NATIONAL STUDENT SUPPORT ACCELERATOR

equalizing access to quality tutoring

Implementation of the OSSE High Impact Tutoring Initiative

School Year 2023 – 2024
Second Year Report

Amanda Lu
Stanford University

Nancy Waymack
Stanford University

Demetra Kalogrides
Stanford University

Carly D. Robinson
Stanford University

Monica G. Lee
Stanford University

Susanna Loeb
Stanford University

February 2025

studentsupportaccelerator.org

Stanford | SCALE Initiative
Accelerator for Learning

Implementation of the OSSE High Impact Tutoring Initiative
School Year 2023 – 2024 Second Year Report

Summary

The second full school year (2023-24) of the OSSE High Impact Tutoring Initiative expanded the reach of an already ambitious program. The Initiative served 7,274 students, approximately 8% of students in DC schools and 12% of students classified at-risk. The Initiative was able to increase participation by 2,000 students from its first year of implementation while also increasing the successful targeting of at-risk students who stand to benefit most from the program. The Initiative also increased the average dosage level to 33.86 sessions. Collectively, this is a significant improvement in program scale and program delivery, ensuring that increases in tutoring continue to serve students who are most in need of potential benefits.

In Year 1, we found that tutoring had a strong positive effect on student attendance, even compared with interventions that are specifically designed for chronic absenteeism (detailed findings here). We continue to find evidence of a positive impact of OSSE-funded HIT on school attendance. After accounting for confounding factors related to the day of scheduled sessions and school absences, we find tutored students were more likely to attend school on days when sessions were scheduled, an effect that was particularly pronounced for younger grades and for students who are currently attending school 70-90% of the time. Overall, having a tutoring session scheduled decreased a student's probability of being absent by 0.5 percentage points, and having a tutoring session scheduled during the school day decreased a student's probability of being absent by 0.8 percentage points. If tutoring is offered at the suggested dosage of three times a week, tutored students would attend an average of 0.5 days more over the course of the school year, with an average of 0.8 days more if tutoring is delivered during the school day. If tutoring was offered every day of a child's year in school, we would expect them to increase their attendance in school by 0.8 days on average, with an average of 1.3 days if tutoring was scheduled during the school day. This is more evidence that, while alone high-impact tutoring is not a silver bullet for attendance issues, it can be part of the solution.

Importantly, the Initiative has continued to be successful in serving students with lower academic performance and students from historically marginalized groups, who represent the majority of OSSE-funded HIT students. Students with lower state standardized test scores (as measured by

Partnership for Assessment of Readiness for College and Careers or PARCC) in the 2022-23 school year, as well as Black or African American students and Hispanic or Latino students were more likely to receive tutoring in the Initiative's second year.

Finally, the Initiative has provided access to tutoring in areas of DC with fewer financial resources. As Figure 1 below shows, existing private tutoring is concentrated in wealthier areas of the city while OSSE-funded tutoring is largely on the east side of the city in wards 5, 7, and 8, areas of the city that tend to have fewer financial resources.

Figure 1. Tutoring Participation by Ward
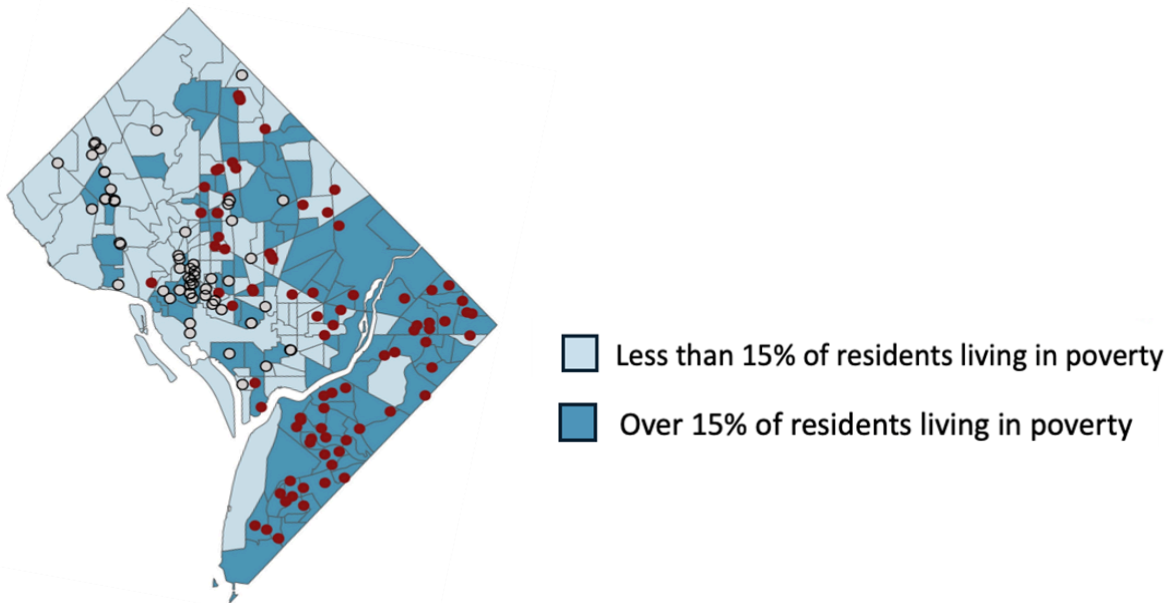
Gray dots represent the coordinates indicating private tutoring facilities found through Google Maps searches for private tutoring establishments in Washington D.C. as of February 2024. Red dots signify the spatial distribution of OSSE-funded HIT sites throughout the District of Columbia. Prior to the implementation of the OSSE HIT Initiative, most private tutoring was concentrated in wealthier areas of DC. The OSSE HIT Initiative increased access to tutoring in parts of DC with more residents living in poverty.

NATIONAL STUDENT
SUPPORT ACCELERATOR

Students Served

In the 2023-24 school year, tutoring providers partnered with schools with greater than 40% of their student body classified as at-risk, as in the prior years of the Initiative. In year 2 of the Initiative, Tutoring was provided in 101 schools and 15 "hubs" serving students in community-based locations. Schools and hubs determined which students were eligible for tutoring. This section of the report will provide an overview of the students served, the participating schools and the demographic characteristics of each. It is important to note that this report describes tutoring provided through the OSSE HIT Initiative only. In some cases, schools may have provided other high-impact tutoring through other funding sources during school or outside of school hours; those programs are not included in this report.

Student Participation

In the 2023-24 school year, the Initiative supported tutoring for 8 percent of students in DC schools overall, and 12 percent of students categorized as at-risk. This is an increase of coverage within DC schools and an increase in efficacy at targeting at-risk students for tutoring services. Tutoring providers served 7,274 students through the Initiative in Year 2, an increase of over 2,000 from the 5,135 students served in Year 1. Along with a broader increase in programs, Year 2 efforts were also more effective in targeting at-risk students, with an increase from 8 percent of at-risk students participating in Year 1 to 12 percent in Year 2. This translates to over 1,000 additional at-risk students receiving tutoring between Year 1 and Year 2. Comparisons between the proportion of students who are categorized as at-risk between tutored and non-tutored students can be found in Figure 2.

**Figure 2. Tutoring Participation by At-Risk Status, 2023-24 School Year**
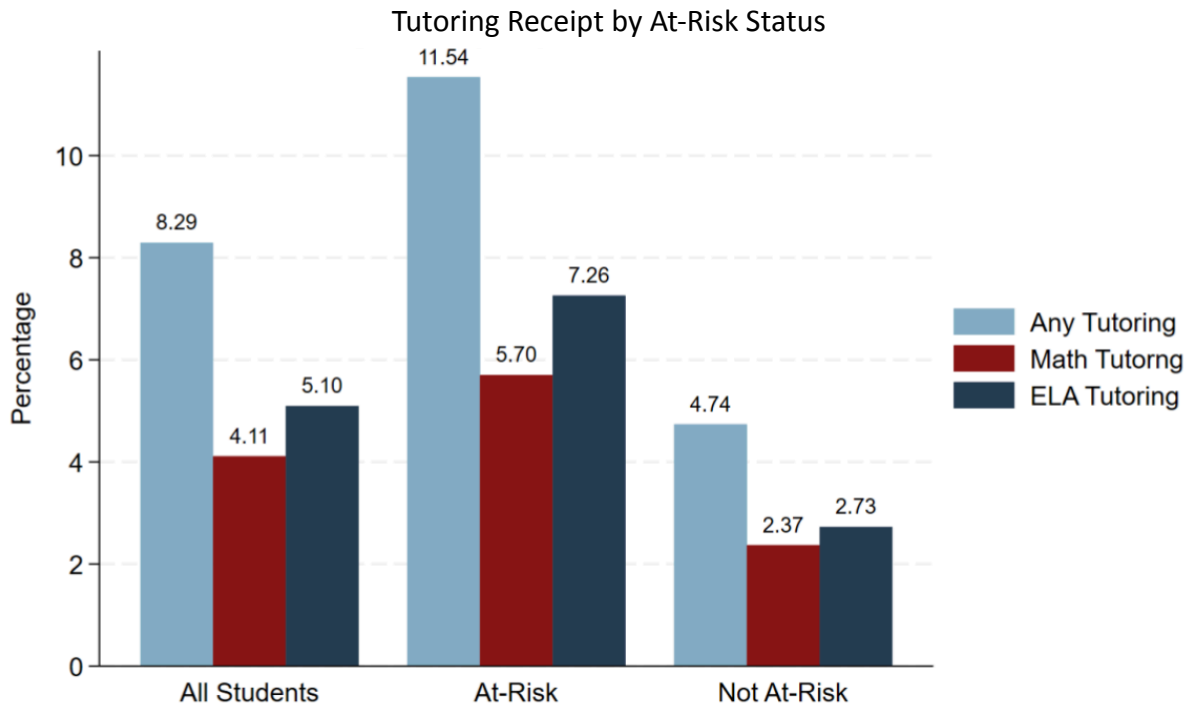
Focusing resources on schools with concentrations of at-risk students (at least 40 percent) resulted in at-risk students being more likely to participate in tutoring.

