

Awareness and Perceptions of Artificial Intelligence among Librarians in University Libraries in Kwara State, Nigeria



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Abstract

Problem Statement: The invention of Artificial Intelligence (AI) has greatly enhanced the potential of academic libraries' services. **Purpose:** This study explores the awareness and perceptions of AI among librarians in university libraries in Kwara State, Nigeria. **Method:** It adopted descriptive survey method. The population of this study are 37 professional librarians in University of Ilorin's and Kwara State University's libraries. Census enumeration sampling technique was used to select the respondents. Questionnaire was used to collect data from the respondents, with the support of two research assistants. Data collected was analysed and presented in frequency, simple percentages and mean ($\bar{x}$). **Result:** Findings revealed that Chatbots and Dynamed are the AI the respondents were aware of. The respondents have the perceptions that AI technologies can be adopted in university libraries, capable of replacing human librarians in future and AI is a positive development for librarians. Findings further indicated that the respondents perceived that AI is beneficial in university libraries because it provides patron-tailored recommendations to items, can reduce manual and repetitive tasks performed by librarians and facilitates the discovery of new knowledge. But the major factors affecting the adoption of AI include poor internet connectivity and lack of expertise among librarians. **Conclusion:** This study concluded that librarians' awareness of AI influences their perceptions of it. It recommends among others that management of university libraries in Kwara State should train their librarians on AI.

Keywords: Awareness; Artificial Intelligence; Kwara State; Perceptions; University libraries

Abstrak

Permasalahan: Penemuan Kecerdasan Buatan (Artificial Intelligence atau AI) telah sangat meningkatkan potensi layanan perpustakaan akademis. **Tujuan:** Penelitian ini mengeksplorasi kesadaran dan persepsi tentang Kecerdasan Buatan (AI) di kalangan pustakawan di Perpustakaan Universitas di Kwara State, Nigeria. **Metode:** Penelitian ini mengadopsi metode survei deskriptif. Populasi penelitian ini adalah 37 pustakawan profesional di Perpustakaan Universitas Ilorin dan Universitas Kwara State. Teknik pengambilan sampel sensus enumerasi digunakan untuk memilih responden. Kuesioner digunakan untuk mengumpulkan data dari responden, dengan dukungan dari dua asisten penelitian. Data yang dikumpulkan dianalisis dan disajikan dalam bentuk frekuensi, persentase sederhana, dan rata-rata ($\bar{x}$). **Hasil:** Temuan menunjukkan bahwa Chatbot dan Dynamed adalah bentuk kecerdasan buatan yang dikenal oleh responden. Responden memiliki persepsi bahwa AI dapat diadopsi di perpustakaan, mampu menggantikan pustakawan di masa depan, dan AI merupakan perkembangan positif bagi pustakawan. Temuan lebih lanjut menunjukkan bahwa responden berpendapat bahwa AI juga dapat memberikan rekomendasi yang disesuaikan dengan kebutuhan pemustaka terhadap koleksi, dapat mengurangi tugas manual dan berulang yang dilakukan oleh pustakawan, serta memfasilitasi penemuan pengetahuan baru. Namun, faktor utama yang mempengaruhi adopsi AI ini meliputi konektivitas internet yang buruk dan kurangnya keahlian pustakawan untuk memanfaatkannya. **Kesimpulan:** Penelitian ini menyimpulkan bahwa kesadaran pustakawan terhadap kecerdasan buatan mempengaruhi persepsi mereka terhadapnya. Saran dari peneliti adalah bahwa manajemen Perpustakaan Universitas di Kwara State untuk melatih pustakawan dalam memanfaatkan AI.

Kata kunci: Kesadaran; Kecerdasan Buatan; Kwara State; Persepsi; Perpustakaan Universitas.

I. INTRODUCTION

Technological advancements have ushered a pulsating paradigm shift in all dimensions of the daily activities of humans. The wind of the changes blowing around human nature does not leave libraries behind and has challenged all types of libraries to be striving towards responding to the trending practices. As institutions established for the propagation of access to and dissemination of information by efficiently managing information resources, academic libraries, in the contemporary times, have been riddled with the tasks of providing enabling technologies to support research, teaching and learning.

