Chapter 6
Ethical Frameworks in Artificial Intelligence for Education:
A Systematic Review and Practical Insights Through Bibliometric Analysis

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ABSTRACT

AI in education has transformed teaching, learning, and assessment. It raises difficult ethical issues pertaining to equity, privacy, algorithmic prejudice, and academic integrity. This article examines ethical issues, theoretical frameworks, stakeholder views, and ethical AI deployment in education through a systematic

DOI: 10.4018/979-8-3373-5550-4.ch006

literature review (SLR). This study synthesises ethical AI research in education by defining major challenges, exploring theoretical and philosophical contributions, analysing educator and student views, and assessing ethical AI integration solutions. The PRISMA framework discovered 414 Scopus articles. After applying inclusion/exclusion criteria, 37 papers were examined. The study categorises and interprets findings across major themes using bibliometrics. AI biases, data privacy hazards, and critical thinking and academic integrity loss are among the ethical concerns found. Constructivism, sociocultural theories, and multi-theoretical frameworks underpin ethical AI.

INTRODUCTION

The rapid advancement of artificial intelligence (AI) technologies has significantly transformed the educational landscape, offering opportunities for personalized learning, enhanced instructional methodologies, and streamlined administrative processes. From automated grading systems to adaptive learning platforms, AI has the potential to redefine how education is delivered and experienced. However, alongside its promise, AI integration has sparked critical debates surrounding ethical issues such as data privacy, algorithmic biases, equity, and the role of human agency in learning environments. Addressing these concerns requires robust ethical frameworks to guide the responsible adoption of AI in education, ensuring that technological advancements align with core values of equity, inclusivity, and academic integrity (Swindell et al., 2024; Butson & Spronken-Smith, 2024).

One prominent challenge arises from the proliferation of generative AI tools, such as ChatGPT, which allow students to produce human-like text effortlessly. This capability has blurred the lines between original work and machine-generated content, posing significant implications for academic integrity and assessment practices. Institutions are grappling with policy inconsistencies, as some encourage ethical AI use while others ban it outright. These varying approaches underscore the urgent need for clear guidelines to govern AI usage in educational contexts and ensure a consistent understanding among students and educators (Gonsalves, 2024).

AI's ability to handle complex datasets, automate decision-making, and facilitate personalized learning environments has brought numerous benefits but also unique ethical dilemmas. For instance, biases embedded in algorithms can perpetuate inequalities, while the unequal access to advanced AI tools risks exacerbating existing educational disparities. Beyond technical fixes, these challenges demand a critical examination of the societal and cultural implications of AI in education, ensuring that its adoption does not unintentionally reinforce systemic barriers (Swindell et al., 2024; Butson & Spronken-Smith, 2024).

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