

**Emerging Artificial Intelligence Technologies for Teaching and Learning: Innovations,
Global Perspectives, and Future Educational Challenges**

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Abstract

This research formally investigates how emerging artificial intelligence (AI) technologies can impact teaching and learning in higher education, particularly focusing on the students and professors of Da yeh University. Research methodology used a mixed-methods design, involving both quantitative survey questionnaire (four-point Likert scale), and qualitative interview and open-ended questions. Data analysis used descriptive statistics (for frequency, mean and ranking), non-parametric tests, like Wilcoxon signed-rank test and thematic analysis to provide qualitative understanding. This study tries to evaluate the impact of AI on the academic performance and views of the students and how professors experienced effectiveness of AI in their instructing to see some critical educational benefits of AI (improving teaching efficiency, student engagement, and doing research) and future challenges (data privacy, algorithmic bias, AI dependency, fostering academic dishonesty, teachers' resistance, and academic integrity breaches) while expected results conclude that although there is positive contributions of AI in support of learning and accessibility, there are important concerns remain in the areas of ethical oversight of misusing and more reliance on technology than themselves. Accordingly, this research offers practical recommendations to promote AI literacy, encourage responsible and ethical use of AI development, and conduct institutional strategies including seminars and educational programs. Lastly, this research spots the importance and necessity of the new technological innovation with the human-centered education to support sustainable and ethical AI environment in educational or academe applications.

Keywords: Artificial Intelligence, Teaching and Learning, AI Literacy, Educational Technology, Ethical Challenges.