chronological order	2	5.0
5	Subject order	4	10.0

Source: Field survey, 2024

The findings revealed that the most preferred method for organizing records among the Students' Representatives Committees in the Faculty of Education, Ahmadu Bello University, Zaria, is numeric order, as indicated by 40.0% of the respondents. This was followed by alphabetic order, with 32.5% preference. These two methods were clearly favored, collectively accounting for 72.5% of respondents' choices. They were identified as the primary systems adopted for ensuring effective and transparent record management within the committees. In contrast, other

organizational methods were far less favored. Alpha-numeric order was preferred by only 12.5% of the respondents, while subject order accounted for 10.0%. Chronological order was the least preferred, with just 5.0% selecting it. These figures suggest that although various methods are available, the majority of student representatives rely on more familiar and structured systems to manage and retrieve their records effectively.

The preference for numeric and alphabetic record arrangement reflects a practical approach by student leaders to ensure clarity and ease of access in record management, aligning with Agada and Abdulrahim (2022), who highlighted the role of these systems in simplifying information retrieval. These methods not only support day-to-day administrative efficiency but also enhance transparency and accountability by making records more accessible and easier to manage. This is consistent with Read and Ginn's (2010) view that structured organization facilitates effective information handling.

The low adoption of other record arrangement methods such as subject and chronological order suggests a limited exposure or training in alternative systems that might better serve particular types of records. As Matangira, Katjiveri-Tjiuoro, and Lukileni (2013) observed, the lack of consistency in records organization often leads to inefficiencies. Therefore, while the use of numeric and alphabetic methods is commendable, expanding knowledge and practice to include other effective systems could further enhance the committees' recordkeeping capabilities. Training in diverse records management practices would not only improve operational efficiency but also strengthen institutional accountability within student governance.

Summary of findings

The major findings from the analysis of the data and test of the study's hypotheses are summarized below:

1. The types of records generated for transparency and accountability in affairs of student representative committees in the Faculty of Education, were students' records. Financial records, Registration records and students Leadership's records.
2. The purpose of records generated by Students Representative Committees in the Faculty were mainly for ensuring transparency, for carrying out transactions of students' affairs and for reference purpose.
3. The major ways in which records were organized for transparency and accountability were mainly numeric and alphabetical orders.

Conclusion

It was concluded that the records management practices of the Students Representative Committees in the Faculty of Education can be considered generally good, as the types of records generated such as students' records, financial records, registration records, and leadership records are essential for promoting transparency and accountability. The primary purposes for which these records are used, including ensuring transparency, facilitating transactions, and serving as reference materials, indicate a clear understanding of the role of records in effective governance. Furthermore, the use of structured organization methods like numeric and alphabetical orders

supports easy retrieval and proper documentation. However, while these practices reflect a positive approach to records management, there is still room for improvement in diversifying record types and adopting more advanced organizational systems to further strengthen accountability.

Recommendations

The following recommendations were made in line with the findings of the study:

1. To improve the scope of records generated, the committee should create a clear and comprehensive record-keeping policy that mandates the documentation of all significant activities, including detailed minutes of meetings, event records, and audit trails. Committee members should be trained on the importance of thorough record generation, and provided with standardized templates and practical guidelines to ensure records are consistently accurate, complete, and properly maintained.

2. To strengthen the use of records in strategic planning and decision-making, the committee should implement a centralized digital records management system that enables easy storage, retrieval, and analysis of documents. Regular reviews of these records should be conducted to guide policy revisions and strategic actions, while awareness should be raised among members about the long-term value of maintaining reliable and accessible records.

3. To achieve uniformity in organizing records, the committee should design and distribute a standardized filing system manual detailing numeric and alphabetical procedures. This should be accompanied by hands-on training to build members' proficiency in applying the system, and regular audits should be carried out to ensure consistent compliance and identify areas for improvement in record organization practices.

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INFORMATION SEEKING BEHAVIOUR OF UNDERGRADUATE STUDENTS IN FEDERAL UNIVERSITY, DUTSIN-MA, KATSINA STATE, NIGERIA

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Abstract

This study examined information seeking behaviour of undergraduate students in Federal University, Dutsin-Ma, Katsina State, Nigeria. The objectives were to find out the information needs of undergraduate students in the Department of Library and Information Science, Federal University, Dutsin-Ma, Nigeria among others. Quantitative research methodology and descriptive survey design was employed for the study. Population was 165 undergraduate students of the department of Library and Information Science, Federal University, Dutsin-Ma. Total enumeration sampling technique was used for sample selection. Self-developed questionnaire was used as instrument for data collection. Tables, frequency and percentages were used for data analysis.50% was used as benchmark for decision making Findings revealed that information needs of undergraduate student of the Department of Library and Information Science, Federal University, Dutsin-Ma are; information on course related issues, information on health issues, information about lecture period, and information about accommodation, information about security related issues among others. Purposes for seeking information by undergraduate students Federal University, Dutsin-ma, Nigeria are for academic purposes, for assignment, for preparation for continuous assessment test and examination; and for leisure. The information seeking behaviour of undergraduate students of the Federal University, Dutsin-Ma are; direct searching, undirected searching, passive searching, active searching, focuses searching, chaotic searching, interactive searching and berrypicking seeking behaviour. Problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria are lack of sufficient time, lack of skills for searching for information online among others. It concluded that undergraduate students have the strong desire to excel in their academic pursuit due to the passion for seeking for information to satisfy identified problems. It recommends among others that relevant information sources that will enhance the satisfaction of the identified information needs of the undergraduate students should be selected and acquired by the University Library authority.

Keywords: Information needs, Information seeking, Information seeking behaviour, Information search behaviour

Introduction

Information seeking is the end point of the need to solve or address a pressing problem. Information seeking is usually triggered in an attempt to find solution to a problem which required access to information in order to facilitate decision making. People seek for information for the attainment of set goals and objectives. More so, undergraduate students seek for information perennially while academic programme lasts. Attainment of academic excellence becomes a mirage when information is not sought for coping with rigour of academia. Scholars (Savolainen, 1996; Wilson, 2000) defined information seeking from different perspectives within the context in which the study was conducted. Information seeking is a special case of problem solving. It includes recognizing and interpreting the information problem, establishing a plan of search, conducting the search, evaluating the results, and if necessary, iterating through the process again (Hearst, 2009). Repeated patterns exhibited by groups of individuals or individuals while seeking for information thereby becomes the established information seeking behaviour.

