

NATIONAL STUDENT SUPPORT ACCELERATOR

equalizing access to quality tutoring

Implementation of the OSSE High Impact Tutoring Initiative

First Year Report School Year 2022 – 2023

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The District of Columbia (DC) Office of the State Superintendent of Education (OSSE) launched a three-year, \$33 million investment in scaling and supporting high-impact tutoring (HIT) across DC, with a particular focus on students classified as “at-risk”¹ or having experienced disrupted instruction during the COVID-19 pandemic. This investment is a core part of the city’s strategy to address interrupted schooling, given the strong body of evidence demonstrating the effectiveness of HIT as an intervention that can produce dramatic gains in student learning. Through this investment, OSSE strives to accelerate learning for students who were impacted by disrupted learning as well as to address persistent achievement gaps present before the pandemic.

During the 2022-23 school year, OSSE expanded the HIT Initiative (the Initiative) with the goal of rapidly expanding access to high-impact math and English Language Arts (ELA) tutoring for students in grades kindergarten through 12, with a focus on DC schools with the greatest concentrations of students identified as at risk. Grant funding awarded directly to tutoring providers serves as the primary mechanism for expansion of high impact tutoring. Tutoring providers with grants partner with eligible schools in DC schools and at community-based locations to conduct tutoring programs. Eligible schools are those in which 40 percent or more of their students are categorized as at risk. In this report “DC schools” or “OSSE schools” refers to schools within the 70 local education agencies (LEAs) located within the geographic bounds of Washington, DC. DC Public Schools (DCPS) students make up approximately 52 percent of the total student population and 46 percent of schools; public charter schools make up the remainder of DC students and schools. OSSE provides support and oversight for all DC schools as the state education agency.

During the 2022-23 school year, the Initiative awarded grants directly to 14 organizations and funded an additional 13 tutoring providers through the recipient of a strategic program supports grant to CityTutor DC, an organization which incubates HIT providers and supports community-based tutoring

¹Students 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.”

hubs as part of their partnership with OSSE. CityTutor DC also provided tutoring design sprints and communities of practice with OSSE funding to support tutoring providers and school leaders in implementing high-impact tutoring programs. The Initiative also funded 10 school-based HIT managers at DCPS middle and high schools to coordinate and support high impact tutoring in their schools.

This report focuses on implementation and effects of the grant program from July 2022 – June 2023. Using available data collected by tutoring providers and administrative data shared by OSSE, we describe program reach, impact on student outcomes including attendance and achievement indicators, and facilitators and barriers to implementation.

Summary

We find that the Initiative’s reach has been wide, improving access to high-quality tutoring experiences to a significant number of students in DC schools during the 2022-23 school year. The Initiative served 5,135 students from more than half of DC schools and in 85 percent of eligible schools. This reach represents approximately six percent of students in DC schools overall and eight percent of students classified as at risk. Students participating in the Initiative, on average, received 27 sessions of tutoring in a small group (one to four students with one tutor) with the youngest students typically receiving tutoring one-on-one or in the smallest groups.

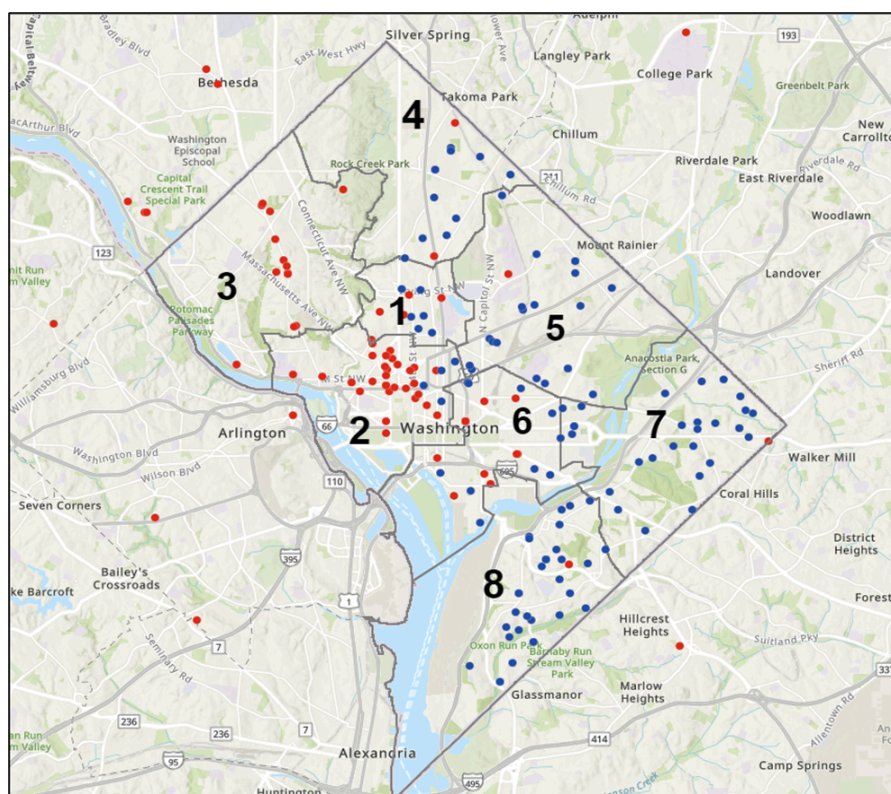
Additionally, we find strong evidence of the positive impact of OSSE-funded HIT on school attendance. After accounting for confounding factors related to the date, day-of-week, and month of scheduled sessions and school absences, we find that, on average, tutored students were 6.9 percent less likely to be absent on days when tutoring is scheduled. Middle school students and students with very high prior-year absentee rates (absent 30 percent or more of school days) were 11.4 percent and 7.3 percent less likely, respectively, to be absent when a tutoring session was scheduled. These findings add to the high impact tutoring research base by providing some of the first causal estimates of the impact of HIT exposure on school attendance. In addition, these findings also suggest that high impact tutoring can be an important strategy in the effort to reduce chronic absenteeism in DC and beyond.

Importantly, the Initiative has been successful in targeting struggling students and students from many 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) at the beginning of the school year, as well as Black or African American students and Hispanic or Latino students, tended to receive more tutoring, especially in English Language Arts (ELA). At the same time, we find that English learners tend to receive fewer tutoring sessions in ELA, but more in mathematics; students with disabilities tend to receive slightly fewer

mathematics sessions than students without disabilities, on average. Together these findings suggest variation in how students with specialized instructional needs may be served.

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

Figure 1. Tutoring Participation by Ward



Source: OSSE - Red dots represent private tutoring providers while blue dots represent OSSE funded tutoring through the Initiative.

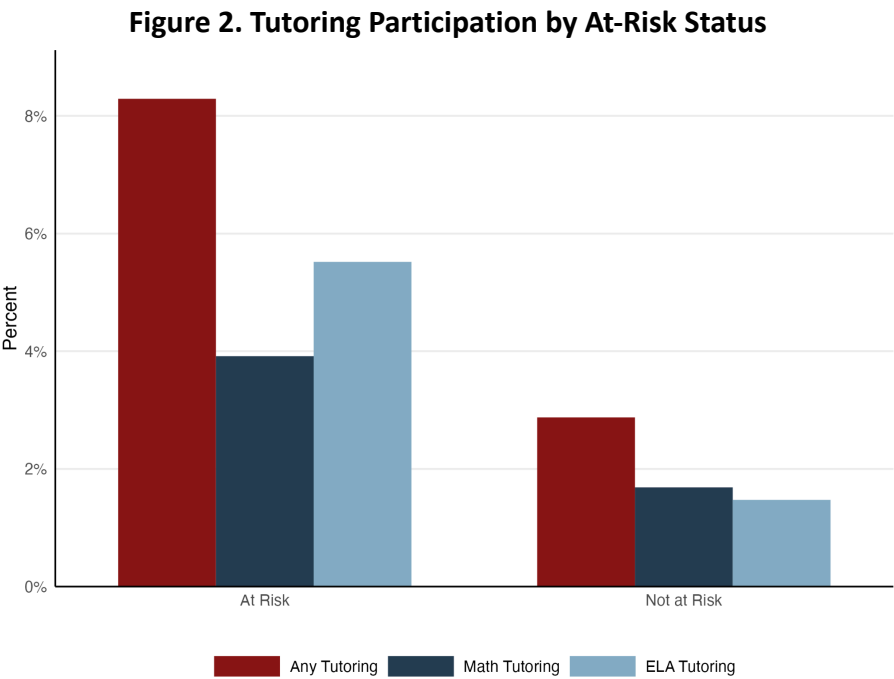
Students Served

OSSE aimed to accelerate learning for students classified as at risk through the Initiative. As such, they identified DCPS and DC public charter schools that were eligible for the Initiative 40 percent of their student body classified as at risk. Tutoring providers then worked with schools to form partnerships. In turn, school teams identified students who would receive 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 covers tutoring provided through the

OSSE HIT Initiative only. In some cases, LEAs may provide other high-impact tutoring through other funding sources; those programs are not included in this report.

