STEM SCHOOLS VS. NON-STEM SCHOOLS:
COMPARING STUDENTS' MATHEMATICS GROWTH RATE
ON HIGH-STAKES TEST PERFORMANCE

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ABSTRACT

The purpose of this study is to determine how students who attended T-STEM academies performed on the mathematics section of the Texas Assessment of Knowledge and Skills (TAKS) compared to their corresponding peers who attended traditional public schools in Texas. The present study included 18 T-STEM academies and 18 matched non-STEM schools. The sample consisted of three years of TAKS mathematics data for 3026 students, of which 1506 attended 18 T-STEM academies and 1520 attended 18 non-STEM schools in Texas. Hierarchical linear modeling (HLM) was used to construct a three-level model for analysis. Results revealed that at the end of grade 9, students who attended T-STEM academies performed higher in mathematics compared to their counterparts in comparison schools, but no difference was found in their mean mathematics score's growth rate from 2009 to 2011. In terms of gender, the present study found that female students who attended T-STEM academies performed higher on TAKS mathematics than male students in comparison schools.

Key Words: STEM, T-STEM academies, Inclusive STEM schools, TAKS, TEA.