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Exploring the philosophy and practice of AI literacy in higher education in the Global South: a scoping review

Research – Literature review

Brenda van Wyk

University of Pretoria, South Africa

Brenda.vanwyk@up.ac.za

ORCID: 0000-0003-3898-7042

Abstract

Artificial Intelligence (AI) is at the top of the agendas of higher education and education leaders are required to give direction in educating the next generation of students and citizens. AI holds positive answers to technological innovations, but the potential for continued inequities, exclusion and divides must not be ignored. As a relatively new concept, AI literacy is often viewed as a complex concept requiring more detailed conceptualisation. Furthermore, with the recent hype around generative AI (GenAI), discussions and explorations around what AI literacy is, are now being deliberated. Historically AI was the domain of mathematicians and computer scientists. This is changing as the wider implication of AI permeates all aspects of society, in particular the ethical and informed use of AI and GenAI is paramount. This leaves higher education with the dilemma of deciding who is responsible in teaching and facilitation AI literacy. Keeping in mind that there is an abundance of new literacies in academia. This problem is particularly pronounced in the Global South countries, where digital exclusions and social injustice are becoming more complex. This scoping review evaluated 40 screened and eligible peer reviewed articles and conference proceedings published between 2020- 2024 on AI literacy in higher education in the Global South. The aim of the study was to gauge the extant research on AI literacy and its subsequent ethical implications in higher education in the Global South. The study further explored which philosophies and frameworks inform and guide AI literacy research and support in higher education within the selected region. Findings are that while the disciplines of education are engaging in research, other disciplines such as

Information Science are interdisciplinary actors in teaching and facilitating AI literacy, but that there is a pronounced paucity in research being conducted.

Keywords

AI, AI support, AI education, AI Ethics

Literature review

AI is increasingly becoming a transformative force in higher education, impacting various aspects of teaching, learning, administration, and research.

Information literacy and AI literacy

From the onset it is clear that the concept of AI literacy does not have a shared understanding. It is generally accepted that literacy refers to specific ways of thinking about and performing reading and writing in order to comprehend or express ideas or thoughts in writing within a particular context of use (Chui et al, 2024). Currently there is no unified and agreed definition of AI literacy, and Ng et al (2021) subscribe this to the fact that AI literacy is an emerging field.

Chui et al (2024) refer to Long and Magerko's definition of AI literacy as a set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI, and use AI as a tool online, at home, and in the workplace. In some disciplines it is merely seen as an extension of exiting literacies such as computer literacy, digital literacy and information literacy. In other cases, the concept is unpacked on deeper levels, looking at intricate and elaborate frameworks to explain and argue around literacies for basic and advanced AI.

As the general understanding of AI literacy revolves around the knowledge and understanding necessary to effectively interact with, use, and critically evaluate artificial intelligence (AI) technologies. It encompasses a range of skills and competencies, ranging from a basic understanding of AI concepts, applying it in critical thinking and problem solving to ethically using it in daily communications. Ng et al. (2021) caution that attempts to define AI literacy is based on lending from existing fields and definitions such as digital and computer literacy. Yet, practical and public understandings of AI technologies must inform how AI literacy is defined and this remains under-explored and under-researched.

AI in Academic libraries

To ascertain information specialists familiarity with AI in general, one should look at AI usage in academic LIS. Academic libraries are uniquely positioned to advance AI literacy within their institutions and beyond. They serve a diverse community of students, faculty, and researchers who can greatly benefit from enhanced understanding and skills in AI.

By implementing these strategies, academic libraries can significantly contribute to the AI literacy of their academic communities, preparing students and researchers to engage with AI technologies critically and responsibly.

AI and AI literacy in Higher education

AI is increasingly becoming a transformative force in higher education, impacting various aspects of teaching, learning, administration, and research. Here are some key areas where AI is making a significant impact. By leveraging AI, higher education institutions can enhance the quality of education, improve administrative efficiency, and provide better support to students and faculty. However, it is also important to address the ethical considerations and potential biases associated with AI to ensure that its implementation is fair and equitable.

Kong, Cheung and Zhang (2023) share that there is agreement and an awareness that AI literacy must be included in higher education programmes and curricula, but that there is uncertainty on how it must be done. There is general unease into the role that LIS plays in fostering AI literacy. There is a general concern about the skills of lecturers and information specialists.