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Exploring Academic Librarians' Perception towards Artificial Intelligence in Nigerian Polytechnics

Explorando la percepción de los bibliotecarios académicos sobre la inteligencia artificial en los institutos politécnicos de Nigeria

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ABSTRACT

Introduction: artificial intelligence is increasingly shaping library practices worldwide. Although Nigerian academic libraries are gradually embracing digital technologies, little is known about how librarians in polytechnic institutions interpret the integration of artificial intelligence in their work environment.
Objective: the study aimed to examine the perceptions of academic librarians in Nigerian polytechnics regarding the adoption of artificial intelligence in library operations.
Method: a survey design using mixed methods was employed. Quantitative data were collected from fifty academic librarians, while qualitative insights were obtained from five heads of ICT or automation units. Participants were purposefully selected from five polytechnic libraries in the South South region of Nigeria. Descriptive statistics and narrative analysis were used to analyse the data.
Results: the study shows that librarians are aware of artificial intelligence and acknowledge its value in improving library services. However, concerns about job security and institutional readiness influence their attitudes toward adoption. While respondents recognise the potential of artificial intelligence to enhance user satisfaction and operational efficiency, they also highlight the need for adequate training and supportive infrastructure.
Conclusion: the perceptions of librarians reflect both enthusiasm and caution toward artificial intelligence adoption. To ensure meaningful integration, institutions must invest in capacity development, strategic planning, and supportive policies. Strengthening the digital competence of librarians will be essential for sustaining their relevance and ensuring effective participation in emerging technological landscapes.

Keywords: Librarians; Artificial Intelligence; Academic Library; Library Services; Nigerian Polytechnic.

RESUMEN

Introducción: la inteligencia artificial está influyendo cada vez más en las prácticas bibliotecarias en todo el mundo. Aunque las bibliotecas académicas nigerianas están adoptando gradualmente tecnologías digitales, se sabe poco sobre cómo los bibliotecarios de instituciones politécnicas interpretan la integración de la inteligencia artificial en su entorno de trabajo.
Objetivo: el estudio tuvo como objetivo examinar las percepciones de los bibliotecarios académicos de politécnicos nigerianos sobre la adopción de la inteligencia artificial en las operaciones bibliotecarias.

Método: se utilizó un diseño de encuesta con un enfoque de métodos mixtos. Los datos cuantitativos se recopilaron de cincuenta bibliotecarios académicos, mientras que los conocimientos cualitativos provinieron de cinco jefes de unidades de TIC o automatización. Los participantes fueron seleccionados de manera intencional de cinco bibliotecas politécnicas en la región Sur Sur de Nigeria. Se emplearon estadísticas descriptivas y análisis narrativo para examinar los datos.

Resultados: el estudio muestra que los bibliotecarios son conscientes de la inteligencia artificial y reconocen su valor para mejorar los servicios bibliotecarios. Sin embargo, las preocupaciones sobre la seguridad laboral y la preparación institucional influyen en sus actitudes hacia la adopción. Aunque los participantes reconocen el potencial de la inteligencia artificial para mejorar la satisfacción del usuario y la eficiencia operativa, también destacan la necesidad de una capacitación adecuada y de una infraestructura de apoyo.

Conclusión: las percepciones de los bibliotecarios reflejan tanto entusiasmo como cautela hacia la adopción de la inteligencia artificial. Para garantizar una integración significativa, las instituciones deben invertir en el desarrollo de capacidades, la planificación estratégica y políticas de apoyo. Fortalecer la competencia digital de los bibliotecarios será esencial para mantener su relevancia y asegurar su participación efectiva en paisajes tecnológicos emergentes.

Palabras clave: Bibliotecarios; Inteligencia Artificial; Biblioteca Académica; Servicios Bibliotecarios; Politécnicos Nigerianos.

INTRODUCTION

Artificial Intelligence (AI) has become a force in global technological development, with expanding influence on education, the labor market, and knowledge institutions. Discussions about the future of work reflect this shift, as automation and intelligent systems reshape professional roles and economic structures.[1,2] Libraries participate in this transition because they depend on structured processes for organizing, preserving, and transmitting information. The evolution of digital systems in libraries established the foundation for current AI applications that now support intelligent search, automated indexing, predictive analytics, and interactive user assistance. These changes redefine expectations for librarians and call attention to the need for understanding their perceptions, particularly in environments that face infrastructural and capacity constraints.

