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# Key Findings

- Students who participated in 90% or more of tutoring sessions saw more growth compared to non-tutored peers in English Language Arts (ELA).
  - Findings show that students who participated 90% or more were more likely to meet or surpass their projected TCAP than non-tutored students.
  - 32% of tutored students who were in the "Below" category last year in ELA moved up at least one performance level, compared to 28% of non-tutored students.
  - Students who scored in the bottom quartile on the Fall i-Ready and attended 90% or more of tutoring sessions had a higher student growth measure than non-tutored students.
- Students who participated in 90% or more of tutoring sessions saw more growth compared to non-tutored peers in math.
  - Students who attended 90% or more of tutoring sessions experienced less learning loss (due to Covid-19 school closures/remote learning) and were more likely to meet or surpass their projected TCAP score than non-tutored students.
  - 34% of tutored students who were in the "Below" category last year in math moved up at least one performance level, compared to 28% of non-tutored students.
  - Students who participated in 90% or more of tutoring sessions had a higher student growth measure on i-Ready than non-tutored students.
  - Students who scored in the bottom quartile on the fall i-Ready and attended 90% or more of tutoring sessions had a higher student growth measure than non-tutored students.
- 65% of the highest tutoring dosage group in English I met or surpassed their projected score, compared to only 58% of non-tutored students.
- 59% of the highest tutoring dosage group in Algebra I met or surpassed their projected score, compared to only 39% of non-tutored students.
- 19% of the highest tutoring dosage group in ACT tutoring scored a 21 or higher composite score, compared to only 14% of non-tutored students.

# **Program Overview**

Students below a specific academic threshold were invited to enroll in the first District-wide tutoring program. However, very early into the program's implementation, all students were welcome to enroll. Memphis Shelby County Schools (MSCS) offered a 1:10 tutor/student ratio for before and after school tutoring for grades Kindergarten through  $12^{th}$  grade (K-12), and a 1:3 or 1:4 tutor/student ratio for tutoring taking place during the school day for grades Kindergarten through eighth grade (K-8).

According to the Academic Operations and School Support team, at the start of the 2021-22 school year there was difficulty in attracting and hiring tutoring staff. MSCS partnered



with Peer Power to assist in assigning students to tutor in the lower grades as a resource for staffing. Student enrollment in middle and high schools was affected by external factors such as students' part-time employment, obligations at home, and extracurricular activities. To retain students' attendance and tutor recruitment and retention, we offered incentives to teachers, students, and parents. Teacher-tutors received an increase in pay, students had the opportunity for monthly drawings, and parents earned the opportunity to participate in a drawing for a \$200 gift card per school if their child participated in tutoring in the first month with an attendance rate of 95% or higher.

#### **Program Goals**

- Increase student achievement/growth in elementary, middle, and high schools
- Close the learning gaps created by COVID closures

#### Data

All tutoring attendance data were taken from a dashboard that the Decision Analytics and Information Management (DAIM) team created. Attendance was entered into PowerSchool by the school-level tutoring coordinators. Both enrollment and attendance were recorded in days; 83 days were the most days that students could enroll and attend. Participation in the tutoring program was broken down into two different views—descriptive statistics with a broad look at enrollment and attendance for grades 3–12 and a narrower look at participation used for comparing different tutoring dosage groups.

The first view of participation included looking at enrollment with three major cut points for descriptive statistics. These three major cut points are those who were enrolled less than 50% of the time and were therefore removed from the analysis, those who were enrolled 50-79% of the time, and those who were enrolled at least 80% of the time. Within these different enrollment levels, there were also three attendance levels: attending 0-49% of the time they were enrolled, attending 50-79% of the time they were enrolled, attending 50-79% of the time they were enrolled, attending 50-79% of the time they were enrolled at levels of enrollment and attendance are considered different levels of tutoring dosage and are compared to students who did not enroll in tutoring at all. Table 1 shows these tutoring dosages.

Tuto	oring Dosage		
50-79%	0-49% Attendance		
Enrollment (42 to 66 Days)	50-79% Attendance		
	80% + Attendance		
	0-49% Attendance		
80% + Enrollment (67 to 83 Days)	50-79% Attendance		
	80% + Attendance		
No tutoring			

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The second look at participation excludes more students but does so in order to compare levels of tutoring for statistical analysis. Tutoring dosage was based on days present at tutoring, regardless of how many days students were enrolled. If a student was enrolled for fifty days and attended forty-five days, their days present were forty-five. Days present were broken down into having attended 10% or less of the total amount students were able to attend (83 days), 45-55%, and 90% or more. Having 10% or less equivalent days present in the program was eight days or less. Attending tutoring 37 to 46 days put students in the 45-55% group and having attended between 75 and 83 days put students in the 90% or more group. If students attended a different percentage, they were not included in these groups. If students were not in tutoring at all, they were put in the zero days present group as the comparison group. This look at participation was used for i-Ready and TCAP analysis and is broken down in table 2.