Student Participation

The Initiative supported tutoring for 6 percent of students in DC schools overall, and 8 percent of students categorized as at-risk. In total, the Initiative served 5,135 students in the 2022-2023 school year. Of these students 3,240 received tutoring in ELA and 2,558 received tutoring in math. As shown in Figure 2, students categorized as at risk were more likely to participate in tutoring, suggesting that on average, school administrators and teachers who had autonomy to refer students for tutoring prioritized serving students most in need of services.

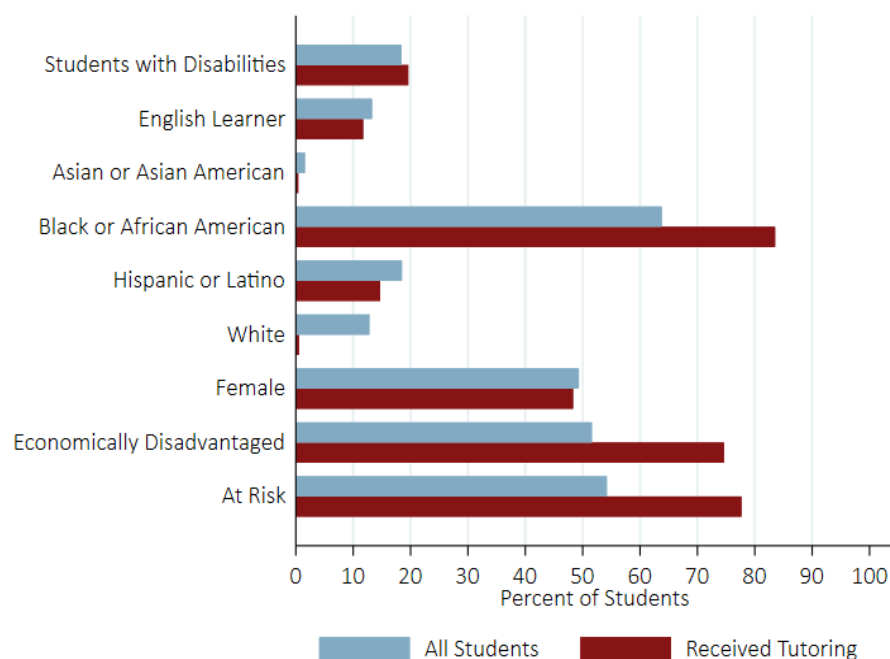


Focusing resources on schools with concentrations of at-risk students (at least 40 percent) resulted in at-risk students being more likely to participate in tutoring.

In general, demographic trends suggest that the Initiative was successful in reaching students from historically marginalized groups. We see that compared to students overall, a larger proportion of OSSE HIT students were identified as Black or African American, economically disadvantaged, or at risk. At the same time, compared to students overall, we do not see as big of a difference in the number of OSSE HIT students with disabilities. This may be because students with disabilities 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



HIT students are more likely to be Black or African American, economically disadvantaged, and designated as at risk than the general population in DC schools

We then examined whether students with given demographic characteristics were more likely to participate in the Initiative than White students when taking into account prior year test scores. 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, Hispanic or Latino, or at risk students are significantly more likely than White students to participate in OSSE HIT. For example, Black or African American students are about 3.8 percentage points more likely than White students to participate, after accounting for prior year test scores. Hispanic or Latino students are 2.1 percentage points more likely to participate than White students. Conversely, students with disabilities are 1.7 percentage points less likely to participate in OSSE HIT than students without disabilities. These differences are statistically significant.

English learner students are more likely to receive tutoring in mathematics than non English learner students, but less likely to receive tutoring services in English Language Arts. This may be because they receive existing services designed to focus on English proficiency.

Table 1. Predicted Difference in Tutoring Participation by Student Characteristics

Percentage Points Difference in Participation in Tutoring							
	Female	Asian	Black or African American	Hispanic or Latino	English Learners	Students With Disabilities	At Risk
Tutoring Overall	-0.2	0.5	3.8***	2.1***	0.3	-1.7***	2.6***
Math Tutoring	-0.1	-0.2	1.1***	0.7**	0.9***	-1.0***	0.5
ELA Tutoring	-0.2	0.6	2.9***	1.3***	-0.7**	-0.9***	1.6***

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.

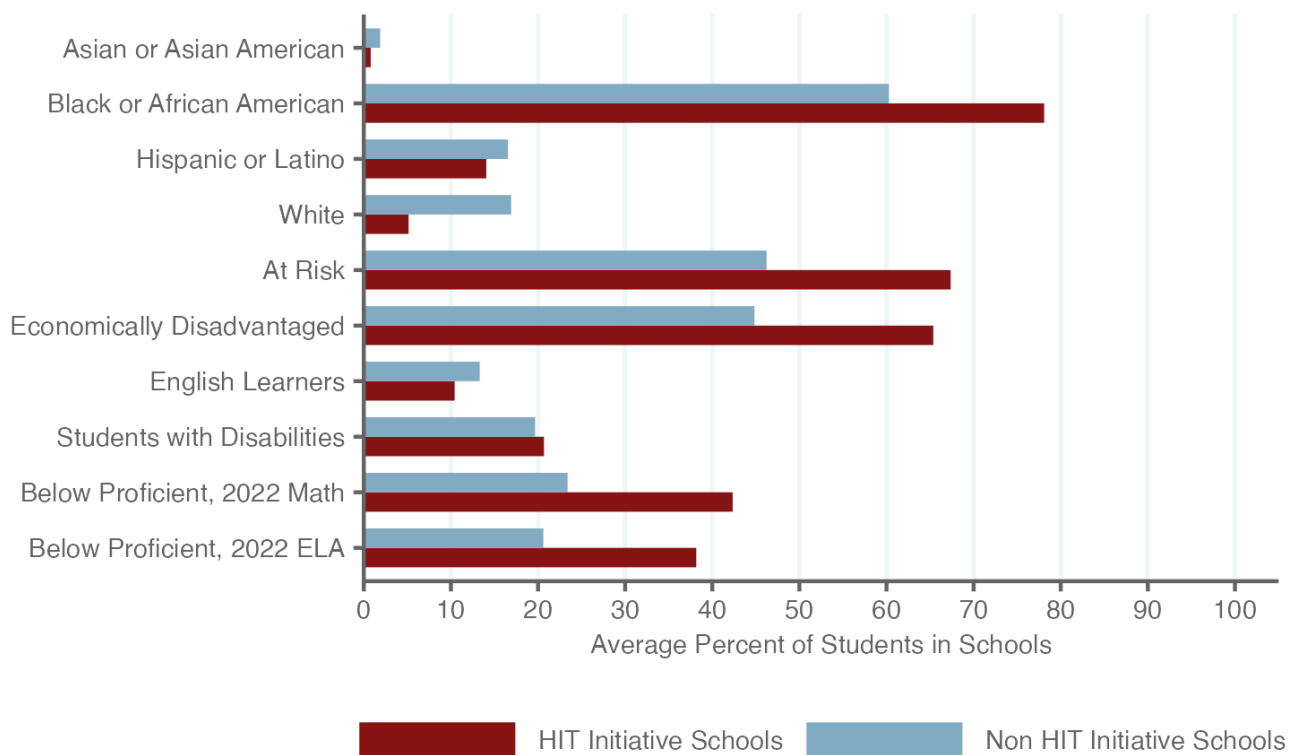
Students of color are more likely to participate in tutoring than White students; English learners are less likely to participate in ELA tutoring than their non English learner peers; and students with disabilities are also less likely to participate in tutoring than their classmates without disabilities.

