imagine math

Greater Use of Imagine Math is Associated with Increased Proficiency on the STAAR Math Assessment

OVERVIEW

During the 2021–2022 academic year, a public school district in Texas implemented Imagine Math to promote mathematics achievement for students in Grades 4–5. The district was interested in evaluating differences in student performance based on program use. Students who used the Imagine Math program at recommended levels (passed 30 lessons in a school year) were compared to students who used the program below recommended levels. On average, the group of students who used the program at or above recommended levels (≥30 lessons) passed 45.9 lessons and spent 32.2 hours in the program over the course of the year. The group of students who used below recommended levels (<30 lessons) passed 11.8 lessons and spent 14 hours in the program.

Texas School District

Demographics of Matched Sample	Below Recommended Use (<30 lessons) Sample	At or Above Recommended Use (≥30 lessons) Sample
Female	36%	35%
Asian	1%	2%
Black	3%	3%
Hispanic	64%	66%
White	31%	27%
Two or More Races	1%	1%

Imagine Learning analyzed scaled score growth on the State of Texas Assessment of Academic Readiness (STAAR) Math assessment. Statistical matching procedures were utilized to ensure that students in each study group were highly similar based on several performance (prior year scaled score) and demographic (race/ethnicity, gender, free-or-reduced lunch status, Title 1 status, bi-lingual status, and migrant status) factors.

RESULTS

Imagine Math product usage was significantly associated with scaled score growth on the STAAR Math assessment (Figure 1). Students who used the program at or above recommended levels (30 or more passed lessons) showed significantly greater scaled score growth from the 2021 to the 2022 administration of the STAAR Math assessment than students who used the program below recommended levels (less than 30 passed lessons; $p < .05$). See Table 1 for average scores and growth of both groups. This study provides evidence of program efficacy with greater use.

Figure 1. Average 2021–2022 STAAR Math Growth by Grade and Study Group
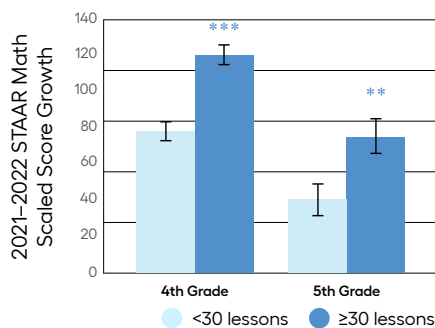
Note. Error bars represent standard error. **$p < .01$, ***$p < .001$

Table 1. Average 2021–2022 STAAR Math Performance and Growth for Grade 4–5 Students by Study Group

Grade	Study Group	# of Students	Avg. 2021 Score	Avg. 2022 Score	Avg. Growth	SE Growth
4th	Below Recommended Program Use (<30 lessons)	159	1442.7	1556.0	133.3	+/- 7.0
4th	At or Above Recommended Program Use (≥30 lessons)	159	1434.3	1608.1	173.8	+/- 7.7
5th	Below Recommended Program Use (<30 lessons)	83	1590.8	1649.6	58.9	+/- 11.8
5th	At or Above Recommended Program Use (≥30 lessons)	83	1591.3	1700.0	108.8	+/- 13.6

Note. SE = standard error.

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