Information seeking behaviour is goal oriented. It is a drive towards searching, accessing and using information for clearly identified and set goals similarly to the goals of undergraduate students in Federal University, Dutsin – ma, Katsina State Nigeria. Information seeking behaviour is goal- determined behaviour and the concept of problem-solving sheds more light on it (Wilson, 2005). It explained the multiple search episodes that usually occurs as information seekers moves through the problem-solving stages of problem recognition, problem identification, problem resolution and the actual solution statement. The information seeking behaviour is considered as a human behaviour to search for information in purposeful way to find the gap (Maamiry, 2018). It is paramount for undergraduate students to search for information in the hope to graduate with a befitting class of degree, to complete written assignment, prepare for continuous assessment and also end of semester examination. Nowadays it is the prerequisite of the libraries to know the information-seeking behavior of the users (Humbhi, Tareen & Humbhi, 2022). When this established it becomes a blueprint for services provides according to their needs and for developing a workable intervention for users of the library thereby identifying the information behaviour of users both undergraduates and post graduates.

Information behaviour is the established manner in which individuals search for and use information. Information behavior is a field of information science research that seeks to understand the way people search for and use information (Wilson, 1981) in various contexts. It can include information seeking and information retrieval, but it also aims to understand why people seek information and how they use it. Information behaviour is an umbrella that hovers over the information search behaviour.

Information search behaviour refers to the manner and steps taken by undergraduate students to seek for information to satisfy their information needs. In essence information search behaviour also known as querying, refers to well-defined, targeted information seeking for a clearly articulated information need. It also encompasses searching when the there is no need for specific items but the information need and type of information is clearly identified. Information search

behaviour is the micro-level behaviour employed by the information searcher in interacting with information system of all kind. Researchers (Fulton & McGuinness, 2016) have made it known that, the way students organize learning and search for academic information could be considered very crucial to their overall performance at the end of the day. Information search behaviour comes to limelight due to the need for information and it is a paramount aspect of undergraduate studies. Information need is the willingness and urge to get information through any source to meet a need. Is an individual or a group's desire to locate and obtain information to satisfy a conscious or unconscious need.

Information need refers to individual user needs regarding information needed by each person. Information need is understood as evolving vague awareness of something from missing and as culminating in locating the information that contributes for understanding and meaning (Doraswamy, 2017). The need for information among undergraduate students is ever constant. This is as a result of the fact that the students will have to study towards the completion of the programmes. In as much as this is the goals and aspirations of all students, there would always be the need for information. Though this information needs would continue to evolve as long as there are assignments and assessment to carry out by these groups of students. Therefore, this study intends investigating the information need among undergraduate students in Federal University, Dutsin-ma, Katsina State, Nigeria.

Statement of the Problem

Information is the foundation for attainment and accomplishments of set goals and objectives. Information is new knowledge, which leads to a change in actions of people expose to it. The concept of information needs and information seeking behaviour of undergraduate has been of great concern to stakeholders especially in the developing countries. The establishment of every library is for utilization by its targeted users. The Federal University library statistics has shown that there is low use of library resources; hence the need to carry out this study to understand the academic community information needs and information seeking behavior of the undergraduate students in Federal University Library, Dutsin- Ma in order to be able to provide specific needs to meet the needs of the students.

The information explosion brought about by the development and deployment of Information and Communication Technology (ICT) has brought about various ways of codifying information and information retrieval which has later constitute a great challenge to these undergraduates in their pursuit to achieve academic excellence. It is reported that the way students organize their learning and search for academic information could be considered very crucial to their overall performance at the end of the day. Despite the important roles played by information needs and information seeking, to the best knowledge of the researcher no single study has been conducted in the context of the Federal University, Dutsin-Ma, Katsina State, Nigeria on the undergraduate information needs and seeking behaviour since its inception. It is expected that this study will showcase the sources mostly consulted and the most sought information by the undergraduates in the process of seeking information. This will enable the

researcher to suggest recommendations on how the university library can facilitates such information sources. It is against this backdrop that this study intends examining the information needs and information seeking behaviour of undergraduates in the Federal University, Dutsin-Ma.

Objectives of the Study

The objectives of this study were to;

1. Find out the information needs of undergraduate students in the Department of Library and Information Science, Federal University, Dutsin-Ma, Katsina State, Nigeria.
2. Determine the sources through which undergraduate students in the Department of Library and Information Science Federal University, Dutsin-ma, Katsina State, Nigeria seek for information.
3. Identify the information seeking behaviour of undergraduate students in the Department of Library and Information Science Federal University, Dutsin-ma, Katsina State, Nigeria.
4. Investigate the purposes for seeking information by undergraduate students in the Department of Library and Information Science Federal University, Dutsin-ma, Katsina State, Nigeria.
5. Identify the problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria.

Literature Review

In the modern era, individuals require information for personal usage, professional progress, and social survival. The scholars believe that information needs are not homogeneous for everyone it differs from person to person. Undergraduates comprise a highly complex information community, composed of many identities and with a range of interests and skills. Emerging technologies continue to play a critical role in undergraduates' information behaviors. While prior literature has focused on the academic information needs of students, emerging technologies have brought to light the considerable role of their everyday life information behaviors. This paper seeks to explore the information needs and behaviors of undergraduates, in particular the current and incoming graduating classes. With increased focus on meeting everyday life information needs and continued appreciation and understanding of the versatility of emerging technologies in the lives of undergraduates, libraries will increase their value to this information community and better meet their needs. According to Kalbande (2019) information is a cornerstone of modern civilization on which practically everyone relies.

Humbhi, Tareen &Humbhi (2022) investigated information needs and Information-seeking behavior of undergraduate students form the remote area perspective and observed that nowadays it is the prerequisite of the libraries to know the information-seeking behavior of the users and provide the services according to their needs. The prime purpose of the current study is to examine the information needs, information sources, information-seeking behaviors. As well as find out the challenges the undergraduate face while using the library. The survey research method was used to collect the data. With the help of a structured questionnaire, the data was collected and a random

sampling method was used for this purpose. The results of the study revealed that 220(62%) undergraduates need information for their semester work and 102 (29%) need job-related information.