The submission above aligns with the claim of Hervieux and Wheatley (2021) that librarians and information practitioners have historically responded to new technological advancements that provide advances in their profession. One of the technological tools that have caused a significant disruption to the operations and services of academic libraries is artificial intelligence (AI). AI is a rapidly evolving field, changing how librarians interact with technology. It involves the development of intelligent computers that can perceive, think and behave like humans (Goralski and Tan, 2020; Hassani et al., 2020; Popenici and Kerr, 2017).

Background. Mamela (2023) defined AI as the progression of computer systems that are capable of executing tasks that normally require human intelligence, such as decision making, object detection, solving complex problems and so on. The four types of AI are reactive AI, limited memory AI, theory of mind AI, and self-aware AI. AI is characterised as the technology that enables machines to be able to have the abilities to plan, learn, reason, solve problems, move and be creative to some extent (Mamela, 2023; Subaveerapandiyan, Sunanthini & Amees, 2023). AI appears to be capable of positively changing the user experience in academic libraries. Hence, academic libraries should consider integrating AI to their services.

AI has enormous potential to greatly improve a library's productivity. Memela (2023) argued that academic libraries have been trying to find ways to offer automated services to their users over the years. From the card system to computers, to digitization, to e-books and databases, and even RFID. AI technology in academic libraries has raised the bar for the effectiveness and efficiency of library service delivery, enabling libraries to enhance and offer dynamic services for library users. It is user-friendly, especially in searching for information, and is also used to direct and assist library activities (Yusuf et al., 2022).

As AI continues to evolve, it will be important for academic libraries to keep pace with the latest developments and adapt their services accordingly (Bubinger & Dinneen, 2021; Huang & Rust, 2018; Lund et al., 2020). Huang (2022) posited that the advent of AI has made the functions of libraries more complicated in which future librarians might need more complex, critical, innovative, and imaginative thinking, as well as emotional involvement to design and execute effective library services. Memela (2023) asserted that AI seems to be the new hope for academic libraries to provide more of the automated services to their users because it is one of the technologies that has arisen and will play a major role in the 5th Industrial Revolution (5IR).

Incorporating AI to services of academic libraries is a developmental strategy that most academic libraries have come to embrace and appropriate. With the use of AI, the duties of librarians can be made easier and service delivery would be efficient. AI is not just important for academic librarians in terms of functions and activities, it is also crucial for the growth and value of libraries in the world today (Omame & Alex-Nmecha, 2020). It is on this note that this study is farmed to explore the awareness and perceptions of AI among librarians in university libraries in Kwara State, Nigeria.

Problems. Libraries have traditionally been viewed as institutions that promote access to information and knowledge. The invention of AI has greatly enhanced the potential of academic libraries' services (Massis, 2018). Mahmoud (2023) asserted that it has become necessary for academic libraries to introduce and exploit artificial intelligence in their operations and services. Currently, the wide evolution of AI in academic libraries with its clear-cut, sophisticated and overwhelming proficiency (Omigie, Krubu & Anthony, 2023) has ensured multiple and specific upload of tasks and also be integrated with other system solutions for super results (Konfuzio, 2022).

Massis (2018) found that while AI may be seen as a threat to traditional institutions like libraries, it also has the potential to enhance library services greatly. It is important to note that AI is still in its early stages of development and many challenges need to be addressed before it can be fully integrated into libraries and information services. Subaveerapandiyan, Sunanthini and Amees (2023) opined that AI is still in its early stages of development, and many challenges need to be addressed before it can be fully integrated into libraries and information services. These challenges include privacy, security and ethical considerations.

Asim, Arif, Rafiq and Ahmad (2023) itemized highly integrated technological infrastructure, funding/cost associated with AI, collaboration between AI experts and professionals, library users' feedback, requirement of a highly networked and integrated environment, lack of budget, high cost of AI technologies, and lack of staff expertise as some key factors influencing AI's adoption and application in academic libraries. This justifies why this study is structured to explore the awareness and perceptions of AI among librarians in university libraries in Kwara State, Nigeria.

Previous Literature Review. Subaveerapandiyan, Sunanthini and Amees (2023) studied the knowledge and perception of artificial intelligence by librarians in Zambia. They found that LIS professionals were aware of the skills required to adopt AI technologies, hence their eagerness and preparedness to take the lead role, which is contrary to what Cox et al. (2018: 426) suggested when they stated that 'IT [information technology] services might be in a greater natural position to take on some of these [AI management] duties.' The study also shows that LIS professionals were concerned that AI could threaten their jobs, with the fear that most of their roles could be replaced by intelligent machines. There is strong evidence that LIS professionals perceive AI as playing a significant role in library services in the future based on the study's favourable findings on its usage in various library-related contexts.

