The Role of AI in Reforming Traditional Education: A Case Study of O/L Students at Meeravodai Al-Hidhaya School

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Abstract

Artificial Intelligence (AI) is increasingly recognized as a transformative force in education, offering innovative tools to address the limitations of traditional teaching methods. This study investigates the role of AI in reforming conventional educational practices, with a specific focus on Ordinary Level (O/L) students in Meeravodai Al - Hidhaya Maha Vidyalaya. Using a case study approach, the research explores how AI technologies influence learning experiences, engagement levels, and academic outcomes among a selected group of O/L students within a local school context. This case study examines the implementation of AI-based interventions within OL education, identifying their impact on student engagement, performance, and skill development. Data was collected through a combination of quantitative methods (structured questionnaires) and qualitative methods (interviews and classroom observations), allowing for a comprehensive understanding of both measurable impacts and student perceptions. The study examines the use of AI-based tools such as intelligent tutoring systems, automated assessments, and personalized learning platforms. Findings reveal that AI integration can significantly enhance individualized learning, provide real-time feedback, and help students grasp difficult concepts more effectively. However, challenges such as limited access to digital infrastructure, lack of teacher training in AI platforms, inadequate facilities and concerns about data privacy also emerged as barriers to effective implementation. Additionally, the study highlights that while AI tools are promising, they must be used in a way that supports not replaces the human element of teaching. Teachers play a crucial role in guiding AI use, adapting content, and providing emotional support, especially for students preparing for high stakes examinations like the O/Ls. The research concludes with practical recommendations for schools and policymakers, including the importance of investing in teacher training, ensuring equitable access to AI tools, and establishing clear guidelines for ethical AI use in classrooms.

Keywords: Artificial Intelligence, traditional education, reform, technology