The program's success in reaching students from historically marginalized groups, which we observed in 2022-23, has also continued. We again see that compared to students overall, a larger percentage of OSSE HIT students identify as Black or African American, economically disadvantaged, or at-risk than the general population. Similar to Year 1, there were not large differences in the proportion of students in OSSE HIT programs and the broader DC student population who are classified as English Learners or students with disabilities. This may be because students with disabilities and English Learners may have access to other resources or interventions providing supplemental support for them during the school day; high-impact tutoring programs are not intended to take the place of other key specialized supports. These results are displayed in Figure 3.

Figure 3. Representation of HIT Initiative Students by Demographic Characteristics, Year 2
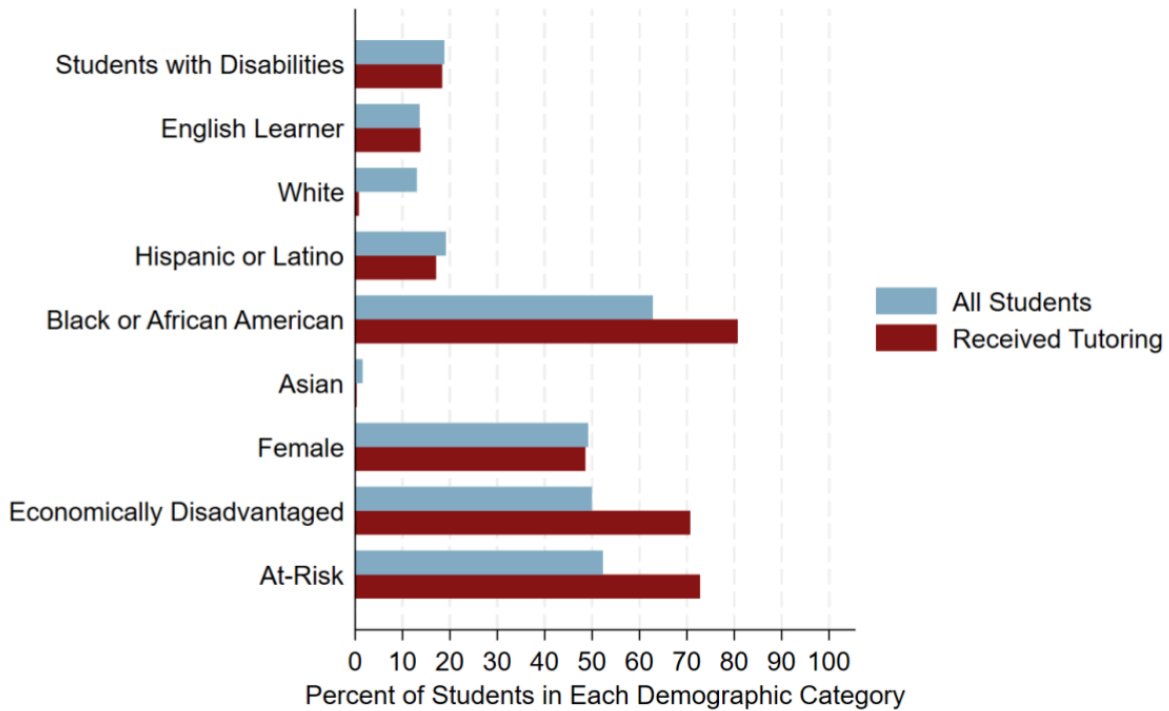
HIT students are more likely to be Black or African American, economically disadvantaged, and at-risk than the general population in DC schools.

When examining the demographics of students participating in the Initiative in comparison to the public school population in Washington DC, we found that the Initiative successfully targeted vulnerable populations. Table 1 below shows the percentage point differences in participation for groups of students when taking into account prior year test scores. The table shows that Black or African American, economically disadvantaged, or at-risk students were successfully targeted to participate in OSSE HIT. For example, Black or African American students are about 5 percentage points more likely than White students to participate, after accounting for prior year test scores. Hispanic or Latino students are 3.3 percentage points more likely to participate than White students. Conversely, students with disabilities are 4.5 percentage points less likely to participate in OSSE HIT than their peers. These differences are statistically significant. A difference is "statistically significant" when there is a high degree of confidence that the differences between the two groups did not occur by chance.

English Learner students in the Year 2 program were more likely to receive tutoring, especially in ELA, than students who are not English Learners. This result differs from Year 1 findings when tutored English Learners were more likely to receive tutoring in math.

Table 1. Predicted Difference in Tutoring Participation by Student Characteristics

	Difference in Likelihood of Participation in Tutoring						
	Female	**Asian**	**Black or African American**	**Hispanic or Latino**	**English Learners**	**Students with Disabilities**	**At-Risk**
Tutoring Overall	-0.5	0.2	5.3 ***	3.3***	1.1 +	-4.5 ***	1.0
Math Tutoring	-0.5*	0.4	3.1 ***	1.3*	-0.3	-3.1 ***	-0.2
ELA Tutoring	0.2	-0.3	2.3 ***	1.8***	1.2 **	-2.6 ***	1.4 +

Notes: Estimates from these models are restricted to the population of students in schools attended by OSSE HIT students. Percentages of female and racial/ethnic categories are relative to male and white students, respectively. Asterisks indicate statistical significance. A difference is "statistically significant" when there is a high degree of confidence that the differences between the two groups did not occur by chance. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$. The model includes fixed effects for student grade level.
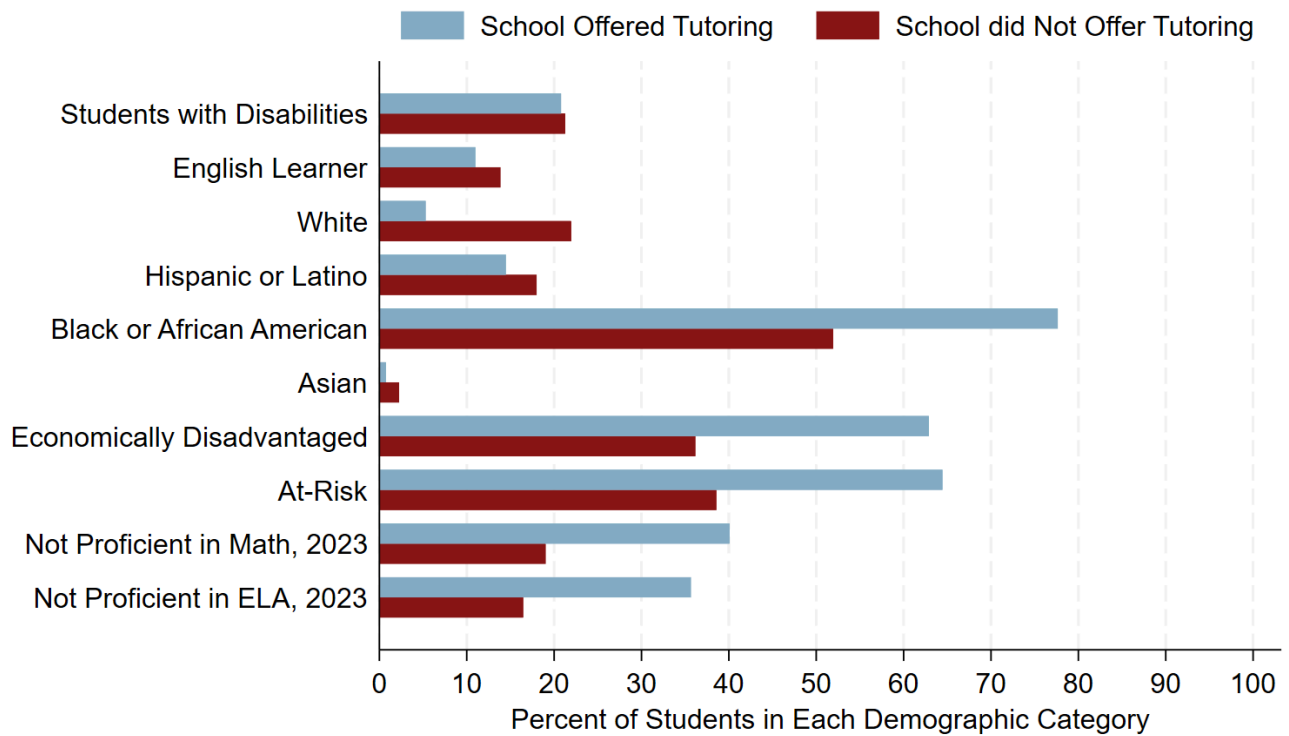
In Year 2, Black or African American students and Hispanic or Latino students are more likely to participate in tutoring than White students; English Learners are slightly more likely to participate in ELA tutoring than their non-English learner peers and students with disabilities are also less likely to participate in tutoring than students without disabilities.

