

## Air Tutors – High Dosage Tutoring

Air Tutors partnered with Mathematica, a public policy research firm, to evaluate Air Tutors’ high dosage tutoring program in the 2021-2022 school year with funding from the Bill & Melinda Gates Foundation. The organizations conducted a randomized controlled trial (RCT) that found that students who participated in Air Tutors achieved scores on an adaptive diagnostic math assessment (NWEA’s Measures of Academic Progress or MAP) that were 0.13 standard deviations higher than control group students’ scores. This is equal to a 4.0 percentile point increase from students who did not receive Air Tutors. There is a 93 percent chance that Air Tutors increased MAP scores.

In addition to the RCT, a survey was administered to students participating in Air Tutors. It showed that students who participated in Air Tutors reported **highly positive relationships with their tutors** and **high senses of belonging in their tutoring sessions**, and **their math confidence increased** over the course of the program.

### STUDY AT A GLANCE

**Study Design:** Randomized controlled trial (RCT)

**School Year:** 2021-2022

**Grades:** 4th, 5th, and 6th

**Students:** 309 (208 treatment and 101 control; 153 participants)

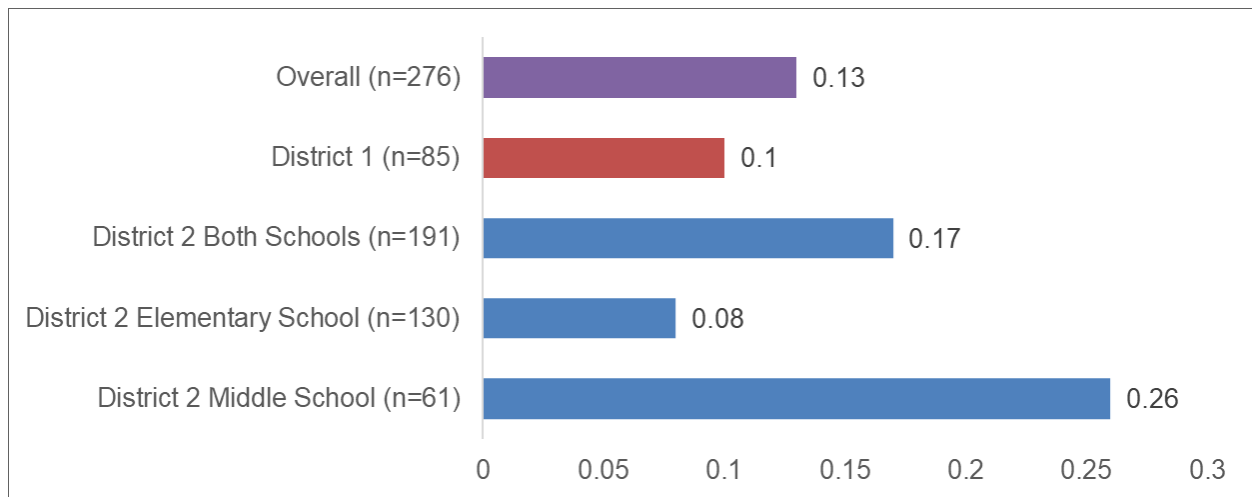
**Dosage:** 3 hours (across 3-4 sessions) per week

**Outcomes:** NWEA’s MAP adaptive diagnostic math assessment (all students), attendance data and student surveys (only treatment students)

	District 1	District 2
Schools	Public online K-12 school	Public in-person elementary school and middle school
Students	102 students (64 treatment and 38 control; 47 participants)	207 students (144 treatment and 63 control; 106 participants)
Average dosage offered	70 hours of tutoring across 21 weeks	42 hours of tutoring across 15 weeks
Session timing	During the school day	During the school day at the middle school; after school at the elementary school’s campus
Period of implementation	Fall 2021 – Spring 2022	Spring 2022

Different outcomes emerged at each school (Figure 1). **Air Tutors increased participating students' MAP scores the most at an in-person middle school program held during the school day** (District 2, 0.26 standard deviations, 4.2 percentile point increase). Air Tutors students' MAP scores also increased relative to control students' scores at an online school (District 1) where tutoring was held during the school day (0.10 standard deviations, 3.7 percentile point increase) and at an elementary school in District 2 where tutoring was held as an after-school program (0.08 standard deviations, 2.5 percentile point increase). These smaller increases may be related to attendance, or other implementation or contextual factors.

**Figure 1. Air Tutors students received MAP scores that were 0.13 standard deviations higher than control students, and the impact varied by site**



Source: District data.

Note: Sample sizes include all students who had both fall and spring MAP scores. These impacts represent the effect of tutoring on students who attended at least one session. A Bayesian analysis suggests that there is a 66 percent chance that Air Tutors increased MAP scores in District 1, a 75 percent chance that Air Tutors increased MAP scores in the elementary school in District 2, and a 98 percent chance that Air Tutors increased MAP scores in the middle school in District 2.

On average, students attended 72 percent of sessions. The attendance rate was 63 percent at the in-person elementary school, where Air Tutors was offered after school at the school's campus. The attendance rates were higher at the in-person middle school and the online school, 78 to 79 percent respectively, where tutoring was offered during the school day.

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