

## Awareness, perception and use of Artificial Intelligence tools by LIS educators in Nigerian Higher institutions

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### Abstract

The advent of Artificial Intelligence (AI) has brought transformative changes across various sectors, including education. In Library and Information Science (LIS), AI tools hold significant potential for enhancing teaching, research, and administrative functions. This study investigates the awareness, perception, and utilization of AI powered tools by LIS educators in Nigerian higher institutions. Data were collected using questionnaires and analysed with the Statistical Product and Service Solution (SPSS), with hypotheses tested via Pearson Product Moment Correlation (PPMC). The findings reveal a high degree of awareness and positive perception towards AI tools among LIS lecturers. Commonly used tools for teaching include ChatGPT, Socrative, ChatPDF, Turnitin, and Gamma. Despite recognizing AI's potential benefits for improving information retrieval, data management, and personalized learning, actual usage remains limited due to challenges such as rapid technological advancement, lack of infrastructure, and resistance to change. All hypotheses were rejected, indicating a significant relationship between awareness, perception, and the use of AI tools in teaching. If measures such as having enhanced AI literacy and training programs for LIS educators, integration of AI into the LIS curriculum, development of

institutional policies on AI adoption, and incentives for AI integration, then the challenges observed could be mitigated.

### **Keywords**

Artificial intelligence; teaching and learning, emerging technology, library and information science

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### **Introduction**

Rapid advancement of technology especially Artificial Intelligence (AI), has brought so many changes to all facet of human activity including education. Artificial intelligence (AI) is developing at a rapid pace, and this has impacted on industries, including education. Artificial intelligence (AI)-enabled tools and technologies are being included into teaching and learning procedures more frequently, providing new opportunities to improve the quality of education. The display of intelligence in computers is known as artificial intelligence, or AI. The idea is to utilize pattern recognition and algorithms that learn from human behaviour to offer machines independence and intelligence (Hashem et al, 2023). Technological development has changed the ways that humans carry out myriad activities and the education sector is not left out. The recent explosion in AI technology has made it so that businesses, organisations and institutions of learning have had to adapt to the changes brought about by these developments As AI permeates daily life more and more, it is critical to assess how it will affect education, especially on teaching (Asirit and Hua, 2023).

Lecturers are at the forefront of introducing cutting-edge teaching techniques in universities in order to involve students and enhance learning outcomes (Pacheco-Mendoza et al, 2023). The way lecturers carry out their duties could be completely transformed by the incorporation of AI-based technology, such as automated grading, intelligent tutoring systems, and individualized learning

platforms. Nonetheless, instructors' awareness and comprehension of these AI tools will determine how well they are adopted and used. Existing research (Shahsavari & Choudhury, 2023) suggests that the awareness and use of AI tools for teaching can vary significantly among lecturers, influenced by factors such as access to information, institutional support, and disciplinary differences. Some lecturers may be well-versed in the capabilities of AI technologies and actively incorporate them into their teaching practices, while others may be hesitant or unaware of the potential benefits.

AI tools have been posited to have the ability to revolutionise the classroom as it can improve teaching and learning, leading to smarter classrooms through personalized learning, improvement of assessments, and reduction in planning time for teachers (Ayala-Pazmiño, 2023). AI-based technologies provide a more individualized approach to education by analysing student data and customizing learning experiences to meet their specific requirements. This may enhance student participation, enhance learning results, and lower dropout rates. AI can also enhance tests by giving immediate responses and enabling a more precise assessment of students' performance. By automating administrative duties like grading and reporting, AI-based technologies can also cut down on the amount of time teachers need to arrange their lessons. This allows teachers to concentrate on more useful instructional activities. Present AI research focuses on training computers to converse intelligently with people, solve difficult problems, provide accurate predictions, and do a wide range of formerly manual tasks automatically (Holmes et al, 2023).

