Age of Learning®

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My Math Academy®

My Math Academy Drives Significant Math Gains in K–2 Students

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LearnPlatform by Instructure has independently reviewed this report for ESSA alignment

KEY FINDINGS

- **Students in kindergarten and 1st grades** who mastered at least 30 learning units in ***My Math Academy*** **had statistically significantly higher scores on NWEA MAP** in comparison to their peers who had mastered fewer learning units.
- **Students in 2nd grade** who mastered at least 15 operations learning units in ***My Math Academy*** **had statistically significantly higher scores on NWEA MAP** in comparison to their peers who mastered fewer learning units.
- Students in kindergarten, 1st, and 2nd grades who made substantial progress in ***My Math Academy*** **scored statistically significantly higher on the end-of-year NWEA MAP in comparison to their peers who did not use the program, making about 1.5–2.5 months of additional learning in math**.
- All 135 teachers who completed the end-of-year survey indicated that *My Math Academy* is a resource they would like to continue using; **9 out of every 10 teachers indicated that at least 70 percent of their students are demonstrating skills they learned in *My Math Academy*** outside of the program and that the program had a **positive impact on their students' enjoyment and self-confidence in learning math**.

Background

This report focuses on Harlingen Consolidated Independent School District's 2022-2023 implementation of ***My Math Academy*** **with kindergarten, 1st, and 2nd grade students across its 17 elementary schools**. The district began using *My Math Academy* with pre-kindergarten students in school year 2020–2021, and given the significant improvements students made in their school readiness during a year disrupted by the pandemic, the program implementation was expanded to additional grade levels in the district. **Students' *My Math Academy* usage has been associated with significant improvements on CIRCLE Progress Monitoring Assessment System (pre-K) and on iStation (kindergarten)**. This study builds on the existing evidence by demonstrating the effectiveness of the program as measured by NWEA Measures of Academic Progress (MAP).

This report compares the performance of different progress groups in each grade (low, medium, high) as well as between the students in each grade who used *My Math Academy* (treatment) and their peers who did not (comparison). In comparing the performance of treatment and comparison groups, propensity score weights were calculated for each student to ensure that the two groups were as comparable as possible.[1]

Results

Students varied in the degree to which they used *My Math Academy* and therefore the amount of progress they made within the program. **TABLE 1** shows the median total hours, median total weeks, and median weekly minutes for those who made low, medium, or high progress in *My Math Academy*, along with the average number of learning units each group mastered in the program.

1 The propensity scores were calculated using a binary logistic regression with group as the dependent variable and the NWEA MAP baseline score as the covariate. These scores/probabilities were saved as a new variable. Weights were calculated by dividing 1 by the probability. All analyses including non-users of *My Math Academy* included these weights.

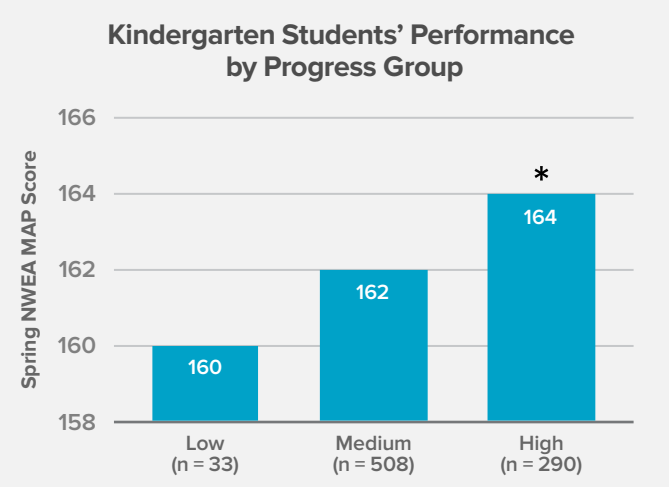
TABLE 1. **Student usage/progress groups by grade level on *My Math Academy***

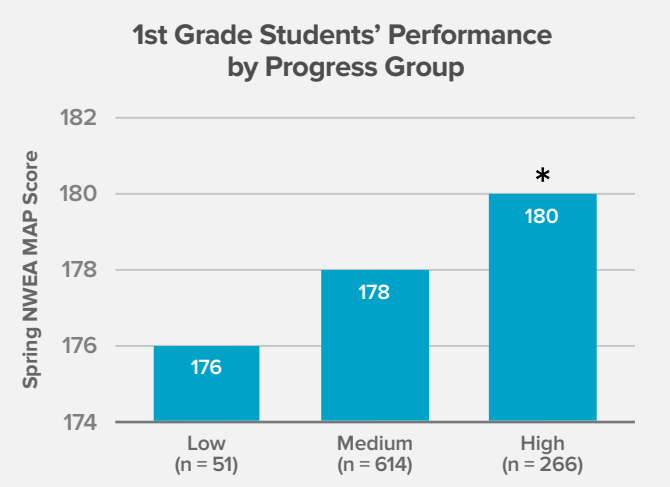
	Average Learning Units Mastered (SD)	Median Total Weeks	Median Total Hours	Median Weekly Minutes
Kindergarten (n = 907)				
Low	2 (2)	5	.91	11.2
Medium	18 (7)	20	6.4	18.9
High	41 (9)	27	14.4	32.5
First Grade (n = 1,002)				
Low	2 (1)	5	.99	10.7
Medium	17 (7)	19	5.8	19.5
High	40 (8)	26	13.6	33.5
Second Grade (n = 932)				
Low	2 (1)	8	1.8	13.8
Medium	9 (3)	17	4.9	19.4
High	21 (4)	20	9.2	30.6

Subsequent results focus on students who had matched fall 2022 and spring 2023 (pre and post) assessment scores.

