



Reimagining Academic Librarianship in Nigeria during the Age of Generative Artificial Intelligence: Ethical, Professional and Policy Implications

Abstract

Generative artificial intelligence is rapidly transforming higher education, with profound implications for academic libraries in developing nations like Nigeria. This study explored the ethical, professional, and policy aspects of AI adoption in Nigerian academic libraries, where digital demands meet infrastructural and governance limitations. Drawing on literature, professional standards, and international ethical frameworks, the study positioned academic librarians as key facilitators for responsible AI integration in teaching, research, and scholarly communication. It identifies ethical concerns (academic integrity, algorithmic bias, data privacy, intellectual property) and professional challenges (AI literacy gaps, digital pedagogy). The study noted the absence of coherent AI policies in Nigerian higher education. To address this, a conceptual framework for AI-empowered academic librarianship was proposed, emphasizing ethical values, professionalism, and governance. A core recommendation is mandatory AI literacy education for librarians, with institutional policies defining permissible usage and accountability. This framework offers a contextual, transferable model for responsible AI adoption in resource-constrained academic libraries, promoting equitable scholarly AI practices.

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Introduction

Academic libraries have traditionally been the basis of knowledge collection, preservation, and distribution. Conventionally, the services in libraries used to take place within a highly reactive system where users requested information and the library responded to them with mediated access to print and digital collections. Although this model worked in the past academic setting, the rate at which digital information systems are expanding and the infusion of generative artificial intelligence today demand more responsive and foreseeing solutions. Large language models (commonly referred to as generative AI systems) are systems that facilitate context sensitive interactions with large bodies of knowledge and are useful in academic writing, data analysis, and retrieval of information. Libraries are being transformed more into active creators of knowledge, instead of mere depositories of information. The change is global, and it is part of wider developments in the role played by libraries in learning, research and dissemination of knowledge in the modern knowledge ecosystems.

In this wider context, academic libraries have a very vital role because they are closely associated with teaching, research, and scholarly communication. The academic library transformation needs significant institutional changes, particularly in professional skills training aimed at digital scholarship and data management as well as new technologies. Other than skills development, academic libraries also need to evolve their organisational cultures and governance structures to support this changing role. In order to achieve success in operating as active participants of knowledge creation, academic libraries need to be empowered with supportive leadership, collaborative institutional practices, and responsive governance structures (Michalak, 2023; Lo, 2024).

It is of specific importance to focus on academic libraries since the librarians are the traditional mediators of access to information and the guardians of fundamental scholarly principles like intellectual integrity, equity of access, and user privacy. Technologies based on generative artificial intelligence have quickly spread among students and faculty, and they frequently happen before formal institutional policies are created and executed. This uncontrolled adoption has resulted in a governance loophole in most institutions of higher learning.



Here, librarians often find themselves obliged to take the front line in dealing with the academic application of generative AI. Their tasks are growing to cover user guidance, misuse, and ethical concerns reduction as no clear institutional guidance is available. The research conducted by Ajayi-Owoyemi (2025) regarding the application of AI tools among the first-year university students in a South-West Nigerian university suggests that despite the increased reliance by students on AI-based academic applications, including ChatGPT, the participants do not have a clear understanding of the ethical standards governing the usage of AI-based academic applications. This loophole underscores the need to institute organized moral leadership and overall policy interventions in the academia. Therefore, similar to most developing countries, Nigeria needs to strike the right balance between the need of finding AI-based innovation within higher education and other issues of equity, governance, and ethical use.

Situation of the Nigerian Academic Library.

The higher education sector in Nigeria is vast and diverse, in that it includes federal, state, and privately owned universities, each of which is backed by its own academic library. These libraries are important in teaching, research provision and disseminating scholarly information, and they work in a nationally coordinated higher education system that is governed by regulatory institutions like the Nigerian Universities Commission (NUC), the National Board of Technical Education (NBTE), and the National Commission of Colleges of Education (NCCE).

Although the Nigerian academic libraries operate within the context of such a regulatory framework, they still have not overcome the structural and operational challenges that persist. Indicatively, according to Olatunbosun et al. (2025), a significant number of academic libraries in Nigeria are crippled by systematic underfunding and lack of ICT infrastructure that severely restricts their ability to roll out and maintain digital library services. Likewise, Odigie (2024) pinpoints lack of access to digital resources and low institutional investment in library technologies as the key impediments to the effective service provision and innovation in library services in Nigerian academic libraries. All these

limitations contribute to the fact that academic libraries are ill-equipped to react to the emergent digital needs and technological changes in the higher education system.