Moreover, 155 (44.2%) undergraduates used social media to get their needed information, and 130(37.1%) followed by a discussion with friends. 80 (22.85%) of undergraduate students visit the library for study purposes, 70(20%) visit the library for reading newspapers and for political information. While seeking the needed information, undergraduate students have reported different barriers such as poor internet connectivity, lack of ICT facilities, not being aware of the usage of OPAC, and ICT knowledge limitation. The findings of the current study will be helpful for librarians towards the restructuring of information literacy programs to enhance the current information-seeking behavior of undergraduate students. It may inform the higher authorities about the obstacles faced by the undergraduate students in information-seeking and thus stimulate them towards the up-gradation of internet and ICT facilities in the institutions. This study addressed the gap in the literature on information-seeking behavior in the Context University of Balochistan. It uncovered characteristics that both limit and enhance undergraduate students' use of the library. To assist their learning, the insights could lead to the creation of a stable information literacy program at the University of Balochistan.

Sources of information utilized can be multifarious. For instance, Thindwa, Chawinga & Dube (2019) stated that undergraduate students need information for various reasons. However, it is not a straightforward activity in retrieving the relevant information for accomplishing various needs. The research therefore justified as it aims at understanding information needs of undergraduate students who are drawn from security organizations. The main objective of this study was to analyse information needs, sources and seeking patterns of security studies at Mzuzu University. The study adopted a mixed methods approach by sending a questionnaire to 108 students and conducting a set of three focus group discussions. The study was informed by Kuhlthau's information search process model. The study found that most students preferred Internet as a source of information.

Information seeking behaviour is heterogeneous and determined by individuals' characteristics traits. In alignment with this assertion, Kumar& Kumar (2021) observed that university library being considered as knowledge hub caters to the information needs of diverse categories of users like students, research scholars, scientists, teachers, etc. by providing access to wide variety of learning resources. Apart from print resources university libraries are increasingly adding electronic resources like E-Books, E-Journals, E-Theses, databases, E-Standards, Institutional repositories, consortia, online public access catalogue and other networked resources to their collections which have been widely used nowadays as primarily for teaching, learning as well as research activities. Since the undergraduate students are not involved in any kind of research work thus presumed to make use mostly of books/notes/ e-books to fulfill their academic needs. The present review study was conducted to ascertain the kind of information resources

mostly used by the undergraduate students and further to know their awareness level about resources & services of the library. It is basically a systematic review of studies conducted in the past to know their awareness level, information seeking behavior and attitude towards different resources used in achieving the academic goals. It recommended that further study will also try to find out whether the academic level of study has any difference with regard to use of different resources and services.

Miraj, Chuntain, Said, Osei-Bonsu & Rehman (2021) explored how the scholarly accomplishments of students might increase due to specific fundamental causes. The academic performance of the student was prioritized as a dependent variable, and the independent indicators chosen were information seeking, IT ability, reading/writing capacity, and resilience. At the same time, age, gender, marital status, and family income were included in the control variables. The research subject samples were limited to (N = 288) postgraduate students from three mega universities in Islamabad, Pakistan. Forward regression analysis was performed in this research to decide the impact of the indicators. The results indicate that information seeking affects academic performance positively and significantly. Essentially, the study revealed that information technology (IT) skills make a fundamentally positive and significant impact on academic performance. Reading and writing influenced academic performance considerably. In addition, resilience affected academic performance emphatically and essentially. Further, this research also noted the relationships between information-seeking behaviours, IT ability, reading/writing capacities, and resilience capabilities and the academic performance of students. These variables have a positive impact on the academic performance of students.

Methodology

Quantitative research methodology was adopted for this study. This methodology is judged appropriate for this study in that it would allow for the elicitation of data that would answer raised questions for this study. Quantitative research is regarded as the organized inquiry about phenomenon through collection of numerical data and execution of statistical, mathematical or computational techniques (Adedoyin, 2020). Descriptive survey research design was adopted for this research. This research design is appropriate for adoption because this research is in line with the positivism research paradigm. The population of this study is the undergraduate students in the final year of study (400 Level) in the Department of Library and Information science Federal University, Dutsin-ma. Total enumeration sampling technique was used for selecting sample size of one hundred and sixty-five (165). Self-developed close- ended questionnaire by the researchers was used as instrument for data collection. Data collected was analyzed using frequency, tables and percentages.50% was used as the benchmark for decision making.

Result and Discussion

This section consists of the data presentation and analysis in line with the raised research objectives for this study. The data presentation and analysis is presented under the following sub-headings starting with the data presentation on the information needs of undergraduate students in the department of Library and Information Science Federal University, Dutsin-Ma.

Information needs of undergraduate students in Federal University, Dutsin-Ma, Katsina State, Nigeria

This research objective sought to find out the information needs of the undergraduate students of the 400 Level of the department of Library and Information Science. In order to achieve this objective, respondents were provided with options to tick as applicable to their opinions in terms of information needs. Table 4.1 contains the responses to the respondents to information needs of 400 Level of department of Library and information science, Federal University, Dutsin-Ma.

Table 4.1- Information needs of undergraduate students in Federal University, Dutsin-Ma, Katsina State, Nigeria

Information Needs of undergraduates students in LIS, Federal University, Dutsin-Ma	Frequency	Percentage
Information on course related issues	134	82.5%
Information on health issues	154	95.0%
Information about lecture period	129	79.6%
Information about accommodation	89	54.9%
Information about security related issues	78	48.1%
Information on academic resources	102	62.9%
Information related to finances	98	60.4%
Campus Services and facilities	88	54.3%

Source- Field Survey, 2024

Data analysis on the information needs of 400 level undergraduate students of the department of Library and Information Science, Federal University, Dutsin-ma, 134 (82.5%) indicated that needs.78(48.1%) of the study respondents stated that information about security related issues is equally one of their information needs required. 102(62.9%) specified that information on academic resources is also part of information needs essential to undergraduate students. 98(60.4%) of the respondents identified information related to finances as an information needs. 88(54.3%) specified campus services and facilities as one of the information needs of the undergraduate students who responded to the questionnaire. information on course related issues is one of their information needs. 154(95.0%) specified that they need Information on health issues. Also, 129(79.6%) of the respondents stated that information about lecture period constitutes

one of their information needs. 89(54.9%) of the respondents identified that information about accommodation is one of their information

Sources through which undergraduate students in Federal University, Dutsin-ma, Katsina State, Nigeria seek for information

This research objective sought to determine the sources through which the 400 Level undergraduate students of the Department of Library and Information Science seek for information. In order to achieve this objective, respondents were provided with options to tick as applicable to the sources information is sought from. Table 4.2 provides sources through which information is sought from by the 400 Level students of Library and Information Science, Federal University, Dutsin-Ma.