Moustapha and Yusuf (2023) wrote a conceptual paper on the adoption of AI for effective library services in academic libraries in Nigeria. They identified the advantages of adopting artificial intelligence in academic libraries, which include ease of use, endless functionality, and the ability to perform complex work, among others. However, they noted that the challenges faced by library management towards adopting artificial intelligence include financial uncertainty, job loss, and technological defects and others. They concluded that adoption of AI in academic libraries sets a new level of efficient and effective library service delivery, but its adoption in developing countries such as Nigeria is low due to some identified challenges.

Asim, Arif, Rafiq and Ahmad (2023) investigated the applications of Artificial Intelligence (AI) in the university libraries of Pakistan. Following the explanatory sequential mixed-methods approach, the study was completed in two phases. In the first phase, quantitative data was collected from 237 university librarians across Pakistan. In the second phase, 10 purposefully selected university librarians were interviewed. The results reveal that Pakistani university libraries are using limited AI-based library services including text-to-speech and speech-to-text technologies, Google Assistant to search by voice command, Radio

Frequency Identification (RFID) system for self-checkout, check-in, and security purposes, and intelligent data analysis for collection management.

Xie (2023) explores the application of artificial intelligence technology in public library information retrieval. The paper argues that the public library as an important place in the society to provide mass education for the masses should fully seize the development opportunity with artificial intelligence technology as the core idea in the operation and development, carry out intelligent, automatic and digital reform and innovation of the library, and optimize the links of information retrieval, book borrowing, information service and access to the library. Through the artificial intelligence and other advanced technologies, the whole science and technology content of public libraries and public service quality is improved so as to meet the specific needs of the public for the use of public education resources. The paper highlights the specific application of artificial intelligence technology in public library information retrieval link and related service applications and provide some reference for professionals.

Cox (2022) investigated how artificial intelligence might change academic library work. The paper considers the likelihood of the adoption of different approaches to AI in academic libraries and draws on both the library and information science (LIS) literature on librarians' competencies and the notions of jurisdiction and hybrid logics drawn from the sociological theory of the professions. The paper starts by outlining the theories and then reviews the nature of AI and the range of its potential uses in academic libraries. The main focus of the paper is on the application of AI to knowledge discovery. Eleven different potential approaches libraries might adapt to AI applications are analyzed and their likelihoods were evaluated. It finally considers how a range of internal and external factors might influence the adoption of AI in libraries.

Obiano et al (2022) investigated aiding the exploration of artificial intelligence (AI) in Nigeria academic libraries. Descriptive survey method was adopted for the study; a structured 4-point online questionnaire was designed for data collection. The population of the study is 250 librarians who are members of the Librarians' Registration Council of Nigeria (LRCN). The sample size comprises 170 librarians who use computer systems in the day to day running of academic libraries in Nigeria with fair knowledge of AI tools. Data collected were analysed using frequency count, percentages and mean ($\bar{x}$) score. The study revealed that institutional support for adoption of AI is low, but the level of ICT competence of library staff is high. It was also revealed that there is perceived usefulness of AI to the librarians and the factors militating against the adoption of AI is high, consisting of factors such as lack of needed AI tools and inadequate planning.

Tang and Zhang (2023) noted that the application of AI (artificial intelligence) in libraries is not only the result of the development of technology, but also the choice of libraries to improve their service. They argued that better integration of AI in libraries still needs further exploration and libraries also need guidance in implementing AI technology. The study uses a systematic literature review method to analyze the literature on the application of AI in libraries published before 2023. Based on sorting out the application of AI in libraries, the paper summarizes and analyzes the practice and attitudes of applying AI in libraries. The study found that there is a broad prospect of AI applications in libraries, but the current application is scattered and lacks a comprehensive view. There are different attitudes towards the application of AI in libraries and it is important to learn about different views.

Hervieux and Wheatley (2021) evaluated the perceptions of librarians with regard to artificial intelligence in academic libraries in Canada and the United States. An online survey of 24 questions was distributed through library distribution lists in Canada and the United

States at the end of the summer in 2019. Findings show that librarians do not agree on a definition of artificial intelligence which is in keeping with this emerging field. The responses highlight the fact that academic librarians require more training with regard to artificial intelligence and its potential applications in libraries. Other important implications include a recognition that library patrons are interested in AI and that little to no programming about it has been offered in academic libraries.