Schools Served

Students from 174 schools participated in OSSE-funded tutoring at schools and community hubs during the 2023-24 school year, up from 141 in 2022-23. Figure 4 below displays the characteristics of schools attended by HIT Initiative students. School-level characteristics strongly mirror the characteristics of OSSE HIT students; Participating schools had a greater proportion of students identified as Black or African American, at-risk, economically disadvantaged, and/or below proficiency in Math and ELA on the 2023 DC CAPE.

Figure 4. Demographic Comparison of HIT Initiative Schools vs. non-HIT Initiative Schools

Schools offering OSSE-funded HIT have larger proportions of Black or African American students, at-risk students, economically disadvantaged students, and students below proficiency in math and ELA.

Tutoring Session Attendance

Research has shown that tutoring can be highly effective when it is held multiple times per week.[1] The Initiative requires tutoring providers to hold two sessions per week. OSSE encouraged providers to schedule tutoring sessions during the school day if at all possible, to maximize student attendance in sessions. Implementation in Year 1 was successful in ensuring that the majority of students were receiving over 20 sessions per school year. Year 2 builds on this success, and we see improvements in tutoring dosage in Year 2 that we describe below.

---

[1]Robinson, C. D., Kraft, M. A., Loeb, S., & Schueler, B. E. (2021). Accelerating Student Learning with High-Dosage Tutoring. EdResearch for Recovery Design Principles Series. EdResearch for recovery project.

Dosage

Figure 5 presents the percentage of HIT students who attended a given number of sessions. HIT students in Year 2, on average, participated in 33.86 sessions, which is an increase from the average of 27.23 sessions in Year 1. When students who were enrolled in the Initiative but attended only one session are removed from the data, the average number of sessions attended in Year 2 grows to 34.96. As the figure indicates, the majority of students receive over 20 sessions, with over 20% of students receiving 50 or more sessions.

In 2022-23, OSSE-funded tutoring providers regularly cited student attendance in tutoring sessions and launching programs later in the year than they had hoped for as challenges that reduced dosage for students. The increase in dosage reflects progress against those challenges and an average of over one session per week for tutoring that began one month into the school year.

**Figure 5. Percent of Students by Sessions Received**
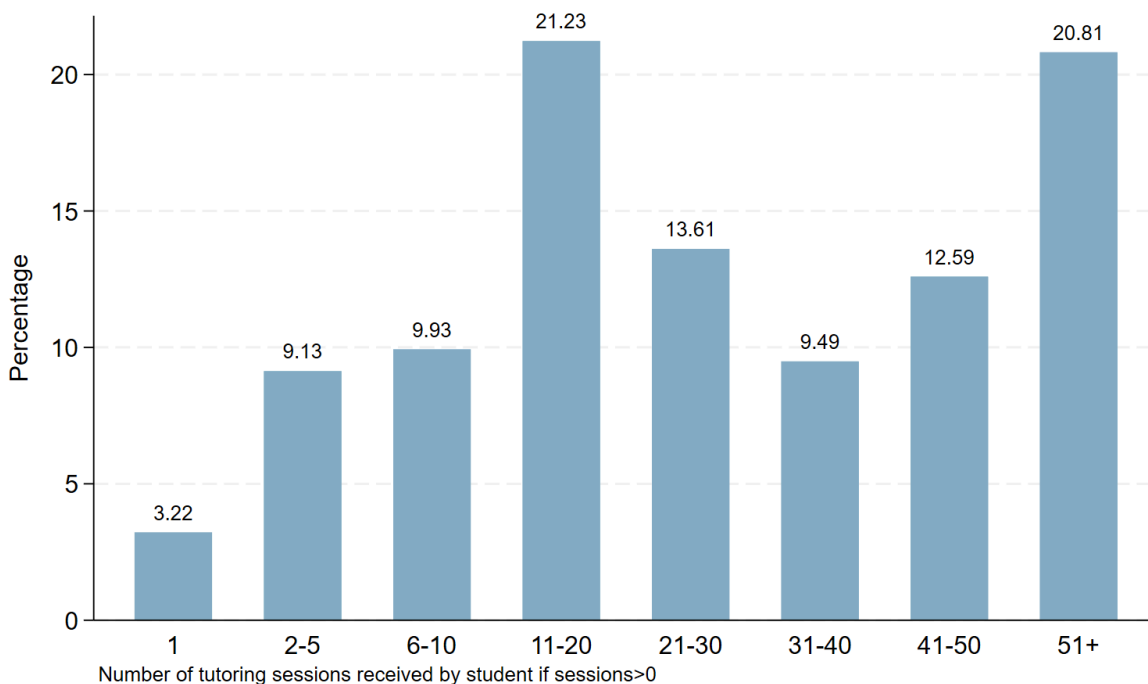
The majority of participating HIT students received more than 20 sessions, with over 20% receiving more than 50 sessions.

Figure 6 shows tutoring delivery differences in different grade levels. Our analysis of Year 2 session-level data shows that middle grade students are most likely to receive tutoring services and logged the most total hours of tutoring. Participating students in lower grades receive more sessions that are shorter in duration.

Figure 6. Grade Level Trends in Tutoring Delivery
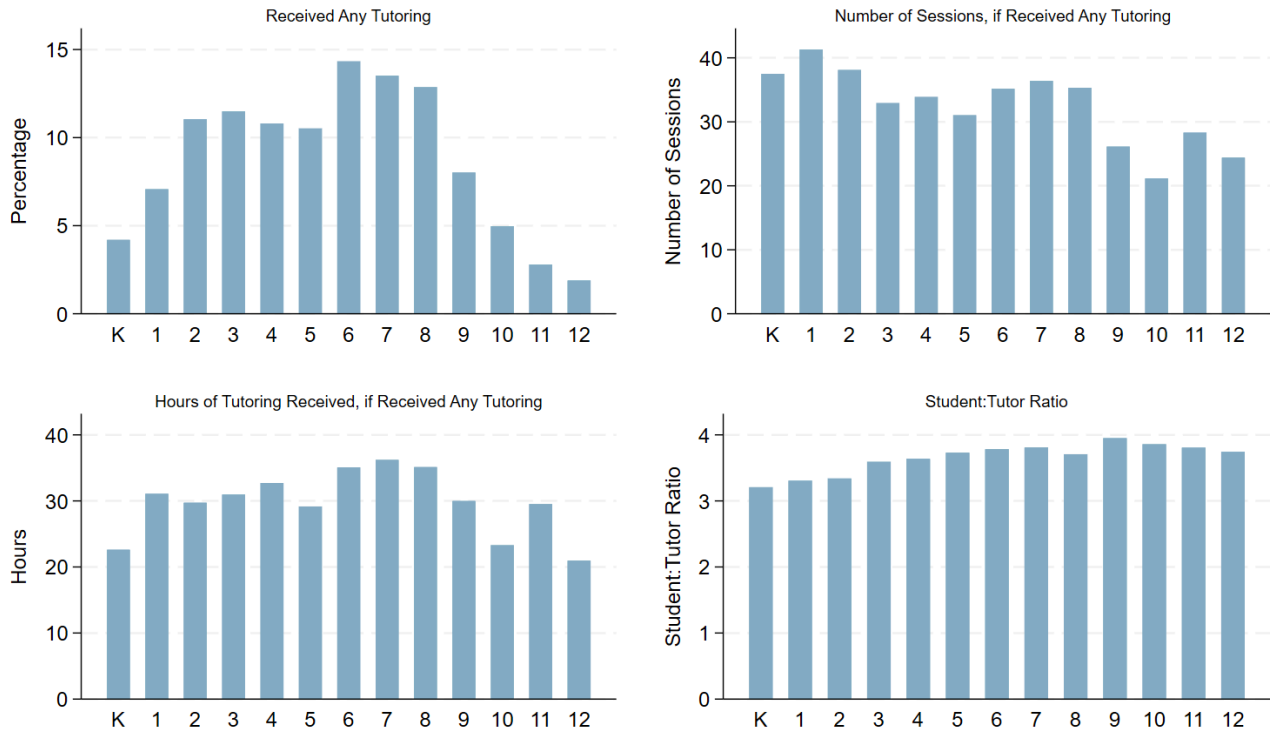
Students in middle grades were more likely to receive tutoring and on average received the most total hours of tutoring. Participating HIT students in younger grades receive more sessions with a lower average tutor-student ratio and fewer minutes per session.

Dosage by Student Demographics

We did not find significant or notable differences between dosage levels among racial groups or other groups that might indicate equity concerns. We do see that the small group of Asian students (< .5% of total students) involved in the program received high levels of math tutoring, but this group represents a very small subgroup of tutored students.

In Year 1, Black or African American and Hispanic or Latino students attended about 9.6 and 12.1 more sessions, respectively, than White students, as shown in Table 2. We also saw that English Learners received about 1.8 more math sessions but 3.7 fewer ELA sessions than native English speakers when

accounting for prior achievement level in Year 1. Comparing these results year-to-year, the overall increase in dosage may have evened out the spread of tutoring sessions across the broader cross section of students being offered tutoring services.

