

Imagine Math Usage Supports Growth on ISAT for Students of Diverse Backgrounds

Overview

In the 2021–2022 academic year, Blackfoot School District #55 used Imagine Math with 658 students in Grades 4–6. On average, students used Imagine Math for 5.5 hours and passed 4.9 lessons. Imagine Learning collected and analyzed 2021 and 2022 Idaho State Achievement Test (ISAT) mathematics data from the district. Analyses examined how using Imagine Math impacted students' mathematics achievement on this assessment.

Results

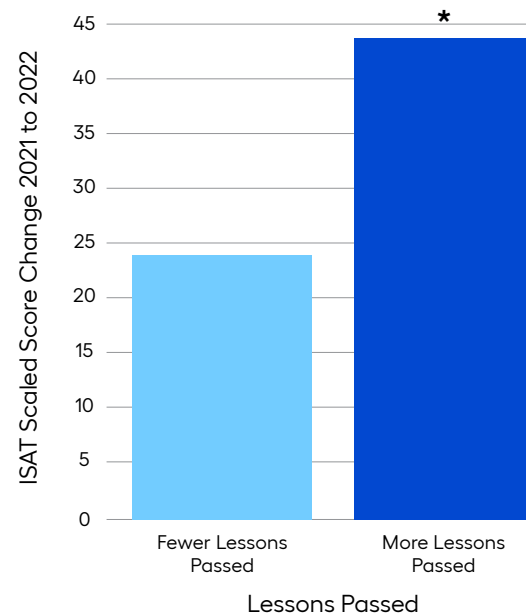
After statistically matching students based on several demographic factors¹, students who passed more lessons achieved statistically significantly greater gains on the ISAT from 2021 to 2022 than their peers who passed fewer lessons (Figure 1, $n = 374$, $p < .001$). Furthermore, Imagine Math was found to positively impact students of diverse backgrounds. A positive and statistically significant relationship was observed between the number of Imagine Math lessons passed and changes in ISAT score from 2021 to 2022 for American Indian or Alaskan Native students (Figure 2, $p < .01$), as well as White ($p = .04$) and Hispanic or Latino students ($p < .01$). Overall, these results demonstrate how Imagine Math supports Idaho students in achieving positive results on the ISAT.

¹Propensity score matching was used to create a matched sample of students based on whether they passed fewer or more than the average number of lessons passed for students in their grade level (4 lessons for Grades 4 and 6 and 2 lessons for Grade 5). Students were matched on their 2021 ISAT score, grade level, race, special education status, free/reduced lunch status, and English language learner status.

Blackfoot SD #55, Idaho

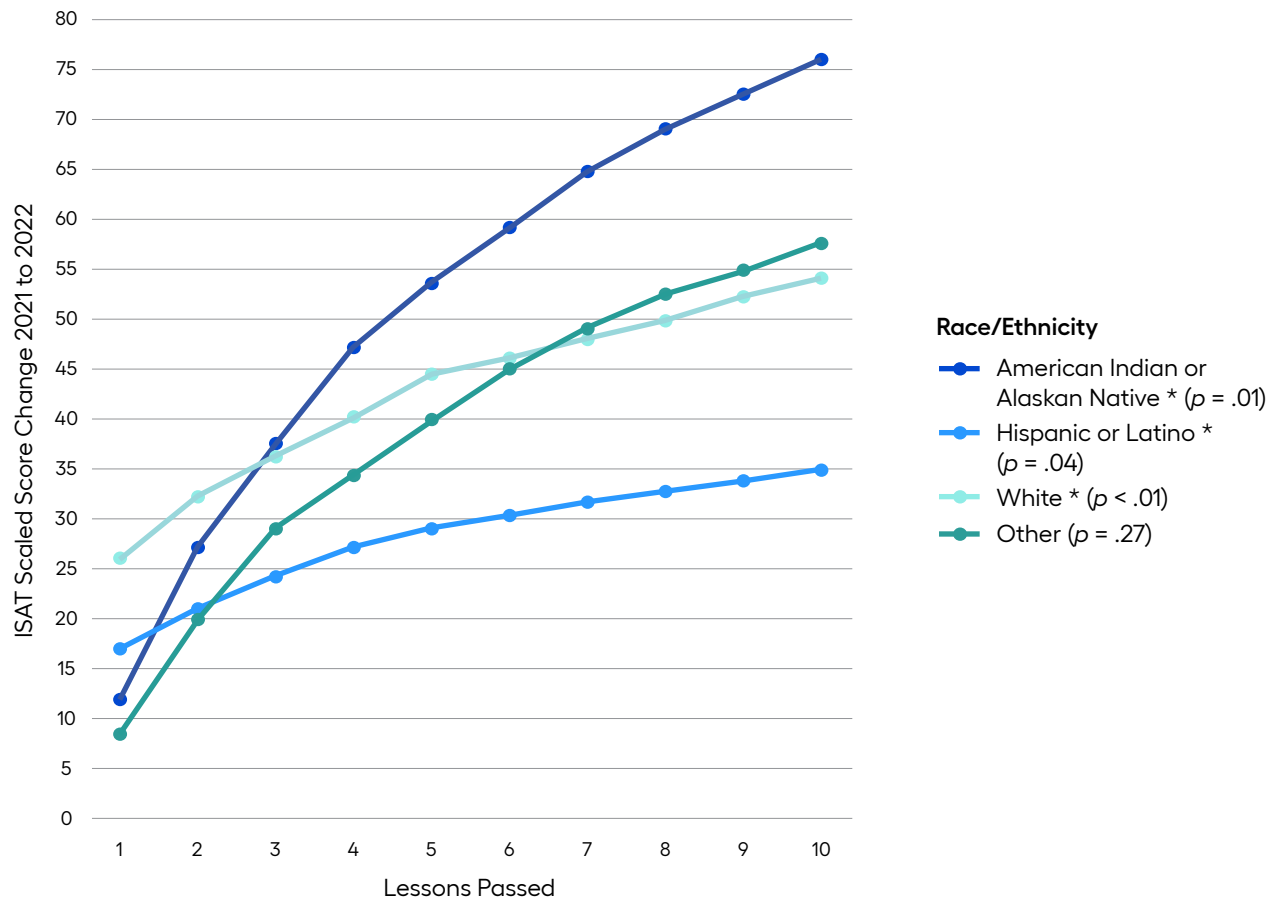
Demographics (N = 658)	Percent
Hispanic	26.3%
Black/African American	0.8%
Asian	0.4%
American Indian/Alaskan Native	10.8%
Free/Reduced Lunch	50.5%
Special Education Status	13.7%
English Language Learner	14.4%

Figure 1. Changes in ISAT Scaled Score Based on Lessons Passed



Note: Asterisk denotes statistically significant difference compared to lower usage group, * $p < .001$.

Figure 2. Association Between Lessons Passed and ISAT Scaled Score Change by Race/Ethnicity.



Note: Asterisks denote statistically significant relationship, * $p < .05$.