


Chapter 7

Echoes of Innovation: Rethinking Art Education in the Age of AI

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ABSTRACT

As artificial intelligence (AI) technologies continue to reshape educational practices, their integration with arts education has received increasing attention, especially in higher education. However, there is little systematic work on how to integrate AI technologies in arts education to improve student learning performance. This systematic review investigates the impact of AI on student learning in higher education arts courses, focusing on empirical studies published between 2020 and 2025. The results show that AI technologies can improve student performance, support personalized learning paths, and promote the development of creativity and technical skills. Although the integration of AI has great potential in enhancing personalized learning and promoting innovation, its impact on human creativity, critical thinking, and the role of educators remains a concern. The review concludes with recommendations for future research and a practical guide for educators aiming to implement AI-enhanced methods in arts education.

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1. INTRODUCTION

In recent years, the advancement of new generation AI and the implementation of the 'Artificial-Intelligence Plus' teaching method have unveiled a burgeoning domain in education characterized by personalized learning experiences, visualized learning processes, integrated learning assessments, and socially-oriented studies, wherein a novel personnel training model and framework can be established leveraging big data technology and educational big data analysis (Yu et al., 2019). AI, particularly since the advent of deep learning and large language models, has evolved from a supportive tool to an integral component of digital transformation in education (Yadav & Shrawankar, 2025). This evolution is not only technological but also pedagogical, reshaping how knowledge is delivered, assessed, and co-constructed. AI fosters equitable and substantial quality enhancement in education, and the advantages of these technologies for pedagogy and learning have recently garnered significant attention (Tan, 2020). AI has significantly transformed the evolution of education (Guilherme, 2019).

Many subject areas are included in the art and design curriculum, and the development of art and design education programs in higher education has demonstrated a trend toward inclusivity and diversity (Wan, 2023). Currently in China, around 2,000 schools and universities provide Art Design programs, fostering generations of intelligent and innovative designers, indicative of the expanding design education sector (Yu et al., 2019). With the many advances made in fields such as education and medicine, the field of art and design has also undergone tremendous changes due to various applications of AI (Zhai, 2022). The integration of technology in art education is marked by notable trends in digitization, customization, and globalization. These trends are evident in immersive learning experiences, AI-enhanced tailored instruction, interdisciplinary integration, and global collaboration. AI may assess students' progress, creative styles, and ability levels to provide tailored feedback and coaching, enhancing their educational experience. Additionally, AI aids instructors in tracking student progress and modifying instructional methods, so enabling tailored learning trajectories that promote effective attainment of educational objectives and encourage creative expression and discovery (Shah, 2023). Despite the growing interest in this area, there remains a lack of comprehensive understanding of how AI integration influences student learning outcomes specifically in higher education art programs. Art education poses unique pedagogical challenges and opportunities that differ from those of other disciplines, often emphasizing subjective interpretation, aesthetic judgment, and process-oriented learning (Illeris, 2012). Through a detailed analysis of the advantages, inherent challenges, and practical applications of AI in art education, this study sheds light on how AI can be strategically used to improve the quality of the learning experience. Make it more engaging and effective,

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