Table 2. Relationship Between Student Characteristics and Number of Sessions Attended

	Female	Asian	Black or African American	Hispanic or Latino	English Learners	Students with Disabilities	At-risk
Total Sessions	0.2+	15.8	-1.8	0.5	-4.4	-1.8	5.1
Math Sessions	-1.3+	24.6 **	-0.7	-1.7	-1.7	-1.5	-4.6
ELA Sessions	1.0+	-10.1	-4.0	.0.2	-0.2	-0.2	9.7 ***

Notes: Differences in the average number of sessions by gender is relative to male students. Differences by race are relative to white students. All models include fixed effects for student grade level.
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Asian and Hispanic Latino Students assigned to the Initiative are, on average, attending more HIT sessions than their White counterparts. Black or African American Students are on average attending fewer sessions than their White counterparts. Participating students with disabilities and English Learners are attending fewer sessions than their peers, potentially because they are already receiving other interventions.

School Attendance

In addition to providing personalized instruction, tutors can also serve as an additional caring adult at school for students. A caring relationship with a tutor may increase a student's sense of belonging and efficacy in the classroom. When students feel like they belong or are capable of succeeding in school, they are more likely to engage positively with school. This may translate into students attending school more. In the next section of this report, we explore the link between student participation in the Initiative and school attendance, expanding on past year's findings. In Year 1, we found that the likelihood of being absent decreased by 1.2 percentage points on days when students had a scheduled tutoring session; this translates to a 7.0 percent reduction in absenteeism, or the percent of time that a student is absent. These effects were most pronounced among middle school students and those with extreme absenteeism in the prior year, with reductions of 13.7 percent and 7.0 percent. In Year 2, we

still find positive effects for attendance, even if these effects are somewhat attenuated. On average, having a tutoring session decreased a student's probability of being absent by 0.5 percent, which translates to an additional half day of school attended by tutored students during the course of a school year assuming they are receiving three tutoring sessions a week. If these sessions occur during the school day, tutored students are expected to attend an additional 0.9 days of school in a year.

Impact of Tutoring on School Attendance

School staff selecting students for tutoring may opt not to include students who are frequently absent in an effort to maximize the number of students receiving tutoring. Likewise, students who are in school more consistently attend more tutoring sessions making it difficult to isolate the effect of tutoring on school attendance without an experimental design. OSSE data allow us to estimate the impact of tutoring on attendance in two ways, using both correlational and causal methodologies. This analysis will help us determine whether better attendance has a positive effect on tutoring dosage, tutoring has a positive effect on attendance, neither or both.

Table 3 below presents results examining the relationship between participation in the Initiative and school attendance. Logically, we find that compared to non-participating students, participating students have higher attendance rates by 0.4 percentage points, showing that better school attendance is related to tutoring participation. Additionally, as expected, students with better school attendance attend more tutoring sessions on average, and vice versa. This differs from Year 1 students, who had higher attendance rates by 1.8 percentage points when tutoring sessions were scheduled.

Table 3. Relationship Between Dosage and Attendance Rate

Difference in Attendance Rate for Students Who Participated in OSSE HIT Tutoring							
By Number of Sessions							
Overall	1 -5 Sessions	6-10 Sessions	11-20 Sessions	21-30 Sessions	31-40 Sessions	41/50 Sessions	51+ Sessions
0.4 *	-1.8***	0.6	0.2	0.7+	0	2.3***	3.3***

Note: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001
Models are restricted to schools that offer OSSE-funded tutoring. All models controlled for demographic characteristics, prior year test scores, and prior year attendance, and include fixed effects for student grade level.

Students participating in the OSSE HIT Initiative have higher attendance rates than their peers. Attendance rates are positively correlated with the number of HIT sessions students attend.

Detailed session data collected by OSSE HIT tutoring provider grantees allow us to focus on daily attendance and absence records for both school and tutoring sessions. By accounting for confounding factors related to the date, day-of-week, and month of scheduled sessions and school absences, we can isolate the impact of HIT on absenteeism with greater confidence.

Table 4 shows the outcomes of analyses examining the probability of being absent on days when a tutoring session is scheduled. We observe an overall reduction in the probability of absence by 0.5 percentage points.

Table 4. Effect of Scheduled Tutoring Session on School Attendance

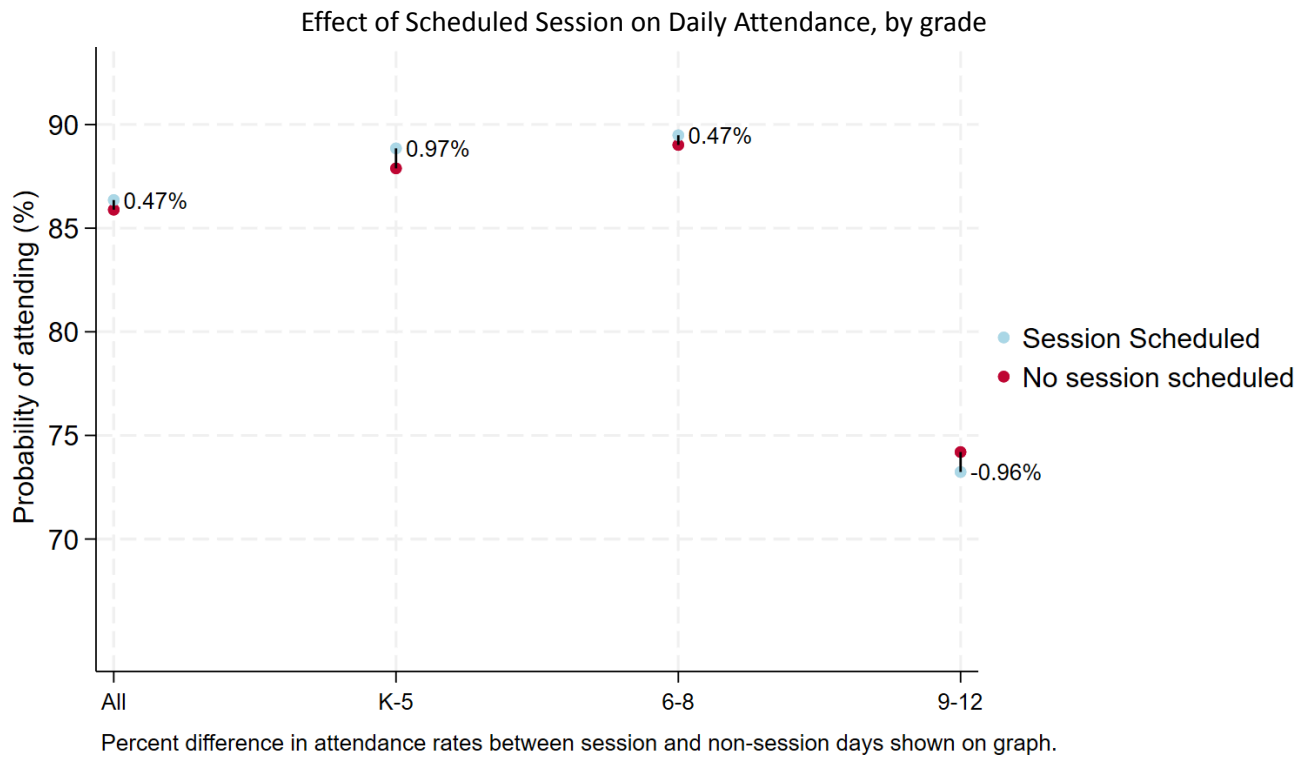| Percentage Point Difference in the Probability of Missing School When a Tutoring Session is Scheduled							
By Grade Level				By Prior-Year Absenteeism			
All	K-5	6-8	9-12	All	<10%	10-30%	>30%
-0.5***	-1.0***	-0.5**	1.0*	-0.5***	-0.7**	-0.9***	0.2

Note: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001
All models include student fixed effects, day-of-the-week fixed effects, month fixed effects, and date fixed effects. Standard errors are clustered at the student level.

Students participating in the HIT Initiative are less likely to miss school on a day when a tutoring session is scheduled. The relationship is stronger for K-5 students and for students with absenteeism rates between 10% and 30%.