FINDING 1.

Students in kindergarten and 1st grades who mastered at least 30 learning units in *My Math Academy* had statistically significantly higher scores on NWEA MAP in comparison to their peers who had mastered fewer learning units.





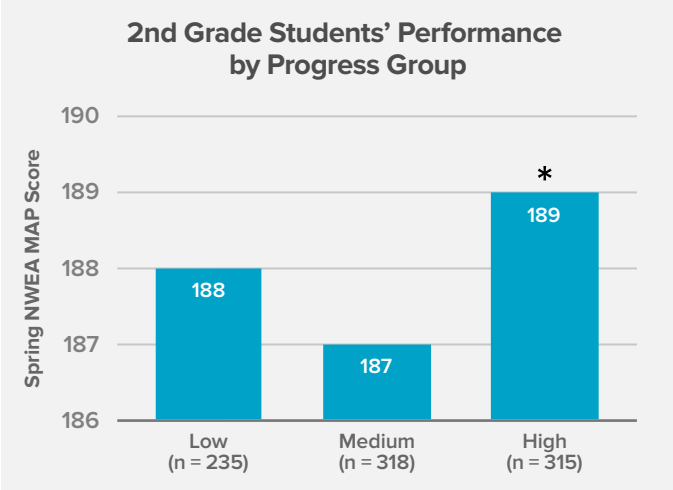
NOTE: * indicates statistically significant difference between high progress vs. medium progress groups and between high progress vs. low progress groups

Kindergarteners who completed at least 30 learning units in *My Math Academy* had significantly higher on spring 2023 NWEA MAP scores compared to those who completed fewer than 5 learning units ($p < .01$, effect size = 0.32) as well as those who completed between 5 and 29 learning units ($p < .001$, effect size = 0.15).

Similarly, first grade students who completed at least 30 learning units in *My Math Academy* performed significantly higher on spring 2023 NWEA MAP compared to their peers who completed fewer than 5 learning units ($p < .001$, effect size = 0.23) as well as those who completed between 5 and 29 learning units ($p < .01$, effect size = 0.15).

FINDING 2.

Students in 2nd grade who mastered at least 15 operations learning units in *My Math Academy* had statistically significantly higher scores on NWEA MAP in comparison to their peers who mastered fewer learning units.

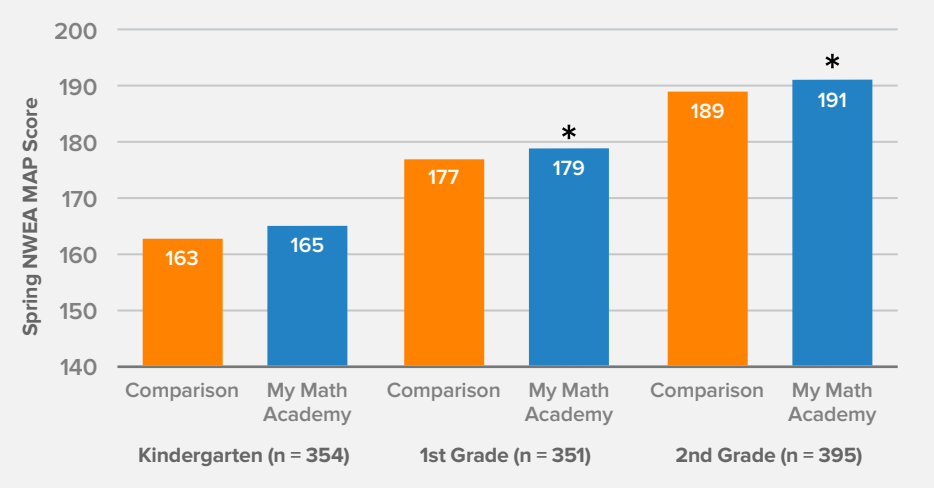


NOTE: * indicates statistically significant difference between high progress vs. medium progress groups and between high progress vs. low progress groups

Second grade students who completed at least 15 learning units focused on operations (e.g., addition, subtraction) scored statistically significantly higher on the spring 2023 NWEA MAP than their peers who completed fewer than 5 operations learning units ($p < .01$, effect size = 0.17) as well as those who completed between 5 and 14 such units ($p < .001$, effect size = 0.14).

FINDING 3.

Students in kindergarten, 1st, and 2nd grades who made substantial progress in *My Math Academy* scored statistically significantly higher on the end-of-year NWEA MAP in comparison to their peers who did not use the program.



