

Imagine Math Facts Builds Math Fact Fluency for Grade 1-7 Students in Birdville ISD

Overview

During the 2022–2023 academic year, Birdville ISD in Texas implemented Imagine Math Facts to support mathematics achievement for Grades 1–7 students. Over the course of the year, 4,987 students used the program for an average of 2.8 hours and correctly completed an average of 677 facts.

Imagine Learning partnered with Birdville ISD to examine how usage of Imagine Math Facts impacted students’ mathematics achievement. To achieve this, Imagine Learning correlated Imagine Math Facts program usage (minutes in program and number of operations completed) with Renaissance Star Math (Ren Star) assessment scores. Additionally, Imagine Learning utilized propensity score matching to compare how Ren Star performance differed between statistically similar students who used or did not use the Imagine Math Facts program.

Birdville ISD, TX

Demographics	Users n = 4,987	Non-Users n = 3,954
Special Education Status	12.2%	12.5%
Female	48.4%	50.4%
Hispanic	51.3%	41.6%

Results

The results of this evaluation showed a positive association between Imagine Math Facts usage and performance on the 2023 Ren Star math assessment. As students spent more time (minutes) in Imagine Math Facts, they achieved statistically greater scores on their 2023 Ren Star math assessment ($p < .01$, see Figure 1). Further, after statistically matching students on baseline scores and other demographics variables, comparative analyses showed that students who completed at least one operation (either addition, subtraction, multiplication, or division) in Imagine Math Facts statistically outperformed their peers by almost 12 points on the Ren Star math assessment ($p < .001$, see Figure 2). Overall, these results indicate that Imagine Math Facts is a strong solution for supporting students in their mathematics achievement.

Figure 1. Association between minutes in Imagine Math Facts and 2023 Ren Star Math score.

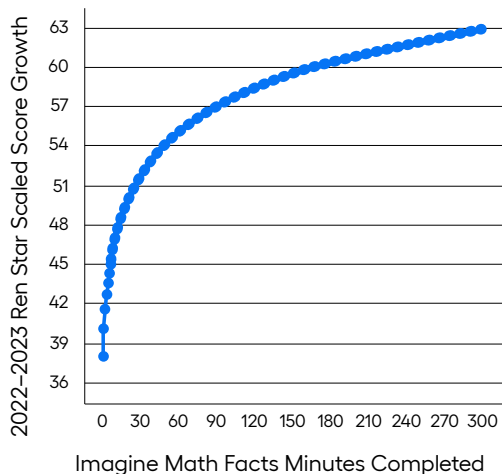
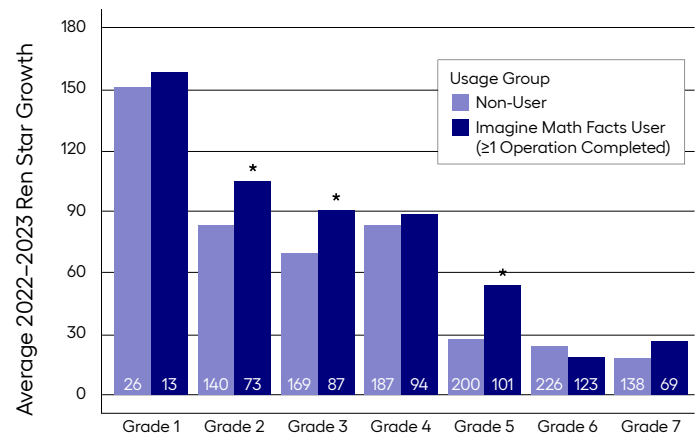


Figure 2. Average 2023 Ren Star math scaled score by Imagine Math Facts user group.



Note. * indicates the difference between users and non-users is statistically significant.