Tutoring Dosage Groups			
Dosage Group	Days Present at Tutoring		
No tutoring	0 days		
10% or Less	1–8 days		
45-55%	37-46 days		
90% or More	75-83 days		

Tab	le	2.
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## **Before and After School Tutoring**

Before and after school tutoring sessions were combined for analysis. Almost all students who did tutoring were involved in either before or after school tutoring. Less than ten students were involved in before and after school tutoring in the same subject area. Because these students would have had much more exposure to tutoring and would have been an outlier, they were removed from the analysis. This only affected K–8 English Language Arts (ELA) and K–8 Math. Similarly, some students had multiple entries for the same tutoring time and subject (example: having two entries for after school tutoring for K–8 ELA). In these cases, the instance with the higher number of enrolled days was kept and used for analysis.

Analysis was broken down by different grade bands, as different tests are given to these grade bands. i-Ready math and i-Ready ELA data were used for grades Kindergarten through eighth grade. Third through eighth grade also participated in the Math and ELA TCAP, and those data were used for analysis for this grade band as well. Ninth and 10<sup>th</sup> grade students took End of Course (EOC) tests based on subject area and these were used for their analysis. Lastly, ACT composite, English, and math scores were used for analysis for 11<sup>th</sup> and 12<sup>th</sup> grade students.

Overall, there were 8,414 unique students enrolled in before and after school tutoring with 9,344 tutoring enrollments. This means that 930 students were enrolled in multiple tutoring sessions that were not in the same subject area (example: a ninth grader is in before school Algebra I tutoring and after school English I tutoring).



# i-Ready K-8 Data

Kindergarten through eighth grade students take the i-Ready diagnostic assessment three times a year—in the fall, at the middle of the year, and at the end of the year (called fall, winter, and spring, respectively). These three tests are used to see how students grow throughout the year. For the tutoring evaluation, the fall window is used as the baseline. i-Ready provides an Annual Typical Growth Measure (ATGM) for each student. This measure is assigned by how the student performed on the fall assessment and is the average amount of growth that is expected from a student with that score within the school year. This is given to help teachers assess how well their students are doing throughout the year. The ATGM was used for the analysis for the tutoring program. First, this was simply used to see if students met this target by the end of the year. Secondly, this target measure was used to gauge the amount of growth students achieved. This measure will be called Student Growth Measure (SGM) and is calculated by subtracting a student's fall scale score from their spring scale score and then dividing that by their ATGM and multiplying by 100% to make this a percentage. See figure 1 for the formula below.

# Figure 1. Formula for Student Growth Measure

$$Student \, Growth = \frac{Spring \, iReady \, scale \, score \, - Fall \, iReady \, scale \, score}{iReady \, Annual \, Typical \, Growth \, Measure} \, \times 100\%$$

A student who has a 100% SGM would have hit their ATGM exactly. This would happen if a student had a fall scale score of 400, an ATGM of 30, and they had a spring scale score of 430. A student with a SGM less than 100% means that they did not hit their ATGM. If theirs is greater than 100% this indicates that they exceeded this measure and anything that is negative indicates that they scored lower than they did in the fall. To ensure that outliers did not sway the analysis, any SGM that was outside of three standard deviations were removed from the dataset when using this as a dependent variable.

Students were included in this analysis if they had a test in each testing window—fall, winter, and spring. Tutored students needed to be enrolled in tutoring of the subject area and to have a valid test in each testing window to be included in analysis (example, a student is enrolled in ELA tutoring and had an ELA i-Ready assessment in fall, winter, and spring). Testing had to be done in the correct window. There were extended windows to ensure that the District was compliant with testing by giving students extra opportunities to take the assessments, however including students who had a fall test in the extended window would not show an accurate picture of where all students were at the beginning of the school year. Tutored students were compared to non-tutored students who also had a test in each of the testing windows.

## 3<sup>rd</sup> through 8<sup>th</sup> Grade TCAP Data

Third through eighth graders take the state assessment (TCAP) in the spring semester each year in both Math and ELA. Each year the state provides both their TCAP scores and projections for the upcoming year based on their performance in the current year. These



projections can be used to compare how well the student actually performs on the TCAP the next year.

