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Enhancing Academic Achievement through STEAM Education: A Study of Motivation and Problem-Solving Skills among Secondary Learners

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Abstract: *This study investigates the role of STEAM education in enhancing academic achievement through its influence on motivation and problem-solving skills among secondary learners. Drawing on content analysis of scholarly articles published between 2020 and 2025, the research highlights how interdisciplinary, art-integrated approaches foster learner engagement, creativity, and resilience. Findings reveal that STEAM pedagogy—particularly project-based and inquiry-driven learning—significantly improves intrinsic motivation by connecting abstract concepts to real-world applications. Moreover, the integration of arts into STEM cultivates divergent thinking and collaborative competencies, enabling students to generate innovative solutions to complex challenges. The study also emphasizes the future-oriented benefits of STEAM, preparing learners with transferable skills such as adaptability, teamwork, and creativity that align with global workforce demands. By synthesizing recent scholarship, this research contributes to the discourse on holistic education, offering recommendations for effective implementation of STEAM curricula at the secondary level*

Keywords: STEAM education; secondary learners; motivation; problem-solving skills; academic achievement; interdisciplinary learning; workforce readiness; creativity; collaboration; future-oriented pedagogy

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