Staff Training and the Use of Artificial Intelligence (AI) in University Libraries

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ABSTRACT

AI has emerged as a transformative force in university libraries, enhancing service delivery and research skills. However, the successful use of AI for library operations depends profoundly on the readiness and training of the library staff. This study explores staff training and the use of AI in university libraries. A survey design was employed for the study. The study population was 91, comprising all the librarians (professional librarians) working in nine selected university libraries in Ondo, Osun, and Ekiti States, Southwest Nigeria. A census sampling method was used for the study. An online Google Form questionnaire was used to elicit data from the participants. Descriptive statistical tools and Pearson Product Moment Correlation Analysis were used for data analysis. The findings revealed that AI training, such as introductory training on AI fundamentals, Programming and Coding, evaluation of AI, Conferences and Workshops on AI, and ethical considerations of AI, among others, are required for artificial intelligence in university libraries. The study also found a significant relationship between staff training and AI use in university libraries in Southwest, Nigeria. Recommendations were made based on the findings that the university library management should organise regular on-the-job training for staff, focusing on the use of ICT. Also, library management should collaborate with AI experts or AI training institutes to offer specialised training programs tailored to the use of AI in libraries.

1. Introduction

Artificial intelligence (AI) has transformed technology worldwide, impacting each facet of development, including libraries. Libraries are the hub of any educational establishment and are a resource where people of all demographic backgrounds can obtain information. University Libraries in the university environment are primarily intended to give their communities access to knowledge-based

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material and other scholarly resources to assist their parent institutions' overall educational goals (Okpokwasili, 2019). One of the modern digital revolutions is artificial intelligence (AI), which university libraries can use to their fullest potential to provide users with a diversity of more expedient library services. Libraries, a sector tasked with giving people the information they need to be current, relevant, and thriving in this AI-driven era, must incorporate AI due to its rapidly expanding ramifications in our daily lives.

Artificial intelligence (AI) is the capability of machines to perform as human intelligence. Benhamou and Janin (2018) defined AI as a group of knowledge that allows machines to behave with an extraordinary degree of intellect, much like humans. Artificial intelligence (AI) is another breakthrough that cleverly employs machines to accomplish tasks that individuals can do and perform faster than individuals, such as processing enormous amounts of data and making forecasts (Wheatley & Hervieux, 2019). AI is a force that redefines human intellectual, social, and professional landscapes; it is more than just a technology phenomenon (Redek, Marčič, Maldonado, da Silva, & Shenstone, 2023). For instance, academic libraries in emerging nations like Nigeria have not utilised AI as much as they might. According to Wheatley and Hervieux (2019), libraries in many emerging economies have not embraced digital technology, and they have demonstrated resistance to modifications in how technologies are used in various library functions. Tella (2020) argued that although libraries in developing nations are still gaining traction, those in advanced countries have embraced and employed AI technologies in almost every aspect of society. However, there is a need for library staff to be trained to use AI effectively in university libraries.

Staff training is an organisational technique that involves investing in personnel to foster the knowledge, skills, talents, and values that will ultimately improve workers' job performance and boost productivity within the company (Bakare, Akinyemi, & Quadri, 2023). Training is a method of improving employee skills to attain the anticipated goals (Ogundele, 2019). Bakare (2023) opined that given the evolving information demands of library patrons, library staff members must get ongoing training to acquire the new competencies necessary for efficient service delivery in the twenty-first century. Adequate training is essential for library personnel to attain the skills and knowledge to use AI technologies effectively. Moreover, Ajulo and Achonna (2020) stressed that one of the most important strategies for ensuring that librarians can use ICT to address challenges in libraries and information services is to train and retrain them in ICT applications. In this digital age, training helps librarians increase productivity and meet the information needs of library users. Furthermore, training prepares librarians to identify, analyse, and make critical decisions that will improve their productivity in the library. According to Akinyemi and Afolabi (2023), one of the issues with ICT utilisation in libraries is the inappropriate internet training and ICT literacy. Likewise, Smith (2023) posited that AI is better used in a library that prioritises staff training. Institutions that invest in comprehensive staff training improve AI readiness and foster an innovative and adaptable culture (Johnson, 2021).

