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Teachers' Perceptions and Practices of Using Artificial Intelligence in Social-Emotional Learning in Early Childhood Schools in Saudi Arabia

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Abstract

Over the past few decades, interest in Artificial Intelligence (AI) and its effective integration into Early Childhood Education (ECE) has steadily increased. This study examines the impact of AI applications on children's Social-Emotional Learning (SEL) in Early Childhood Schools (ECS), focusing on insights from teachers in the city of Mecca, Saudi Arabia. A self-administered questionnaire was conducted on a random sample of (n=503) teachers in public, private, and international ECS. This research focused on exploring teachers' perceptions and practices around how to integrate AI tools and the digital challenges they may face while using AI. The results highlight that AI-enhanced SEL significantly enhances student engagement and emotional well-being from the teachers' perspective. Teachers in international schools demonstrated higher levels of AI-based teaching strategies, such as canning, ChatGPT, and social robots, than teachers in public and private schools. The results confirm that AI enhances students' SEL learning outcomes and creates a more emotionally supportive environment. The challenges reported by teachers regarding the implementation of AI in SEL include a lack of training opportunities, low levels of digital literacy, concerns about data privacy and security, and ethical considerations for children's age groups. Resistance to change from teachers accustomed to traditional methods is an additional barrier to AI integration. Our results contribute to advancing knowledge about AI in ECE by addressing implementation challenges and providing actionable solutions. The findings underscore the need for policymakers and educators to leverage AI to bridge educational gaps in SEL and prepare a digitally literate generation.

Keywords: ChatGPT; Digital Challenges; Gamification; Learning Outcomes; Supportive Environment