The projection variable is a projected percentile rank. This is then compared to the percentile rank that the student actually achieved in the spring of the 2021–22 school year. Similarly to i-Ready, the projected percentile rank is used in the following analysis to see if students met this projected percentile rank. Then, similarly to the student growth measure for i-Ready, a calculation is made to see how much of their projected percentile rank students achieved. This variable is referred to as the "Difference between the Projected and Actual Percentile Rank." If a student has a positive difference between these two that indicates that the student 1. met their target, meaning the projected percentile rank, and 2. exceeded it by some amount. To be included in either the descriptive statistics or the analysis for this portion of TCAP, students needed to have both a projected percentile rank on file and a valid test from the 2021–22 spring TCAP.

Students also receive a TCAP performance level label of Exceeded, Met, Approaching, or Below Expectations. This is a categorical variable that shows if the student is at, above, or below grade level. Another way to look at the data is to see what percentage of each tutoring group started in each of these levels in 2020–21 compared to their performance level after tutoring in 2021–22. To be included in this portion of the analysis, students needed to have both a valid scale score from 2020–21 and a valid scale score from 2021–22.

#### 9th and 10th Grade EOC Data

Ninth and 10<sup>th</sup> graders take End of Course (EOC) assessments in the spring after taking the following courses: English I, English II, Algebra I, Algebra II, and Geometry. High schoolers were able to enroll in tutoring in these courses. Like the TCAP for third through eighth graders, ninth and 10<sup>th</sup> graders receive projections of how well they will do on their EOCs.

To be included in the analysis, students needed to have both an EOC score within the subject level for the 2021–22 school year and a projection of how well they would do from the previous year. Students were removed if they did not have both measures. Subject levels were chosen for specific grades based on the regular sequence for high school math and English. Only ninth graders were chosen for the analysis of English I and Algebra I tutoring because they made up the majority of the students who were enrolled in the tutoring sessions. The English II, Algebra II, and Geometry analyses were done using only 10<sup>th</sup> grade students for the same reason. Table 3 shows the breakdown of students by each subject and which grade was primarily used for each subject.



Table 3.				
	Tutoring Subj	ects by Group		
Subject	Grade Used for Analysis	Non-tutored	Tutored	Removed*
English I	9th	4,945	195	40
English II	10th	4,554	79	0
Algebra I	9th	4,647	197	30
Algebra II	10th	1,612	< 10	0
Geometry	10th	2,866	124	38
*Removed indicates that this number of students were removed because they were enrolled for less than 50% of the available days.				

#### 11<sup>th</sup> and 12<sup>th</sup> Grade ACT Data

High schoolers were able to enroll in ACT tutoring, as well as English or math tutoring. For 11<sup>th</sup> and 12<sup>th</sup> graders, ACT composite scores were used to analyze ACT tutoring. The English portion of the ACT and the math portion of the ACT were used to analyze each of those subjects of tutoring for 11<sup>th</sup> and 12<sup>th</sup> graders. Each year the state provides projections for students' ACT scores. These projections can be used to compare how well the student actually performs on the ACT the next year. There were 8,230 students that had both an actual ACT score and a projection included in the non-tutored group. There were 106 tutored students who had both of these metrics that were included in the analysis.

## **During School Tutoring**

During school tutoring was a pilot initiative within the tutoring program that the following seven elementary schools participated in: Alton Elementary, Cherokee Elementary, Ford Road Elementary, Holmes Road Elementary, Maxine Smith STEAM Academy, Oakshire Elementary, and Winchester Elementary. Students were enrolled in either math or ELA for this tutoring session time. Math was the larger of the two subjects with 143 students participating and only 23 students receiving ELA tutoring during school. Less than 10 students had during school tutoring along with before or after school tutoring in the same tutored subject. Twenty-six students had during school tutoring for one subject and also received tutoring to 166 first to eighth grade students. Table 4 shows the schools that were involved in the pilot program with their enrollment numbers.



Table 4.	
Enrollment in During School Tu	toring by School
School	Students Enrolled
Alton Elementary	32
Cherokee Elementary	12
Ford Road Elementary	33
Holmes Road Elementary	17
Maxine Smith STEAM Academy	43
Oakshire Elementary	15
Winchester Elementary	14

Maxine Smith STEAM Academy tutored seventh and eighth graders and was the only school to do so. All other schools tutored a mix of grades from first to fifth grade. Table 5 shows the grades for which each school had during school tutoring.

Tab	le 5.							
Grades Receiving During	Schoo	ol Tut	torin	g by	Scho	ool		
Schools		Grades Served						
	1 2 3 4 5 6 7 8					8		
Alton Elementary	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			
Cherokee Elementary		$\checkmark$		$\checkmark$				
Ford Road Elementary			$\checkmark$	$\checkmark$	$\checkmark$			
Holmes Road Elementary		$\checkmark$			$\checkmark$			
Maxine Smith STEAM Academy							$\checkmark$	$\checkmark$
Oakshire Elementary								
Winchester Elementary								

Lastly, Table 6 shows the attendance rate for each school who participated in the during school tutoring pilot program. Overall, these schools had an attendance rate of 92%.