Several studies have examined the integration of AI into service delivery in university libraries, and they emphasised on the need for library personnel to be trained to enable them using AI for library operations (Walker & Jiang, 2019; Abayomi et al., 2021; Liu et al., 2022; Lo, 2024; Yusuf et al., 2022). However, this study is novel as it explores the required training for library personnel

in using AI in university libraries. This training includes introductory training on AI fundamentals, programming and coding, conferences and workshops on AI, and ethical considerations of AI. Librarians must know AI concepts like machine learning and natural language processing. This will help them understand how AI tools work and their potential applications in the library. Jones and Brown (2022) opined that AI in libraries necessitates specialised capabilities such as data analytics, machine learning techniques, and natural language processing. Moreso, training in programming and coding is essential for librarians in the cataloguing unit. For example, librarians can learn to use AI-powered chatbots to assist patrons or AI-driven systems for personalised recommendations. AI training for librarians should also cover ethical considerations such as data handling and data privacy, copyright, and bias in AI systems. This will guarantee the accountable and equitable use of AI technologies in libraries.

Furthermore, conferences and workshops on AI will help librarians to stay current on new tools and trends. Thus, this will contribute to the skill development necessary for librarians to harness the potential of AI technologies effectively. Whittlestone et al. (2020) discussed that workshops, webinars, and collaborative learning experiences enhance librarian awareness of AI. Other training on specific AI tools relevant to library operations, including user experience (UX) design, AI evaluation and assessment, etc. AI is crucial in university libraries to meet the users' information needs in this digital age. Therefore, the staff of university libraries must acquire new skills through training to stay competent in using AI to provide better services to users. The study aimed to determine the required training for library staff in using AI in university libraries and the advantages of using AI in university libraries. Despite the growing interest in incorporating AI into the operations of academic libraries, notably in advanced nations, there is still a significant gap in the staff training tailored to this technological transition in university libraries, particularly in Nigeria. Based on this gap, this study investigated staff training and the use of AI in university libraries in South-West Nigeria.

1.1 Research Questions

The following are the research questions that guided the study.

(1) What is the required training for library staff in using AI in university libraries?
(2) What are the advantages of using AI in University Libraries?

1.2 Research Hypotheses

There is no significant relationship between staff training and the use of AI in university libraries.

2. Literature Review

2.1 Staff Training and the Use of Artificial Intelligence (AI) in University Libraries

Training improves employees' skills in an organisation, and it is a proactive tactic used to keep the workforce flexible and competitive in a rapidly changing environment. Mohammed, Danjuma,

and John (2022) examined the impact of training and development on employee productivity in the 21st century. The study discovered that trained employees are expected to be more skilled, knowledgeable, and expert in performing their jobs than untrained employees. The study also revealed a positive impact of training on employee productivity. However, staff training is essential for library employees due to the rapid advancement of AI technologies. A study by Omosekejimiu, Eyanfe, Nwobu, and Nweke (2019) identified some training needed by library professionals in this digital era. This training includes digitalising library resources, application management, and computer applications for additional knowledge and abilities. Adequate training is indispensable for preparing library staff with the requisite skills and knowledge to use AI technologies for library functions. A study by Johnson (2024) agreed that training programs that support creativity and innovation empower librarians to investigate novel approaches to incorporating AI into library services. Training on the use of AI will enable the library personnel to fully realise AI's potential and remain relevant in a quickly changing technological context.

Parry and McCarthy's (2023) study found that library staff members can more efficiently install and manage AI-powered data analytics platforms and other AI tools by participating in training programs. The study further clarified that without a clear grasp of AI's principles and ethical issues, university libraries undoubtedly risk becoming caught in the traps of AI rather than taking advantage of it. Similarly, Yusuf et al. (2022) studied the development of artificial intelligence to investigate its application for efficient library services in Nigerian university libraries. The study supported the benefits of using AI in library activities. They emphasised that, among other things, library employees should receive training and retraining on artificial intelligence to enhance library service delivery. Walker and Carbery (2024) opined that when library employees are given the needed training on AI, it can help them use AI to do all the labour-intensive jobs like cataloguing, indexing, and reference management. Hence, this ensures accuracy and efficiency while freeing their time for more strategic and user-focused work. In addition, Floridi and Taddeo (2023) affirmed in a study that when librarians receive staff training that incorporates ethics training, it will help them solve the ethical implications of AI, such as concerns about privacy, bias, and transparency.