In Figure 7 we present the effect of having a tutoring session scheduled on school attendance by school level. The effects are most pronounced among elementary students, which is different from effects from Year 1's program where middle school students experienced the largest effect. For K-5 students, we find that the likelihood of attending school increases by approximately 1 percentage point on days when students have a scheduled tutoring session. This translates to an 8.2 percent increase in the likelihood that students will be present at school.
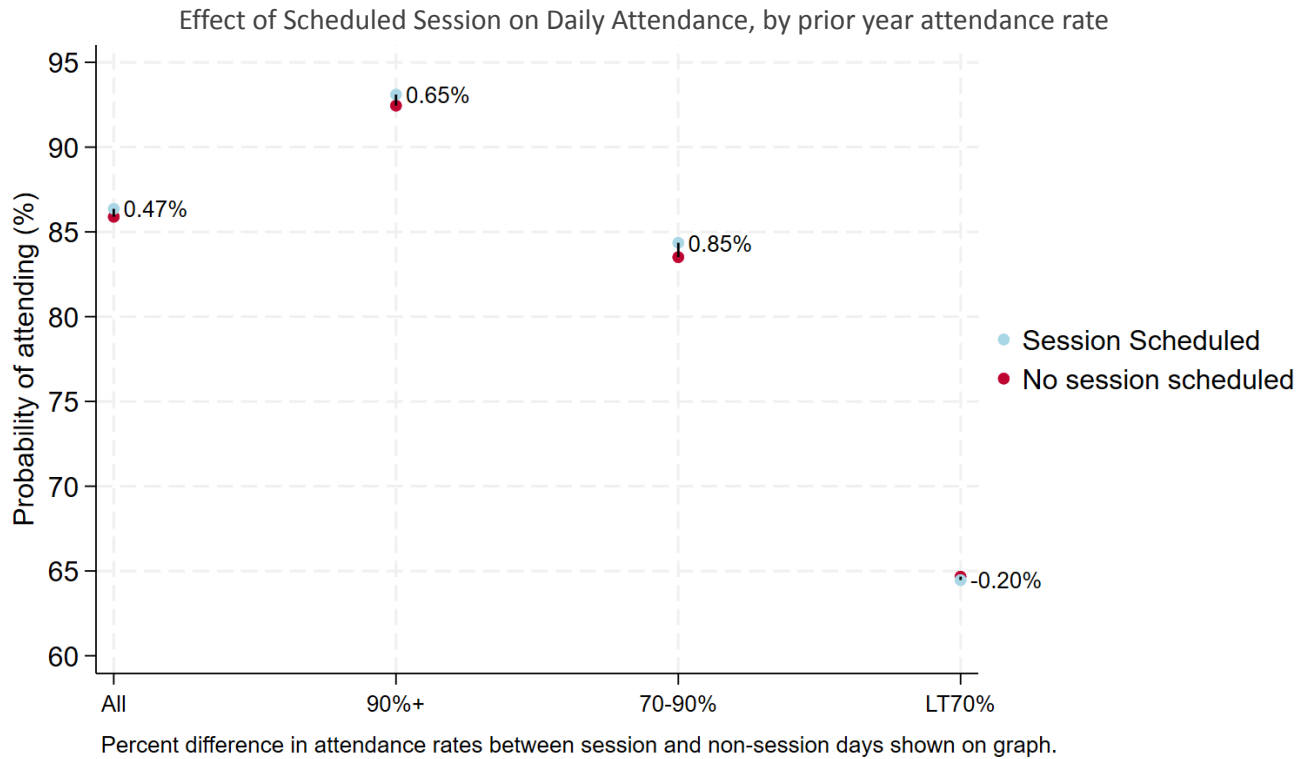
Figure 7. Percent Likelihood of Attending School When a Tutoring Session is Scheduled vs Not Scheduled, by Grade Level

Effect of Scheduled Session on Daily Attendance, by grade

Percent difference in attendance rates between session and non-session days shown on graph.

Note: The vertical line between the two estimates represents the percentage point difference in the probability of attending school on days when a student has a tutoring session scheduled (the red dot) versus days when a student does not have a tutoring session scheduled (the blue dot).

Elementary students experienced the largest positive effects of the probability of attending school when a session is scheduled.

Figure 8. Probability of Attending School Based on Having a Tutoring Session Scheduled, by Prior Year Attendance Rate

Effect of Scheduled Session on Daily Attendance, by prior year attendance rate

Percent difference in attendance rates between session and non-session days shown on graph.

Note: The vertical line between the two estimates represents the percentage point difference in the probability of attending school on days when a student has a tutoring session scheduled (the red dot) versus days when a student does not have a tutoring session scheduled (the blue dot).

Attendance effects in tutored students in Year 2 of the Initiative were strongest for students with higher attendance rates.

As shown in Figure 8, the positive effects on attendance were also greatest for students who are in school 70%-90% of the time. This is also different from findings in Year 1, where the largest effects were observed for students with the greatest absenteeism. This could possibly be attributed in part to the fact that some marginal students already experienced improvement in attendance in Year 1 of tutoring. As a result, attendance results in Year 2 remain positive, but effect sizes have decreased.

Finally, we explored whether the effects of tutoring on absenteeism differed based on when the tutoring occurs. The results are, in some ways, predictable. Programs operating during the school day resulted in a decrease in absenteeism (-0.008) whereas programs delivering tutoring after school did not have an impact on students' school attendance. Among students receiving tutoring during the

school day, elementary school students experienced the largest decrease in absenteeism as a result of having a tutoring session scheduled (-0.016), followed by middle school students (-0.006).

Tutoring and Student Achievement

A primary goal of the OSSE HIT Initiative is to accelerate learning for students. There is a robust research base showing that high-impact tutoring, when implemented with fidelity, results in significant student learning gains. This section of the report will provide an analysis of the available data on student learning outcomes.

Impact of Tutoring on Student Achievement

The Initiative provides funding to tutoring providers and each provider partners with eligible schools who, in turn, determine which students will be served. School staff are likely to use quantifiable data as well as other, less concrete factors to select students for tutoring. Because the Initiative supports this school-level autonomy in identifying students for tutoring who are most in need, there is no group of similar students who did not receive tutoring available for comparison. That restricts our ability to understand the student achievement changes that can be attributed solely to tutoring. It is likely that students selected for tutoring differ from non-selected students in many unobservable ways that cannot be accounted for in statistical models; the models below estimate a *correlation* between participation in tutoring and test scores rather than an *effect* of tutoring.

As noted in the Year 1 report, correlational analyses showed a strong association between lower test scores and both referral into tutoring and receiving tutoring at a higher dosage. That is, students with lower academic performance were more likely to receive tutoring and receive more tutoring. Year 2 was even more effective at targeting students in need of academic support, including more English Learners and students with disabilities than Year 2. Using interim assessment data from Year 2, we again analyzed the available data to gain insights using several assessments covering different grade levels and subject areas (see Appendix A for methodology). It is important to note that data from interim assessments was only available from District of Columbia Public Schools (DCPS) and exclude HIT Initiative students enrolled at public charter LEAs.

In order to make our results comparable across assessments and grade levels, we standardized test scores for DIBELS, i-Ready Math, and Reading Inventory around a mean of zero and a standard deviation of 1. For MAP scores, we compared percentile scores (1-100) in our models. These estimates should be interpreted as differences between students who received tutoring in a particular subject and students who did not receive tutoring in that subject. For example, a math tutored student is

compared to individuals who did not receive math tutoring but may have received tutoring in reading/ELA. In this analysis, an estimate that becomes more positive over time means that the subject-tutored group has improved academically in relation to the average of the group of students that were not tutored in that subject. An estimate that becomes more negative over time means the group is growing at a slower rate than non-tutored students.

When interpreting these differences, we caution against making causal interpretations of the estimates. At best, these are descriptive differences between students who received tutoring in a particular subject and those who did not receive tutoring in a particular subject in regards to their growth over time. Given the targeted delivery of tutoring services which leads to selection bias, we are unable to provide reliable causal estimates for tutoring's impact on student achievement.

Figure 9 shows that math-tutored K-8 students who took the i-Ready math assessment began the school year 0.49 standard deviations below their non-math-tutored peers, and ended the school year 0.40 standard deviations below their non-math-tutored peers. While math-tutored students still scored lower than their non-tutored classmates, the gap between the two groups diminished over the course of the year. The difference between beginning and end of year assessment performance in math-tutored and non-math-tutored students were similar across various tutoring dosage levels.