Historical developments reveal a steady progression toward machine-mediated library operations. Early automation systems eased routine tasks, while later digital platforms expanded access to electronic resources. The emergence of AI extends this evolution by introducing capabilities that exceed human processing limits. Studies on advanced library systems show use of robots, expert systems, conversational interfaces, and recommendation engines that support cataloguing, metadata creation, discovery services, preservation tasks, and circulation.[3] Research from Southeast Asia, East Asia, Europe, North America, and the Middle East confirms that AI now appears across several academic library environments, although adoption remains uneven in many developing regions.[4,5,6,7,8,9] These studies show growing institutional interest in AI due to its predictive, analytic, and automation capabilities.

Current conditions in developing countries highlight the significance of understanding AI within specific institutional contexts. Evidence from India, South Africa, Kenya, Mexico, Bangladesh, Bulgaria, and the Philippines shows that librarians acknowledge the value of AI but confront issues that relate to skills, funding, ethical concerns, organizational structures, and infrastructure.[10,11,12,13,14] African libraries remain in the early stages of structured AI deployment, with many institutions still assessing the implications of intelligent systems for workflow, staff responsibilities, and service delivery.[15,16] These findings emphasize the need for contextual analysis across national and institutional boundaries.

Nigeria's academic library system reflects these global challenges. University-based studies indicate rising awareness of AI technologies as well as hesitations that relate to job security, infrastructural deficits, ethical concerns, and the adequacy of professional skills.[17,18,19] Newer Nigerian studies also highlight issues that involve training needs, AI literacy, and the risk of job displacement, particularly with the growth of robotic technologies and intelligent automation.[20,21,22,23,24] These concerns mirror global debates where scholars caution that large-scale automation can alter employment structures and increase uncertainty across professional groups.[25] The combination of perceived benefits and perceived threats shapes how librarians interpret AI within their work environment.

Although research in Nigeria increasingly addresses AI adoption, existing studies emphasize university libraries, LIS departments, and federal institutions. Polytechnic libraries receive far less scholarly attention despite their critical role in supporting technical and vocational education. Their operational structures differ from those of universities, which may produce distinct experiences, opportunities, and concerns about AI. Studies found that librarians engage directly with information retrieval, reference services, cataloguing, and

circulation—areas that AI targets for automation in several global studies.[26,27,28] Understanding the perception of these librarians is essential because their response to AI will determine the direction of institutional adoption, staff preparedness, and alignment with national digital transformation goals.

International trends reveal clear movement toward broader AI integration. Academic librarians in North America demonstrate growing intention to adopt AI under models that evaluate perceived usefulness, effort expectancy, and institutional support.[29] Studies across Arab countries reveal expanding AI use in cataloguing and metadata generation, while also identifying ethical concerns related to intellectual property and privacy.[9] Evidence from South Asia identifies financial constraints, technical problems, and limited workforce expertise as obstacles to sustainable AI deployment.[25] These varied experiences enrich understanding of the challenges and opportunities that Nigerian polytechnic librarians may encounter.

Within this global and national context, polytechnic librarians in Nigeria occupy a crucial position. Their perceptions influence the speed, structure, and success of AI deployment in institutions that rely heavily on them for core service delivery. The relevance of this study derives from the need to generate empirical evidence that reflects their awareness, expectations, reservations, and interpretations of AI in the polytechnic environment. This evidence will support institutions in developing realistic policies, appropriate training frameworks, and sustainable investment plans. The aim of this study is to explain how academic librarians in Nigerian polytechnics interpret AI integration. To achieve this objective, the study focuses on specific aspects that reflect how librarians interpret AI in their work environment. The study seeks to understand the extent of their knowledge of AI integration in library operations, their judgment of its usefulness, their interpretation of the advantages that AI can introduce, and the library services they expect to benefit most from AI deployment.

METHOD

Type of Study

This study adopted an observational, descriptive, cross-sectional design. It sought to document and interpret the existing perceptions of academic librarians toward the integration of artificial intelligence in polytechnic library operations. Since the study aimed to describe an existing situation as it naturally occurred in various polytechnic libraries, an observational descriptive approach provided a suitable framework.