Furthermore, Lo (2024) studied artificial intelligence (AI) literacy among university library staff in the United States. The results show that participants have low knowledge of AI principles, limited experience with AI tools, and no skills in ethical considerations of AI. The study, therefore, proposed a framework training that outlines the fundamentals of AI literacy specifically for libraries. Similarly, Akinyemi and Afolabi (2023) investigated ICT application and information service delivery in South-West Nigeria's public polytechnic libraries. The investigation revealed low ICT application in Southwest Nigeria's public polytechnic libraries. It was discovered from the study that one of the reasons for the low rate is a lack of staff training. However, the study found a significant relationship between ICT application and information service in polytechnic libraries. Based on these findings, the study suggested that library personnel should be trained to acquire ICT skills. Additionally, a study by Liu et al. (2022) on the use of artificial intelligence (AI) technology in university libraries' information retrieval found that the primary issues with AI information retrieval technology for university libraries were difficulty learning new information, ambiguous knowledge representation, and poor comprehension of natural language. The study concludes that to operate

and manage AI systems efficiently, training library staff is needed. Also, Abayomi et al. (2021) suggested in their investigation that academic librarians should obtain the competencies required to comply with AI in library operations and that librarians should participate in conferences and training to get ready for the adoption of AI in library operations. However, training of library personnel is crucial for the effective and efficient use of AI in university libraries.

2.2 The Advantages of Using AI in University Libraries

Artificial intelligence is a broad concept that can be used in all aspects of university libraries, such as collection development, cataloguing and classification, circulation, reference services, research and scholarship, and library management. Asefeh and Asemi (2018) identify various places where AI tools could be utilised to advance library services, including circulation, book shelving, and cataloguing library materials. AI improves inventory control and resource allocation (Akinyemi, 2023). Panda and Chakravarty (2022) research artificial intelligence (AI)-driven solutions to meet user needs with or with less human involvement. The study findings revealed that AI Chatbots offer a reliable solution for libraries to initiate virtual assistance, thus augmenting the virtual reference service. Similarly, Li's (2021) findings suggest that AI can enhance the security and protection of library management networks. Moreover, Hussain's (2023) research found that AI is an influential tool that may improve library services. The study also showed that AI in university libraries helps to deliver better information services, search results, and fast access to information. Also, Sivarajah et al. (2017) asserted that AI in university libraries improves dataset analysis. Other benefits are reducing the time-consuming and repetitive tasks and round-the-clock reference services, allowing customers to seek assistance even when the library is closed. AI tools could also be utilised to create novel real-time virtual reference services via mobile to merge existing library resources with third-party information. Chukwueke and Onuoha (2019) described the benefits of ICTs in academic libraries as improving the efficiency and proficiency of library services, lowering the time it takes to access information, and saving physical library space, among other things.

Moreover, AI can acquire, process, and manage library resources in the collection and development unit. Patel (2023) opined that the condition of library resources can be preserved and conserved by AI tools as they can easily be used in cataloguing and classifying library materials. AI-powered chatbots and virtual assistants are to answer queries and help users locate newly acquired materials in the reference unit. Similarly, users' preferences and behaviours can be analysed easily by AI in the circulation unit. Massis (2018) suggested that artificial intelligence tools have been demonstrated to be needed for scholarship and research. Akinyemi (2023) added that AI can help people with disabilities have access to library material. However, Yusuf et al. (2022) found that AI in academic libraries has several advantages, including user-friendliness, unlimited functionalities, and the ability to handle complex labour. Han (2021) contended that artificial intelligence can assist with gathering data and analysis and help library management make decisions without burdening library staff. The study proposed that library management would be improved by merging AI with human knowledge in the library system. The paper also discussed the benefits of employing artificial intelligence in library management. These advantages include shorter working hours and fewer errors, thus

enhancing customer satisfaction. Likewise, Robinson (2024) posited that AI technologies improve library administrative and operational efficiency by streamlining cataloguing operations, reducing manual work, and increasing accuracy. It also helps to optimise resource allocation and manage library inventories more efficiently. AI can help optimise resource allocation, personnel scheduling, and space management, resulting in more efficient library operations (Davis & Green, 2023).

