



Impacts of Saga Blended Learning on Math Achievement After COVID-19

Introduction

We conducted an analysis of Saga Education’s (Saga) high-dosage blended learning tutoring in three school districts across the United States during the 2021–2022 school year, when schools were still struggling with the COVID-19 pandemic and its repercussions for student learning. These blended models alternate student tutoring in small groups with individual adaptive online math practice.

Our evaluation explored the implementation of these models, the impacts of Saga, and the relationships between implementation factors and impacts. For the impact evaluation, we compared outcomes for Saga students to a group of “non-Saga” students who did not participate in Saga but who were otherwise similar to Saga students. This brief summarizes findings and provides recommendations for action based on those findings.

Saga’s blended tutoring models

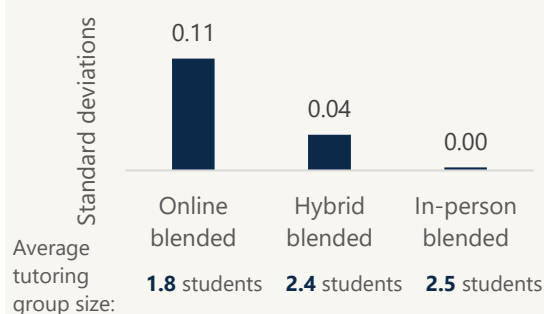
- **In-person blended:** Tutors are physically present in students’ schools.
- **Online blended:** Tutors are remote and meet with students via a virtual platform.
- **Hybrid blended:** Some tutors are physically present, and others are remote.▲

Online tutoring models have promise, especially when it is challenging to hire in-person tutors.

This study found that Saga’s online blended models increased student performance on some end-of-course exams and that it was easier to hire for remote tutoring roles than in-person tutoring roles in 2021–2022. On average, the online blended model increased student performance on end-of-course exams by an average of 0.11 standard deviations across two districts, which is considered a moderate-sized impact (Figure 1). Additionally, the online models ended up with smaller tutoring group sizes than the in-person models because it was substantially easier to hire and retain remote tutors than in-person tutors. Because of the challenges with hiring in-person tutors, some schools that intended to provide in-person tutoring switched partway through the

school year to a hybrid model, in which remote tutors supplemented the in-person tutors. The challenges with hiring and retaining in-person tutors likely reflects some challenges specific to the 2021–2022 school year, which was still highly affected by the COVID-19 pandemic. However, some of the challenges with hiring for in-person

Figure 1. Saga’s impact on standardized test scores, by type of blended model

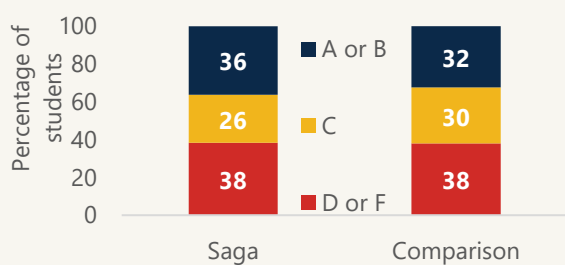


roles might continue to persist into future years, as many workers across industries continue to prefer working remotely.

Saga's blended model has the potential to increase student math grades in addition to test performance.

Saga students were 4 percentage points more likely to receive an A or B and less likely to receive a C than similar, non-Saga students. This finding is consistent with previous studies of Saga's traditional model, which also found that Saga increased students' math grades.

Figure 2. Math letter grades for Saga and comparison students



Saga had the largest impacts in schools with the fewest staffing challenges and smallest group sizes and for students with lower prior achievement.

Schools that had no tutor staffing issues and in which tutors worked with students one-on-one had large impacts (0.2 standard deviations) on average. In contrast, schools that had more issues with hiring and retaining tutors and had tutoring group sizes of two or more students had smaller or no impacts. This could either mean that math tutoring is more effective when there are fewer implementation and hiring challenges, or that it is more effective when students are in smaller tutoring groups. However, this study cannot differentiate between these two explanations.

Additionally, this study found that impacts of Saga tutoring were larger on average for students with lower prior achievement in mathematics, as well as for Black students. Some prior evidence has also shown that tutoring programs may have larger

impacts among students with lower prior performance, although other studies have found that tutoring benefits students at all levels of prior performance. Schools and tutoring programs should consider if lower performing students may benefit the most from tutoring in their schools and be intentional about prioritizing students that could benefit the most from tutoring.

Technology-driven tutoring programs can continue to find ways to improve student engagement.

This study suggests that blended models show promise for improving student outcomes, yet these models can create additional challenges for student engagement. Saga staff reported experiencing technical difficulties with some of the online practice tools and that students might have struggled to stay focused during adaptive online math practice.

Students don't inherently enjoy [adaptive online math practice].... They are craving human interaction, so when you place them in front of a computer screen, it's a challenge.

Saga site director

Tutoring programs and school districts can continue to consider how to improve student engagement, potentially by hiring more in-school staff to support students, making online platforms more user-friendly and engaging, or identifying other ways to engage students in math. Saga is currently exploring a variety of approaches, including both improved online platforms and hands-on activities that support math intuition and reasoning.

For more information about the study and our findings, please see the full report.

This summary is based on research funded by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.