Figure 9: Differences in K-8 i-Ready Math Scores Between Students Who Received Math Tutoring and Students Who Did Not Receive Math Tutoring
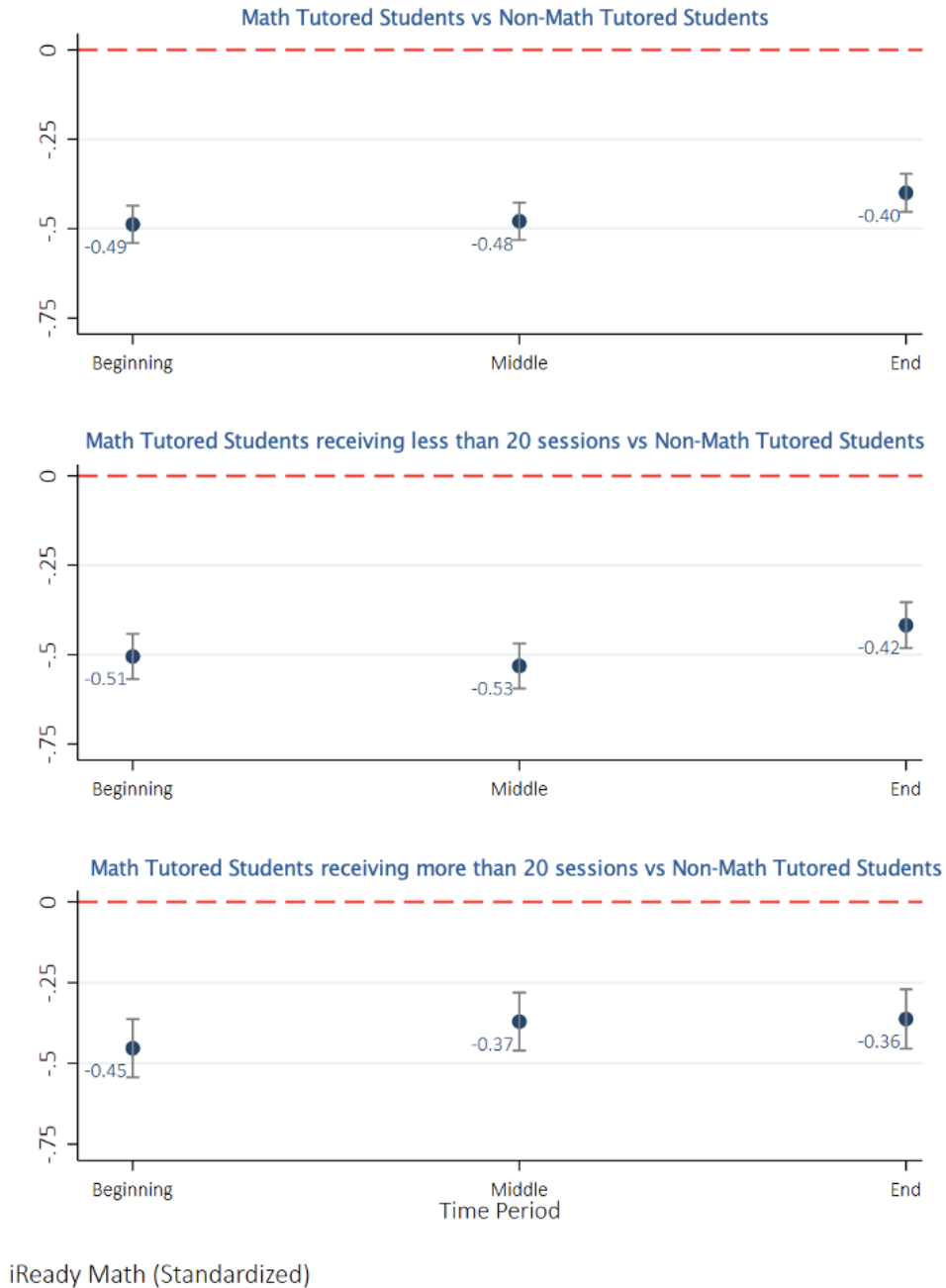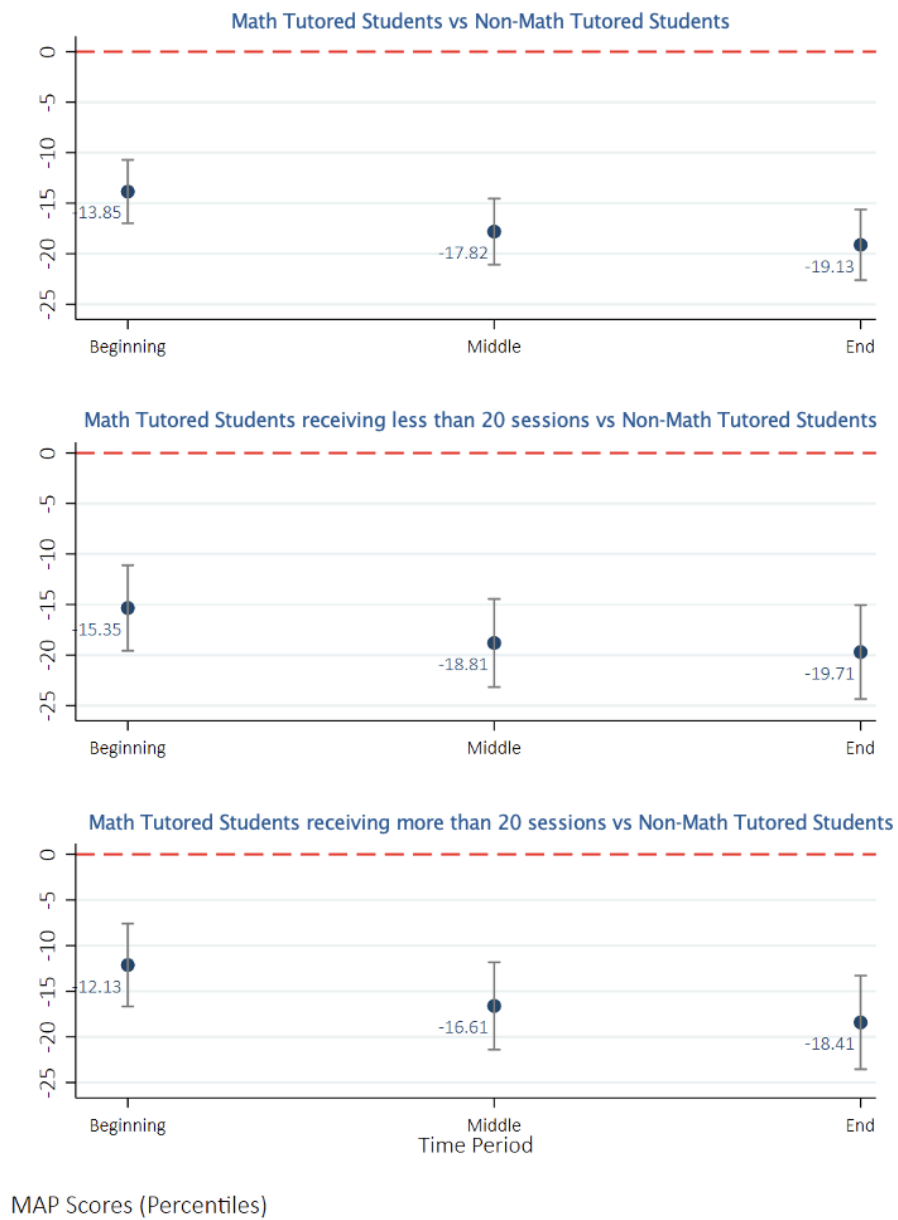

Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.
Beginning (N= 29855), Middle (N= 29777), End (N= 29128)

Students who received math tutoring sessions were more likely to be behind than their peers at the beginning of the year on i-Ready Math Scores. These gaps closed over time. These effects were similar between dosage levels.

Figure 10 examines MAP Math scores between math-tutored and non-math-tutored students in Year 2 of implementation. For MAP scores, we compare score percentiles in lieu of standardized test scores because of the way that scores are reported in this assessment. We do not see an improvement trend in these score differences, and instead see evidence of a potential widening of differences. These differences could be driven by targeting tutoring to the students who were struggling more.

Figure 10: Differences in Grades 7-12 MAP Math Scores Between Students Who Received Math Tutoring and Students Who Did Not Receive Math Tutoring
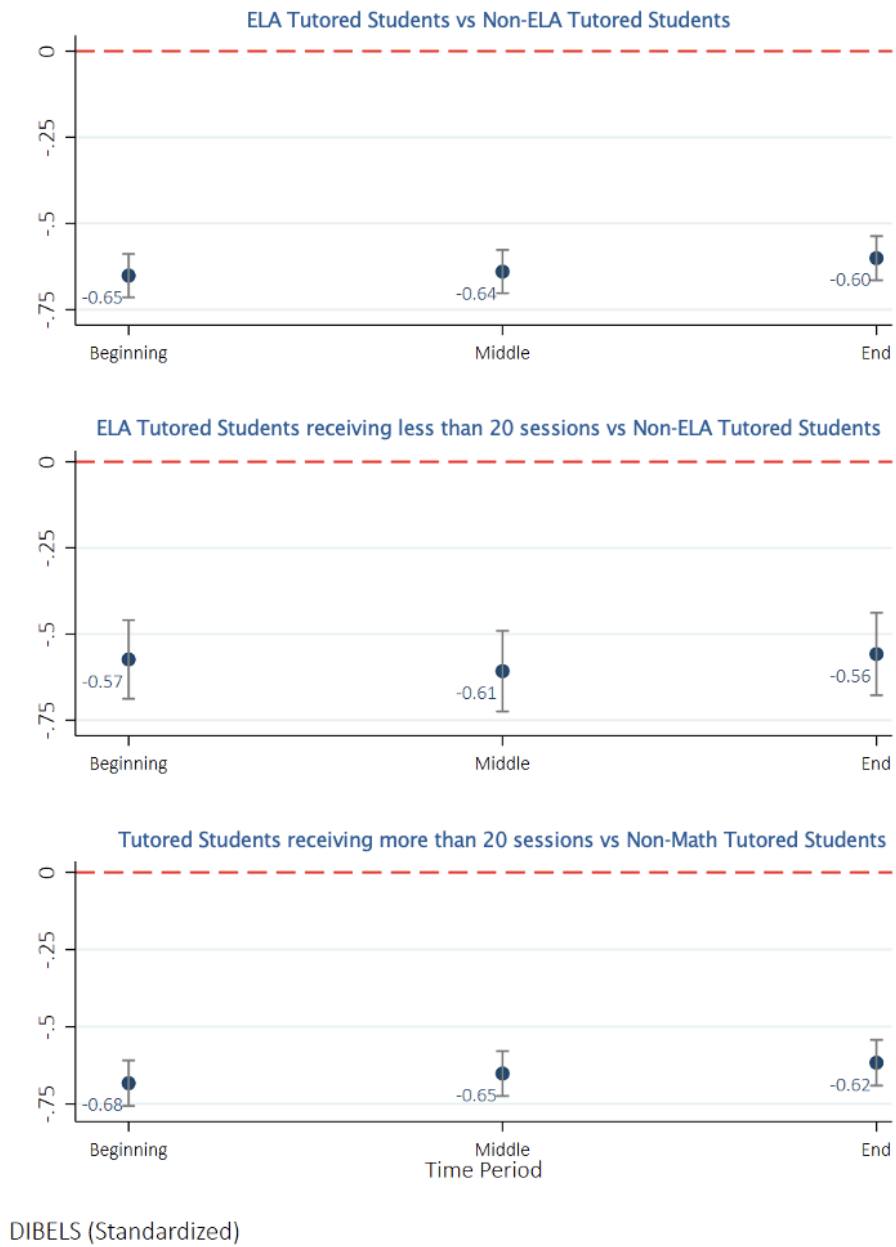

MAP Scores (Percentiles)

Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.
Beginning (N = 6831), Middle (N =6579), End (N = 5919)

Differences in MAP Math scores between math-tutored and non-math-tutored students did not improve significantly over the course of the year. This is consistent throughout dosage levels.