Schools Served

Students from 141 schools participated in OSSE-funded tutoring during the 2022-2023 school year at schools and community hubs; 71 schools provided tutoring during the school day for students. 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 both mathematics and reading.



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



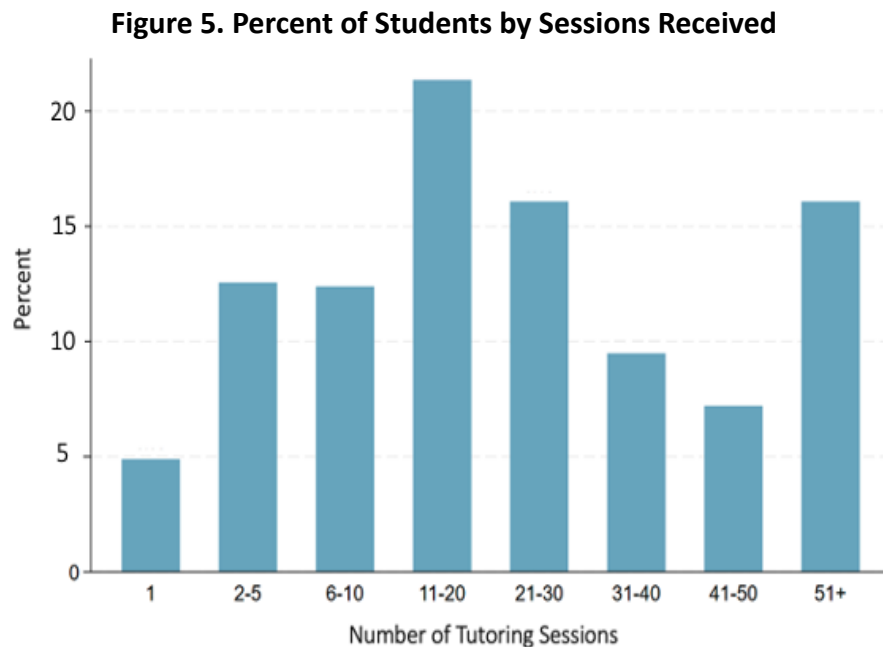
Students receiving OSSE-funded HIT attend schools with larger proportions of students of color, at-risk students, and students below proficiency in math and ELA.

Tutoring Session Attendance

Research has shown that tutoring can be highly effective when it is held three or more times per week (Robinson et al., 2021).² The Initiative requires tutoring providers to hold three sessions per week. OSSE encouraged providers to schedule tutoring sessions during the school day, if at all possible, to maximize student attendance in sessions.

Dosage

Figure 5 presents the percentage of OSSE HIT students who attended a given number of sessions. Students, on average, participated in 27.23 sessions. When students who were enrolled in the Initiative but attended only one session are removed from the data, the average number of sessions attended grows to 28.58 sessions. As the figure indicates, 70 percent of students who received tutoring received 11 or more tutoring sessions.



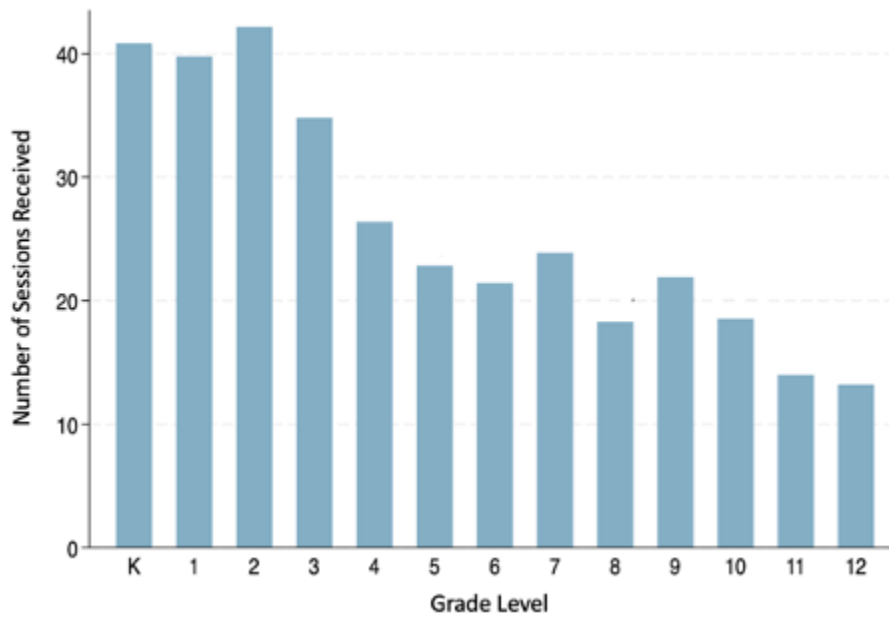
Seventy percent of students attended 11 or more tutoring sessions and 16 percent attended 51 or more sessions.

However, as Figure 6 below displays, there is notable grade-level variation in the number of sessions, with students in the early elementary grades attending the most sessions and students in high school attending the fewest sessions, on average.

² 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.



Figure 6. Average Number of Tutoring Sessions Received, by Grade



On average, HIT Initiative students in lower grades attended more tutoring sessions.

Dosage by Student Demographics

Analyses that take into account students' prior achievement levels show that among OSSE HIT students, 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. 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. Students with disabilities attended approximately 1.9 fewer sessions overall and 2.4 fewer sessions in math. As noted above, this may be because students with disabilities may have access to other resources or interventions.

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

Difference in Average Total Number of Sessions by Student Demographics							
	Female	Asian	Black or African American	Hispanic or Latino	English Learners	Students With Disabilities	At Risk
Total Sessions	-0.60	11.2	9.6*	12.1*	-2.4	-1.9*	2.4
Math Sessions	-0.36	-0.7	-4.0	-3.1	1.8*	-2.4***	0.8
ELA Sessions	-0.3	11.5+	13.1**	14.6***	-3.7**	0.5	1.6

Notes: Differences in 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

Students of color assigned to the Initiative are, on average, attending more HIT sessions than their White counterparts. Participating students with disabilities and English learners are not more likely to attend more HIT sessions, 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.

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 1.8 percentage points, showing that better school attendance is related to tutoring participation. Additionally, as expected, we find that students with better school attendance attend more tutoring sessions on average, and vice versa.

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
1.8***	0.0 *	1.0 *	1.6 ***	2.2 ***	2.2 **	4.8 ***	6.1 ***

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 1.8 percent higher attendance, on average. Attendance rates are positively correlated with the number of HIT sessions students attend.

Detailed session data collected by OSSE HIT tutoring provider grantees allows us to focus on daily attendance and absence records for both school and tutoring sessions, and 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 presents the outcomes of analyses examining the probability of being absent on days when a tutoring session is scheduled. Preliminary findings show that students were less likely to be absent on days when they had a scheduled tutoring session, with a reduction in the probability of absence by 6.9 percent. If tutoring were scheduled as a regular part of every school day, this would translate into students attending 2.3 more days of school over the course of the school year.

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%
-1.2***	-1.2***	-1.8***	-0.2	-1.2***	-1.0***	-1.1***	-2.6***