Besides these, the issue of security (both physical and cybersecurity breaches) has arisen in situations where institutions do not have a well-developed security procedure in place when introducing digital systems. All these structural constraints restrict the rate and scope of proliferation of advanced technologies like AI to academic libraries in Nigeria, and thus yield more experimental and uneven application instead of systematic application of the technology. Nigerian academic libraries are also changing in terms of professional functions. Imam and Ilori (2023) note that nowadays the librarian profession is becoming more and more complex as representatives are expected to not only manage print collections but also act as facilitators of technology, instructors of information literacy, and champions of digital innovation.

As much as this change is indicative of the trends in the world of librarianship, it is unequally applied in Nigeria. Research has shown that a significant number of librarians have heard of AI tools and informally use them to perform personal tasks. Nevertheless, its application in practice in the library services is not widespread because of training deficiencies and constraints imposed by the institutions (Odigie, 2024). Therefore, despite the fact that Nigerian academic libraries are already active in embracing generative AI, lack of coordination strategies and policies to support the continuity of growth remains a factor of concern.

Generative AI in Academic Libraries: Ethical Implications

Generative AI poses a serious ethical issue to academic libraries, especially when it comes to academic integrity. AI tools can help students to write an essay, a summary, or a solution to a given assignment, which can deteriorate the quality of learning and go against the requirements of a given institution. Findings from Nigerian universities show that despite the fact that students believe in the use of these tools (like ChatGPT) as being helpful educational resources, they are not always aware of the ethical considerations that regulate their use (Ajayi-Owoyemi, 2025). This observation underscores the importance of libraries becoming a key figure in the formation and sharing of explicit guidelines on responsible AI

utilization, such as references and restrictions to permissible measures. By incorporating AI literacy into the already existing information literacy programmes, librarians will be able to make students more critical of the AI generated content and comprehend how it should be used (Lo, 2025).

Another ethical issue is bias and transparency. Large datasets used to train AI systems could be biased socially, culturally, or linguistically and could affect how AI systems behave in search results, recommendation systems or automated processes in decision making. Among the libraries, these biases may create a problem of strengthening inequalities in accessing information. According to Olatunbosun et al. (2025), algorithmic bias and opaque decision making can be considered main ethical threats of applying AI to the Nigerian academic libraries. These issues have been cited in general research on the use of AI in library services (Nathania et al., 2025). The use of AI tools by librarians consequently presents an ethical responsibility to question AI in order to promote explainable systems and enhance algorithmic accountability by adopting evaluation and oversight procedures.

The concerns of data privacy and intellectual property also make the implementation of AI more complicated. In most cases AI tools are based on the collection of user data which is processed by cloud based facilities. Libraries in Nigeria should be cautious to ensure they protect the privacy of their users when data protection laws and regulations like the Nigeria Data Protection Regulation (2019) exist but are not well enforced. Librarians are expected to promote privacy-by-design solutions that reduce the amount of data collected and ensure that the current regulations are adhered to on a national level (Olatunbosun et al., 2025). Meanwhile, the ambiguity about copyright and ownership of AI generated content implies the need to conduct continuous education of users. Academic libraries can foreground privacy, transparency, and ethical stewardship to make sure that the adoption of AI is in line with the primary professional values (Michalak, 2023).

Professional Implications for Academic Librarians.

Implementation of generative AI in academic libraries has serious implications on the professional roles and competencies of librarians. With more and more routine work being automated by the AI systems, including metadata creation and simple reference queries,

librarians need to broaden their abilities to stay relevant. Lo (2024) claims that the implementation of AI requires a change in the abilities of librarians, in particular, the development of digital literacy, understanding of the principles of machine learning, and moral consideration of new technologies. Professional development programs such as hands on training programs and collaborative learning models are thus a necessity.

In addition to technical expertise, librarians are in a good position to become leaders in terms of teaching AI literacy. Using their information evaluation and pedagogy skills, librarians can be able to instruct students and faculty to think critically about using AI tools, comprehend their flaws, and use them responsibly in academic matters (Lo, 2025). Libraries can also assist the faculty by counseling on curriculum design and assessment practices that consider AI use. Although fears of job loss have not been overcome, especially with automated services, researchers highlight that the competencies that can be retained by people only, such as critical thinking, personalised instructions, and ethical judgement are at the center of the librarian profession (Nathania et al., 2025). The active encouragement of lifelong learning and development of skills provided by institutions is thus important in making sure that librarians will be able to evolve successfully with the AI driven change (Imam & Ilori, 2023).