We also looked at two reading assessments to understand the potential impacts of reading/ELA tutoring. We first assessed DIBELS scores throughout the 2023-24 school year. DIBELS is a literacy assessment that's administered in DCPS in grades K-2. We observe a slight improvement in the DIBELS score gap between reading-tutored and non-reading-tutored students over the course of the year. These results are in Figure 11.

Figure 11: Differences in Grades K-2 DIBELS Scores Between Students Who Received Reading Tutoring and Students Who Did Not Receive Reading Tutoring
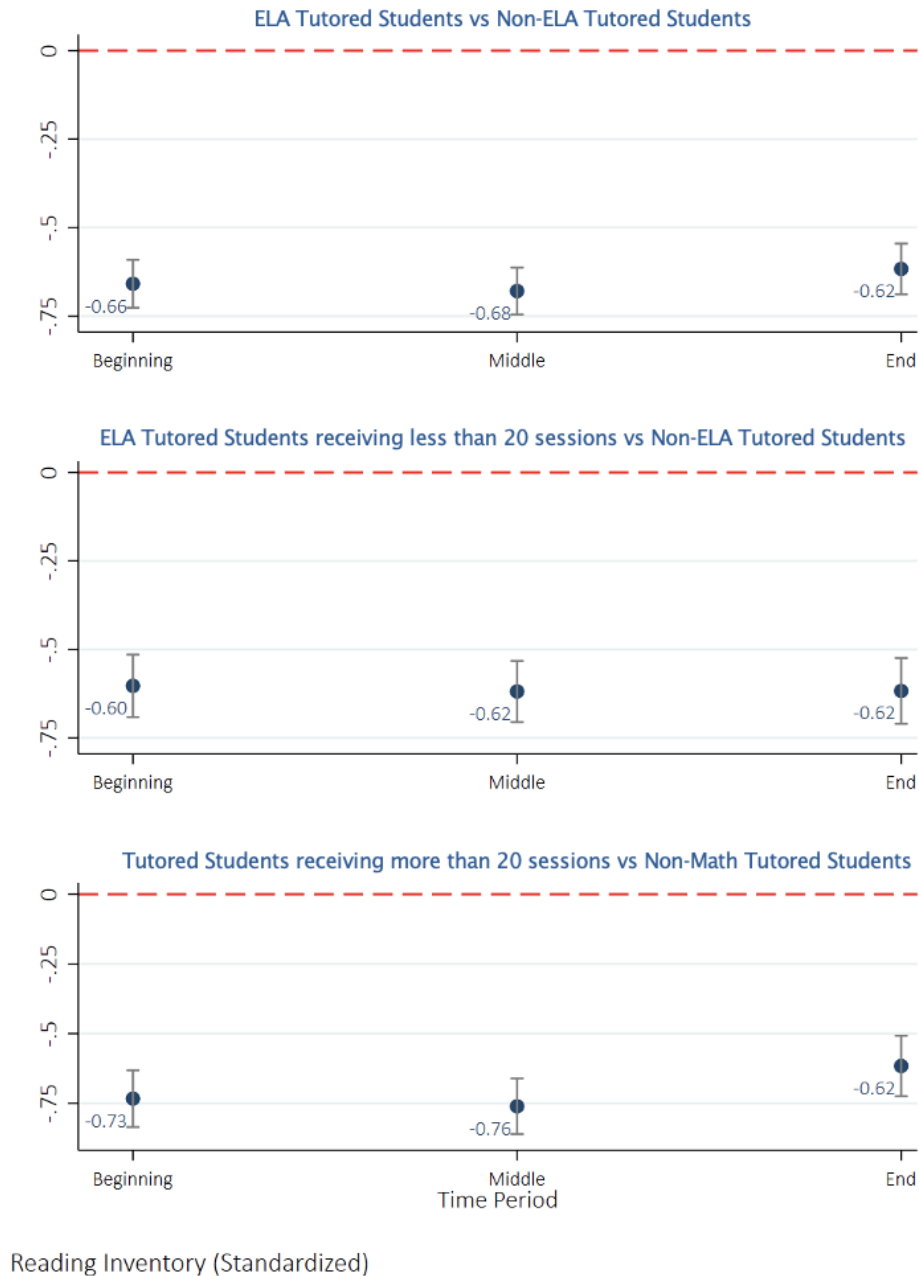

Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.
Beginning (N= 12413), Middle (N= 12210), End (N = 11887)

Differences in DIBELS scores between reading-tutored and non-reading-tutored students decreased slightly over time. This trend is more pronounced in students receiving high dosage levels of reading tutoring.

Figure 12 examines Reading Inventory score differences between reading-tutored and non-tutored students. Overall, there is a small upward trend between beginning and end of year scores on the Reading Inventory. Notably, students who received higher dosage levels of reading tutoring closed the difference between their peers at a higher level on this assessment.

Figure 12: Differences In Reading Inventory Scores For Students Who Received Reading Tutoring and Students Who Did Not For Grades 2-12

Reading Inventory (Standardized)

Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.
Beginning (n = 14846), Middle (n = 14796), End (n = 12381)

The difference between reading-tutored and non-reading-tutored students on Reading Inventory Scores had a slight improvement through the course of Year 2. Improvement was more pronounced for students who received higher dosages of reading tutoring.

Comparison to Year 1 Academic Achievement Results

In Year 1, our descriptive analysis of interim assessments conducted during the school year showed that the gaps between tutored and non-tutored students consistently narrowed over time. However, an important difference between Year 1 and Year 2 is the initial difference between tutored and non-tutored students. In Year 2, we saw larger initial (i.e., beginning-of-year) gaps between tutored and non-tutored students on all interim assessments we examined, even though our reported models all account for prior year achievement. This suggests the OSSE tutoring program targeted students with stronger academic needs in Year 2 relative to students that were chosen during Year 1, which could be one explanation for why we observe less relative growth in relation to non-tutored students. Ultimately, the program was not designed to measure the causal impact of tutoring on student outcomes. Therefore, our findings should be interpreted as descriptive and not as evidence of a causal relationship.

End of Year Assessment Results

In our Year 2 analysis we use End of Year (EOY) assessments from the DC CAPE assessment (given in 2023-24) and the PARCC Assessment (given in 2022-23). The DC CAPE assessment is available for:

- ELA: Grades 3-8, ELA I and ELA II
- Math: Grades 3-8, Algebra I, Geometry and Algebra II

Data from the standardized annual assessment used for the 2022-23 school year in DC, PARCC, is also available for students across all participating LEAs in grades 3 through 11 in the spring of 2023.

We examined differences in year-to-year growth on EOY assessments by creating a difference between standardized 2024 DC CAPE scores to standardized 2023 PARCC scores. If this estimated difference for a student was positive, it indicates that students grew relative to their past performance. If the difference in growth metric between tutored and non-tutored students is estimated to be positive, this means that tutored students grew more relative to non-tutored students on EOY assessments.

We find that tutored students grew slightly less on standardized assessments in ELA from 2023 in 2024. There was no statistically significant difference in growth between tutored and non-tutored students in Math.

Table 5. Differences in Year to Year Growth Between Tutored and Non-tutored Students

Differences Year to Year Growth for Tutored and Non-tutored Students Grades 3-11		
Period	**ELA**	**Math**
Spring 2023 to Spring 2024	-0.053 ***	-0.023

All models controlled for demographic characteristics. The model also controlled for prior achievement in the 2023 end-of-year (spring 2023) PARCC assessment in order to control for baseline performance. All models include grade fixed effects.

Tutored students grew slightly less on end of year standardized assessments from Spring 2023 to Spring 2024. This estimate is statistically significant in ELA growth.

Limitations

To conclude this section on academic outcomes, we acknowledge that none of the results from our analysis of academic outcomes are causal estimates, as it is not possible to account for the selection bias that occurs when students are targeted for tutoring services. Given that tutoring is given at the discretion of the schools that offer it, we are not able to make clean comparisons between tutored and non-tutored students, which is key for knowing unequivocally how tutoring impacts academic outcomes. The above sections instead give insight into the differences between tutored and non-tutored students over time, even if they cannot give us precise measurements on how tutoring impacted these differences.