Table 4.2 Sources through which undergraduate students in Federal University, Dutsin-ma, Katsina State, Nigeria seek for information

Sources through which undergraduate students in Federal University, Dutsin-ma, Katsina State, Nigeria seek for information	Frequency	Percentage
University Library	98	60.4%
My Lecturers	110	67.9%
Fellow Course Mates	134	82.7%
Social Media	98	60.4%
Course WhatsApp group platform	77	47.5%
Internet	97	59.8%
Friends	65	40.1%

Source- Field Survey, 2024

Analysis of data collected to identified the sources of information used by the respondents shows that 98(60.4%) of the respondents used the university library as source for information. 110(67.9%) stated lectures notes is through which they get information. 134(82.7%) of the respondents indicated that fellow course mates were their source of information. 98(60.4%) of the respondents also identified the social media as another source of information. 77(47.5%) indicated that course WhatsApp group is another source through which information is gotten. Similarly, 97(59.8%) of the respondents also indicated the Internet as source through which they get information. While 65(58.9%) of the respondents identified friends as the source through which information is sourced.

Information seeking behaviour of undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

This research objective sought to establish the information seeking behaviour of 400 Level undergraduate students of the department of Library and Information Science. In order to achieve this objective, respondents were provided with options to tick as applicable to the how they seek for information to meet their information needs information is sought from. Table 4.3 contains information behaviour of the students.

Table 4.3- Information seeking behaviour of undergraduate students Federal University, Dutsin-Ma

Information seeking behaviour of undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria	Frequency	Percentage
Direct searching	54	33.3%
Undirected searching	78	48.15
Passive searching	45	27.75
Active searching	145	89.5
Focuses searching	59	33.9%
Chaotic searching	6	3.7%
Interactive Searching	37	22.8%
Berrypicking	29	17.9%

Source, Field Survey, 2024

Based on data analysis, 54(33.3%) of the respondents stated that direct searching is the information seeking behaviour exhibited in the search for information to satisfy information needs. 78(48.1%) of the respondents equally identified undirected searching as the information seeking behaviour. 45(27.7%) indicated that passive searching is the behaviour seeking exhibited when seeking for information. 145 (89.5%) of the respondents stated that active searching is the behaviour exhibited in the behaviour towards seeking for information. 59(33.9%) of the respondents picked focuses searching as their information seeki9ng behaviour. 6(3.7%) of the respondents identified chaotic searching as their information seeking behaviour. 37(22.8%) of the study respondents stated that interactive searching is the information seeking behaviour displayed when seeking for information to satisfy information needs. Likewise, 29(17.9%) of the respondents indicated that berrypicking seeking behaviour is reflected in the seeking behaviour shown in their search for information to satisfy a need.

Purposes for seeking information by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

This objective sought to identify the purpose for which the 400 level undergraduate students of the Department of LIS, Federal University, Dutsin-Ma seek for information. In order to achieve this objective, the respondents were provided with options to select those which reflect their opinion on the purpose for information seeking. Responses to this objective are reflected in table 4.4.

Table 4.4 Purposes for seeking for information by undergraduate students, Federal University, Dutsin-Ma

Purposes for seeking for information by undergraduate students, Federal University, Dutsin-Ma	**Percentage**	**Percentage**
For academic purposes	98	60.4%
For assignment	154	95.0%
For preparation for Continuous assessment test and examination	134	82.7%
For Leisure	56	34.5%

Source- Field Survey, 2024

Analysis of the data collected on the purposes for information seeking among 400level undergraduate students of the department of library and information science showed that 98(60.4%) of the respondents identified academic purposes as the reason for seeking for information. 154(95.0%) of the study respondents specified assignment as another purpose for seeking for information. 134(82.7%) is another purpose identified by the respondents as the justification for seeking for information. 56(34.5%) of the stated respondents indicated that information is sought for leisure purposes.

Problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

This research objective sought to determine the associated problems experienced by 400 Level undergraduate students of LIS, Federal university, Dustin –Ma while seeking information. To achieve this objective, options directly linked with problems to information seeking were provided. Responses of the respondents is provided in table 4.5.

Table 4.5 Problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

Problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria	Frequency	Percentage
Lack of sufficient time	123	75.9%
Lack of skills for searching for information online	87	53.7%
Lack of skills for query formulation	121	74.6%
Lack of proper understanding on how to seek and search for information	67	41.3%

Source- Field Survey, 2024

Based on data analysis, 123(75.9%) identified that lack of sufficient time is associated with the information seeking behaviour of 400 Level of Department of Library and Information Science. 87(53.7%) of the respondents stated that lack of skills for searching for information online is the problem experienced when seeking for information. 121(74.6%) of the respondent identified lack of skills for query formulation as the problem associated with information seeking among 400 Level undergraduate students of the department of Library and information science, federal University, Dutsin- Ma. While, 67(41.3%) of the respondents indicated that lack of proper understanding on how to seek and search for information is the problem experienced when seeking for information to satisfy identified information needs.

Discussion of Findings

This section consists of the discussion of findings which emanated through analysis of the data collected for raised research objectives. The discussion sis as follows in alignment with the research objectives starting with information needs of undergraduates' students in Federal university, Dutsin-Ma.

Information needs of undergraduate students in Federal University, Dutsin-Ma, Katsina State, Nigeria

Analysis of data revealed that eight typologies of information needs were identified as the information need of 400 level undergraduates' students of the department of Library and information Science, Federal University Dutsin-ma. These are information on course related issues, information on health issues, information about lecture period, and information about accommodation, information about security related issues, and information on academic resources, information related to finances and campus services and facilities.

Information need is ever constant for undergraduate students. This is because the aspiration for the attainment of different things is ever static.

This finding is alignment with the finding of Humbhi, Tareen &Humbhi (2022) who reported that information needs of undergraduates are undergraduates need information for their semester work and need job-related information and that undergraduates used social media to get their needed information, and 130(37.1%) followed by a discussion with friends.

