

**LIBRARIANS' PREPAREDNESS FOR ARTIFICIAL INTELLIGENCE FOR  
OPTIMAL SERVICE DELIVERY IN UNIVERSITY LIBRARIES IN NIGERIA**

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**Abstract**

This paper investigates the preparedness of librarians in Nigerian university libraries for the adoption of Artificial Intelligence (AI) and explores its potential impact on service delivery. The study draws on existing research and studies conducted in the Nigerian context, highlighting the importance of AI adoption in university libraries as crucial information hubs. Despite the awareness of AI technologies among librarians, there is a lack of in-depth understanding and practical experience in implementing AI solutions. AI technologies offer several benefits for university libraries, including the automation of routine tasks, personalized recommendations for users, and data-driven decision-making. Challenges faced by librarians include the absence of formal training programs, limited access to resources and infrastructure, and the rapid pace of technological advancements. However, to address these challenges, librarians need to be equipped with the necessary skills and knowledge. The study recommends strategies such as incorporating AI-related courses and training programs, fostering collaboration and partnerships, providing professional development opportunities, offering research and innovation grants, and establishing networking and online communities. The successful integration of AI in Nigerian university libraries requires proactive measures by librarians, collaboration with experts, and the prioritization of user-centric approaches. Adequate funding and ongoing evaluation are crucial for optimizing AI initiatives. By embracing AI technologies, Nigerian university libraries can enhance service delivery, efficiently manage information, and meet the evolving needs of users in the digital age.

**Keywords:** Librarians, Artificial Intelligence, Service Delivery, University Libraries, Nigeria, Preparedness.

**Introduction:**

In today's rapidly evolving digital era, technological advancements such as Artificial Intelligence (AI) have significantly transformed various sectors, including libraries. University libraries in Nigeria, as vital information hubs, need to embrace AI to enhance service delivery. The digital era has ushered in a wave of technological advancements that are reshaping industries and sectors worldwide. AI, in particular, has emerged as a transformative

force with the potential to revolutionize various domains, including libraries. AI technologies, such as natural language processing, machine learning, and data analytics, can automate routine tasks, analyze vast amounts of information, and provide personalized recommendations, thereby improving the efficiency and effectiveness of library services (Vijayakumar, 2020). Nigerian university libraries, as critical repositories of knowledge and information, must recognize the importance of AI adoption to stay relevant and meet the evolving needs of their users.

However, the successful integration of AI in libraries requires librarians to be adequately prepared to utilize and harness the potential of this technology. Librarians play a crucial role in managing and disseminating information in libraries, and their expertise is vital for the effective implementation of AI systems. They need to possess the necessary knowledge and skills to leverage AI tools and techniques, understand the ethical considerations associated with AI adoption, and adapt their roles to accommodate the changes brought about by AI (Kawoosa, 2019).

The preparedness of librarians in Nigerian university libraries for AI adoption is a crucial aspect to consider. Are librarians equipped with the knowledge and skills required to effectively utilize AI technologies in their daily operations? Do they have access to adequate training and resources to develop expertise in AI? These questions need to be addressed to ensure that Nigerian university libraries can fully leverage the benefits of AI and provide enhanced services to their users. According to a study by Raman Nair and Ramachandran (2021), AI technologies have had a profound impact on libraries, improving efficiency, access to information, and user experience. Libraries worldwide are increasingly adopting AI

solutions to automate routine tasks, enhance information retrieval, and provide personalized services to their patrons especially in the academic libraries.

University libraries in Nigeria, being the hub of information center of the parent institutions, need to embrace AI to enhance service delivery. In a report by the National Universities Commission (NUC) of Nigeria (2019), it was highlighted that the role of university libraries extends beyond providing access to books and resources. These libraries are crucial in supporting research, innovation, and academic excellence. Embracing AI technologies can help Nigerian university libraries streamline their operations, improve resource management, and provide more effective and personalized services to students, faculty, and researchers.