Universe and Sample

The universe of the study consisted of all practicing academic librarians in the polytechnic libraries located in the South-South geopolitical zone of Nigeria. From this universe, the study purposively selected professional librarians from five polytechnics, including Akwa Ibom State Polytechnic, Delta State Polytechnic Ozoro, Captain Elechi Amadi Polytechnic in Rivers State, Federal Polytechnic Ugep in Cross River State, and The Polytechnic Ekowe in Bayelsa State. The sample included librarians who worked in departments directly responsible for reference, circulation, cataloguing and classification, information retrieval, and acquisition services. These units were selected because they represent operational areas where the introduction of AI is expected to produce major effects. A total of fifty-five librarians met these criteria and received copies of the questionnaire. In addition to the questionnaire respondents, the study included five heads of ICT or automation units, one from each institution, to provide deeper insight through interviews regarding technological readiness and institutional experiences with digital systems.

Variables

The study focused on variables that corresponded to the central objective of understanding librarians' perceptions of AI. These variables included the level of knowledge librarians possessed about AI integration in library operations, their views about the usefulness of AI in enhancing library functions, their perceptions of the advantages associated with adopting AI, and the specific services they believed could be improved through AI technologies. Both the quantitative and qualitative components of the study collected data related to these variables.

Data Collection and Processing

Data were collected through a structured questionnaire and an interview schedule. The questionnaire, designed after reviewing similar instruments used in recent studies on AI adoption in libraries.[17,30] It was self-administered to the selected librarians across the five institutions. The interview schedule guided the conversations with the heads of ICT or automation units and enabled them to provide detailed accounts of their experiences with digital systems, their assessment of institutional capacity for AI integration, and their expectations about future developments. Quantitative data from the questionnaires were processed with descriptive statistics such as frequency counts and percentages. Qualitative data from the interviews were processed through narrative analysis, which allowed the researcher to identify the ideas, viewpoints, and experiences respondents emphasized while discussing AI in their institutional contexts.

Ethical Standards

The study adhered to established ethical standards for research involving human participants. Participation was voluntary, and informed consent was obtained from all librarians before the administration of the instruments. Participants were assured of the anonymity of their responses and the confidentiality of all information provided. No identifying markers, such as names or staff numbers, were collected. The librarians were informed that the study posed no risk and that the data would be used solely for academic purposes. Permission to access the selected libraries and interact with their personnel was obtained from the management of each participating polytechnic.

RESULTS

The results are presented according to the four research objectives that guided the study. Each subsection provides a narrative explanation of the findings, followed by the table to which it refers. The qualitative insights from the interviews complement the quantitative results from the questionnaires.

Academic Librarians' Knowledge of AI Integration in Library Operations

The study first examined whether academic librarians in Nigerian polytechnics possess adequate knowledge of AI and its potential integration into library operations. The findings in table 1 show that a considerable proportion of the librarians expressed limited knowledge of AI technologies. Only a smaller number reported familiarity with AI concepts, while the majority admitted that they were not knowledgeable about AI, its tools, or its emerging roles in library service delivery. These results were reinforced by the interviews. Several respondents stated that although they had heard of AI, they did not understand how it functions in a library environment. One of the interviewees emphasized that AI knowledge remains low because institutions have not provided formal exposure, training, or orientation.

Table 1. Are academic librarians knowledgeable about the integration of AI in library operations?

Variables	Frequency (n=50)	Percentage
Yes	46	92 %
No	4	8 %

Perception of the Utility of AI in Libraries

The second objective explored how librarians view the usefulness of AI in enhancing library functions. Table 2 sought to ascertain the perception of academic librarians about artificial intelligence. 23 (46 %) admitted that adopting AI in polytechnic libraries will lead to job loss. 12 (24 %) agreed that AI adoption in the libraries would make the libraries more relevant in the academic community. On the other hand, 9 (18 %) claimed that adopting AI will improve academic librarians' job performance. Lastly, 6 (12 %) maintained that AI's adoption would facilitate timely service delivery. A related concern also appeared during the interview sessions. Several interviewees expressed deep anxiety about the consequences of AI adoption on staffing in polytechnic libraries. One respondent stated, "Once AI becomes part of daily library work, many routine duties will no longer require people. If machines handle circulation, shelf checks, and basic cataloguing, management may feel that fewer librarians are needed."

