Toward Development of a STEM Framework Based on Cultural-Historical Activity Theory

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Abstract

In a global economy in which U.S. students are expected to perform at or near the apex in mathematics and science, integrating these disciplines with technology and engineering in education requires a fresh look. The acronym STEM (science, technology, engineering, and mathematics) was developed to improve math and science education. In this paper, we develop a framework for STEM through an activity theory lens to accentuate the sociocultural characteristics of STEM education. The implications for this timely original framework may aid in the development of innovative curriculum for STEM teacher education.

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