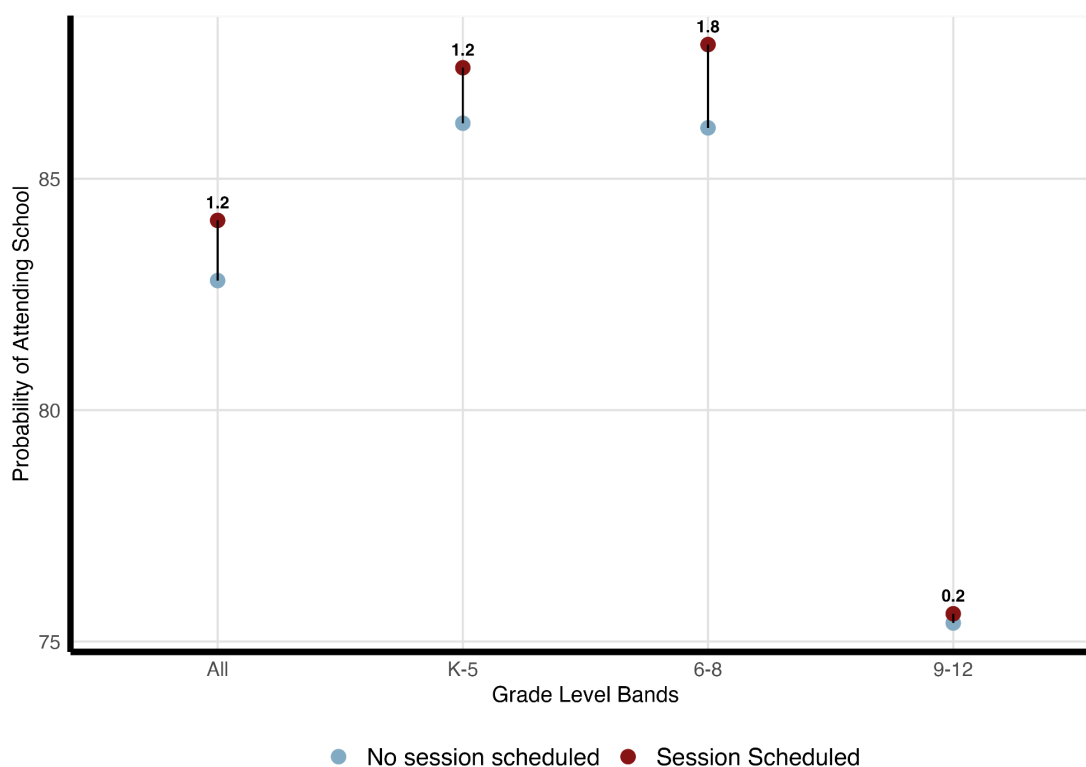
Note: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

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-8 students and for students with a higher rate of absenteeism in the prior year.

As shown in Figure 7, across grade levels, middle school students experienced the largest positive effects. On days when middle schoolers had scheduled tutoring sessions, they were 1.8 percentage points more likely to attend school, which translates to an 11.4 percent increase in the likelihood they are attending school. If tutoring were scheduled every day as part of the school experience, this effect suggests that middle school students would attend 3.1 more days of school over the course of the school year.

Figure 7. Middle school students experienced the largest positive effects on the probability of attending school when a session is scheduled

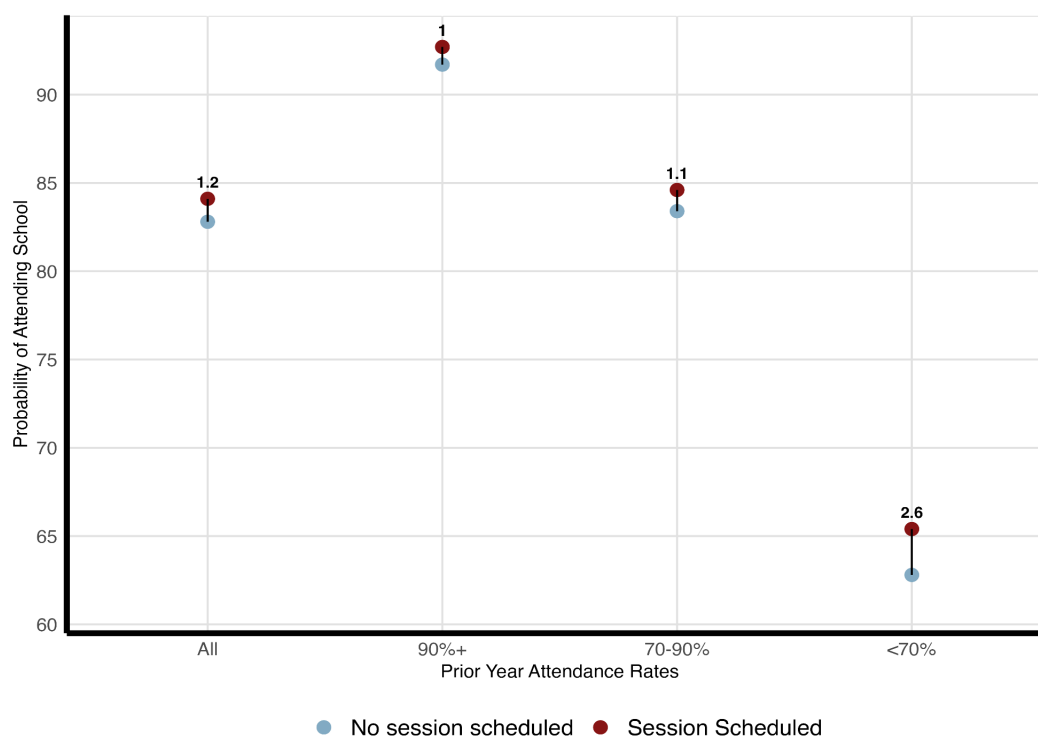


Note: The vertical line between the two estimates represents the percentage point difference in the probability of attending school on days when a student has a tutoring session scheduled (the red dot) versus days when a student does not have a tutoring session scheduled (the blue dot).

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

As shown in Figure 8, the positive effects on attendance were also greater for students with higher absentee rates. For students with higher absence rates during the prior school year (i.e. missing 30+ percent of school days), a scheduled tutoring session increased the probability of attending school by 2.6 percentage points (a 7.3 percent increase). The effect of daily scheduled tutoring would translate into these students attending 5.2 more days of school over the course of the year.

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



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).

The effect of a scheduled tutoring session on the probability of attending school is higher for students with lower attendance rates in the prior year.

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.

When we use correlational analyses, we find a strong association between lower test scores and both referral into tutoring and receiving tutoring at a higher dosage. That is, struggling students were more likely to receive tutoring and receive more tutoring. While the gap between tutored students and their peers remained, in most measures, it decreased over the course of the school year though the magnitude of the change varied from assessment to assessment.

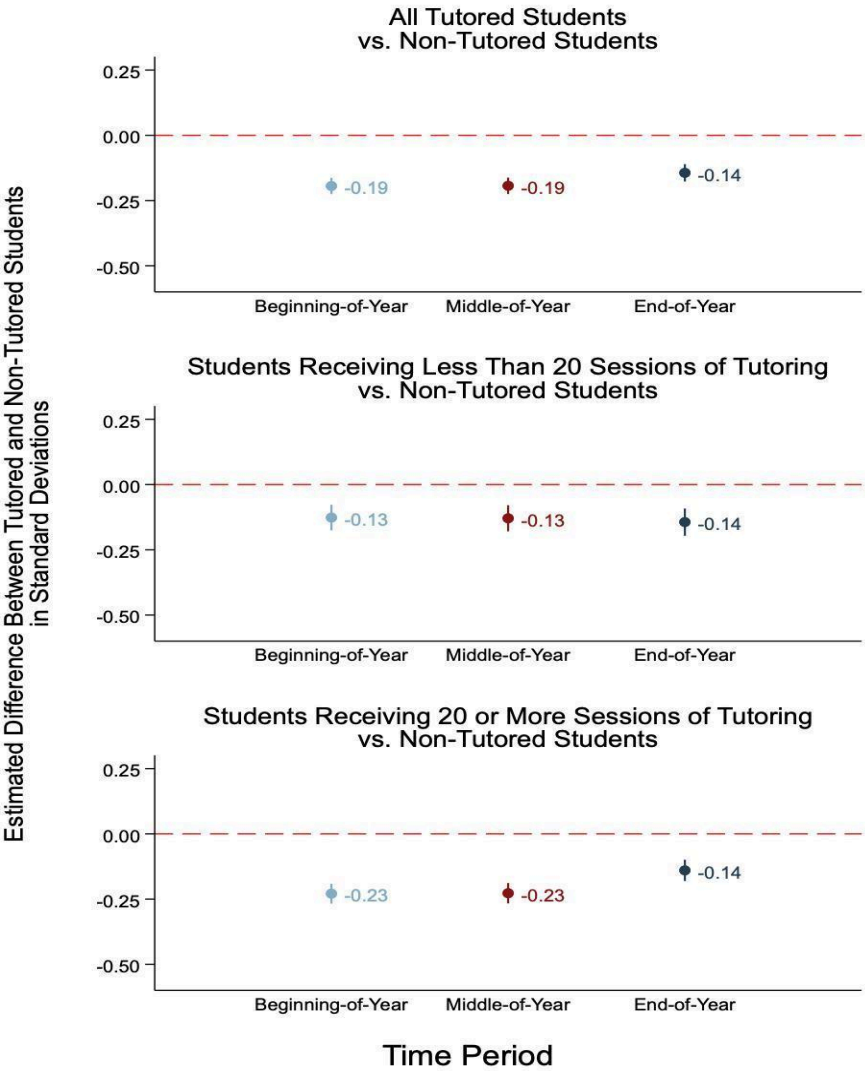
In sum, students who were behind at the beginning of the year were more likely to participate in tutoring than their peers. At the end of the year, they remained behind their peers; however, they were closer to the average performance of students who were not selected for tutoring. These trends should not be interpreted as causal because there are likely characteristics of students or other school experiences that are different for tutored and untutored students and that could be driving student achievement.