State of The Art. Artificial intelligence, as intelligence demonstrated by machines have become a prominent tool for contemporary library and information services because they are designed to perform some activities including speech recognition, learning, planning, perception, logical reasoning and problem solving (Igwe & Sulyman, 2022). The algorithms embedded in AI make it capable of predicting and adapting, make decisions on its own, continuously learn, forward-looking, motion and perception (Saleh, 2019). For instance, AI can be programmed to be delivering information to users at stipulated time without the librarian's interventions.

Researches have shown that the adoption AI in libraries and information centers are based on the awareness and perceptions of the LIS professionals in different societies. Looking at Nigeria for instance, Moustapha and Yusuf (2023) noted that libraries in Nigeria are struggling to adopt AI because of paucity of fund and technological defects, while the fear of job loss, reliability on and authenticity of content and fear of privacy and confidentiality are the problems associated with the librarians' perceptions. However, Subaveerapandiyan, Sunanthini and Amees (2023) claimed that LIS professionals in Zambia were aware of the skills required to adopt AI technologies. This spurred their eagerness and preparedness to take the lead role in adopting AI in libraries.

Purpose. This study will serve the following purposes of revealing the awareness of AI by librarians in university libraries in Kwara State, the perceptions of AI by librarians in university libraries in Kwara State, the perceived benefits of AI by librarians in university libraries in Kwara State and the challenges affecting the adoption of AI by university libraries in Kwara State?

II. METHODS

This study adopted descriptive survey method to gather opinions of librarians in university libraries in Kwara State on the subject understudied. Its population consists of 37 professional librarians in two selected university libraries in Kwara State. This comprises 23 librarians from University of Ilorin library and 14 from Kwara State University library. Census enumeration sampling technique was adopted in order to allow all the targeted population participate in this study. A self-developed questionnaire arranged into two major sections was used to collect data from the respondents. Section One focused on demographic information of the respondents, while Section Two was tailored towards answering the questions raised. Face validity was adopted by submitting the questionnaire to experts in Library and Information Science and Artificial Intelligence. The questionnaire was administered to the respondents by two Research Assistants. Data collected was presented and analysed in frequency tables, percentages and mean ($\bar{x}$).

III. RESULTS AND DISCUSSION

The researcher involved 37 respondents as sources of research information with the characteristics depicted in Table 1.

Table 1.
Demographic Characteristics of the Respondents

	Options	F	%
Gender	Male	25	67.6
	Female	12	32.4
	Total	37	100
Age range	21 – 25 years	0	0
	26 – 30 years	2	5.4
	31 – 35 years	10	27.0
	36 – 40 years	5	13.5
	41 years and above	20	54.1
	Total	37	100
Academic qualification	BSc/BLIS	6	16.2
	MSc/MLIS	20	54.1
	PhD	11	29.7
	Total	106	100
Marital status	Single	10	27
	Married	25	68
	Divorced	1	3
	Widow	1	3
	Total	37	100
Work experience	1 – 5 years	10	27.0
	6 – 10 years	8	21.6
	11 – 15 years	7	18.9
	16 – 20 years	6	16.2
	21 years and above	6	16.2
	Total	37	100
Job status	Assistant Librarian	9	24.3
	Librarian II	5	13.5
	Librarian I	7	18.9
	Senior Librarian	6	16.2
	Principal Librarian	4	10.8
	Dep. Univ. Librarian	4	10.8
	University Librarian	2	5.4
	Total	37	100

Source: Data Researcher, 2023

Table 1 shows that 25 (67.6%) of the respondents were male, while 12 (32.4%) were female. 20 (54.1%) were within the age range of 41 years and above, followed by 31 – 35 years with 10 (27.0%), 36 – 40 years 5 (13.5%), while 26 – 30 years constitute 5.4%. Also, 20 (54.1%) of the respondents had MSc/MLIS, followed by 11 (29.7%) who had PhD and 6 (16.2%) had BSc/BLIS. Furthermore, 25 (68%) were married, followed by 10 (27.0%) who were single and 1 (3%) was widow and divorce respectively. More so, 10 (27.0%) had 1 – 5 years' work experience, 8 (21.6%) had 6 – 10 years experience, 7 (18.9%) had 11 – 15 years experience, while 6 (16.2%) respectively for 16 – 20 years and 21 years and above. Finally, majority 9 (24.3%) were Assistant Librarians, 7 (18.9%) were Librarian I, 6 (16.2%) were Senior Librarians, 5 (13.5%), 4 (10.8%) respectively were Principal Librarian and Deputy University Librarian, while 2 (5.4%) were University Librarian.