2.3 Rationales of Training for the Use of AI in University Libraries

The rationales of training for AI utilisation in university libraries are:

- Training improves the library staff's technical expertise, such as machine learning algorithms, data analytics, and natural language processing. Robinson and Johnson (2023) argued that training on AI tools improves employees' capacity to run and debug AI systems, which ensures effective and seamless library operations.
- Training enables library personnel to create and carry out rules governing the moral use of AI and guarantee adherence to legal requirements.
- Training on AI tools helps library staff automate repetitive processes like indexing and cataloguing, thus increasing operational efficiency. Chen (2023) opined that well-trained staff can effectively use AI to create cutting-edge services like personalised user experiences and AI-driven research assistance.
- AI training encourages creativity and reduces reluctance to adopt new technology. AI training encourages a proactive and upbeat attitude toward technology integration (Johnson, 2024).
- AI training enables staff members to offer library patrons more individualised and responsive support.

3. Methodology

The research employed a survey design. The study population was 91, comprising all the librarians (professional librarians) working in nine selected university libraries in Ondo, Osun, and Ekiti States, Southwest Nigeria. These states were used due to proximity. The universities were selected based on Federal, State, and Private institutions in each respective state. A census sampling was employed for the study. The entire population served as the study's sample size due to the small and controllable population size. Lawrence (2019) asserted that using the total population is allowed when a population is under control. An online Google Form questionnaire was used to elicit data from the participants. The instrument consisted of sections A and B. Section A consisted of five questions focusing on the demographic attributes of the respondents. Section B consisted of fifteen questions on staff training and the use of AI among university librarians. The questions in section B were in the form of four Likert scales in closed-ended questions. The four-point Likert scale allowed the respondents to take a definite position about their training needs and experience with AI. The study was analysed with Statistical Package for Social Sciences (SPSS) version 23 using descriptive and inferential

statistics such as frequencies, percentages, mean and standard deviation. Pearson Product-Moment Correlation Analysis was used to analyse the relationship between staff training and the use of AI in university libraries at a 0.05 level of significance. The criterion mean was placed at 2.50, indicating that the average mean below 2.50 is considered low and the average mean above 2.50 is considered high.

4. Results

Table 1 revealed that 72 responses were retrieved from 91 librarians, indicating a 79.1% response rate. The response rate of 79.1% is appropriate because 60% is the minimum standard response rate set by Clearinghouse (2019) in social science and education. The highest responses (16.48%) were received from librarians in Obafemi Awolowo University, Ile-Ife, followed by those from Afe Babalola University, Ado-Ekiti (13.89%), Ekiti State University, Ado-Ekiti (9.89%), and Osun State University, Ado-Ekiti (9.98%). However, the fewest responses came from Elizade University, Ilara-Mokin (4.40%). This is because they have only 5 librarians, and not all of them answered the questionnaire, like that of Joseph Ayo Babalola University, Arakeji.

Table 1. Distribution of Librarians and Rate of Responses from the Sampled Universities

Sr. No	Names of the States and Universities	Total Number of Librarians	Number of Questionnaires Retrieved	Percentage
	Ondo State			
1.	The University Library, Federal University of Technology, Akure	8	8	8.79
2.	Adekunle Ajasin, University, Akungba-Akoko	7	5	5.49
3.	Elizade University, Ilara-Mokin	5	4	4.40
	Osun State			
4.	Obafemi Awolowo University, Ife	20	15	16.48
5.	Osun State University	11	9	9.89
6.	Joseph Ayo Babalola University, Arakeji	5	5	5.49
	Ekiti State			
7.	Federal University of Technology, Oye-Ekiti	10	7	7.69
8.	Ekiti State University, Ado-Ekiti	13	9	9.89
9.	Afe Babalola University, Ado-Ekiti	12	10	10.99
	Total	91	72	79.11

Table 2 revealed the demographic distribution of respondents. Responses on gender revealed that 59.7% (43) were female, while 40.3 % (29) were male. Responses on marital status showed that among the librarians, 79.17% (57) were married, and 20.83% (15) were single. Of the designation, there were University Librarians 5.5% (4), Deputy Librarians 8.3% (6), Principal Librarians 13.9%