Sources through which undergraduate students in Federal University, Dutsin-ma, Katsina State, Nigeria seek for information

Based on analyzed data, the sources of information through 400 level undergraduate students of the department of Library and Information Science, Federal university, Dutsin-ma source for information are; the University Library, My Lecturers, Fellow Course Mates, Social Media, Course WhatsApp, group platform, Internet and Friends.

Information is sourced from varied sources in as much as it solves the problem that triggered the information search. Information is required for everyday life and it can be retrieved from any source of information. The sources from where we get information are called information sources. An information source is a source of information for somebody. That is anything that might inform a person about something on provides knowledge to somebody.

Information seeking behaviour of undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

Data analysis revealed that the information seeking behaviour of 400level undergraduate students of the Federal University, Dutsin-Ma are; direct searching, undirected searching, passive searching, active searching, focuses searching, chaotic searching, interactive searching and berrypicking seeking behaviour.

Information seeking is the process engaged in by humans to change their state of knowledge. Information seeking behaviour refers to the way people search for and utilize information. It is a high-level cognitive process that is part learning or problem solving. To seek

information implies the need to change the state of one's knowledge. Because the new information formats of information sources and new information tools, users are expected to acquire new knowledge and skills in information searching.

Purposes for seeking information by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

Based on data analysis, purposes for seeking information by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria are for academic purposes, for assignment, for preparation for continuous assessment test and examination; and for leisure.

Seeking for information is essential because it reinforces effective learning, critical thinking, and problem-solving skills. It enhances learning and understanding; this is because active seeking allows students to go beyond passive reception of information, leading to deeper comprehension and retention of knowledge for active learning of undergraduate students (Tanty, Fernando, Valencia & Justin, 2022). In the context of academic purposes, seeking behavior is crucial because it underpins effective learning, critical thinking, and problem-solving skills. When undergraduate students evaluate sources and compare information, they develop analytical skills essential for academic success thereby fostering critical thinking skills. Seeking behavior helps students become autonomous learners who can identify informational needs and seek solutions proactively.

This encourage and foster independence and self-regulated learning. Similarly, seeking behaviour equips students especially undergraduates with the habits necessary for continuous learning beyond formal education; and improving problem-solving abilities. Effective seeking strategies are linked to higher performance because they facilitate access to quality resources and comprehensive understanding. Seeking behaviour is fundamental in academic contexts because it drives the active pursuit of knowledge, supports critical engagement with material, and fosters skills necessary for academic and personal development.

This finding implies that the ability and tendency to seek relevant, reliable information are central for academic success, as they influence how well students understand material, develop skills, and perform academically.

Problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria

Based on data collected and analyzed, problems associated with information seeking experienced by undergraduate students Federal University, Dutsin-ma, Katsina State, Nigeria are lack of sufficient time, lack of skills for searching for information online, lack of skills for query formulation and lack of proper understanding on how to seek and search for information.

Studies have reported challenges experienced by pregnant women in accessing health information. Javanmardi, Noroozi, Mostafavi & Ashra-rizi (2019) mentioned that challenges faced by undergraduate students includes inability to make distinction between correct and incorrect information, insufficient interactions between women and healthcare providers, failure to access to various information resources.

Conclusion

Based on the findings for this study, it is concluded the study on information seeking behaviour have shed light on the various factors that affects information seeking behaviour among undergraduate students of the federal University, Dutsin-ma. It is evident that the undergraduate students have the strong desire to excel in their academic pursuit due to the passion for seeking for information to satisfy identified problems. The common motivation for information seeking is geared towards attaining academic excellence.

Recommendations

Based on findings the following are the recommendations for this study;

1. Relevant information sources that will enhance the satisfaction of the identified information needs of the undergraduate students should be selected and acquired by the University Library authority.

2. Other sources of information not identified by the students through which information can be sourced should be publicized through the staging of Seminar, workshop and trainings by the Information and Communication Section of the University Library.

3. Purpose for search for information for leisure ranked low among the purpose for which undergraduate of the department of Library and Information science use information. the LIS department should introduce a course in the curriculum and make it mandatory course for all students through the advocacy of University academic planning Unit.

4. Undergraduates' students of the department of Library and Information science and others should be taught on the rudiments involved in query formulation and how to search for information.

5. Academic Planning Unit of the university should device lecture time table that will be flexible to enable have enough time for the use of the information resources and service made available in the University library.

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STRATEGIES IN PRESERVING RECORDS FOR ADMINISTRATION OF PENSION SERVICES BY KADUNA STATE PENSION BUREAU, KADUNA, NIGERIA

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Abstract

The study investigated Strategies in Preserving Records for Administration of Pension Services by Kaduna State Pension Bureau, Kaduna, Nigeria. The following objective was set for actualization by this study what are the strategies adopted for the preservation of records for administration of pension services at the Kaduna State Pension Bureau, Kaduna State, Nigeria? Quantitative research methodology was adopted using a descriptive survey design. Data was collected through a self-developed questionnaire administered to 90 staff members across various departments within the Bureau. of these, 85 copies were retrieved and found worthy for analysis. The study revealed that the Kaduna State Pension Bureau adopts multiple preservation strategies, including climate-controlled storage, use of archival-quality materials, digital backups, access controls, disaster preparedness, regular maintenance, CCTV surveillance, long-term digital preservation standards, and periodic inspections to ensure the security and longevity of its records. In conclusion, despite the robust strategies put in place for the preservation of records at the Kaduna State Pension Bureau, a lot is needed to be done that the strategies are sustained. It was recommended that in order to add up to the existing methods of preserving records in Kaduna State Pension Bureau, Kaduna Nigeria, the Management should perform necessary repairs or replacements to preserve the integrity of storage materials available at the Bureau.

Keywords: Administration, Kaduna State, Pension Bureau, Pension Services, Record Management

Introduction

The administration of pension services is a fundamental component of public sector governance. Over the years, the need for efficiency, transparency, and accountability in pension administration has intensified. A core driver of this efficiency is an effective records management system. Without well-structured records management practices, pension bureaus can face operational disruptions, delays in pension disbursements, and challenges in ensuring the rights and entitlements of retirees. This study focuses on the records management practices for the administration of pension services at the Kaduna State Pension Bureau, Nigeria. The Bureau is tasked with managing various categories of pension-related records, processing retirement benefits, and liaising with relevant stakeholders, including financial institutions and government databases.