However, the successful integration of AI in libraries requires librarians to be adequately prepared to utilize and harness the potential of this technology. As noted by Anderson, Lee, and Yoon (2020), the successful implementation of AI in libraries depends on librarians' understanding of AI concepts, familiarity with AI tools and techniques, and ability to adapt to the changing information landscape. Librarians play a critical role in guiding users, curating collections, and managing library services, and their knowledge and skills in utilizing AI are crucial for effectively leveraging its benefits.

This paper aims to explore the preparedness of librarians in Nigerian university libraries for AI adoption and its impact on service delivery. The topic of librarian preparedness for AI adoption has gained attention in the international library community. For example, in a study conducted by Chen, Quan, and Yang (2022), it was found that many librarians in Chinese academic libraries have limited knowledge and training in AI, leading to

challenges in fully utilizing AI technologies for library services. Similarly, this article seeks to investigate the level of preparedness among librarians in Nigerian university libraries and examine the potential impact of AI adoption on service delivery in this specific context.

**The focus/Objectives of this study, therefore, are to:** assess the current level of preparedness among librarians in Nigerian university libraries regarding AI adoption; identify the challenges faced by librarians in acquiring the necessary skills and knowledge for AI integration; explore the potential benefits of AI technologies in enhancing service delivery in university libraries; and propose strategies and recommendations to enhance librarians' preparedness for AI adoption in Nigerian university libraries.

### **The current level of preparedness among librarians in Nigerian university libraries regarding AI adoption**

The current level of preparedness among librarians in Nigerian university libraries regarding AI adoption can be evaluated through various factors. Firstly, a study conducted by Aina and Kehinde (2020) titled "AI adoption in Nigerian academic libraries" found that the majority of librarians in Nigerian academic libraries were aware of AI technologies and their potential impact on library services. However, the study also revealed that there was a lack of in-depth understanding and practical experience among librarians in implementing AI solutions.

Another study by Oladejo and Fabunmi (2021) titled "AI integration in university libraries in Nigeria: Librarians' perspectives" indicated that while some librarians expressed interest in AI adoption, many lacked the necessary technical skills and knowledge to fully utilize AI technologies. The study further highlighted the need for training programs and professional development opportunities to enhance librarians' preparedness for AI adoption.

Furthermore, a survey conducted by the Nigerian Library Association (NLA) in 2022 revealed that a significant number of librarians in Nigerian university libraries had limited exposure to AI concepts and were unsure about its practical applications in library services. This suggests that the current level of preparedness among librarians in Nigerian university libraries regarding AI adoption is still relatively low.

**Challenges faced by librarians in acquiring the necessary skills and knowledge for AI integration:**

Librarians in Nigerian university libraries face several challenges in acquiring the necessary skills and knowledge for AI integration. One major challenge is the lack of formal training and educational programs focused on AI in library science. The traditional library science curriculum in Nigeria often does not include comprehensive courses on emerging technologies such as AI, leaving librarians ill-equipped to understand and implement AI solutions effectively (Oladejo & Fabunmi, 2021).

Moreover, the limited access to resources and infrastructure also poses a challenge. Many university libraries in Nigeria have inadequate funding and technological resources, making it difficult for librarians to access AI tools and technologies for experimentation and hands-on learning. Without access to these resources, librarians face difficulties in acquiring the practical skills necessary for AI integration (Aina & Kehinde, 2020).

Additionally, the rapid pace of technological advancements and the lack of up-to-date information about AI developments pose another challenge. Librarians must constantly update their knowledge and skills to keep up with the latest AI trends and applications. However, the lack of access to current and relevant information about AI in the Nigerian

library community inhibits librarians from staying updated and adapting their skills accordingly (Aina & Kehinde, 2020).

**Potential benefits of AI technologies in enhancing service delivery in university libraries:**

AI technologies have the potential to greatly enhance service delivery in university libraries in Nigeria. One significant benefit is the automation of routine tasks, such as cataloging and indexing, which can free up librarians' time and allow them to focus on more complex and value-added activities (Oladejo & Falola, 2021). By automating these tasks, AI can improve the efficiency and accuracy of library operations, leading to faster and more reliable services for library users.

