imagine math facts®

Imagine Math Facts Supports Clifton Public School Students' Achievement on NJSLA

Overview

During the 2022–2023 academic year, Clifton Public Schools in New Jersey implemented Imagine Math Facts to support mathematics achievement for Grades K–8 students. Over the course of the year, 3,410 students used the program for an average of 3.6 hours and correctly completed an average of 936 facts (all these students also used Imagine Math during the 2022–2023 school year). The purpose of this research study was to examine how usage of Imagine Math Facts impacted students' mathematics achievement. To achieve this, Imagine Learning analyzed the New Jersey Student Learning Assessments (NJSLA) mathematics data for the users and correlated outcomes to program usage (hours on program and number of operations completed) to determine how students' usage of Imagine Math Facts was impacting mathematics performance. Additionally, Imagine Learning utilized propensity score matching to compare how different levels of usage contributed to students' mathematics achievement as measured by the NJSLA.

Clifton Public Schools, NJ

Demographics	($n = 3,410$)
Special Education Status	19.5%
Free/Reduced Lunch Status	43.8%
ELL	9.8%
Title I Math	28.2%
504 Plan	1.4%

Results

The results of this evaluation showed a positive association between Imagine Math Facts usage and performance on the 2023 NJSLA math assessment. As students spent more time (hours) in Imagine Math Facts, they achieved statistically greater scores on their 2023 NJSLA math assessment ($p < .01$, see Figure 1). Further, after statistically matching students on baseline scores, ELL status, 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 about 3 points on the NJSLA math assessment ($p = .031$, see Figure 2). Overall, these results indicate that Imagine Math Facts is a strong solution for supporting students in their mathematics achievement.

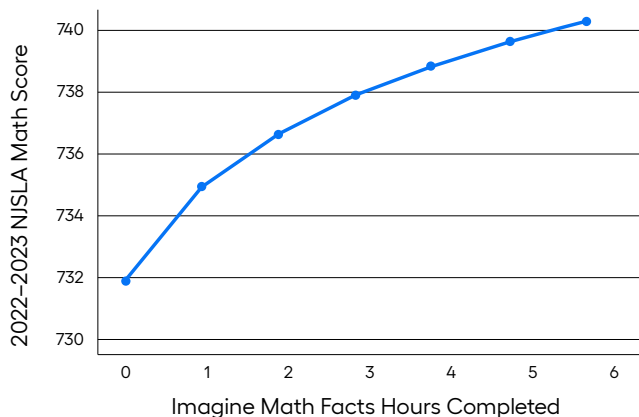**Figure 1.** Association between hours in Imagine Math Facts and 2023 NJSLA Math score.

Figure 2. Average 2023 NJSLA math scaled score by Imagine Math Facts usage.

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