

A Study on the Knowledge and Perception of Artificial Intelligence

Subaveerapandiyan, A., Sunanthini, C., & Amees, M. (2023). A study on the knowledge and perception of artificial intelligence. *IFLA Journal*, 49(3), 503–513. <https://doi.org/10.1177/03400352231180230>

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Evidence Summary

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Abstract

Objective – To assess the knowledge, perception, and skills of library and information science (LIS) professionals related to artificial intelligence (AI).

Design – 45 statements were distributed to 469 LIS professionals via Google Forms to collect primary data. 245 participants responded to the structured questionnaire.

Setting – University and college libraries in Zambia.

Subjects – Zambian library and information science professionals.

Methods – A descriptive approach was employed for the study. Data was gathered via a questionnaire. “The objective was to assess the statistical relationship between the knowledge, perception, and skills of LIS professionals (the independent variables) and AI (the dependent variable)” (Subaveerapandiyan et al., p. 506). The survey used a 5-point Likert scale with (1) *strongly disagree* being the lowest score and (5) *strongly agree* the highest. Means and standard deviations are

included in data display tables. Thematic analysis was employed to analyze the data. SPSS was used for data analysis.

Main Results – Survey results are presented in three tables. Table 1, “Awareness of AI among LIS professionals,” contains 21 statements related to AI use in various library environments and services, including reference (finding articles and citations, content summarization, detecting misinformation), circulation of library materials, security and surveillance, character recognition and document preservation, research data management, language translation, and others. The authors note that 44.1 percent of the respondents agreed that “AI is essential for the effectiveness and efficiency of library service delivery, enabling libraries to enhance and offer dynamic services for their users” (Subaveerapandiyan et al., 2023, p. 506).

Table 2, “Perception of AI among LIS professionals,” contains 10 statements. Over 85 percent of respondents either strongly agreed or agreed that AI “makes library staff lazy” while 58.1 percent either strongly agreed or agreed that AI is a “threat to librarians’ employment” (Subaveerapandiyan et al., 2023, p. 506). The authors note that the “respondents also indicated barriers to the adoption of AI in libraries, such as the lack of LIS professionals’ skills and budgetary constraints” (Subaveerapandiyan et al., 2023, p. 506).

Table 3 lists 13 competencies required by library professionals in the AI era. The majority of the respondents (an average of 65 percent) were in strong agreement that “electronic communication, hardware and software, Internet applications, computing and networking, cyber security and network management, data quality control, data curation, database management ... are necessary competencies required by LIS professionals for them to be proficient in AI” (Subaveerapandiyan et al., 2023, p. 506).

Conclusion – The authors assert that the findings provide strong evidence that LIS professionals perceive AI as playing a significant role in library services in the future based on the study’s favorable findings on AI usage in various library-related contexts. The authors contend that the “research can be used as a resource by library boards and associations to develop policies for implementing artificial intelligence in academic libraries and fills a research vacuum in developing nations like Zambia regarding the knowledge of university and college libraries, and their willingness to use artificial intelligence” (Subaveerapandiyan et al., 2023, p. 503).

The authors acknowledge that “the sample is not representative enough to draw general conclusions from the findings. Hence, the study provides a good literal foundation for representative research with a wider sample and more robust research on AI and its applications in LIS” (Subaveerapandiyan et al., 2023, p. 510).

Commentary

AI in libraries has the potential to significantly alter the way that LIS professionals do their jobs across all facets of library operations. The analyzed data shows strong consensus among respondents that AI is advantageous for libraries, in particular for use in routing library tasks such as circulation services, acquisitions, and weeding. In addition, respondents indicated that AI could be useful in efficiently analyzing large sets of gathered data that often do not get analyzed due to the time and human effort required or budgetary constraints. Using AI to process these datasets has the potential to help libraries allocate resources more strategically and aid in strategic planning.

The quality of the study was appraised using “The CAT: a generic critical appraisal tool” created by Perryman and Rathbun-Grubb (2014) and was found to be high. The first listed author is a librarian at the Habitat School in Ajman, United Arab Emirates. Prior to his current position, he was chief librarian at DMI–St Eugene University in Lusaka, Zambia. The second author is a lecturer and head of the

Department of Computer Science and Information Technology at DMI–St Eugene University, while the third author is a junior librarian at OP Jindal Global University in Sonipat, India.

An extensive literature review gives context to the study, and the results of the survey are clearly communicated both textually and visually. The methods employed are clear, and the conclusion rests firmly on the analysis of the collected data. The authors state on a number of occasions that the study is a step forward in examining AI in academic libraries, but due to the fact that it looks only at academic libraries in Zambia and the sample is small, it does not allow for any kind of sweeping generalizations that might apply universally.

The authors note that the LIS professionals who responded to the survey were often early adopters of new information and communications technology and were quite open to the idea of using AI in library operations. However, they do not address how self-selection might have impacted the gathered data. The article suggests a high familiarity with AI among respondents but does not consider that nearly half of those invited to participate in the study declined. It is possible that those who declined did so due to unfamiliarity with AI in general or the integration of AI into academic libraries in particular. Had all solicited professionals responded, it could have significantly changed the conclusion about the degree to which AI is being embraced by LIS professionals in Zambian academic libraries.

References

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