Table 6.				
Attendance Rate	by School			
Schools Attendance Rate				
Alton Elementary	99.9%			
Cherokee Elementary	90.3%			
Ford Road Elementary	99.7%			
Holmes Road Elementary	98.8%			
Maxine Smith STEAM Academy	72.7%			
Oakshire Elementary	99.4%			
Winchester Elementary	97.7%			
Overall	92.0%			

Because this program was a very small pilot program, the descriptive statistics will not be discussed fully in the report but can be found in Appendix A.

#### Analyses & Findings

#### K-8 i-Ready Analyses & Findings

For i-Ready ELA and math, three different analyses were run: a bivariate regression between days present and SGM, a Chi-square test of independence between the variables of tutoring dosage and met ATGM, and lastly, independent samples t-tests between tutoring dosages and their average STM. These same analyses were run on only students within these groups who scored in the bottom quartile on the fall i-Ready assessment. Essentially, to see if tutoring was more helpful to students in the bottom quartile than to all tutored students on a whole. Students in the 90% or more tutoring dosage group were in the bottom quartile at a higher percentage rate than any other group, but especially those who were not tutored. Tables 7 and 8 show these breakdowns for ELA and math, respectively.

Table 7.	
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ELA Tutoring Dosages by Bottom Quartile					
Tutoring Group	All Students	Bottom Quartile	Percent of Group in Bottom Quartile		
No tutoring	32,935	14,924	45.3%		
10% or less	137	80	58.4%		
45-55%	217	126	58.1%		
90% or more	1,315	913	69.4%		

## Table 8.

Math Tutoring Dosages by Bottom Quartile				
Tutoring Group	All Students	Bottom Quartile	Percent of Group in Bottom Quartile	
No tutoring	35,961	18,340	51.0%	
10% or less	21	< 5	N/A	
45-55%	251	160	63.7%	
90% or more	712	474	66.6%	



# i-Ready ELA Findings

First, bivariate regression analysis was conducted to test whether days present significantly predicts SGM on both i-Ready ELA and Math assessments. The ELA analysis showed that days present could not significantly predict SGM. The same analysis was done on only the bottom quartile and still days present could not significantly predict SGM.

A Chi-square test of independence was conducted to determine whether there was an association between tutoring dosage and achieving ATGM. The results of the analysis showed that achieving ATGM was not dependent on tutoring dosage, when looking at all students, meaning there was not a statistically significant difference between tutored and non-tutored students when it came to meeting their ATGM. However, the same analysis was run using only students who were in the bottom quartile on the fall i-Ready. In this analysis, students who participated 90% or more of tutoring sessions were more likely than their non-tutored peers to meet or exceed their ATGM,  $\chi^2_{(1)} = 4.91$ , p = .027. Fifty-five percent of the 90% or more tutoring dosage group met or surpassed their ATGM, while only 51% of the non-tutored group met or surpassed their ATGM. Table 9 shows the breakdown of this analysis.

		Tabl	e 9.		
Cross-Tabulation Analysis of ELA i-Ready Annual Typical Growth Measures (ATGM) of Bottom Quartile Non-Tutored vs. 90% or More Tutored Students					
Tutoring Dosage Missed ATGM Met/Surpassed ATGM Total					
No Tutoring	%	49%	51%		
No futoring	n	7,351	7,711	15,062	
00% or Moro	%	45%	55%		
	n	413	504	917	
$\chi^2_{(1)}$ = 4.91, p = .027					

Independent samples t-tests were conducted on different tutoring dosage groups to see if there was a statistical difference between groups' average SGM. Figure 2 shows comparisons between no tutoring, 45–55% tutoring dosage group, and 90% or more tutoring dosage group among all students and then again including only the bottom quartile students of each group. On the figure, arrows and asterisks indicate if there is a statistical significance between groups. The non-tutored group and the 45–55% group were compared to the 90% or more group both in the all students and the bottom quartile groupings. A statistically significant difference between the non-tutored group and the 90% or more group emerged,  $\chi^2_{(1051)}$ = 3.95, *p*<.001. In both cut points, the 90% or more tutoring dosage group had a higher average SGM than the other groups, however, the only statistically significant difference was between bottom quartile non-tutored students and those who participated 90% or more in tutoring sessions. The 90% or more group had an average SGM of 122% while the non-tutored group had an average SGM of 105%.







