

Title

INTEGRATING INNOVATIVE TECHNOLOGY INTO STEM LEARNING: PRELIMINARY FINDINGS FROM A META-ANALYSIS ON K-12 STUDENTS' STEM CAREER INTERESTS

Abstract

This paper presents preliminary findings from a meta-analysis study that reviews and synthesizes studies related to the effects of innovative technology-related learning experiences in formal and informal K-12 STEM education on students' STEM career-related outcomes. This meta-analysis synthesizes a body of research from 1995 to the present, across characteristics of technology-based STEM education interventions, learning contexts, student demographics, and study designs. Findings presented in this paper describe the characteristics of these innovative technology-related educational interventions, including intervention content, format, and setting, as well as their collective impact on students' STEM career aspirations. Variables examined also include whether an intervention aimed at serving students from backgrounds that are traditionally underrepresented and underserved in STEM education and whether an intervention has an explicit career-exploration component. This paper sheds light on the diverse landscape of technology-related STEM education, offering valuable insights for educators, policymakers, and researchers striving to enhance students' pursuit of STEM careers.

Keywords

STEM learning, STEM career outcomes, innovative technology-related intervention, K-12 student, meta-analysis

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