Artificial intelligence use in education is a concept that is being widely discussed as AI has infiltrated virtually all aspects of human endeavour. Various AI tools can be effectively integrated into teaching and learning in order to meet the growing

need to reach learners. AI tools in education can be described as educational technology (Lin, 2022) that are used to enhance teaching effectiveness. The use of educational technology is ingrained in the education sector and goes a long way in assisting learners. A study by Lin (2022) on the influence of AI in education on teaching effectiveness found that AI technologies can assist lecturers in providing more precise instruction by analysing students' activities and by providing more scientific practice ideas based on their level of mastery of the material to grasp the course's important and challenging information elements.

Several AI tools can be used in for teaching and learning. Canva, an AI tool, can be used to enhance designs and this can be particularly useful in creating posters for the library. The use of generative AI tools such as ChatGPT to generate ideas for creative and artistic writing, help in bringing up topic outlines and general research that serve as a basis for writing. ChatPDF is particularly useful in helping students get better insights and understanding into educative documents that may be in PDF format. Socrative and Quillionz are AI powered tools used to quickly and easily create quiz questions and assessment by teachers. With the use of Turnitin plagiarism check, teachers can check for originality of their students' work (Baker, 2021; Ogurlu & Mossholder, 2023; Tzoneva, 2023).

Studies on use of AI tools for teaching are however few as ChatGPT, the precursor of AI tools only became available to the public in 2022. In the medical field, Shahsavari & Choudhury (2023) did a cross-sectional survey on users' intention to use ChatGPT for diagnostic purposes and it was revealed that users showed a positive perception and readiness to use ChatGPT for decision making about health issues. However, some studies have looked at use of chatbots and other AI tools in education especially in learning. A meta-analysis of 24 research by Wu

& Yu (2023) looked at the moderating impacts of educational levels and length of intervention, as well as the effects of AI chatbots on students' learning results. According to the study findings, AI chatbots have a statistically significant substantial impact on learning outcomes such as learning motivation, learning self-efficacy, and learning curiosity. Tlili et al. (2023) looked into issues surrounding the usage of chatbots in the classroom. The researchers studied user experiences, content analysis of interviews, and social network analysis of tweets. The results of the study indicate that early adopters show a generally positive perception to and enthusiasm about using ChatGPT for educational purposes. Similarly, the study of Lo (2023) revealed that AI tools like ChatGPT are particularly useful to teachers as it could help in the generation of course materials and provide suggestions. Baytak (2023) in a comprehensive literature review of acceptance and adoption of generative AI tools in education, using technology acceptance model (TAM) and diffusion of innovation (DOI) theories, found that educators showed a remarkable acceptance of these tools for educational purposes but with reserves. The reserve exhibited by educators stems from issues of originality in content generation made possible by these tools. In all, these studies reveal a positive perception and acceptance of AI tools for education purposes.

Despite the proliferation and acceptance of AI tools in all areas of endeavour but most especially in the education sector in developed climes, the reverse is the case in Nigeria as majority of these tools appear not to be in use in the Nigerian educational sector. Awareness and perception are key in the utilisation of a product. A study by Adeoti (2023) examining the awareness and perception of AI in the medical sphere in Nigeria showed that lecturers were less aware of AI tools for education than their student counterpart. How then can lecturers impart what

they are ignorant about or properly utilise these tools in teaching? Studies like that of Adeoti (2023) necessitates the conduct of this study in order to adequately answer the above question.

In order to determine the critical elements influencing the acceptance and use of AI tools for teaching, this study intends to investigate the present level of knowledge and usage of these technologies among LIS lecturers. The results, which emphasize lecturers as the main change agents through their experiences and viewpoints, will add to the expanding corpus of knowledge on the application of AI in education. The knowledge acquired can guide the creation and execution of technology solutions, institutional regulations, and professional development initiatives that enable lecturers to fully utilize artificial intelligence (AI) to improve teaching and learning of LIS in Nigerian higher institutions of learning.