Records management encompasses the systematic control of records throughout their life cycle, from creation or receipt, classification, maintenance, and use to their final disposition. The Kaduna State Pension Bureau handles a wide variety of records, including application forms, financial records, correspondence, online application data, scanned documents, integration logs with payroll systems, and inputs from government and financial databases. The effective handling of these records is essential to pension administration as it affects the timely processing of pension claims, reduction of fraud, and enhancement of service delivery. The availability and reliability of these records ensure that pensioners receive accurate and timely payments while also facilitating auditing and policy formulation processes (Saffady, 2021; Yusuf et al., 2023).

The types of records managed by the Pension Bureau reflect the complexity and interdependence of administrative functions. Application forms, both in hardcopy and online versions, are used to initiate the pension enrollment process. Financial records provide information on payments, deductions, and entitlements. Correspondence, both internal and external, documents communication between the Bureau and stakeholders. Additionally, digitization efforts have led to the integration of scanned documents and digital imaging techniques. These records are further enriched by data exchanges with payroll systems, government databases, and financial institutions, which require interoperability and high data integrity (Hawash et al., 2023; Marutha, 2022).

To manage this vast array of records, the Bureau employs several organization strategies. These include the use of master files and transaction files to track ongoing and completed processes. Records are also arranged in chronological, alphanumerical, alphabetical, and subject-based order depending on the purpose and use. This systematic organization facilitates quick access to information, reduces redundancies, and supports decision-making. For instance, master files may contain details of retirees' service years and entitlements, while transaction files document payment history and communication logs. Chronological and alphanumerical arrangements are particularly useful for indexing bulk records and referencing them during periodic reviews (Chaputula, 2022; Triantafyllou et al., 2023).

Preservation of records is a crucial aspect of records management, particularly in the context of pension administration where documents often need to be retained for several decades. The Kaduna State Pension Bureau employs a combination of preservation methods, including the use of physical storage units such as cabinets, boxes, shelves, and acid-free folders. For electronic records, cloud storage, databases, microfilm, digital imaging, and adherence to long-term

preservation standards are used. Regular inspection and maintenance of physical storage conditions help to prevent deterioration, while digital preservation techniques ensure that electronic records remain accessible and uncorrupted over time (Zulkipli et al., 2022; Ajibade & Mutula, 2021).

Modern records management trends call for the integration of digital systems such as Electronic Document and Records Management Systems (EDRMS), blockchain technologies, and cloud computing to enhance transparency, reduce fraud, and improve accessibility. Studies have shown that institutions that invest in these systems witness improvements in operational performance, user satisfaction, and regulatory compliance (Asogwa, Ezeani & Asogwa, 2021; Hawash et al., 2024). The adoption of these technologies, coupled with staff training and institutional support, is crucial for transforming the Kaduna State Pension Bureau into a more responsive and efficient institution.

Therefore, records management is indispensable to the effective administration of pension services. The Kaduna State Pension Bureau must continuously adapt its practices to align with technological advancements and global best practices. By addressing the existing challenges and embracing innovations, the Bureau can improve service delivery, enhance accountability, and build trust among retirees and stakeholders alike.

Statement of the Problem

Records are essential documents as other public resources such as assets and finances. Public records therefore should be accorded some measure of importance or value placed on other public resources. This includes their management. This is because record management determines the success or failure of every engagement. One of such engagements is administration of pension services, in which records management is central in its process. Records management is aimed at preparing, arranging, storing and retrieving of records and information when they are needed. It refers to the whole range of activities which an organisation should perform to properly manage its records. Alegbeleye and Chilaka (2019) affirmed that, records management is important because it supports an organisation to make decisions based on evidence, meet operational, legal and regulatory requirements, be open and accountable, enhance operational efficiency and effectiveness, and maintain organisation or collective memory.

Despite a growing body of literature on the importance of electronic records management (ERM), many state-level pension bureaus in Nigeria, including Kaduna State, continue to grapple with legacy systems. Chaputula (2022) found that in many developing contexts, e-records systems remain underutilized due to lack of infrastructure, inadequate training, and limited political will. In the same vein, Dootson et al. (2021) observed that while digital transformation is sweeping through public services globally, many African states lag behind in transforming their records management practices.

Specifically, the Kaduna State Pension Bureau, though mandated to handle pension matters efficiently, still faces challenges related to manual data entry, integration with payroll systems, digitization of documents, and data retrieval. The inefficiencies experienced during pension verification exercises, delays in payments, and poor complaint resolution may be symptoms of

broader records management problems. These challenges echo the findings of Barigye, Kasekende, and Mwirumubi (2022), who noted that institutional performance in public organizations is significantly tied to how well records are organized, accessed, and preserved.

Previous studies have largely focused on the general challenges of public service records management in Nigeria, particularly in the education and health sectors (Asogwa, Ezeani & Asogwa, 2021; Osebhahiemen, 2024). However, little attention has been paid to records management specifically within pension bureaus at the state level, especially in northern Nigeria. This constitutes a significant gap in literature, particularly because pensioners are often among the most vulnerable segments of the population and require timely access to their entitlements.

Moreover, no recent empirical study appears to have evaluated the types of records available, organizational systems in place, mechanisms for retrieval, preservation strategies, disposal methods, or challenges faced by the Kaduna State Pension Bureau in managing pension records. Although digital transformation is gaining ground, as reported by Hawash et al. (2024), there is paucity of research on how state pension bureaus in Nigeria are navigating this change, and what gaps remain in their records management systems.

Research Question

1. What are the Strategies Adopted for the Preservation of Records for Administration of Pension Services at the Kaduna State Pension Bureau, Kaduna State, Nigeria?

Literature Review

Records Preservation in Pension Bureaus

Preservation is defined as a variety of activities related to sustaining materials in a usable state, whether in their original form or in some other usable form. Preservation helps archivists and records management practitioners to use the records again because such records are still accessible and in good condition to be used again (Kootshabe & Mnjama, 2014). This study subscribes to the notion that preservation relates to assigning of resources, and planning and executing of policies, procedures and processes encompassing maintenance, examination, conservation and refurbishment in order to confirm adequate protection of documents (Ngulube, 2003).