One of the participants noted that, "AI systems cost a lot of money. When administrators invest in something expensive, they often look for ways to cut spending in other areas. Staff salaries are usually the next target." A third interviewee expressed that, "I heard that one university has already started testing AI tools in their library. As soon as I saw that, I knew it could affect us too. If our own management adopts AI, new jobs may stop completely and those of us already working might face retrenchment. It reminds me of what happened in the banking sector when automation increased." Despite these concerns, one respondent offered a different perspective that, "AI can make the library stand out on campus. Students will come more often because they want to experience smart services. Even the presence of intelligent devices or robots can turn the library into an exciting space."

Table 2. How do they view the utility of AI in libraries?

Variables	Frequency (n=50)	Percentage
Adopting AI in polytechnic libraries will lead to job loss	23	46 %
AI adoption in the libraries would make the libraries more relevant in the academic community	12	24 %
Adopting AI will improve academic librarians' job performance.	9	18 %
AI adoption would facilitate timely services delivery	6	12 %

Perceived Advantages of AI Adoption

The third objective examined the advantages that librarians associate with AI. The results show that respondents identified multiple potential benefits. On the advantages of AI in library operations, 21(42 %) of the respondents agreed that introducing AI in libraries will bring innovations to libraries, as seen in advanced countries. 6 (12 %) respondents admitted that the adoption and use of AI in academic libraries would boost library automation services. Also, 14 (28 %) of them acknowledged that adopting AI will surely enhance libraries and librarians' productivity. Lastly, 9 (18 %) agreed that AI adoption in academic libraries would promote better and easy access to library information.

For the qualitative analysis, respondents were interviewed to state the benefits of adopting AI in libraries. According to one of the respondents, "there are many benefits of adopting AI in the library. This is an outstanding innovation in which our library should not be left out. Recently, I was in a country, and l saw how robots were being used to perform library operations." Another respondent noted that, "adopting AI in the library will be great in Nigerian polytechnic libraries, although I will not like to talk about the negative aspect of it." Another interviewee had this to say, "…using AI in our polytechnic library is going to be a perfect idea; l can't wait to see the introduction of it in the library… it will be an outstanding innovation in polytechnic libraries in Nigeria."

Table 3. What advantages do they associate with the adoption of AI?		
Variables	**Frequency (n=50)**	**Percentage**
Introducing AI in libraries will bring innovations to libraries	21	42 %
Adoption and use of AI in academic libraries would boost library automation services	6	12 %
Adopting AI will surely enhance libraries and librarians' productivity	14	28 %
AI adoption in academic libraries would promote better and easier access to library information	9	18 %

Services That Can Be Enhanced Through AI Technology

The fourth objective focused on identifying specific library services that librarians believe can be improved or supported through AI. Table 4 sought to identify the specific area(s) where AI can be applied in academic libraries. Remarkably, all the respondents agreed that all areas of library operations need the adoption of AI. Ranking first was reference service with 16 (32 %) and closely followed by circulation service with 15 (30 %); and then information retrieval and shelving services with eight (16 %). Others were cataloguing and classification 7 (14 %) and acquisition services 4 (8 %).

During the interview, participants were asked to consider how AI technologies could transform library operations. Several respondents illustrated this by imagining a typical day in an academic library. One interviewee described a scenario where students frequently approach the reference desk with complex queries and said, "…AI technologies can be integrated across all services, but their most immediate impact would be in reference services, helping librarians respond faster and more accurately." Another participant painted a picture of busy circulation counters during peak hours and observed, "While every library unit can benefit from AI, the reference and circulation sections, with constant user traffic, stand to gain the most from automation and intelligent support." A third respondent reflected on overall service efficiency, stating, "AI could streamline operations across all departments, making it easier to deliver timely and personalized services to our patrons."