# i-Ready Math Findings

The bivariate regression run on math i-Ready test scores with the same parameters showed that days present could significantly predict SGM,  $F_{(1, 2116)} = 11.1$ , p = .001. The results show that only 0.5% of the variance in SGM was explained by days present at tutoring,  $r^2 = .005$ . Running this analysis on only bottom quartile students for math showed that days present could significantly predict SGM,  $F_{(1, 1410)} = 12.2$ , p < .001, with the results showing that 0.9% of the variance in SGM was explained by days present at tutoring,  $r^2 = .009$ .

The Chi-square test of independence that was conducted on tutoring dosage and meeting ATGM for math found that there was an association between the two. The results of the analysis showed that there was a statistically significant difference between 90% or more tutored students and non-tutored students when it came to meeting their ATGM. This was true when looking at all students,  $\chi^2_{(1)} = 11.15$ , p = .001, and even more so when looking at only bottom quartile students,  $\chi^2_{(1)} = 18.05$ , p < .001. Nearly 60% of students who participated 90% or more met or surpassed their ATGM while only 52% of non-tutored students met or surpassed their ATGM. This difference was even bigger when only looking at bottom quartile students, with the 90% or more tutored students having ten percentage points more of their group meeting or surpassing their ATGM at 62%. Table 10 shows the breakdown of the total population and table 11 shows only the bottom quartile students.



Table 10.						
Cross-Tabulation Analysis of Math i-Ready Annual Typical Growth Measures (ATGM) of Non-Tutored vs. 90% or More Tutored Students						
Tutoring Dosa	ge	Missed ATGM	Met/Surpassed ATGM	Total		
No Tutoring	%	48%	52%			
No lutoring	n	17,425	19,192	36,617		
90% or More	%	41%	59%			
	n	297	422	719		
$\chi^2_{(1)}$ = 11.15, p =	.001					

	Table 11.
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Cross-Tabulation Analysis of Math i-Ready Annual Typical Growth Measures (ATGM) of Bottom Quartile Non-Tutored vs. 90% or More Tutored Students						
Tutoring Dosage		Missed ATGM	Met/Surpassed ATGM	Total		
No. Testa via et	%	48%	52%			
No rutoring	n	8,943	9,725	18,668		
90% or More	%	38%	62%			
	n	182	296	478		
$\chi^2_{(1)}$ = 18.05, p < .001						

Just like with ELA, independent samples t-tests were conducted on different tutoring dosage groups to see if there was a statistical difference between groups' average SGM on math scores. Figure 3 shows comparisons between no tutoring, 45–55% tutoring dosage group, and 90% or more tutoring dosage group among all students and then again including only the bottom quartile students of each group. The non-tutored group and the 45-55% group were compared to the 90% or more group both in the all students and the bottom quartile groupings. In each instance, there was a statistically significant difference between the nontutored group and the 90% or more group (all students—  $\chi^2_{(36,671)}$  = 4.6, p< .001; bottom quartile students—  $\chi^2_{(503)}$  = 4.9, p< .001). When looking at all students, the non-tutored group's average STM was right around 100%, meaning that they exactly met their ATGM. The 45–55% tutoring dosage group had an average STM right below 100%. The 90% or more group had an average STM of 120%, a 20-percentage point difference. There was also a statistically significant difference between the 45-55% tutoring dosage group and the 90% or more group when looking at all students,  $\chi^2_{(380)}$  = 2.3, p= .02. When looking at only bottom guartile students, the difference between non-tutored and 90% or more was about 25-percentage points. Figure 3 shows these differences with indicators showing the



relationship and if there was statistical significance between the two (arrows and asterisks indicate statistical significance between groups).



# Figure 3.

## 3<sup>rd</sup> through 8<sup>th</sup> Grade Analyses & Findings

For TCAP ELA and math, three different analyses were run: a bivariate regression between days present and Difference between Projected and Actual Percentile Rank, a Chi-square test of independence between the variables of tutoring dosage and met Projected Percentile Rank, and lastly, One-Way ANOVAs between tutoring dosages and their average Difference between Projected and Actual Percentile Rank. These same analyses were run on only students within these groups who scored in the below category on the 2020–21 TCAP. Students in the 90% or more tutoring dosage group had scored in the below category at a higher percentage rate than any other group, but especially those who were not tutored. Tables 12 and 13 show these breakdowns for ELA and math, respectively. For the TCAP analysis, a random sample of non-tutored students were used, rather than using the entire population of non-tutored students who had the correct parameters.