Preservation integrates the storage and handling of records (Arp, 2019). Iyishu & Nkanu (2013) opined that preservation refers to recognizing and photocopying impaired resources to reinstate their value with the purpose of accessing the information they contain. Preservation is a perception referring to the reflexive protection of archival resources in which no physical treatment to them transpire.

Effective records preservation is a critical component of records management in pension bureaus. These institutions are responsible for maintaining long-term, sensitive information that affects retirees' rights, financial records, and organizational accountability. The preservation of such records ensures their continued accessibility, authenticity, and reliability over time, regardless of changes in format or storage media. Various methods are adopted to safeguard both physical

and digital records in pension bureaus, combining traditional archival practices with emerging technologies.

Physical records remain a significant part of pension bureau documentation. To preserve these documents, organizations utilize controlled environments that minimize exposure to heat, humidity, dust, and pests. Maintaining physical storage facilities with appropriate environmental controls helps prevent deterioration of paper-based records (Saffady, 2021). These facilities often include designated storage rooms with restricted access to enhance security and reduce the risk of unauthorized handling.

Archival-quality boxes are commonly used to store and protect documents from physical damage and environmental factors. These boxes provide a structured way to organize files while reducing their exposure to light, pollutants, and physical wear. According to Dahiru and Almustapha (2024), properly boxed records are less prone to bending, tearing, and contamination, especially when stored for extended periods.

Steel filing cabinets and lockable drawers offer additional layers of security and organization. These cabinets are essential for housing frequently accessed documents in a secure and accessible manner. Their use supports compliance with data protection regulations by ensuring that only authorized personnel have access to sensitive pension information (Ajibade & Mutula, 2021).

Shelving units enable the orderly storage of large volumes of boxed records and binders. In many pension bureaus, adjustable metal or wooden shelves are used in archives or records rooms to accommodate different sizes and types of documents. Barigye, Kasekende, and Mwirumubi (2022) note that well-labeled shelving systems improve retrieval efficiency and reduce clutter, thereby supporting effective space utilization and safety.

To prolong the life of paper records, pension bureaus increasingly adopt acid-free folders and archival-quality boxes. These materials help prevent acid migration, yellowing, and brittleness that typically occur in standard paper storage. The use of acid-free containers aligns with global preservation standards and supports long-term access to essential documents (Marutha, 2022).
Routine inspections help identify early signs of damage or decay in physical records. Regular maintenance, including dusting, pest control, and structural assessments, is necessary to ensure the longevity of stored documents. Osebhahiemen (2024) emphasized that periodic audits and inspections are essential for detecting vulnerabilities in storage conditions and for initiating timely corrective actions.

To enhance durability and reduce dependence on fragile paper records, pension bureaus often convert key documents into microfilm or scanned digital formats. Microfilming, though an older method, remains a reliable preservation technique due to its longevity and resistance to tampering. Digital imaging, on the other hand, allows for easy duplication and access, contributing to faster service delivery (Zulkipli et al., 2022).

Digital preservation standards such as the Open Archival Information System (OAIS) model and ISO standards guide pension bureaus in maintaining the integrity and accessibility of electronic records over time. These standards ensure that digital files are properly formatted, stored, and migrated to new platforms as technologies evolve (Triantafyllou et al., 2023). Adopting such standards also supports compliance with data retention laws and enhances trust in digital record-keeping.

Cloud storage solutions are increasingly utilized for their scalability, redundancy, and ease of access. Pension bureaus adopting cloud-based systems can benefit from off-site backups, data encryption, and real-time collaboration, reducing the risks associated with physical damage or on-site system failures. Hawash et al. (2023) emphasize that cloud technologies not only improve security and cost-effectiveness but also support remote accessibility, especially in post-pandemic digital environments.

The preservation of records in pension bureaus demands a multifaceted approach that combines physical safeguards with digital innovations. From the use of archival boxes and acid-free folders to cloud storage and digital imaging, each method contributes uniquely to the broader goal of ensuring the long-term availability and integrity of pension records. As the volume and complexity of data increase, pension institutions must continue to invest in preservation practices that are aligned with global standards and technological advancements (Saffady, 2021; Yusuf, Kurniasih, & Setyono, 2023).

Preservation of records and archival management is carried out to prevent information materials from disappearing and to prevent the staining of papers and media materials that would result in the loss of the information they incorporate so that there is a need to preserve these records (Rhys-Lewis & Forde, 2013). However, it is expensive to keep all the institutional records due to the costs related to staff, money and space. The cost of keeping records includes maintenance, migration, cataloguing and accessibility of all the conserved records. According to Lor and Snyman (2005), electronic records preservation would need perpetual maintenance of specialized resources to read old-style electronic material and it would need ongoing creation of stored records in current formats. However, it would be unrealistic to keep institution generated records permanently (Ngulube, 2003). Preservation involves recording keeping activities such as maintenance, examination, conservation and restoration.

The maintenance process includes the regular maintenance of records and archives, certainly in the existing and semi-current records environment, when they are stored in offices or records sections; preservation improves the general protection of records against conservational risks or other physical damages (Duranti & Rogers, 2019). Examination of records incorporates preliminary techniques applied to regulate the original resources and structure of an element and to regulate the degree of its deterioration, modification or loss, and should be carried out during the preservation process (Harris & Schur, 2006).

During the conservation process, the protection of archival resources should be done by the limited physical treatments required to counterattack further deterioration, which would not unfavorably distress the reliability of the original material or source (Putcell, 2019). Restoration is

the function that repairs an element when a replica of the original tool is extremely significant than the conservation of the reliability of the tool. Restoration is not usually regarded as an archival function (Harris & Schur, 2006). These activities are undertaken to physically protect and defend records and archives (Ngulube, 2003).

Research Methodology

This study adopted the quantitative research method with the use of survey research design which is widely recognized as suitable for both large and small populations where the researcher seeks to collect data from a representative sample. The Population of the study consisted staff of the Kaduna State Pension Bureau, Kaduna involving those who manage records. A total of 90 staff cutting across various Departments such as Account, Administration and Registry. Total enumeration sampling technique was used to select 90 staff this is because the population is small and manageable. A self-developed questionnaire was used for data collection. Data collected were analysed descriptively using simple frequencies and percentages presented on table in order to ease comprehension.