Table 4. Which specific services do academic librarians believe can be enhanced or offered through AI technology?		
Variables	**Frequency (n=50)**	**Percentage**
Circulation service	15	30 %
Reference service	16	32 %
Information retrieval and shelving services	8	16 %
Acquisition service	4	8 %
Cataloguing and classification	7	14 %

DISCUSSION

The findings of this study show that academic librarians in Nigerian polytechnics are generally aware of artificial intelligence and its relevance to library operations. Although many respondents acknowledge that they have not received formal training, they demonstrate conceptual understanding of artificial intelligence. This pattern reflects earlier studies in Nigeria and abroad which report high awareness but limited practical

readiness among librarians.[5,7,17,18] Similar observations have been made in Taiwan, South East Asia, and South Africa, where librarians understand the importance of artificial intelligence but lack institutional support for hands on adoption.[6,11]

A major concern identified in this study is the fear that artificial intelligence may lead to job loss. Respondents believe that management may reduce staff strength once automated systems handle routine duties. This aligns with international and Nigerian studies that highlight anxiety about displacement when intelligent systems are introduced into professional environments.[19,20,23,25] The finding supports the argument made in the introduction that artificial intelligence can create uncertainty in the labour market.[2] The results therefore reinforce existing literature that describes artificial intelligence as both an opportunity and a source of professional tension. Despite these concerns, the study reveals that librarians strongly believe in the benefits of artificial intelligence. Respondents view artificial intelligence as a tool that can promote innovation, improve productivity, enhance access to information, and strengthen user satisfaction. This agrees with prior research which describes artificial intelligence as a catalyst for modernising cataloguing, discovery systems, reference services, automation, and metadata creation.[3,4,26,27] Studies from India, Mexico, Bangladesh, and Arab countries also show similar optimism that artificial intelligence can improve service delivery and operational efficiency when supported by adequate infrastructure.[9,10,13]

The librarians in this study believe that artificial intelligence can support every section of the academic library, particularly reference and circulation services. This aligns with international findings that indicate that user focused services often benefit first from intelligent systems such as virtual reference tools, smart circulation systems, and automated service interactions.[12,14,28] The expectation that artificial intelligence will strengthen information retrieval and user support reflects wider global trends reported in several studies across Asia, Africa, and North America.[8,16,29] However, the study also highlights barriers to the adoption of artificial intelligence, particularly issues relating to training, funding, digital infrastructure, and institutional planning. These challenges correspond with findings from previous research in developing countries which identify similar constraints affecting sustainable implementation.[5,11,13,15] Scholars have emphasised that successful adoption requires strong managerial support, clear policies, and continuous professional development.[21,29]

CONCLUSIONS

This study set out to understand how academic librarians in Nigerian polytechnics perceive the integration of artificial intelligence in library operations. The findings reveal that librarians recognize artificial intelligence as an important element of contemporary library practice and acknowledge its potential to strengthen service delivery, enhance professional effectiveness, and increase institutional relevance. At the same time, the study highlights that perceptions of artificial intelligence are shaped by broader concerns relating to professional identity, institutional readiness, and the future of work within the library environment.

Furthermore, the study demonstrates that artificial intelligence is interpreted through a combination of opportunity and caution. Librarians express optimism about the transformative value of artificial intelligence, yet their views also reflect the realities of limited infrastructural support, inadequate training opportunities, and uncertainty about how technological change may affect staffing patterns. These interpretations affirm the need for deliberate policy responses that balance technological advancement with the development of human capacity. The research contributes to a deeper understanding of how librarians in polytechnic settings make sense of emerging technologies. It emphasizes the importance of preparing library personnel for future innovation through continuous professional development, strategic planning, and supportive leadership. In doing so, the study provides a foundation for institutions seeking to adopt artificial intelligence in ways that strengthen both service quality and the evolving role of the librarian. Based on the study's findings, the following recommendations are made:

- Academic libraries must prioritize raising awareness about the significance of AI in their operational strategies.
- Academic librarians should actively seek to enhance their relevance in the era of the Fourth Industrial Revolution (4IR) through Continuous Professional Development (CPD) to acquire the essential skills required for integrating AI into library operations.
- Additionally, it is crucial for academic library management to establish advocacy programs that educate academic librarians about the fact that adopting AI does not necessarily lead to job loss; instead, it enhances the quality and effectiveness of service delivery.
- Furthermore, academic librarians should proactively engage in training sessions and conferences related to AI adoption to equip themselves with the necessary knowledge and skills for the tasks that lie ahead.