Table	12.			Table 1	.3.		
ELA '	Tutoring Dosag	es by Below	Category	Math	<b>Tutoring Dosa</b>	ges by Below	Category
Tutoring Group	All Students	Students Scoring 'Below' on '21 TCAP	Percent of Group Scoring 'Below' on '21 TCAP	Tutoring Group	All Students	Students Scoring 'Below' on '21 TCAP	Percent of Group Scoring 'Below' on '21 TCAP
No tutoring	984	394	40.0%	No tutoring	609	366	60.1%
10% or less	169	80	47.3%	10% or less	23	14	60.9%
45- 55%	168	80	47.6%	45- 55%	256	186	72.7%
90% or more	984	612	62.2%	90% or more	609	466	76.5%

# **TCAP ELA Findings**

For ELA TCAP, a bivariate regression was conducted to test whether days present could significantly predict the difference between projected and actual percentile rank for ELA TCAP scores. The test found that days present was able to predict this difference in a statistically significant way,  $F_{(1, 3718)} = 11.0$ , p = .001. The results show that only 0.3% of the variance in the Difference between Projected and Actual Percentile Rank was explained by days present at tutoring,  $r^2 = .003$ . Running this analysis on only the students who scored in the below category in the 2020–21 TCAP for ELA showed that days present could also significantly predict Difference between Projected and Actual Percentile Rank,  $F_{(1, 1985)} = 5.8$ , p = .016, with the results showing that 0.3% of the variance in the Difference between Projected and Actual Percentile Rank,  $r^2 = .003$ .

A Chi-square test of independence was conducted to see if there was an association between tutoring dosage and meeting projected percentile ranks. The results of the analysis showed that there was a statistically significant difference between 90% or more tutored students and non-tutored students when it came to meeting their projected percentile rank,  $\chi^2_{(1)} = 15.76$ , *p*< .001. Table 14 shows that 62% of the 90% or more tutoring dosage met or surpassed their projected percentile rank in comparison to only 53% of the non-tutored group.



		Table	14.		
Cross-Tabulation Analysis of Achieving ELA TCAP Projected Percentile Rank of Non-Tutored vs. 90% or More Tutored Students					
Tutoring Dosag	(e	Missed Projection	Met/Surpassed Projection	Total	
No. Testa site of	%	47%	53%		
No Tutoring	Ν	460	524	984	
90% or More	%	38%	62%		
	Ν	373	611	984	
$\chi^2_{(1)}$ = 15.76, p<	.001				

There was also a statistically significant difference when only looking at students who score in the below category in 2020–21. Sixty-three percent of the 90% or more tutoring dosage group met or surpassed their projection in comparison to 53% of the non-tutored group. Table 15 shows these comparisons.

		Table	15.		
Cross-Tabulation Analysis of Achieving ELA TCAP Projected Percentile Rank of 'Below' Category Non-Tutored vs. 90% or More Tutored Students					
Tutoring Dosag	ge	<b>Missed Projection</b>	Met/Surpassed Projection	Total	
No Tutoring	%	47%	53%		
	Ν	186	208	394	
90% or More	%	37%	63%		
	Ν	224	388	612	
$\chi^2_{(1)}$ = 11.17, p =	= .00	1			

Figure 4 shows the results of the One-Way ANOVAs that were run on both the general population group and the below category group between the variables of tutoring dosage and the Difference between Projected and Actual Percentile Rank. Figure 4 shows the mean difference of percentile rankings for each tutoring dosage group. The One-Way ANOVAs showed a statistically significant difference between the non-tutored group and the 90% or more tutoring dosage group, as well as a difference between the 45–55% tutoring dosage group and the 90% or more. Students in the highest dosage group had an average difference of 5.3 percentile ranks, meaning they were scoring 5.3 percentile ranks higher than it was predicted that they would. Among those who scored in the below category in the previous year, there was a statistically significant difference between the non-tutored group and the 90% or more tutoring dosage group. The highest tutored group had on average nearly 6 percentile ranks higher than what they were projected on their ELA TCAP. This is two percentile ranks higher than those who did not receive any tutoring.

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# TCAP Math Findings

The bivariate regression for TCAP math found that days present could predict the Difference between Projected and Actual Percentile Rank in a statistically significant way,  $F_{(1, 2533)} = 20.18$ , p < .001. The results show that only 0.8% of the variance in the Difference between Projected and Actual Percentile Rank was explained by days present at tutoring,  $r^2 = .008$ . Running this analysis on only the students who scored in the below category in the 2020–21 TCAP for math showed that days present could also significantly predict Difference between Projected and Actual Percentile Rank,  $F_{(1, 1823)} = 9.1$ , p = .03, with the results showing that 0.5% of the variance in the Difference between Projected and Actual Percentile Rank,  $r^2 = .005$ .