(10), Senior Librarians 19.4% (14), Librarian I 33.3% (24), Librarian II 15.3% (11), Assistant Librarians 4.2% (3). This indicates that there were more professionals in the cadre of Librarian I than in other cadres in the university libraries, followed by Senior Librarians and the least is Assistant Librarians. Responses on the qualification showed that about 35% (25) had PhD degrees, while about 65.3% (47) were holders of MLIS. This indicates that most of the librarians hold an MLIS degree. More study participants were working in units such as Characteristics Frequency Percentage % Gender: Female 43 59.7 M ale 29 40.3 Total 100 Marital Status: Married 57 79.17 Single 15 20.83 Total 100 Designation University Librarian 4 5.5 Deputy University Librarian 6 8.3 Principal Librarian 10 13.9 Senior Librarian 14 19.4 Librarian I 24 33.3 Librarian II 11 15.3 Assistant Librarian 3 4.2 Total 100 Academic Qualification PhD 25 34.7 MLIS 47 65.3 Total 100 Unit/Department Cataloguing and Classification 33 45.8 Acquisitions 10 13.9 Circulation 15 20.8 Reference 8 11.1 Serials 6 8.3 Total 100 Cataloguing and Classification 43.8% (33), Circulation 20.8% (15), and Acquisitions 13.9% (10).

Table 2. Demographic characteristics of the respondents

Characteristics	Frequency	Percentage %
Gender:		
Female	43	59.7
M ale	29	40.3
Total		100
Marital Status:		
Married	57	79.17
Single	15	20.83
Total		100
Designation		
University Librarian	4	5.5
Deputy University Librarian	6	8.3
Principal Librarian	10	13.9
Senior Librarian	14	19.4
Librarian I	24	33.3
Librarian II	11	15.3
Assistant Librarian	3	4.2
Total		100
Academic Qualification		
PhD	25	34.7
MLIS	47	65.3
Total		100
Unit/Department		
Cataloguing and Classification	33	45.8
Acquisitions	10	13.9
Circulation	15	20.8
Reference	8	11.1
Serials	6	8.3
Total		100

- **Research Question 1**. What is the required training for library staff in using AI in university libraries?

Table 3 reveals the mean and standard deviation of the required training for library staff using AI in university libraries. The grand mean is (x =2.99) higher than the criterion mean (x =2.50). Training on the ethical considerations of AI use in libraries and training in programming and coding have equal and highest mean (x =3.26). Other training with high mean includes training on data handling and data privacy (x =3.18), introductory training on AI fundamentals (x =3.11), and conferences and workshops on artificial intelligence (x =2.99). Training in design and user experience (x =2.58), and training on AI evaluation and assessment (x =2.57). Since all the variables have a high mean, it denotes that training is highly needed for library staff to enable them to use artificial intelligence in university libraries.

Table 3. The Mean and Standard Deviation of the Required Training for Library Staff in Using AI in University Libraries

Sr. No.	Staff Training	Mean	Standard Deviation
1.	Introductory training on AI fundamentals	3.11	.571
2.	Training in Programming and Coding	3.26	.650
3.	Training on how to evaluate and assess AI	2.57	1.019
4.	Conferences and Workshops on Artificial Intelligence	2.99	.813
5.	Training on the ethical considerations of AI use in libraries	3.26	.839
6.	Training on data handling and data privacy	3.18	.657
7.	Training in artificial intelligence design and user experience	2.58	.931
	Grand Mean	**2.99**	
	Criterion Mean	**2.50**	

- **Research Question 2**. What are the Advantages of Using AI in University Libraries?

Table 4 reveals the mean and standard deviation of the advantages of using artificial intelligence (AI) in university libraries. The grand mean is (x =2.98) higher than the criterion mean (x =2.50). Artificial intelligence facilitates rapid information dissemination and retrieval and has the highest mean (x =3.46). This is followed by using AI to enhance the effectiveness of library service delivery, and using AI in university libraries lessens librarians' stress and workload (x =3.18) and (x =3.17), respectively. AI tools help librarians automate repetitive processes like indexing and cataloguing (x =3.08). "Using AI in the library enhances the security and precision of library data" and "AI relieves librarians of manual and repetitive tasks" scored the same mean (x =2.94). AI enables staff to respond to user inquiries promptly (x =2.78). All the variables have a higher mean than the criterion mean, except "using AI in the library helps to optimise resource allocation and manage library inventories more efficiently," which scored a mean (x =2.26) less than the criterion mean.

The low mean may be due to a lack of AI expertise because the allocation of library resources is sensitive among library functions. It was revealed from this analysis that the use of AI in the university library enhances library operations.