The Awareness of AI by Librarians in University Libraries in Kwara State

Table 2.

Awareness of AI by librarians in university libraries in Kwara State

Options	Yes		No	
	(F)	(%)	(F)	(%)
I am aware of dynamed	20	54.1	17	45.9
I am aware of Micromedex	18	48.6	19	51.4
I am aware of expert AI	14	37.8	23	62.2
I am aware of virtual references	16	43.2	21	56.8
I am aware of chatbots	22	59.5	15	40.5

Source: Data Researcher, 2023

Table 2 reveals that majority of the respondent 22(59.5%) are aware of Chatbots, followed by 20(54.1%) for Dynamed. However, 48.6% are not aware of Micromedex, 43.2% for virtual references and 62.2% were not aware of expert AI. This implies that Chatbots and Dynamed are the AIs the respondents are aware of.

The Perceptions of AI by Librarians in University Libraries in Kwara State

Table 3:

Perceptions of AI by Librarians in University Libraries in Kwara State

Options	SA		A		D		SD		(M)
	(F)	(%)	(F)	(%)	(F)	(%)	(F)	(%)	
AI is a positive development for librarians	10	27	15	41	6	16	6	16	1.31
AI technologies can be adopted in university library	12	32	18	49	4	11	3	8	1.42
AI is capable of replacing human librarians in the future	12	32	16	43	5	14	4	11	1.37
Adoption of AI technologies will help to fasten library activities	9	24	13	35	8	22	7	19	
Adoption of AI technologies will help to ease library stress	7	19	13	35	9	24	8	22	

Source: Data Researcher, 2023

Table 3 shows that majority of the respondents perceived that AI technologies can be adopted in university libraries with ($x = 1.42$), followed by AI is capable of replacing human librarians in future ($x = 1.37$) and ($x = 1.31$) for AI is a positive development for librarians. On the other hand, adoption of AI technologies will help to ease library stress has the lowest mean with ($x = 1.14$). This means that AI technologies can be adopted in university libraries, AI is capable of replacing human librarians in future and AI is a positive development for librarians are the perceptions of most of the respondents on AI in university libraries.

The Perceived Benefits of AI by Librarians in University Libraries in Kwara State

Table 4.

Perceived Benefits of AI by Librarians in University Libraries in Kwara State

Options	SA		A		D		SD		(M)
	(F)	(%)	(F)	(%)	(F)	(%)	(F)	(%)	
AI reduces manual and repetitive task performed by librarians	11	30	9	24	10	27	7	19	1.31
AI-powered library search tools is better and faster	8	22	11	30	9	24	9	24	1.20
AI provides patron-tailored recommendations to items	13	35	10	27	8	22	6	16	1.36

AI facilitates the discovery of new knowledge in university libraries	10	27	14	38	6	16	7	19	1.27
AI saves time spent on generating information	9	22	10	24	9	11	10	16	1.14

Source: Data Researcher, 2023

Table 4 indicates that majority of the respondents ($x = 1.36$) perceived AI provides patron-tailored recommendations to items as the main benefits of AI in university libraries, followed by AI can reduce manual and repetitive tasks performed by librarians ($x = 1.31$) and AI facilitates the discovery of new knowledge in university libraries ($x = 1.27$). However, AI saves time spent on generating information ($x = 1.14$). This means that AI provides patron-tailored recommendations to items, AI can reduce manual and repetitive tasks performed by librarians and AI facilitates the discovery of new knowledge in university libraries are the perceived benefits of AI by the respondents.

The Challenges Affecting the Adoption of AI by University Libraries in Kwara State
Table 5.

