Longitudinal Analysis of T-STEM Academies: How Do Texas Inclusive STEM Academies (T-STEM) Perform in Mathematics, Science, and Reading?

Longitudinal Analysis of T-STEM Academies: How Do Texas Inclusive STEM Academies (T-STEM) Perform in Mathematics, Science, and Reading?
, Mehmet Oren, Victor Willson, Tarcia Hubert, Robert M. Capraro

Özet

This study examines standalone inclusive STEM (Science, Technology, Engineering and Math) schools—T-STEM (Texas - STEM) in Texas—that operate as autonomous units. Researchers tracked two cohorts of ninth grade students of T-STEM and non-T-STEM schools between 2008 and 2011 to examine how schools' performances changed over times by school type in school level reading, mathematics, and science passing scores. To ensure that T-STEM schools and non-T-STEM schools have similar demographic compositions and achievement indicators, propensity score matching was used. After matching, the sample used for the analyses was nine T-STEM versus 27 non-T-STEM schools from 2008 and 18 T-STEM versus 52 non-T-STEM schools from 2009. Multivariate analysis of variance was performed to examine each cohort to determine how schools' performance changed over three years on mathematics, science, and reading TAKS (Texas Assessment of Knowledge and Skills) scores. Although each group had statistically significant growth for each of their three-year periods, there was no statistically significant difference between T-STEM schools and non-T-STEM schools.

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Abstract

This study examines standalone inclusive STEM (Science, Technology, Engineering and Math) schools—T-STEM (Texas - STEM) in Texas—that operate as autonomous units. Researchers tracked two cohorts of ninth grade students of T-STEM and non-T-STEM schools between 2008 and 2011 to examine how schools' performances changed over times by school type in school level reading, mathematics, and science passing scores. To ensure that T-STEM schools and non-T-STEM schools have similar demographic compositions and achievement indicators, propensity score matching was used. After matching, the sample used for the analyses was nine T-STEM versus 27 non-T-STEM schools from 2008 and 18 T-STEM versus 52 non-T-STEM schools from 2009. Multivariate analysis of variance was performed to examine each cohort to determine how schools' performance changed over three years on mathematics, science, and reading TAKS (Texas Assessment of Knowledge and Skills) scores. Although each group had statistically significant growth for each of their three-year periods, there was no statistically significant difference between T-STEM schools and non-T-STEM schools.

Keywords

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Tam metne ulaşmak ve tüm referansları görmek için tıklayın.