Furthermore, AI-powered recommendation systems can enhance the discovery and retrieval of information for library users. By analyzing user preferences and behavior, AI algorithms can provide personalized recommendations, suggesting relevant resources and materials to individual users based on their specific interests and needs. This can significantly improve the user experience and ensure that library users have access to the most relevant and useful information (Aina & Kehinde, 2020).

AI technologies can also facilitate data analysis and visualization in university libraries. By utilizing machine learning algorithms, librarians can gain insights from large volumes of data, such as user behavior data or circulation patterns, to make informed decisions about collection development, resource allocation, and service improvements. This data-driven approach can lead to more effective decision-making and better alignment of library services with user needs (Oladejo & Fabunmi, 2021).

### **Strategies and recommendations to enhance librarians' preparedness for AI adoption in Nigerian university libraries**

To enhance librarians' preparedness for AI adoption in Nigerian university libraries, several strategies and recommendations can be considered:

a. Incorporate AI-related courses and training programs: Nigerian universities should revise their library science curriculum to include dedicated courses on AI and emerging technologies. Additionally, training programs and workshops focusing on AI integration should be organized to provide librarians with practical skills and knowledge.

b. Collaboration and partnerships: Collaborative initiatives between Nigerian university libraries, government agencies, and professional associations can be established to facilitate knowledge sharing and resource pooling. These partnerships can provide librarians with access to AI tools, technologies, and expertise, enabling them to gain hands-on experience and learn from best practices.

c. Professional development opportunities: Nigerian Library Association and other relevant professional bodies should organize conferences, seminars, and webinars dedicated to AI adoption in libraries. These events can serve as platforms for librarians to learn from experts, share experiences, and discuss challenges and solutions related to AI integration.

d. Research and innovation grants: Government agencies and funding organizations should provide research and innovation grants specifically targeted at AI integration in Nigerian university libraries. These grants can encourage librarians to conduct research and experiments, leading to the development of AI-driven solutions tailored to the needs of Nigerian academic libraries.

e. Networking and online communities: Online platforms and communities focused on AI in libraries can be established to foster networking, information sharing, and collaboration among librarians. These platforms can facilitate discussions, resource sharing, and peer support, enabling librarians to stay updated with the latest AI developments and learn from each other's experiences.

By implementing these strategies and recommendations, librarians in Nigerian university libraries can enhance their preparedness for AI adoption, leading to improved service delivery and better utilization of AI technologies to meet the evolving needs of library users.

**Conclusion:**

In conclusion, the integration of AI technologies in university libraries in Nigeria holds great potential for improving service delivery and enhancing the overall user experience. Librarians must recognize the challenges and opportunities that AI presents and take proactive measures to prepare for its adoption. By investing in training programs, librarians can acquire the necessary skills and knowledge to effectively utilize AI tools and systems. Additionally, creating awareness among library staff and stakeholders about the benefits and ethical implications of AI will foster a supportive environment for its implementation.

Collaboration between librarians, technology experts, and researchers is vital to ensure the successful integration of AI in university libraries. By working together, they can develop customized AI solutions that align with the specific needs and goals of Nigerian universities. This collaboration will also facilitate the sharing of best practices and



experiences, enabling librarians to learn from one another and collectively overcome challenges related to AI implementation.

Furthermore, librarians should prioritize user-centric approaches in their AI strategies. By leveraging AI technologies, such as natural language processing and machine learning algorithms, librarians can offer personalized recommendations, improve search capabilities, and provide tailored support to users. This personalized and efficient service delivery will enhance the overall user experience and promote the value of university libraries in Nigeria.

In light of these considerations, it is recommended that Nigerian university libraries embrace AI as a transformative tool for their operations. Adequate funding should be allocated to support AI initiatives, including training programs, research projects, and infrastructure development. Collaboration with external organizations, both within and outside Nigeria, can provide valuable insights and resources for successful AI integration. Additionally, ongoing evaluation and assessment of AI systems and their impact on library services should be conducted to ensure continuous improvement and optimization.

By embracing AI technologies and investing in the necessary resources and training, Nigerian university libraries can position themselves as dynamic and future-ready information centers. The integration of AI will enable librarians to efficiently manage vast amounts of information, deliver personalized services, and meet the evolving needs of their users in the digital age.

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