We analyzed the available interim assessment data to gain insights using several assessments covering different grade levels and subject areas. (See Appendix B for methodology.) It is important to note, data from interim assessments was only available from DC Public Schools and does not include HIT Initiative students from other LEAs. Using the available data, we standardized test scores around a mean of zero and a standard deviation of 1 in order to make our results comparable across assessments and grade levels. These estimates should be interpreted as differences between tutored and nontutored students in standard deviation units. For instance, an estimate that becomes more positive over time, means that the tutored group has improved in relation to the average of the group of students that were not tutored. An estimate that becomes more negative over the time means the group is performing worse in relation in the nontutored students.

Figure 9 shows that tutored K-8 students who took the iReady math assessment began the school year 0.19 standard deviations below their nontutored peers and ended the school year 0.14 standard deviations below their nontutored peers. While tutored students still scored below their nontutored classmates, the gap between the two groups diminished over the course of the year. Students who

started out further behind their peers but had over 20 sessions of tutoring, were able to shrink their gap with nontutored peers from 0.23 standard deviations to 0.14 standard deviations.

Figure 9: Differences in iReady Math Scores for Tutored and Non-Tutored Students for Grades K-8

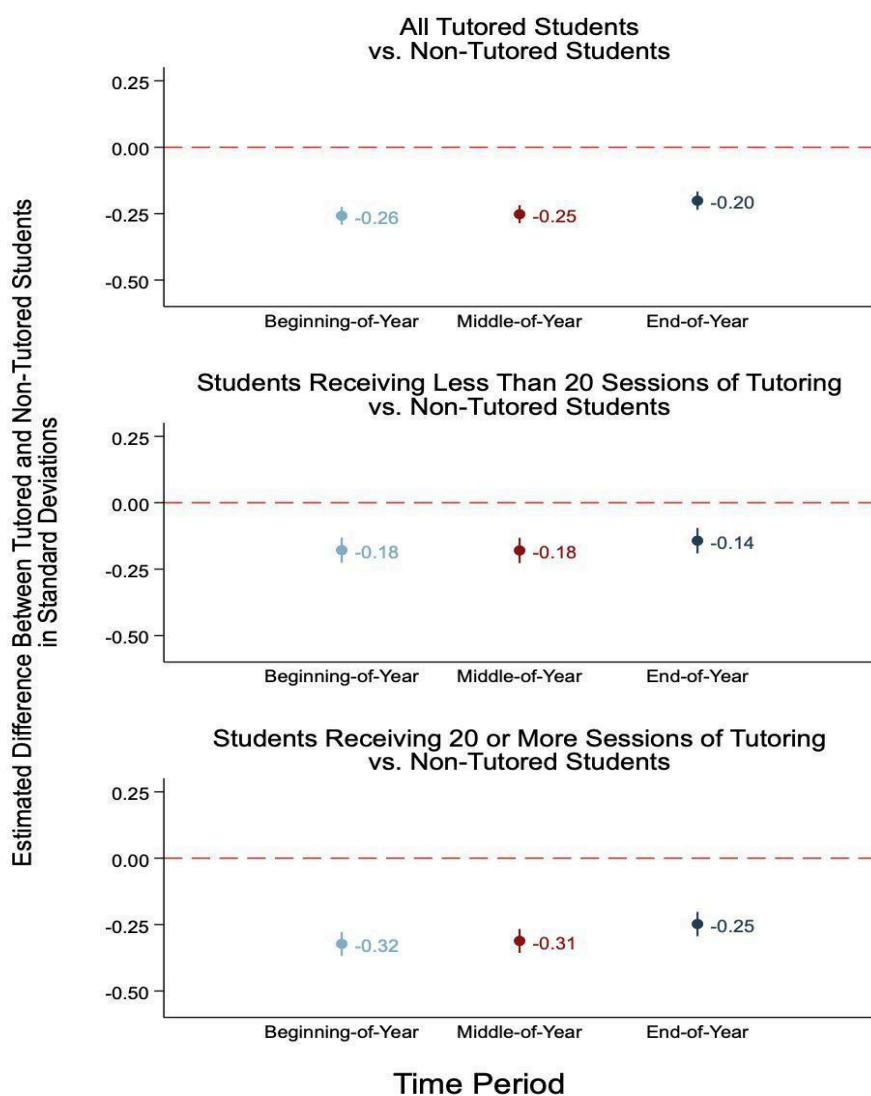


Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.
Top panel, n=27,127 (2,331 students received tutoring)
Middle panel, n=25,652, (856 students received fewer than 20 HIT sessions)
Bottom panel, n=26,271, (1,475 students received 20 or more HIT sessions)

Students that received tutoring sessions were more likely to be behind than their peers at the beginning of the year on iReady Math Scores. At the end of the year these students with more than 20 sessions of tutoring were closer to the average of students who were not selected for tutoring.

Similarly, Figure 10 shows that tutored students started behind their peers on the Reading Inventory but diminished the gap between groups over the course of the year. Again, the biggest gains were seen from students who received 20 or more sessions of tutoring.

Figure 10: Differences in Reading Inventory Scores for Tutored and Non-Tutored Students for Grades 2-12



Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.

Top panel, n=21,666 (1,909 students received tutoring)

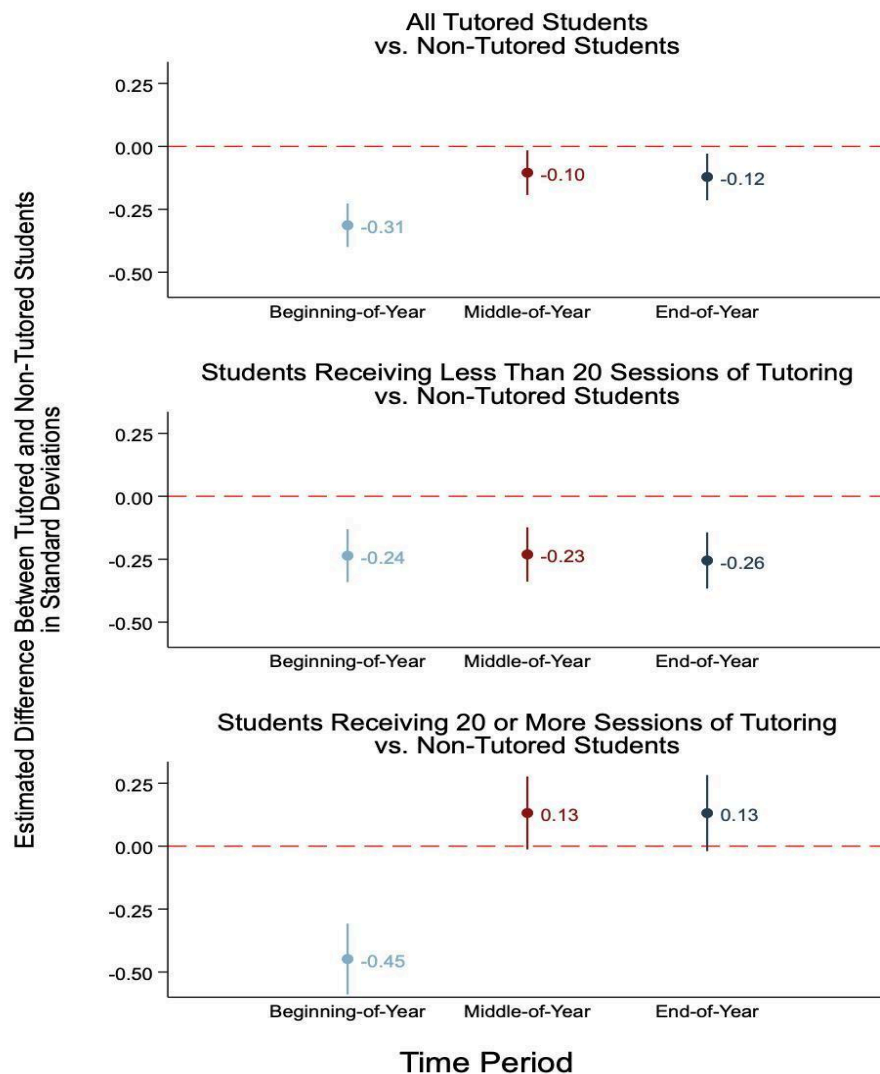
Middle panel, n=20,655 (898 students received fewer than 20 HIT sessions)

Bottom panel, n=20,768 (1,011 students received 20 or more HIT sessions)

Students that received tutoring sessions were more likely to be behind than their peers at the beginning of the year on Reading Inventory Scores. At the end of the year these students were closer to the average of students who were not selected for tutoring.