Implications on policy and Governance.

The blistering penetration of AI technologies in Nigerian universities highlights the urgency of harmonious institutional and national policies. Most universities do not have clear policies that regulate AI-assisted academic labor, and there is no consistency in its use, as there are confusion among learners and employees (Olatunbosun et al., 2025). Librarians are also supposed to be actively involved in institutional AI policy development as they are the ones who have expertise in information ethics, copyright, and data governance (Michalak, 2023). These policies must define what is acceptable to use, citation policies, accountability measures, balanced innovation and academic standards.

At the national level, it is critical to align it with the general digital governance frameworks. In the National Artificial Intelligence Strategy, Nigeria focuses on data protection, ethical innovation and developing human capacity as the essential subjects of AI

implementation (Federal Ministry of Communications, Innovation and Digital Economy, 2023). Academic libraries can achieve these targets through the integration of AI literacy into learning programs and with regulatory organizations and professional bodies. The international recommendations, including the IFLA Statement on Libraries and Artificial Intelligence, also support the concept of libraries as beneficial contributors to ethical and inclusive use of AI via lifelong learning courses (IFLA, 2020).

Towards a Conceptual Framework of AI Enabled Academic Librarianship in Nigeria.

Based on the analysis above, the present paper suggests a conceptual framework of sustainable AI implementation in the context of Nigerian academic libraries that consists of three interdependent components: professional competencies, governance structures, and ethical principles. The framework is based on ethical principles that focus on fairness, accountability, transparency, and respect to privacy of users. These principles involve constant watch over algorithmic bias, privacy by design, and delivery of information to users on AI driven services (Olatunbosun et al., 2025; Nathania et al., 2025).

The second element is dedicated to professional skills, which emphasize that librarians should acquire AI literacy, digital pedagogy, and consultative skills. The confidence and expertise in the use of AI requires continued training programmes and professional learning community, which are necessary to develop (Lo, 2024).

The third element deals with systems of governance, which ensures control and coordination to have AI initiatives in line with institutional missions and national policy frameworks. Libraries can be responsible in the use of AI and still accountable with the help of dedicated committees, explicit evaluation guidelines, and cross-departmental integration.

Despite the fact that the framework has been adapted to fit the Nigerian context, its focus in ethics, capacity building and governance renders it to be transferable to other resource limited academic libraries settings. The framework helps facilitate responsible and holistic AI adoption by introducing libraries to the policy/practice interface.

Conclusion and Recommendations

Generative AI has its opportunities and challenges to Nigerian academic libraries. Although AI tools have the potential to improve the accessibility of information, the efficiency of services, and user interactions, various ethical, professional, and governance issues become relevant when using AI. This paper has established that librarians are key facilitators to managing these complexities, as they have knowledge and skills on information ethics, literacy teaching and scholarly communication. Through the adoption of AI literacy, ethical custodianship and active involvement in policy making, adoption of AI can be turned in Nigerian academic libraries as a risk to an opportunity. Instead of being passive observers, libraries can also place themselves in the role of being leaders in defining the equitable, transparent, and academically based AI practices. By so doing, the Nigerian academic librarianship will be able to play a significant role in the responsible integration of generative AI into higher education. The following recommendations were made:

- Academic libraries should ensure that librarians and staff in libraries are put through mandatory and sustained training programmes in AI literacy, digital scholarship, and data management. The training should be based on practical work and theoretical knowledge (introduction to the basics of machine-learning and ethical application), and provided as workshops, peer learning communities, and accredited short courses to make the staff capable of designing, testing, and teaching responsible AI-based services.
- To protect against misuse, universities need to implement clear and library-led AI policies to clarify the usage, citation conventions, responsibility, and penalties in the event of abuse. Incorporate cross-departmental AI governance (the librarians, faculty, legal counsel and IT) to align institutional policy, control and assessment and align institutional policies and practices with national and international theories of data protection and academic integrity.
- There is an urgent necessity to invest in trusted ICT, secure cloud services, and cybersecurity measures on a long-term basis. The privacy-by-design strategies to follow, reduction of unnecessary data gathering, access controls and incident response policies, and the promotion of policies to university leadership

recommending budgets that will enable stable, scalable AI services and a resilient digital library infrastructure should be the priorities of libraries.

- Incorporating AI literacy in current information literacy programs and working with faculty to design assessment. Librarians ought to offer courses on how to critically assess AI-generated content, how to attribute, and how to ethically use it; and they should also suggest how to evaluate it so as to limit the chances of misuse and encourage positive, pedagogically sound uses of generative AI.

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