ARTIFICIAL INTELLIGENCE RELIANCE AMONG STUDENTS IN CREATING SCIENCE OUTPUTS: OPPORTUNITIES AND CHALLENGES

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Students' methods of producing scientific outputs are being revolutionized by artificial intelligence (AI) a new software application that boost learning productivity. Artificial intelligence-based platforms enable access to large resources, skip tiresome processes, and generate ideas quickly. With AI tools, learners are now more efficient at data analysis and experimental simulation and also build better presentations (Fitria, 2021). Thus, artificial intelligence has become one of the effective tools for the development of innovative ideas in the field of science education, making complex projects accessible and possible for students.

Despite the advantages, there are numerous challenges with relying significantly on artificial intelligence in scientific education. Students are over-dependent on such artificial intelligence tools, thus not contributing to the foundation of critical thinking and problem-solving competencies. More importantly, the fear of plagiarism and the abuse from using AI-generated content is an urgent need for regulation and controls. The other issues created through the use of artificial intelligence in education are that differential and unequal access available creates a digital divide among opportunities for learners. These problems make the necessity of integration of AI applications with traditional educational approaches toward comprehensive development (Dayal et al., 2024).

To address these challenges and maximize opportunities, AI should be responsibly integrated into science education. Training for ethical use of AI as well as developing critical thinking skills along with AI tools will help students use such technologies

effectively (Walter, 2024). Schools should also work towards equitable access to AI resources to bridge the digital divide. This study is motivated by the need to understand the impact of AI reliance on students' scientific outputs, aiming to guide educators in leveraging AI as a supportive tool while maintaining academic integrity and fostering essential skills.

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