The overall pattern was similar when we looked at interim math scores for 7th through 12th graders on the MAP assessment, as illustrated by Figure 11. Students who were the furthest behind and received over 20 sessions of tutoring exceed their nontutored peers performance at the end of the year. For students who received less than 20 sessions of tutoring, the gap with nontutored students remained fairly consistent over the course of the year. On average, tutored students shrunk the gap between themselves and non-tutored students by 0.19 standard deviations.

Figure 11: Differences in MAP Math Scores for Tutored and Non-Tutored Students for Grades 7-12



Notes: Red dashed line at 0 is the average score of non-tutored students at each time point.

Top panel, n=3,142 (227 students received tutoring)

Middle panel, n=3,061 (146 students received fewer than 20 HIT sessions)

Bottom panel, n=2,996 (81 students received 20 or more HIT sessions)



Students that received tutoring sessions were more likely to be behind than their peers at the beginning of the year on MAP Math Scores. At the end of the year these students were closer to the average of students who were not selected for tutoring.

Data from the standardized annual assessment used for the 2022-23 school year in DC, PARCC, is available for students across all participating LEAs in grades 3 through 11 in the spring of 2023. Again, as shown in Table 5, we see that students who received tutoring scored lower on PARCC than their non-tutored peers and those that received over 20 sessions had lower scores than those of their non-tutored peers and of students who received fewer than 20 sessions of tutoring. This indicates that schools identified students who needed tutoring the most to receive it and that students who were the furthest from their peers received more sessions of tutoring in both English/Language Arts and math.

Table 5. Differences in PARC Scores between Tutored and Non-Tutored Students

Differences in PARCC ELA Scores for Tutored and Untutored Students Grades 3-11			
Period	Overall	Received <20 Sessions	Received 20+ Sessions
Spring 2023	-0.1***	-0.08***	-0.12***

Note: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

All models controlled for demographic characteristics. Spring 2023 models are controlled for prior achievement in the 2022 end-of-year (spring 2022) PARCC assessment. All models include grade fixed effects.

Differences in PARCC Math Scores for Tutored and Untutored Students Grades 3-11			
Period	Overall	Received <20 Sessions	Received 20+ Sessions
Spring 2023	-0.05***	-0.04*	-0.07***

Note: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

All models controlled for demographic characteristics. Spring 2023 models are controlled for prior achievement in the 2022 end-of-year (spring 2022) PARCC assessment. All models include grade fixed effects.

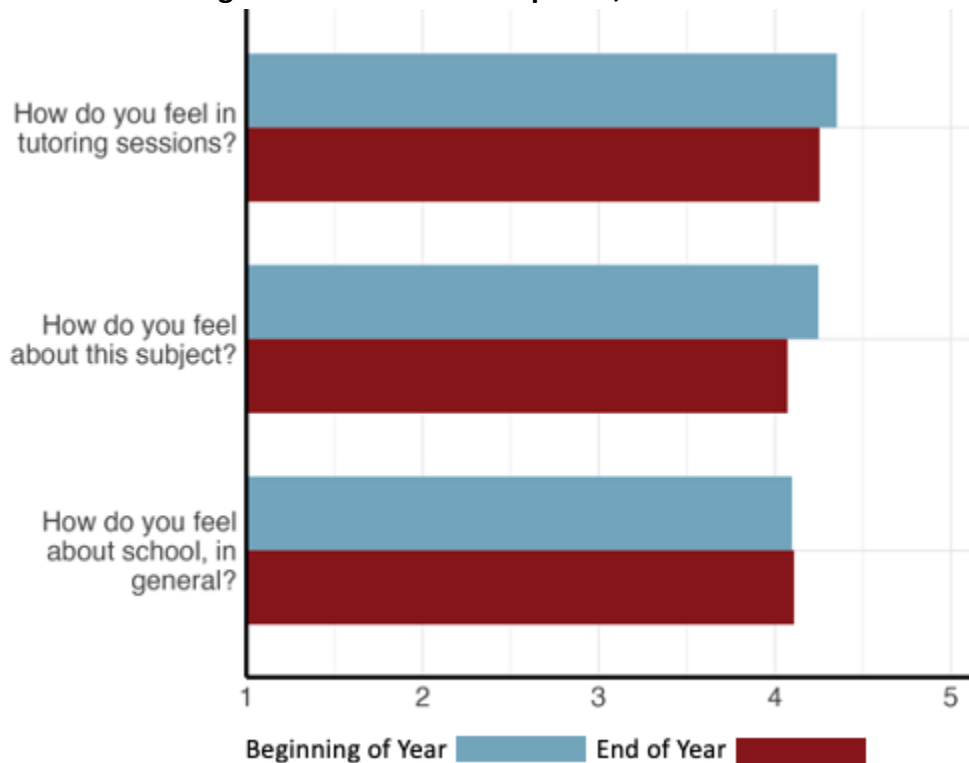
Schools selected students furthest behind to participate in tutoring. Students who received tutoring scored lower on PARCC than their non-tutored peers and those that received over 20 sessions had lower scores than those of their non-tutored peers and of students who received fewer than 20 sessions of tutoring.

Student Experiences

While academic acceleration is a primary goal of the Initiative, OSSE leaders also hoped to enhance student engagement in school and boost their self-efficacy and belonging. This section of the report will provide an analysis of the available data on student learning experiences.

A group of tutoring providers administered “pulse checks,” short surveys completed periodically to learn more about students’ experiences with tutoring and school to participating students. For younger students, these surveys asked participants to identify a face (smiles to frowns) that corresponded to their feelings about tutoring, their tutoring subject (ELA in this case), and school. Figure 12 shows the responses of a group of students (n=968) at the beginning and end of the school year. At both points in time, students responded that they felt between “a little good” and “very good” about each tutoring, ELA, and school generally.