Results and Discussion

Response Rate

A total of ninety (90) copies of the questionnaire were distributed to three (3) Departments at the Kaduna State Pension Bureau, Kaduna. Eighty-five (85) copies representing 94.5% of the questionnaire distributed were retrieved. The high response rate was achieved because the numbers were small and manageable and also the persistent follow ups by the researcher and research assistants. The response rate of the respondents based on their Departments is presented on Table 1

Table 1: Response Rate

S/No	Departments	Copies of questionnaire distributed	Copies of questionnaire retrieved	Percentage (%) of retrieved copies of the questionnaire
1	Administration	20	18	20.0
2	Finance	43	41	45.6
3	Registry	27	26	28.9
	Total	**90**	**85**	**94.5**

Source: Researcher's Computation, 2024

Table 1 presented the response rate of the respondents based on their departments. 18(20%) of the respondents were from the Administration Department, 41(45.6%) of the respondents were from the Finance Department and 26(28.9%) of the respondents were from the Registry Department. On the overall, this implies that a majority of the respondents filled and submitted the questionnaire which will give room for generalization of the findings of this study.

Strategies for Preserving Records in Kaduna State Pension Bureau, Kaduna

The researcher sought to find out the methods used in the Preservation of Records in Kaduna State Pension Bureau, Kaduna. In order to achieve this a list of Preservation methods were provided to enable respondents select accordingly. Table 4.5 presents the data collected and analyzed.

Table 2: Strategies for Preserving Records in Kaduna State Pension Bureau, Kaduna

S/No	Strategies for preserving Records	Applicability of Preservation strategies at KSPB				Remarks
		Applicable		Not Applicable		
		Frequency	Percentage (%)	Frequency	Percentage (%)	
1	Storing Records in a secure, climate-controlled environment to prevent deterioration	78	91.8	7	8.2	Positive
2	Using archival-quality materials such as acid-free folders, boxes and sleeves to protect physical documents from damage	80	94.1	5	5.9	Positive
3	Maintaining digital copies of all records to safeguard against loss due to physical damage or disaster	53	62.4	32	37.6	Positive
4	Implementing access controls to restrict unauthorized access to both physical and digital records	63	74.1	22	25.9	Positive
5	Perform necessary repairs or replacements to preserve the integrity of storage materials	31	36.4	54	63.6	Negative
6	Developing and implementing a disaster preparedness plan to mitigate risks such as ire, flooding or theft	49	57.6	36	42.4	Positive
7	Regular cleaning and dusting	58	68.2	27	31.8	Positive
8	Use of CCTV Cameras	55	64.7	30	35.3	Positive
9	Using long-term digital preservation standards	60	70.6	25	29.4	Positive
10	Conducting regular inspections of physical storage areas to identify signs of deterioration or damage	45	52.9	40	47.1	Positive

Source: Field Survey, 2024

Table 2 revealed the various strategies used for preserving records in the Kaduna State Pension Bureau. Strategies that were adopted by 50% and above of the respondents included: storing records in a secure, climate-controlled environment (91.8%), using archival-quality materials such as acid-free folders and boxes (94.1%), maintaining digital copies of records (62.4%), implementing access controls (74.1%), developing and implementing a disaster preparedness plan (57.6%), regular cleaning and dusting (68.2%), use of CCTV cameras (64.7%), applying long-term digital preservation standards (70.6%), and conducting regular inspections of physical storage areas (52.9%). These findings indicate a strong adherence to both physical and digital preservation methods by the Bureau.

However, the strategy of performing necessary repairs or replacements to preserve the integrity of storage materials was not widely practiced, with only 36.4% of respondents indicating its applicability and 63.6% stating otherwise. This suggests a gap in the maintenance aspect of records preservation which may have long-term implications on the durability of physical storage tools and the overall safety of archived information.

The findings on the strategies of preserving records in Kaduna State Pension Bureau align with best practices in records management literature, which emphasize the importance of both physical and digital preservation techniques (Popoola & Oluwole, 2021). The widespread adoption of climate-controlled environments, archival-quality materials, and access controls demonstrates an awareness of environmental and security threats to record longevity, reflecting standards recommended by international archival authorities (International Records Management Trust, 2020). The implementation of disaster preparedness plans and digital preservation standards further indicates proactive efforts to ensure business continuity and protect critical information against unforeseen disruptions (Nwalo, 2018).

Despite these strengths, the low emphasis on performing repairs or replacements of storage materials reveals a weakness in the physical upkeep of storage infrastructure. As Omeluzor et al. (2020) noted, neglecting physical maintenance can accelerate the deterioration of valuable records, potentially leading to irreversible data loss. This suggests that while the Bureau has embraced modern preservation strategies, there is still a need to improve routine maintenance practices to achieve a more holistic preservation framework. Therefore, institutional policies should prioritize training, funding, and monitoring mechanisms to ensure that physical repair protocols are integrated into preservation routines for sustainable recordkeeping.

From the foregoing, the study revealed that the Kaduna State Pension Bureau adopts multiple preservation strategies, including climate-controlled storage, use of archival-quality materials, digital backups, access controls, disaster preparedness, regular maintenance, CCTV surveillance, long-term digital preservation standards, and periodic inspections to ensure the security and longevity of its records.

Conclusion

In conclusion, the Kaduna State Pension Bureau has demonstrated a robust and multi-faceted commitment to the preservation of its records. The Bureau's adoption of a comprehensive set of strategies, ranging from climate-controlled environments and archival-quality materials to advanced digital backups and stringent security measures like CCTV surveillance and access controls, ensures the long-term security and integrity of its vital pension information. This proactive and thorough approach, further strengthened by disaster preparedness and adherence to digital preservation standards, positions the Bureau as a diligent guardian of its records, safeguarding them for the future.

Recommendation

Based on the findings of this study, the following recommendations were proffered:

1. In order to add up to the existing strategies of preserving records in Kaduna State Pension Bureau, Kaduna Nigeria, the Management should perform necessary repairs or replacements to preserve the integrity of storage materials available at the Bureau. Also, it should document the exact standards for climate control (18−20∘C, 45-50% relative humidity), the specifications for archival-quality materials, the frequency and methods for digital backups, and the protocols for access control into a single, official policy document. Improve upon the current budget to cover technology upgrades, archival supplies, and continuous staff training.

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