



# The Science, Technology, Engineering, Arts, and Mathematics Test Kitchen: Stirring up STEAM in the Elementary School

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## Abstract.

An interdisciplinary research team consisting of one art education professor and two instructional technology professors collaborated with elementary school educators to examine the impact of STEAM programs at two United States elementary schools in Florida and the elementary school students' knowledge, identities, and attitudes toward STEAM learning experiences. In this paper researchers discuss the findings of this mixed methods study and further implications. Research questions include: Is there a significant difference in elementary students' STEAM identities, knowledge, and attitudes after participating in the STEAM program; and in what ways did the STEAM program impact students' identities, knowledge, and attitudes? The IRB approved research collected quantitative and qualitative data through survey questionnaires via Qualtrics survey software (pre and post program surveys). The need for further research involving interdisciplinary teams including in-service educators is an important factor. Teaching and learning strategies for reforming elementary school STEM and STEAM education in the U.S. as a dependable human resource for a competitive workforce and economic development is a significant part of the study and the field of education.

**keywords:** attitudes; identities; interdisciplinary; knowledge; teaching and learning strategies