Figure 12. Students Perceptions, Grades K - 2



Note: N = 968

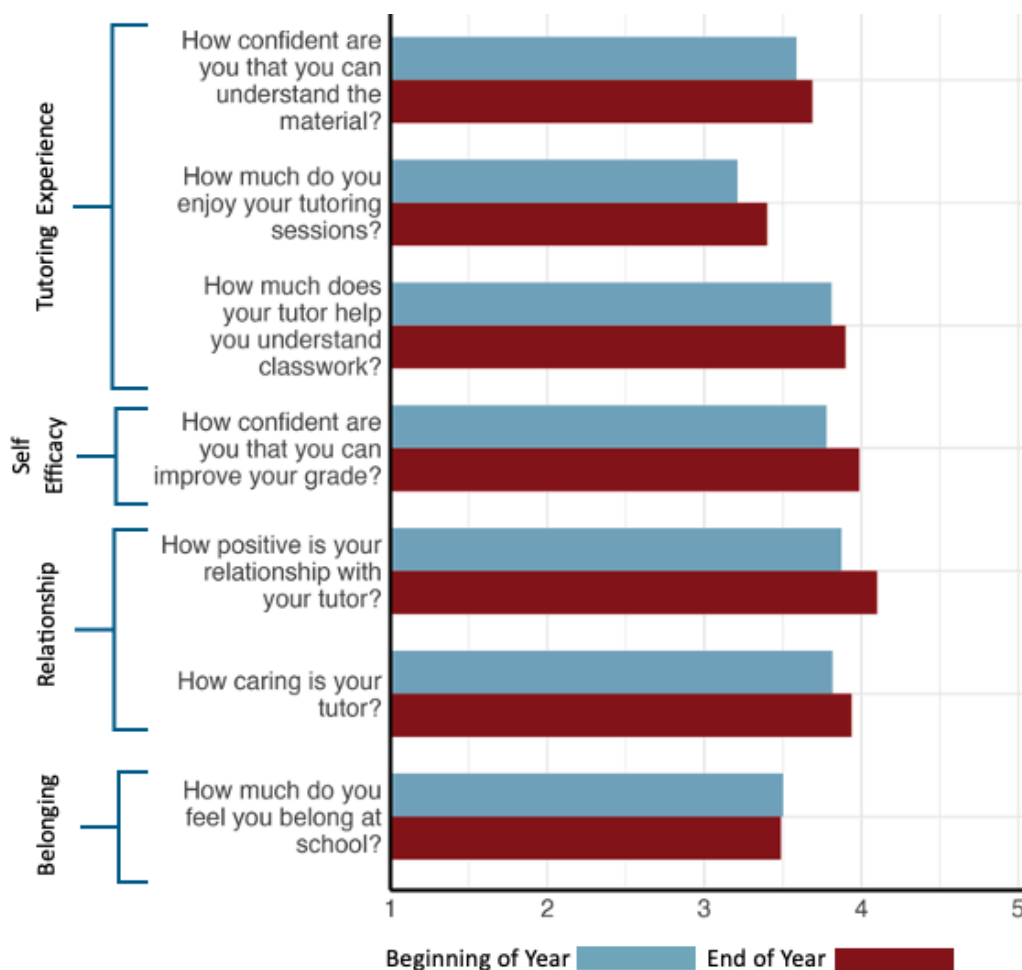
We find that the positive feelings young students have towards tutoring are sustained throughout the school year.



Surveys completed by fourth through twelfth graders allowed for more nuanced responses and focused on four domains: tutoring experience, self-efficacy, the tutor-student relationship, and belonging in school. For the group of students who completed the surveys, scores in each of the domains increased in positivity over the course of the year.

Similar to K-3 students, we see the generally positive sentiments about tutoring are sustained between the beginning of the year and end of year surveys. The responses to the question “How positive is the relationship with your tutor?” had a statistically significant positive difference between the beginning and end of the school year. The remainder of the questions were relatively constantly positive at both points in time.

Figure 13. Student Perceptions, Grades 4 -12



Note: N = 740

We see the generally positive sentiments about tutoring are sustained between the beginning of the year and end of year surveys for students in grades 4-12.

Program Features and Tutoring Providers

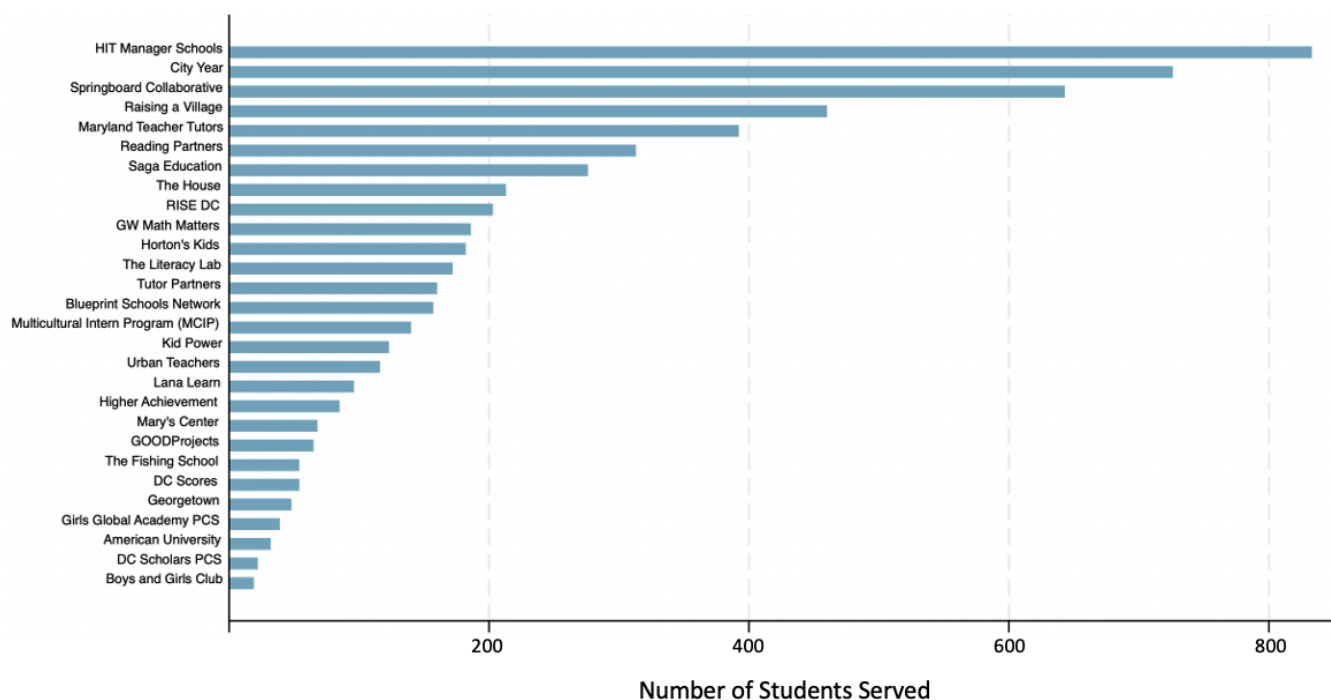
Features that characterize effective high-impact tutoring include small group size (i.e., no more than four students), regular and frequent sessions (occurring at least three times per week for at least 30 minutes per session), embeddedness during the school day, the provision of a well-trained consistent tutor, the use of data to identify students' assets and needs, and high-quality instructional materials (Robinson & Loeb, 2021).³ Analysis of OSSE administrative data, tutoring session data, program documentation, and interviews and personal communication with program managers support that all programs include many evidence-based features of effective tutoring and are strongly aligned to [OSSE high-impact tutoring standards](#). Appendix Table A1 presents the features of HIT programs provided by the initial cohort of grantees operating during the first year.

Across providers, students met with tutors one-on-one or in small groups and saw the same tutor multiple times per week. Most organizations collaborated with school leaders to schedule at least some tutoring during the school day. Eight providers offered tutoring at community-based sites such as community centers. The grant required tutoring programs to use high-quality instructional materials that were directly aligned to the classroom curriculum and/or were grounded in evidence (e.g., the science of reading).

Figure 14 displays the number of HIT Initiative students served by each provider, and also includes HIT Initiative students not directly served by an OSSE grantee provider, but receiving high impact tutoring in a school staffed with an OSSE-funded HIT manager. The number of students served ranged widely from 19 students served by the Boys and Girls Club to City Year who served 628 students. The largest number of students served by the Initiative were in schools supported by HIT managers.

³Robinson, Carly D., and Susanna Loeb. (2021). High-Impact Tutoring: State of the Research and Priorities for Future Learning. (EdWorkingPaper: 21-384). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/qf76-rj21>

Figure 14. Number of Students Served by Provider



The number of students by each tutoring provider ranged widely from 19 students served by the Boys and Girls Club to City Year who served 628 students.

Tutoring Program Managers' Experiences

A series of semi-structured interviews and informal conversations with tutoring provider program managers offered insights into their experiences with the implementation of the Initiative. The interviews aimed to understand the barriers and facilitators encountered during the launch and subsequent operation of their programs.

Facilitators to Implementation

Interviews with grantees suggest that funding and other support through the OSSE HIT Initiative allowed for greater flexibility and innovation in their programming, allowing them to be responsive to the needs of schools and students. OSSE HIT managers, in particular, have played a crucial role as liaisons between tutoring providers and schools, facilitating the connection and communication tutors need. A representative observed a significant benefit to the quality of service provided at schools with an assigned HIT manager.

“And so, you know [with the involvement of HIT managers] information is being shared more freely. And more efficiently. And I think just like... day to day.... It helps make the tutoring sessions a lot smoother.”

Another organization noted that OSSE funding enabled them to hire site coordinators, which helped the organization, tutors, and staff create community bonds. The on-site representation from their program staff at the beginning of the year helped build relationships with the school leaders, as well as supported tutor training and coaching.