Top of form in addition, this study has implications for research/scholarship, policy and practice. In terms of its contributions to knowledge, this study makes significant strides in various areas. It has enriched the

literature by employing a blend of qualitative and quantitative research methods to explore the views of academic librarians on AI's role in library practices. Furthermore, it has generated new and valuable data that can be used by academic librarians, policymakers, and polytechnic management teams to assess the relevance and potential benefits of AI within Nigerian polytechnic libraries. This research holds the promise of serving as a valuable reference source for future researchers who will delve into AI adoption or related studies within the context of developing countries.

This study, while valuable, has certain limitations that should be acknowledged. Firstly, it focused primarily on five purposefully selected polytechnic libraries in the South-South region of Nigeria. Consequently, the findings cannot be readily generalized beyond this specific context. Additionally, the study exclusively targeted professional librarians. Given this focus, there is an opportunity to replicate the research using other members of the library staff. It is advisable to extend the scope of this study by conducting similar research in other polytechnic libraries across Nigeria and different types of higher institutions. Such an expanded approach would provide a more comprehensive understanding of the perception of academic librarians regarding the integration of AI in library operations.

Also, the study by the nature of its questionnaire, is prone to social desirability bias. Being a self-assessment scale, the respondents might not be willing to under-report themselves in order not to portray themselves in a bad light as professionals. This could adversely affect the findings of the study. Further studies on this area could adopt a knowledge test scale, especially in assessing the respondents' knowledge about the integration of AI in library operations.

REFERENCES

1. Shahzad K, Khan SA, Iqbal A, Javeed AMD. Identifying university librarians' readiness to adopt artificial intelligence (AI) for innovative learning experiences and smart library services: an empirical investigation. Glob Knowl Mem Commun. 2024; [Epub ahead of print].

2. Acemoglu D, Restrepo P. Robots and jobs: Evidence from US Labour Markets. J Polit Econ. 2020;128(6):2188-2244.

3. Asemi A, Ko A, Nowkarizi M. Intelligent libraries: a review on expert systems, artificial intelligence, and robots. Libr Hi Tech. 2021;39(2):412-34.

4. Tella A. Robots are coming to the libraries are librarians ready to accommodate them? Libr Hi Tech News. 2020;37(8):13-7. https://doi.org/10.1108/LHTN-05-2020-0047

5. Huang YH. Exploring the implementation of artificial intelligence applications among academic libraries in Taiwan. Libr Hi Tech. 2024;42(3):885-905.

6. Xu C, Loo S. A review of artificial intelligence applications in libraries in Southeast Asia: where are we now?. Ref Serv Rev. 2025;53(1):66-91.

7. Yoon J, Andrews JE, Ward HL. Perceptions on adopting artificial intelligence and related technologies in libraries: public and academic librarians in North America. Libr Hi Tech. 2022;40(6):1893-915.

8. Cox AM, Wang X. Artificial intelligence in libraries: The emerging research agenda. IFLA J. 2025;51(3):567-9.

9. Elsayed AM, Abusharhah MM. Artificial Intelligence adoption, perceptions, and ethical literacy among Arab academic librarians: A survey. J Acad Librariansh. 2025;51(5):103083.

10. Kalbande D, Yuvaraj M, Verma MK, A S, Suradkar P, Chavan S. Exploring the integration of artificial intelligence in academic libraries: a study on librarians' perspectives in India. Open Inf Sci. 2024;8(1):20240006.

11. Molaudzi AI, Marutha N. Contributory factors to attitudes towards the adoption of artificial intelligence technology in public academic libraries in South Africa. Inf Dev. 2025;41(3):615-25.

12. Sang LJ. Adopting artificial intelligence in Kenyan academic libraries: Analyzing through the technology-organization-environment framework. Libr Manag. 2025;46(1/2):29-40.

13. Lau J, Tammaro AM, Miltenoff P, Begum D, Zanichelli F, Orru D, et al. Factors Driving Artificial Intelligence

(AI) Adoption in Italy, Mexico, Bulgaria, and Bangladesh: A Comparative Qualitative Study of Library Professionals. Int Inf Libr Rev. 2025;57(3):275-90.