Provider Perspectives

The HIT Initiative is a collective effort between OSSE and 41 tutoring providers. Table 6 shows the providers by the number of students they served. One of the Initiative's primary learnings is how to overcome significant logistical challenges to deliver tutoring services to the intended target populations. In Year 1 providers reported significant logistical difficulties including scheduling and technology access. Despite these difficulties, the program has managed to continue its expansion and has successfully targeted students most in need of learning acceleration.

Table 6: Numbers of Students Served by Provider

Tutoring Provider	Students Served
Great Oaks Foundation	828
District of Columbia Public Schools	816
City Year	760
Springboard Collaborative	690
Blueprint Schools Network	454
Multicultural Intern Program (MCIP)	352
Your Teacher Tutors (formerly Maryland Teacher Tutors)	350
Raising a Village	334
Kid Power	329
Tutor Partners	308
The House, Inc.	289
Teach for America Ignite	273
Reading Partners	252
Saga Education	239
GW Math Matters	208
Cesar Chavez PCS	195
The Literacy Lab	183
Lana Learn	182
Horton's Kids	182
DC Scholars PCS	174
Students Motivated through the Arts (SMARTS)	126
American University Future Teacher Tutors	108
Perry Street Preparatory PCS	102
Friendship PCS	87
GOODProjects	84
Bright Minds	82
Georgetown University DC Schools Project	75
Harriet Tubman Elementary School	70
The Sojourner Truth School PCS	69
DC SCORES	60
Latin American Youth Center- Northstar Tutoring	56
Higher Achievement	48
The Fishing School	46
Lee Montessori PCS	31
Boys and Girls Club	29

In Year 2, providers continued to report some challenges with scheduling; however, they cited frequent communication with a designated school liaison and stronger relationships with school staff as factors that resulted in more problem solving and stronger support from school leaders. Providers also worked with schools to focus more of their tutoring during the school day. One reported, "When schools can find a way to successfully integrate intervention times into their bell schedule, not only does it help the students who receive HIT as an intervention, but it allows all the students at the school to receive extra support as it frees other school personnel to focus on smaller groups." Tutoring providers also noted the importance of tutor training, communication with parents, and communication with teachers. Finally, providers noted that several of their former tutors are now working in DC (and surrounding areas) as teachers. While this data is anecdotal, it is a positive indicator of both tutor experiences and the schools' experiences with tutors.

Conclusion

Findings Summary

The OSSE High-Impact Tutoring Initiative's second year of implementation is a sustained effort towards educational equity and acceleration of learning for students, particularly among DC's at-risk student population. We found that the Initiative expanded its reach and continued its focus on serving students who have historically experienced inequitable access to tutoring and other high-quality educational opportunities.

The Initiative's targeted approach has proven effective in reaching students who are academically furthest behind including historically marginalized groups, with significant participation from Black or African American and Hispanic or Latino students.

We continue to see positive effects in attendance: Participating students were more likely to attend school on days they had in-school tutoring scheduled by 0.8 percentage points. Students in elementary grades and those who are absent 10-30% of the time had stronger effects in Year 2. If tutoring is offered at the suggested dosage of three times a week, tutored students would attend an average of 1.3 days more over the course of the school year.

Our student achievement analysis suggests that although tutored students, on average, start the school year academically behind their non-tutored peers, some of these gaps narrow over time. We observe these narrowing gaps in assessments like DIBELS and i-Ready Math, although the trends are inconsistent. We cannot draw causal interpretations from our results, but they do re-emphasize that implementation has been successful at focusing on students most in need of learning acceleration. As

the results suggest, the task of supporting learning acceleration was made even more challenging given the increased focus on students who were more academically behind than their non-tutored peers.

As the Initiative looks to its future, it has created the structures for successfully providing additional support for students who would benefit most from tutoring opportunities, and there is room to continue to improve on practice so that students can continue to receive services that allow them to make academic progress.

Suggestions for Future Research

In Year 2, we saw some of the positive indicators of academic growth in interim assessments diminish. As the program scales and refines, it would be advantageous to investigate how program delivery changed between years as the program grew. This is also applicable to the attendance findings, which remained positive, but to a lesser degree. Aspects of implementation that could be the subject of further study include the selection of tutored students, alignment between tutoring providers and OSSE's academic priorities, the successful integration of providers within existing academic programs, and the degree of personalization that happens in tutoring sessions.

The OSSE tutoring program engages a wide variety of tutoring partners and LEAs, and our report mainly assesses the program as a whole. There could be partnerships that are particularly efficient in their delivery or particularly effective at reaching target populations which would be most advantageous for reinvestment. An overall examination of how tutoring vendors fit with LEAs and OSSE's priorities could inform future implementation success.

Finally, as the initial term of the Initiative comes to a close and demand for tutoring may exceed funding capacity, delivery of tutoring could be randomized to eligible students which would allow for a causal study. This would allow for more robust conclusions about how tutoring improves academic achievement.

Appendix A

Methodology

Data

We leveraged an extensive multi-year panel dataset from the Office of the State Superintendent of Education (OSSE) team to conduct these analyses. We received data on student demographics, characteristics of schools, Local Education Agencies (LEAs), tutoring providers, academic and attendance performance. In this report, we primarily focus on three types of data: (1) student demographics, (2) student academic achievement, and (3) student attendance.

The student demographic data includes information on student race/ethnicity, "at-risk" status, economic disadvantage, disability status, English language learning status, and gender. Students who qualify for Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), have been identified as homeless during the academic year, who are under the care of the Child and Family Services Agency (CFSA or "foster care"), or who are high school students at least one year older than the expected age for their grade are categorized as "at-risk."

The student achievement data includes English Language Arts (ELA) and math assessment data. Interim assessments i-Ready, DIBELS MAP, and the Reading Inventory assessments are all given three times in a school year (beginning-, middle-, and end-of-year) in DCPS. DCPS administers (1) the i-Ready assessment to students in grades K through 8 and measures student math proficiency; (2) the MAP assessment to students in grades 7 through 12 and measures math proficiency; and (3) the Reading Inventory assessment to students in grades 2 through 12. We use math and ELA state test outcomes from PARCC from the 2022-23 school year and the DC CAPE from the 2023-24 school year. To facilitate comparison, all student academic achievement in assessments have been standardized to have a mean of 0 and a standard deviation of 1. Thus, we can interpret our estimates as representing an average student's performance relative to the mean in standard deviation units and compare across years.

The attendance data include indicators for whether a student attended school or not for each day of the school year.

Academic Analysis

To produce estimates in our academic achievement analysis (Figures 9-12, Table 5), we conducted several linear regression analyses to estimate the difference between subject-tutored (ELA or Math) and non-subjected-tutored students' performance on four standardized interim assessments: i-Ready, DIBELS, Reading Inventory, and MAP scores. These assessments are administered at the beginning, middle, and end

of the academic year. We also estimated the difference between tutored and non-tutored students' Spring 2024 DC CAPE scores and the growth between standard PARCC scores (Spring 2023) and standardized DC CAPE (Spring 2024) scores.

To assess how tutored and non-tutored students performed on the beginning-of-year (BOY) assessments, we regressed the standardized score of each interim test (e.g., BOY i-Ready) on an indicator for whether a student received subject-specific tutoring in the subject tested. For a given assessment, we limited our sample to students who completed all three test administrations during the school year. We also controlled for student demographic variables (including student race - Asian, Black or African American, Hispanic or Latino, Multi-racial, Native American, "at-risk" status, economic disadvantage, disability status, English language learning status, and gender), grade-level fixed effects, and the previous year's PARCC scores (e.g., Spring 2023 PARCC). If students were missing the Spring PARCC score in the appropriate subject, we imputed their score to be the mean for their grade level. We conducted the same analysis for the middle-of-year (MOY) and end-of-year (EOY) assessments.

Finally, we regressed a student's growth on standardized EOY assessments (2023 Math PARCC score to 2024 DC CAPE) on an indicator for whether the student received tutoring in the subject area tested, the same student demographic variables, grade-level fixed effects, and the previous year's PARCC scores (e.g., 2022 Math PARCC score). We also regressed our growth metrics on these same variables.

For interim assessment, we also analyzed how the difference between tutored and non-tutored students varied based on tutoring dosage. Specifically, we conducted the above analyses focusing on two samples: (a) tutored students who attended less than 20 sessions compared to non-tutored students and (b) tutored students who attended 20 or more sessions compared to non-tutored students.

Attendance Analysis

To examine the relationship between tutoring and student absenteeism we narrowed our analysis to students enrolled in the HIT Initiative. Next, we excluded students assigned to City Year and MCIP programs because these programs only reported attended (rather than all scheduled) sessions. In total, our attendance analysis includes 65,563 total students in DCPS and tutoring data from 41 providers, across 174 schools.

We use daily student attendance data that includes one record for each day that a student was enrolled and a variable indicating whether the student was present that day. We combine this with the dates of students' scheduled tutoring sessions. We predict whether a student is absent on a particular day as a function of whether they have a tutoring session scheduled that day. We use a linear probability model with fixed effects for students, days of the week, months and dates. Moreover, since students appear in the

data multiple times we also cluster the standard errors at the student level to account for within-student correlations. The coefficients are interpreted as the percentage difference in the probability of being absent on days that a student has a scheduled tutoring session compared to days without a scheduled tutoring session, net of unobserved student and temporal factors.