The Chi-square tests of independence that was conducted on tutoring dosage and meeting Projected Percentile Ranks for TCAP math found that there was an association between the two. The results of the analysis showed that there was a statistically significant difference between 90% or more tutored students and non-tutored students when it came to meeting their Projected Percentile Rank,  $\chi^2_{(1)}$  = 14.99, *p*<.001. This was also true when looking at only students who score in the below category on the 2020–21 TCAP,  $\chi^2_{(1)}$  = 5.22, *p* = .022. Table 16 shows the breakdown of the total population, and table 17 shows only the below category students.



		Table	16.		
Cross-Tabulation Analysis of Achieving Math TCAP Projected Percentile Rank of Non-Tutored vs. 90% or More Tutored Students					
Tutoring Dosag	ge	Missed Projection	Met/Surpassed Projection	Total	
No Tutoring	%	62%	38%		
No lutoring	Ν	377	232	609	
90% or More	%	51%	49%		
	Ν	310	299	609	
$\chi^2_{(1)}$ = 14.99, p	< .00	1			

# Table 17.

Cross-Tabulation Analysis of Achieving Math TCAP Projected Percentile Rank of 'Below' Category Non-Tutored vs. 90% or More Tutored Students						
Tutoring Dosag	ge	Missed Projection	Met/Surpassed Projection	Total		
No Tutoring	%	59%	41%			
	Ν	216	150	366		
90% or More	%	51%	49%			
	Ν	238	228	466		
$\chi^2_{(1)}$ = 5.22, p =	.022	2				

The last analyses run on math TCAP were the One-Way ANOVAs between tutoring dosage groups and the Difference between Projected and Actual Percentile Rank. For math, all groups, except for the 90% or more tutoring group who scored in the below category, score on average below their projected percentile rank. There was a statistically significant difference between the non-tutored group and the 90% or more tutored group, when looking at all students and when looking at only the below category group. This indicates that 90% or more tutored students were much closer to meeting their projected percentile rank; in the case of all students, they were on average, very close to meeting their projection and in the case of the below category, they on average, were around one percentile rank above their projection. When looking at all students, there was also a statistically significant difference between the 45–55% tutoring dosage group and 90% or more tutoring group. Figure 5 shows these comparisons.





The rest of this report will be the descriptive statistics that were initially run on third to eighth grade TCAP ELA and math, high school EOC assessments, and ACT scores by subject.

# **TCAP Descriptive Statistics**

To be included in the initial descriptive statistics, students needed to have both an actual TCAP score for the 2021–22 school year and a projection of how well they would do from the previous year. Students were removed if they did not have both measures. For the ELA TCAP, 28,425 students were included in the non-tutored population with both metrics. There were 2,215 students with these metrics who were included in the tutoring group, 521 of these were enrolled less than 50% of the available days and were therefore removed from the analysis. For the math TCAP, 28,865 students with these metrics who were included in the non-tutored population with both metrics. There were 1,926 students with these metrics who were included in the set included in the available days and were therefore removed from the available and were therefore removed from the available and were therefore removed from the available days and were therefore removed from the analysis.

Table 18 shows ELA TCAP median percentile ranks in comparison to median projected percentile ranks among tutoring dosage groups. The control group or non-tutored group had the highest median projected percentile rank of 35. This group's actual median percentile rank was 38. The tutored group with the biggest difference between their median projected percentile rank and their realized percentile rank were those who were enrolled 80% or more and attended less than 50% of the time (it should be noted that this group is made up of only 25 students). Those who were enrolled the most and attended the most surpassed their projected percentile rank by 4.3, and this group was made up of nearly 1,400 students.



Table 18.							
3 <sup>rd</sup> –8 <sup>th</sup> Grade ELA TCAP Median Projected Percentile Rank versus Median Actual Percentile Rank by Tutoring Dosage							
Tutor	ing Dosage	N	Median Projected Percentile Rank	Median Actual Percentile Rank	Difference Between Median Projection & Median Actual		
50–79% Enrollment	0-49% Attendance	20	17	24.05	7.05		
	50-79% Attendance	93	34	32.9	-1.1		
	80% + Attendance	368	29	31.8	2.8		
00%	0-49% Attendance	25	16	24.4	8.4		
80% + Enrollment	50–79% Attendance	319	22	27.3	5.3		
Enronment	80% + Attendance	1,390	23	27.3	4.3		
No tutoring		28,425	35	38	3		
All Students		31,161*	34	37.9	3.9		
*521 tutored students were removed because they were enrolled for less than 50% of the available days.							