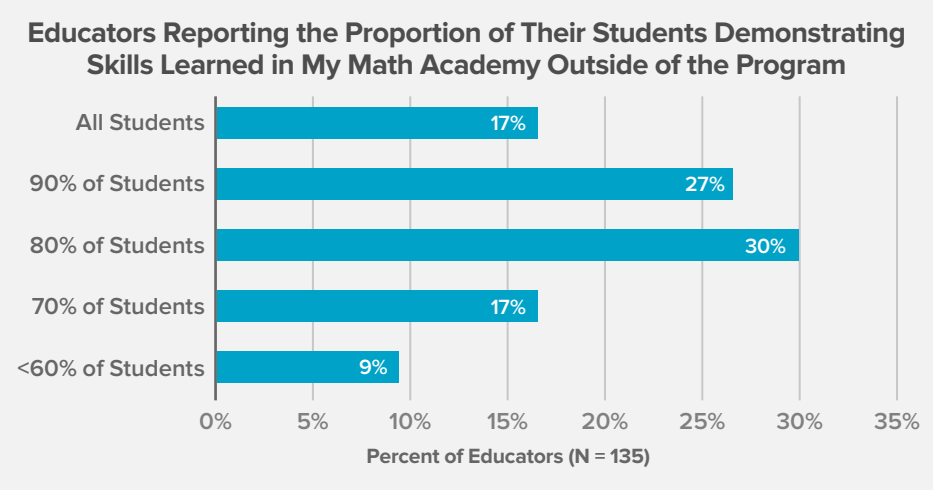
NOTE: * indicates statistically significant difference between comparison vs. *My Math Academy*

Students who made substantial progress in *My Math Academy* were kindergarteners and 1st grade students who completed at least 30 learning units in the program and 2nd grade students who completed at least 20 learning units and at least 15 additional learning units focused on operations. Regression analyses were conducted to determine whether there were significant differences between the spring NWEA MAP scores of students who used *My Math Academy* and their peers who did not. Findings indicated that students in kindergarten ($p < .05$, effect size = 0.19), 1st ($p < .001$, effect size = 0.22), and 2nd ($p < .05$, effect size = 0.14) grades who made substantial progress in the program scored statistically significantly higher on the spring 2023 NWEA MAP assessment in comparison to their peers who did not use the program. This is equivalent to approximately 2 months of additional learning for kindergarteners, 2.5 months of additional learning for 1st graders, and 1.5 months of additional learning for 2nd graders who used *My Math Academy* in comparison to their peers who did not use the program.[1]

FINDING 4.

All teachers who responded to the survey indicated that *My Math Academy* is a resource they would like to continue using; 9 out of every 10 teachers indicated that at least 70 percent of their students are demonstrating skills they learned in My Math Academy outside of the program and that the program had a positive impact on their students' enjoyment and self-confidence in learning math.

A total of 135 educators who used *My Math Academy* in school year 2022–2023 completed the end-of-year survey, in which all of them indicated that the program is a resource that they would like to continue using (85% definitely, 15% somewhat). Moreover, **the majority of teachers reported observing their students demonstrate skills they learned in *My Math Academy* outside of the program**.



Additionally, 95% of the educators reported that *My Math Academy* had a positive impact on their students' self-confidence in learning math; 93% of the educators indicated that the program had a positive impact on their students' enjoyment in learning math.

Teachers further elaborated on the positive impact of *My Math Academy* in interviews:

> *"I saw a lot of students who struggled with math or weren't confident with math. But when they left my classroom, they had developed a much better relationship with math. They were more excited to learn about math."* **1st grade teacher**

1 These estimates are based on research by Bloom and his colleagues who analyzed typical student growth rates across grade levels and subjects. See Bloom, H. S., Hill, C. J., Black, A. R., & Lipsey, M. W. (2008). Performance trajectories and performance gaps as achievement effect-size benchmarks for educational interventions. *Journal of Research on Educational Effectiveness*, 1(4), 289–328. https://doi.org/10.1080/19345740802400072

> *"They're excited, especially when they get to the larger numbers, they're like, look, I have more than 20 now! Also, before, they didn't have the confidence to know what they're doing, but now they actually just start doing it. I can see their confidence with anything new. They would just do it on their own and don't need my help as much, so they're more independent."* **PK teacher**

> *"If I sit with a child and they're doing something on* My Math Academy*, they can explain the process., I can ask, tell me, how do you do that? And they're able to explain it perfectly. I think that's huge because that's really when you know they learned it. Not that they can do it, but that they can explain it to somebody else. Then they transfer that to something that they're doing in the classroom."* **Administrator**

> *"I don't think that I've ever seen a program before where a pre-K student or a kinder student was able to do second grade work. We've never had that in the district. But we did with* My Math Academy*. If you look at different data points from different things that the district is doing since we started using* My Math Academy*, our gaps are smaller. And we started using the program in every grade level."* **Administrator**

This study builds on and strengthens ***My Math Academy*'s track record of effectiveness** in early mathematics education. The new findings demonstrate the program's effectiveness across a broader range of grades and through a different, widely used measure. The positive feedback from both educators and administrators corroborates the results of earlier studies and **further reinforces the program's value as an effective, engaging solution for early mathematics instruction**.

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