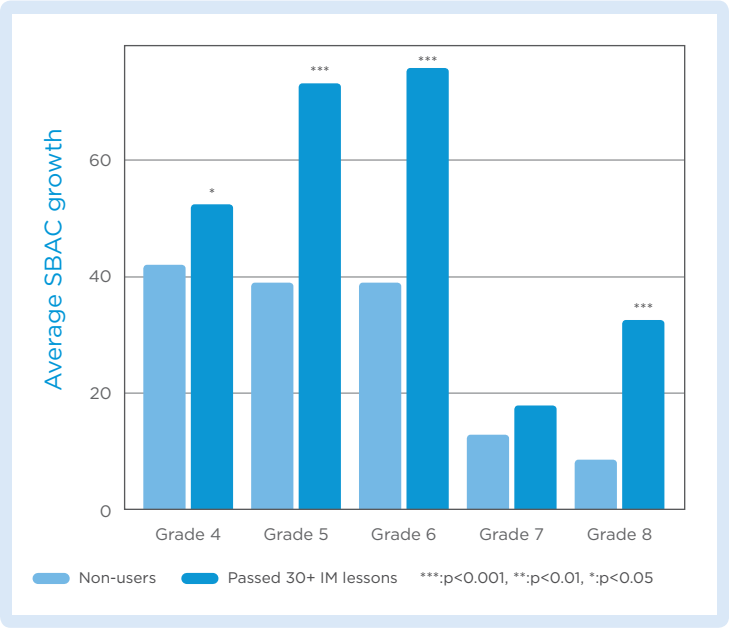
Imagine Math: Increased Performance on the SBAC Math Assessment

Background

During the 2017–2018 school year, a school district in the northwestern United States implemented Imagine Math as a supplemental instructional tool for its students. The school district serves a diverse population of students. Within the school district, 55.7% of students are White, 16.7% Hispanic, 11% Asian/Pacific Islander, 7.6% Black/African American, 4.3% Asian, 3.5% Pacific Islander, and 1.2% American Indian/Native Alaskan. Approximately 14% of students in the district are special needs students and 48.5% are on free or reduced lunch programs.

To determine the impact of the program on student growth, we utilized Smarter Balance Assessment Consortium (SBAC) Math scores from the 2016–2017 and 2017–2018 school years for 530 students who passed the recommended 30 or more lessons and 1,590 similarly matched[1] non-users from the same district in grades 4–8.

Figure 1. SBAC Math Score Growth



Results

Figure 1 presents the average SBAC Math score growth from 2016–2017 to 2017–2018 between non-users and students who passed the recommended level of Imagine Math lessons during the 2017–2018 school year. These results demonstrate that users of the Imagine Math program achieved greater SBAC Math score growth when compared to non-users. On average, students who passed the recommended level of lessons demonstrated statistically higher year-to-year growth than non-users in grades 4, 5, 6, and 8. Use of the Imagine Math program at the recommended level favorably impacted the average SBAC score growth during the 2017–2018 school year.

Conclusions

The results of this study support the role of Imagine Math as a supplementary tool for the development of mathematics achievement. Students who used the program at the recommended level in the school district for the 2017–2018 school year experienced improvements in mathematics proficiency as demonstrated by performance on the SBAC Math assessment. Given these findings, we would expect similar results for other similar students who use the Imagine Math program at recommended levels.

1: Propensity Score Analysis was done using k-NN ratio of 1:3 using the variables of 2016-2017 SBAC Math score, Gender, Race, English Learner status, and Special Needs status

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