14. Barsha S, Munshi SA. Implementing artificial intelligence in library services: a review of current prospects and challenges of developing countries. Libr Hi Tech News. 2024;41(1):7-10.

15. Harisanty D, Anna NEV, Putri TE, Firdaus AA, Noor Azizi NA. Leaders, practitioners and scientists' awareness of artificial intelligence in libraries: a pilot study. Libr Hi Tech. 2024;42(3):809-25.

16. Haris M, Ansari AJ, Malik BA, Lund BD, Ali N. Artificial intelligence in academic libraries: a survey of users' perception and adoption. Glob Knowl Mem Commun. 2025; [Epub ahead of print].

17. Abayomi OK, Adenekan FN, Abayomi AO, Ajayi TA, Aderonke AO. Awareness and perception of the artificial intelligence in the management of university libraries in Nigeria. J Interlib Loan Doc Deliv Electron Reserve. 2021;29(1-2):13-28.

18. Ajani YA, Tella A, Salawu KY, Abdullahi F. Perspectives of librarians on awareness and readiness of academic libraries to integrate artificial intelligence for library operations and services in Nigeria. Internet Ref Serv Q. 2022;26(4):213-30.

19. Owolabi KA, Okorie NC, Yemi-Peters OE, Oyetola SO, Bello TO, Oladokun BD. Readiness of academic librarians towards the use of robotic technologies in Nigerian university libraries. Libr Manag. 2022;43(3/4):296-305.

20. Oladokun BD. Facilitating conditions and adoption of robotic technologies in libraries of federal universities of technology in Nigeria. Alexandria. 2025; [Epub ahead of print]. https://doi.org/10.1177/09557490251393038

21. Oladokun BD, Abduldayan FJ, Akanbiemu AA. Leave No one Behind: Empowering Librarians with AI Skills and Competencies in the Libraries of 5IR. New Rev Acad Librariansh. 2025;1-19. https://doi.org/10.1080/13614533.2025.2524795

22. Oladokun BD, Josiah Okai ED, Kolawole DTO, Okorie JN, Okamgba JO. Knowledge and usage of artificial intelligence technologies among library and information science educators in Nigerian universities. Alexandria. 2025; [Epub ahead of print]. https://doi.org/10.1177/09557490251378743

23. Oladokun BD, Enakrire RT, Okai EDJ, Owolabi KA. The double-edged sword of AI: librarians' perceptions of job displacement and polarization. Electron Libr. 2025;1-21. https://doi.org/10.1108/EL-03-2025-0100

24. Oladokun BD, Owolabi AK, Aboyade MA, Wiche HI, Aboyade WA. Emergence of robotic technologies: implications for Nigerian academic libraries. Libr Hi Tech News. 2023;40(6):15-8. https://doi.org/10.1108/LHTN-02-2023-0031

25. Shahzad K, Khan SA, Iqbal A. Factors influencing the adoption of robotic technologies in academic libraries: A systematic literature review (SLR). J Librariansh Inf Sci. 2025;57(3):687-704.

26. Li D. Adoption of Artificial Intelligence in Public and Private Libraries of China: Determinants, Challenges, and Perceived Benefits. Prof Inf. 2024;33(4).

27. Okunlaya RO, Syed Abdullah N, Alias RA. Artificial intelligence (AI) library services innovative conceptual framework for the digital transformation of university education. Libr Hi Tech. 2022;40(6):1869-92.

28. Storey MA, Hoda R, Milani AMP, Baldassarre MT. Guidelines for Using Mixed and Multi Methods Research in Software Engineering. arXiv preprint arXiv:2404.06011. 2024.

29. Andrews JE, Ward H, Yoon J. UTAUT as a model for understanding intention to adopt AI and related technologies among librarians. J Acad Librariansh. 2021;47(6):102437.

30. Lund BD, Omame I, Tijani S, Agbaji D. Perceptions toward artificial intelligence among academic library employees and alignment with the diffusion of innovations' adopter categories. Coll Res Libr. 2020;81(5):865.

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CONFLICT OF INTEREST

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