Challenges Affecting the Adoption of AI by University Libraries in Kwara State

Options	SA		A		D		SD		(M)
	(F)	(%)	(F)	(%)	(F)	(%)	(F)	(%)	
The lack of expertise among librarians	4	10.81	8	21.62	10	27.03	15	40.52	1.64
The low level of awareness of AI among librarians	17	45.95	3	8.11	13	35.14	4	10.81	1.09
The cost of implementing AI systems	25	67.57	5	13.51	4	10.81	3	8.11	1.10
Resistance to change from librarians and library users	10	27.03	7	18.92	11	29.73	9	24.32	1.29
Low level of support from government and funding agencies	21	56.76	6	16.22	8	21.62	2	5.41	1.32
Epileptic power supply	27	72.97	3	8.11	2	5.41	5	13.51	1.69
Poor internet connectivity	30	81.08	3	8.11	3	8.11	1	2.70	1.76

Source: Data Researcher, 2023

Table 5 reveals that poor internet connectivity has the highest mean ($x = 1.76$) out of the challenges affecting the adoption of AI by university libraries, followed by epileptic power supply ($x = 1.69$), lack of expertise among librarians ($x = 1.64$) and low level of support from government and funding agencies ($x = 1.32$). on the other hand, low level of awareness of AI among librarians has the lowest mean with ($x = 1.09$). This implies that poor internet connectivity, epileptic power supply, lack of expertise among librarians and low level of support from government and funding agencies are the major challenges to adopting AI in libraries of the respondents.

Discussion of Findings. Results showed that Chatbots and Dynamed are the AIs the respondents are aware of. This affirms the notion that chatbots is gaining prominence in Library and Information Science landscape. Since 2022 when chatbots was launched, it has become a veritable AI tool that enhances the provision of more efficient and effective services to library patrons, provides round-the-clock support, answer user queries, and significantly enhance customer service in libraries (Jones, 2019). Discovering that the respondents are aware of Dynamed, a not too common AI in Nigeria, indicates that the respondents are keeping themselves up-to-date with technological advancements that can help them in providing quality and reliable information to users.

Furthermore, this study revealed that the respondents have the perceptions that AI technologies can be adopted in university libraries, capable of replacing human librarians in future and is a positive development for librarians. The implications of the respondents' perceptions are that aside the possibility of adopting AI in university libraries, the respondents perceived that AI is a positive technological advancement that can be used to perform some tasks initially performed by librarians. This may make AI a replacement for librarians in the future.

The perceptions of the respondents make them believed that AI provides patron-tailored recommendations to items, can reduce manual and repetitive tasks performed by librarians and facilitates the discovery of new knowledge in university libraries. These perceived benefits of the respondents corroborate the points of Hervieux and Wheatley (2021) that America and Canadian librarians perceived AI to be technological tools that can be leveraged to perform repetitive tasks and facilitates prompt discovery of knowledge among users of libraries.

Studies have established that AI has not been adopted in many libraries in different parts of the world because of series of factors. This study revealed poor internet connectivity, epileptic power supply, lack of expertise among librarians and low level of support from government and funding agencies as the major challenges of adopting AI in libraries of the respondents. This buttresses the claims of Obiano et al (2022); Moustapha and Yusuf (2023) that the adoption and implementation of AI in Nigerian libraries have been affected by inadequate funding of university libraries, poor internet bandwidth and inadequate ICT infrastructure.

IV. CONCLUSION

AI is an emerging technology transforming the operations and services of libraries. But its seamless and prudent adoption and implementation in libraries rest of many factors. This study reveals that chatbots and Dynamed are the major AI librarians in university libraries in Kwara State are aware of. It further established that librarians in university libraries in Kwara State have the perceptions that AI can be adopted in university libraries, it is capable of replacing human librarians in future and is a positive development for librarians. This makes the librarians perceived provision of patron-tailored recommendations to items, reduce manual and repetitive tasks performed by librarians and facilitates the discovery of new knowledge in university libraries. However, it is difficult to adopt AI in university libraries because of poor Internet connectivity, epileptic power supply and lack of expertise among librarians.

Based on the research findings, several recommendations are proposed. Firstly, it is advised that the management of university libraries in Kwara State takes proactive measures to train their librarians in the field of Artificial Intelligence (AI). This training is essential for enhancing the librarians' expertise in AI, enabling them to effectively integrate AI into library services. Secondly, collaboration between the management of university libraries in Kwara State and internet service providers is crucial. Establishing a reliable and robust internet connectivity infrastructure will facilitate the seamless adoption of AI in university libraries. Thirdly, there is a recommendation for increased support from government and funding agencies for university libraries. Adequate financial backing will empower university libraries to invest in the necessary infrastructure for the successful integration of AI. Lastly, the management of university libraries in Kwara State should prioritize ensuring a stable power supply. This is essential for guaranteeing the consistent availability of the power needed to support AI adoption in library operations. These

recommendations collectively aim to pave the way for a more effective and technologically advanced environment within university libraries in Kwara State.

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