Finally, the program manager from another tutoring provider noted that students seem to show genuine excitement about tutoring and spending time with their tutors. Specifically, she described the strong relationship their tutors create with students, drawing on strong cultural and sociolinguistic ties to the community. Describing the relationships one of their tutors has with newcomer students who are learning English, she spoke to the importance of having an adult who can speak the same language as the students and is able to understand and relate to them:

“They like knock on the [tutoring provider’s] door to come and speak Spanish to their tutor or not even their tutor to just like this person who they feel, understands them and like it’s just, it’s so sweet, and it’s so good to see, you know, a lot of the teachers at that school are not bilingual.”

Challenges to Implementation

Interviewees identified several challenges impeding the effective implementation of tutoring, with the challenges largely rooted in operational difficulties. Notably, many tutoring providers mentioned issues such as restricted access to school-based technology and scheduling conflicts. These obstacles not only complicated the logistical aspects of tutoring but hindered providers from adhering to implementing tutoring best practices.

Interviewees mentioned scheduling challenges as a significant impediment to their capacity to adhere to and implement tutoring best practices. One tutoring provider disclosed that due to these scheduling difficulties, coupled with the volume of students served, their tutoring groups were sometimes larger (comprising 5-8 students) than what is typically recommended. This deviation from best practices adversely affected the tutors’ ability to address and personalize instruction to student needs.

Additionally, providers raised concerns about the alignment of tutor schedules with student schedules, especially when school schedules change frequently. Tutors, particularly those who are college students, faced significant challenges in adjusting their schedules to accommodate rescheduled

tutoring sessions at schools. Beyond scheduling issues, another tutoring provider highlighted additional logistical challenges, including access to essential operational resources like WiFi and copiers. While individually these tasks may seem manageable, finding solutions takes time away from focusing on the direct needs of students.

Another tutoring provider noted that in some of their partner districts they have a contact in the central office to provide support if needed. They noted that that would also be helpful in DC to work through logistical issues.

Conclusion

The OSSE High Impact Tutoring Initiative's first year of implementation represents a significant stride towards educational equity and acceleration of learning for students, particularly among DC's at risk students. We found that the Initiative was successful in serving students of color and at-risk students for tutoring services and many of those students received a meaningful amount of tutoring.

The initiative's focus on high-impact tutoring has demonstrated clear benefits. Participating students were more likely to attend school on days they had tutoring, an effect that was particularly strong for students who were more likely to be absent in the prior school year. Furthermore, we observe that the academic gaps between students participating in tutoring and those that were not participating diminished over the course of the year on most available assessments. This effect was most notable for students who received tutoring at high dosages. These attendance findings for DC students are the first pieces of evidence that demonstrate a positive effect of HIT on attendance.

Moreover, 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. Challenges, largely related to logistics, underscore the need for continuous improvement to maximize the Initiative's effectiveness. Given the multifaceted needs of these populations and the promising initial results, we anticipate the efforts to continually improve the Initiative's effectiveness will continue throughout the life of the Initiative.

OSSE's proactive measures through the High Impact Tutoring Initiative serve as a robust model of how targeted educational investments and collaboration between state education agencies and tutoring providers can facilitate improvements in student outcomes. Continued monitoring and adaptation informed by the Initiative's comprehensive data collection will be crucial to sustaining and expanding its impact, ultimately contributing to a more equitable educational landscape in Washington, DC.

Appendix A

Summary of Services Provided by Grant Recipients

Table A1 displays the features of HIT program grant recipients who provided tutoring services to students in the 2022-2023 school year.

	Grade Level	Subject	Days/Week	Mins/Week	Session Length (Mins)	During School	OST	Average Group Size	Number of students served
American University	ES, MS, HS	ELA, Math	2	60-120	60	✓		1 to 2	21
Blueprint Schools	MS	Math	4	180	30 – 60	✓		3	103
City Year	ES, MS	ELA, Math	2 – 3	90	30 – 45	✓	✓	3	628
GW Math Matters	MS	Math	2	90	45	✓	✓	1 to 3	168
Horton's Kids	ES, MS	ELA, Math	2	90	45		✓	4	174
Kid Power	ES	ELA	3	105	35	✓	✓	3	105
Lana Learn	HS	ELA, Math	2	90	45	✓	✓	1	88
Maryland Teacher Tutors	ES, MS, HS	ELA, Math	3	195	65	✓	✓	3	375
Multicultural Career Intern Program	MS, HS	ELA, Math	2+	180+	90	✓	✓	1 to 2	147
Reading Partners	ES	ELA	2	90	45	✓		1	312
Saga Education	HS	Math	2 – 3	90	45	✓		4	231
Springboard Collaborative	ES	ELA	2 – 3	90	30 – 45		✓	3	599
The House	ES, MS, HS	Math	2	90-120	45-60	✓	✓	3	212
The Literacy Lab	ES	ELA	5	125	20 – 30	✓		1	168
Tutor Partners	ES, MS, HS	ELA, Math	2-3	138+	~70	✓		1-3	158

Note: Information based upon grantees' reports of their programs as designed. ES=elementary school, MS= middle school, HS= high school, OST= Out of School Time. All tutoring organizations listed in Table A1 were grantees whose applications were reviewed by researchers to learn the details of their program descriptions.

The following programs are not direct OSSE grantees but were CityTutor subgrantees in 2022-2023: DC Scores (53 students), Georgetown University's GW Math Matters (48), RISE DC (172), Raising a Village (398), and The Fishing School (54). CityTutor Hubs, community-based tutoring centers operated by non-profit Out of School Time providers, were made up of the following providers: Boys and Girls Club of Greater Washington (19 students), GOODProjects (60), Higher Achievement (83), Horton's Kids (174), and Mary's Center (67).

Appendix B

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, as well as survey responses. In this report, we primarily focus on four types of data: (1) student demographics, (2) student academic achievement, (3) student attendance, and (4) survey data measuring student perceptions of tutoring.

The student demographic data includes information on student race (Asian, Black, Hispanic or Latino, Multi-racial, Native American), DCPS-assigned "at risk" status, economic disadvantage, disability status, English language learning status, and gender.

The student achievement data includes English Language Arts (ELA) and math assessment data. Interim assessments iReady, 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 iReady 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 3 through 12. We use math and ELA state test outcomes from PARCC from the 2021-22 school year and the 2022-23 school year for all included LEAs. To facilitate comparison, all student academic achievements 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.

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

Lastly, the survey data was collected from students who received tutoring during the 2022-23 school year and provides insights into student perceptions of tutoring. In this report, we have incorporated survey results from K-2 students, conducted by two tutoring providers. Springboard Collaborative administered surveys to 952 students, while Reading Partners collected responses from 16 students, amounting to a total of 968 K-2 students surveyed. For the 4-12 student surveys, we received 502 responses from Saga Education and an additional 238 responses from Maryland Teacher Tutors, culminating in a total of 740 surveys.

Academic Analysis

To produce estimates in our academic achievement analysis (Figures 9-11, Table 5) , we conducted several linear regression analyses to estimate the difference between tutored and nontutored students' performance on three standardized interim assessments, i-Ready, 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 nontutored students' Spring 2023 PARCC scores.

To assess how tutored and nontutored students performed on the beginning-of-year (BOY) assessments, we regressed the standardized score of each interim test (e.g., BOY iReady) on an indicator for whether a student received tutoring. 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, Hispanic or Latino, Multi-racial, Native American, DCPS-assigned "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 2022 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 the EOY PARCC assessments (e.g., 2023 Math PARCC score) on an indicator for whether the student received tutoring, the same student demographic variables, grade-level fixed effects, and the previous year's PARCC scores (e.g., 2022 Math PARCC score).

Additionally, 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 141 schools, 26 tutoring providers, and 4,478 students.

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.

Appendix C

Point estimates from Figures 5, and 6

Point estimates from Figure 5

Number of Tutoring Sessions	Percent
1	4.89%
2 to 5	12.56%
6 to 10	12.39%
11 to 20	21.34%
21 to 30 -	16.07%
31 to 40	9.48%
41 to 50	7.21%
51 or more	16.07%
Total	100%

Point estimates from Figure 6

Grade Level	Number of Tutoring Hours Received
K	54.67
1	55.92
2	55.52
3	43.5
4	36.13
5	24.45
6	21.72
7	24.91
8	16.32
9	15.28
10	21.41
11	16.85
12	15.67