Table 4. The Mean and Standard Deviation of the Advantages of Using Artificial Intelligence (AI) in University Libraries

Sr. No.	Usefulness	Mean	Standard Deviation
1.	AI tools help librarians automate repetitive processes like indexing and cataloguing	3.08	.783
2.	Using AI in university libraries lessens librarians' stress and workload	3.17	.872
3.	Using AI in the library enhances the security and precision of library data	2.94	.785
4.	AI enables staff to respond to user inquiries promptly	2.78	.982
5.	Using AI in the library helps to optimise resource allocation and manage library inventories more efficiently	2.26	1.048
6.	The use of AI relieves librarians of manual and repetitive tasks	2.94	.918
7.	Artificial Intelligence facilitates rapid information dissemination and retrieval	3.46	.730
8.	The use of AI enhances the effectiveness of library service delivery	3.18	.718
	Grand Mean	**2.98**	
	Criterion Mean	**2.50**	

- **Hypothesis**

There is no significant relationship between staff training and the use of AI in university libraries.

Table 5 reveals the Pearson Product-Moment Correlation Coefficient r = 0.887, and the significant value (Sig.2-tailed) is 0.000 (less than 0.05). This shows a relationship between staff training and the use of AI in university libraries in southwest Nigeria. The null hypothesis is, therefore, rejected, but the alternative is accepted. This means that training on AI enables the librarians in the university libraries to use AI effectively in library operations.

Table 5. The relationship between staff training and the use of AI in university libraries

		Artificial Intelligence (AI)	Staff Training
Artificial Intelligence (AI)	Pearson Correlation	1	.887**
	Sig. (2-tailed)		.000
	N	72	72
Staff Training	Pearson Correlation	.887**	1
	Sig. (2-tailed)	.000	
	N	72	72

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

5. Discussion of findings

Table 3 answered the questions on the required training for library staff in using AI in university libraries. The findings revealed that AI training, such as introductory training on AI fundamentals, Programming and Coding, evaluation of AI, Conferences and Workshops on AI, and ethical considerations of AI, among others, is highly required for artificial intelligence in university libraries. This finding agrees with Floridi and Taddeo's (2023) findings that librarians are more prepared to address the ethical implications of AI, such as concerns about privacy, bias, and transparency, when they receive staff training that incorporates ethics training. Additionally, the findings align with Parry and McCarthy's (2023) position that staff members can more efficiently install and manage AI tools in libraries after participating in training programs. Likewise, the study by Johnson (2024) affirmed that training programs that support creativity and innovation empower librarians to investigate novel approaches to incorporating AI into library services. Similarly, Jones and Brown (2022) opined that training programs that equip library staff with ICT competencies are essential.

In addition, Table 4 shows the advantages of using AI in university libraries. It was found that the benefits of using AI in university libraries were high. This includes that AI helps the staff to respond to user inquiries promptly, facilitates rapid information retrieval, relieves librarians of manual and repetitive tasks, enhances the effectiveness of library service delivery, and AI in university libraries will lessen librarians' stress and workload, among others. This finding agrees with Li's (2021) study on library network security with the integration of AI. The findings show that AI can enhance the security and protection of library management networks. Similarly, Hussain's (2023) research showed that AI is a powerful tool that may improve library services. Akinyemi (2023) also agrees that AI improves inventory control and resource allocation, also known as resource management. Moreover, the study discovered a significant relationship between staff training and AI use in university libraries in southwest Nigeria. Likewise, Walker and Carbery's (2024) study asserted that when given the required training, library employees can use AI to do all the labour-intensive jobs like cataloguing, indexing, and reference management.

Furthermore, the findings of this study agree with scholars on the relationship between training and employees' job performance in an organisation. For instance, the findings of a study by Daniel (2019) on the effects of human capital development on organisational performance established a connection between training and organisational performance. The result showed that training enhances employees' skills and knowledge in addressing the obstacles posed by technological innovation. Akinyemi and Afolabi's (2023) research on the use of ICT in public polytechnic libraries in South-West, Nigeria, found that the use of ICT is low due to the lack of ICT skills. They suggested that library personnel should be trained to acquire ICT skills. Similarly, Mercy and Wali (2021) investigated the influence of staff training and development on librarians' job performance in federal university libraries in South-South Nigeria. The result also showed that training and development programmes influence librarians' job performance. Based on the findings, the study recommended staff training and development to be one of the regular exercises by university libraries in South-South Nigeria.

