Title: Teachers' perceptions of AI in supporting students' learning within a globally diverse digital settings

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Abastact: This study aims to investigate how teachers perceive AI tools in their efforts to enhance teaching practices and student learning in higher education. It examines the potential benefits and challenges of AI as seen by teachers in this setting regarding student learning. Using a quantitative correlational approach with surveys of 102 teachers in higher education institutions in four countries, Bangladesh, Malawi, Saudi Arabia, and Peru, the study found that teachers' demographics, AI familiarity, AI usage, and personalization of AI are key factors influencing AI use in higher education. The Unified Theory of Acceptance and Use of Technology (UTAUT) served as the framework for analyzing the results, which largely show that teachers see AI as helpful in enhancing student learning. It also reveals that teachers view AI as beneficial for student learning, that familiarity with AI impacts its use, that students' use of AI is perceived as unethical, and that teachers use AI as a personal choice. The study reports a strong link between AI familiarity and perceived effectiveness ($r = 0.75$), meaning that more familiar individuals tend to see AI as more effective in education. It also finds a strong connection between age and perceived effectiveness ($r = 0.60$), and between teaching experience and perceived effectiveness ($r = 0.55$). This suggests that older teachers or those with more teaching experience or exposure to AI generally see AI as more effective. Successful AI integration in higher education demands teacher training, ethical frameworks, balanced pedagogical strategies, and institutional support. As AI and its integration in higher education continue to evolve, perceptions, tools, and pedagogical practices may shift, requiring ongoing longitudinal research to track changes.

Keyword: Generative AI, Teachers' training, Higher education, Digital transformation, Transformative learning

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