RESEARCH STUDY
STEMSCOPES DISTRICTS OUTPERFORM
NON-STEMSCOPES DISTRICTS FOR 4 YEARS IN A ROW
TEXAS SCIENCE ASSESSMENT
5TH GRADE

Comparing STAAR™ Passing Rates for STEMscopes and Non-STEMscopes Districts for 399,250 Students in the State of Texas™

OVERVIEW AND KEY FINDINGS

The following report includes results comparing districts that use STEMscopes and districts that do not use STEMscopes on the science component of the 2017-2018 State of Texas Assessment of Academic Readiness (STAAR™). The state of Texas creates benchmarks for proficiency in science and identifies students as not proficient, approaching grade-level proficiency, meeting grade-level proficiency, and mastering grade-level proficiency. The percent of students in each of these categories is used to determine the district's achievement in science. The percentage of students who approach grade-level proficiency is used by the state as the district passing rate. The key findings of the study include:

- **Using the STEMscopes curriculum increased passing rates by 1.5% on the 5th grade STAAR.**
- **Economically disadvantaged students made significant gains vs. counterparts not using STEMscopes on the 5th grade STAAR.**
- **These findings have been consistent for four consecutive school years.**

ELEMENTARY SCHOOL STAAR RESULTS

The state average passing rate for all Texas school districts that include 5th grade and whose passing rates were publicly released (N = 1,148 districts, 399,250 5th grade students) was 73%.[1] Of these districts, 559 districts used the STEMscopes science curriculum during this school year, and 589 districts used either a district-created science curriculum or purchased a different science curriculum. The rates of proficiency for these two groups of districts are found in the table below. The average passing rate for the STEMscopes districts was 74%, and the average passing rate for the non-STEMscopes districts was 71%. STEMscopes districts also had higher rates of students who met grade-level performance and mastered grade-level performance.

	Approaches	Meets	Masters
STEMscopes Districts (n = 384)	**74%**	**37%**	**14%**
Non-STEMscopes Districts (n = 761)	71%	33%	12%

In addition, achievement for economically disadvantaged students was examined. In the table below, STEMscopes districts had higher passing rates for economically disadvantaged compared to districts that did not have STEMscopes.

	STEMscopes Districts	Non-STEMscopes Districts
Economically Disadvantaged Students	**69%**	65%

Follow-up Analysis on Elementary Results
For the fourth year in a row, a research follow-up study was conducted to ensure that these differences remained statistically significant after accounting other important variables that influence student achievement. Specifically, multiple regression analysis was utilized to recalculate these passing rates taking into account 2016-2017 passing rates as well as important district demographic information, including the size of the district, whether the district was a charter school district, teacher turnover rates, and demographic information of students (i.e., race/ethnicity, socioeconomic status, and ELL student population).

Results showed that, when accounting for these important variables, districts that used STEMscopes continued to have significantly higher overall STAAR^{TM} passing rates compared to districts that did not use STEMscopes. Specifically, STEMscopes districts had a weighted passing rate of 73.1%, and non-STEMscopes districts had a weighted passing rate of 71.6%. **In other words, using the STEMscopes curriculum increased passing rates by 1.5%.**

Elementary Passing Rates for Economically Disadvantaged Students
These analyses were also conducted examining the passing rates for economically disadvantaged students. STEMscopes districts had a weighted passing rate for economically disadvantaged students of 68.4%, and non-STEMscopes districts had a weighted passing rate of 66.4% for economically disadvantaged students. In other words, using the STEMscopes curriculum increased passing rates for economically disadvantaged students by 2%.

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