6. Theoretical Framework Theory of Human Capital

Human Capital Theory was used to underpin the findings of this study. The theory of human capital was initially proposed by Schultz (1961) and further refined by Greg Becker in 1964. Human Capital Theory illustrates how an organisation can increase employee capacity by accumulating knowledge, skills, and abilities through training and development. The notion claims that training increases employee productivity by providing information, skills, and talents (Abdul-Rasheed & Adebayo, 2018). In other words, human capital includes methods for developing human characteristics that can improve organisational productivity. The human capital theory proposes that individuals invest in themselves. The theory explains the significance of labour maximisation and how an organisation might gather employees' knowledge, skills, and abilities to build employee capability and increase organisational performance. Skill denotes the capability to apply information and techniques to fulfil responsibilities and unravel issues. Knowledge is an employee's intellectual grasp of how to increase organisational performance. Ability is the physical capacity of an employee to perform and accomplish work. It refers to the attribute or state of being able or capable of performing something.

This theory aligns with this study because the theory illustrates how an organisation can increase employee capacity by accumulating knowledge, skills, and abilities through training and development. In this new digital era, librarians in university libraries are expected to deliver library services to the best of their capabilities and meet users' information needs with AI. For the librarians in the university libraries to be competent in AI and effectively use AI to deliver library services, they need to acquire some skills and knowledge on AI that will enable them to be efficient. Such skills include AI fundamentals, AI ethics, programming and coding, AI evaluation, etc. However, for employees to attain new skills and knowledge, the library must organise training programmes for the employees. Librarians' jobs include cataloguing and classification, resource acquisition, and reference services. etc. Using AI to reduce the tasks requires skills and knowledge. As a result, staff training on AI in university libraries is necessary. Awogbami, Opele, and Adeoye (2021) affirmed that the library profession is dynamic and problematic, and the most productive and effective way for professional librarians to address these problems is to look for professional development programmes. Similarly, Ahanya, Vasudevan, and Prasanth (2021) stated that professional librarians require training to improve their job performance, expand their knowledge, and become experts in technological advancements.

7. Conclusion and Recommendations

7.1 Conclusion

The study explored staff training and the use of AI in university libraries. The study revealed that training is essential for librarians in university libraries to acquire skills and knowledge that will enable them to use AI effectively. This training includes AI fundamentals, ethical consideration of AI, programming and coding, AI evaluation, etc is highly required More so, the findings showed

the benefits of the use of AI in university libraries AI enhances the effectiveness of library service delivery, facilitates rapid information dissemination and retrieval, enables staff to respond to user inquiries promptly, and help librarians automate repetitive processes like indexing and cataloguing etc. Based on the findings, the study concludes that training on AI is vital for librarians to effectively and efficiently use AI in university libraries, and this will enable the libraries to enjoy the benefits of using AI.

7.2 Recommendations

a. The university library management should organise regular on-the-job training for staff, focusing on the use of ICT.
b. Library management should collaborate with AI experts or AI training institutes to offer specialised training programs tailored to the use of AI in libraries.
c. The librarians should be allowed to attend a workshop or seminar on AI to ensure that staff are well-trained and skilled for the effective use of AI in the library.
d. The staff of university libraries should encourage themselves to acquire the required skills and knowledge in AI since it will lessen their workload and enhance their service delivery.
e. Library management should find a method of assessing librarians and ensure that the training programs identify areas for improvement.

8. Implications

The findings of this study have significant implications for library staff training on the use of technologies. Staff training in this study is tailored to enhance the use of AI for library operations. The university librarians should encourage all librarians in the university libraries to develop themselves to be relevant in this digital age. Furthermore, university library management should allocate funds toward staff training programs that will enable librarians to acquire the skills and knowledge to be experts in technologies, thereby simplifying the effective use of AI for library operations. Librarians in university libraries should make themselves available for the training.

Suggestions for Future Studies

i. Only librarians in university libraries were examined. Consequently, this limits the chance of getting diverse answers on staff training and the use of AI in other academic libraries in Nigeria and other countries. Therefore, future studies on a similar topic should examine AI training needed by other types of libraries aside from university libraries in Nigeria and other countries.
ii. Future studies should explore how training on AI tools like text-to-speech or screen readers can help library personnel make library resources accessible for users with disabilities.
iii. Future studies should examine the long-term impact of AI training on library performance

using longitudinal studies.

iv. Finally, future studies should research different approaches involved in AI training or assess the comparative effectiveness of AI training methods.

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