Table 19 shows what percentage of each tutoring dosage group hit their ELA TCAP projections. If a student scored lower than their projection, they are in the "missed" category, meaning they missed their projected percentile rank. If students scored their exact projected percentile ranking, they are in the "achieved" category. The last category is "surpassed." A student is in this category if they surpassed their projected percentile rank. At least 60% of the 80% or more enrollment group achieved or surpassed their projected percentile rank. The no tutoring group had a slightly lower percentage of students in the achieved or surpassed categories with 56%.

Table 19.								
3 <sup>rd</sup> -8 <sup>th</sup> Gra	3 <sup>rd</sup> -8 <sup>th</sup> Grade ELA TCAP Projection Achievement Level by Tutoring Dosage							
Tutoring	Tutoring Dosage N Missed Achieved Surpa							
	0-49% Attendance	20	35%	0%	65%			
50–79% Enrollment	50–79% Attendance	93	57%	2%	41%			
	80% + Attendance	368	42%	3%	55%			
	0-49% Attendance	25	36%	4%	60%			
80% + Enrollment	50–79% Attendance	319	40%	2%	58%			
	80% + Attendance	1,390	40%	2%	58%			
No tutoring		28,425	44%	2%	54%			
All Students		31,161*	43%	2%	54%			
*521 tutored students were remo	oved because they were enrolled fo	r less than 50	% of the ava	ilable days.				

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## ESSER 2021–22 Tutoring Program Evaluation Report Prepared by the Department of Research & Performance Management

Table 20 shows the movement of performance levels from 2020-21 to 2021-22 between students who were most tutored (80% or more enrollment) and non-tutored students. The table acts as a grid, showing the performance levels from 2020-21 on the left and the performance levels those students achieved in 2021-22 in the columns on the right. For example, only 68% of the most tutored students who previously scored in the below category last year were also in the below category this year, in comparison to 71% of non-tutored students scoring in the below category both years. For this analysis, students needed to have a TCAP assessment score for the 2020-21 and 2021-22 school year. For ELA, there were 29,569 non-tutored students who had both of these metrics, as well as 2,812 tutored students, with 543 being removed for being enrolled less than 50% of the available days. The total number of tutored students that were included in this analysis for ELA was 2,269. For math, there were 30,013 non-tutored students who had both of these metrics. There were 1,988 tutored students initially, however, 286 students were removed because of their enrollment level, leaving 1,702 tutored students in the math analysis. It should be noted that the performance level labels changed from 2020-21 to 2021-22; in 2020-21 the labels were Mastered, On-track, Approaching, or Below and they were changed in 2021-22 to Exceeded Expectations, Met Expectations, Approaching Expectations, and Below Expectations. While the labels changed, the meaning of the performance levels did not. See table 33 in Appendix B to look at all tutoring dosage groups' performance level movements.



Table 20.							
ELA TCAP Performance Level Movement from 2020–21 to 2021–22 by Tutoring Dosage							
2021 TCAP				2022 TCAP	Performance Le	vel	
Performance Level	Tuto	or Type	Below	Approaching	Met Expectations	Exceeded Expectations	
		0-49% Attendance	70%	30%	0%		
Polow	80% + Enrollment	50-79% Attendance	68%	30%	2%	0%	
Below		80% + Attendance	68%	29%	3%	0%	
	Non-	71%	26%	2%	0%		
	80% + Enrollment	0-49% Attendance	20%	80%	0%		
A un una a a b luc at		50-79% Attendance	25%	54%	18%	4%	
Approaching		80% + Attendance	24%	57%	18%	1%	
	Non-	20%	57%	21%	2%		
		0-49% Attendance	0%	50%	50%		
On-Track	80% + Enrollment	50-79% Attendance	14%	21%	57%	7%	
		80% + Attendance	2%	25%	61%	13%	
	Non-	1%	22%	58%	20%		
Mostorod		0-49% Attendance	-	-	-	-	
	80% + Enrollment	50-79% Attendance	-	-	-	-	
Mastereu		80% + Attendance	-	-	-	-	
	Non-	<b>Tutored</b>	0%	4%	35%	61%	

In math, almost all tutoring dosage groups' median actual percentile rank were lower than their median projected percentile rank. The no tutoring group and the 50–79% enrollment with at least 80% attendance group had the biggest slide from their projected percentile rank to their median actual percentile rank. Table 21 shows these comparisons.



		Т	able <b>21</b> .				
3 <sup>rd</sup> –8 <sup>th</sup> Grade Math TCAP Median Projected Percentile Rank versus Median Actual Percentile Rank by Tutoring Dosage							
Tutori	ng Dosage	N	Median Projected Percentile Rank	Median Actual Percentile Rank	Difference Between Median Projection & Median Actual		
50–79% Enrollment	0-49% Attendance	15	36	38.9	2.9		
	50-79% Attendance	253	35	30.9	-4.1		
	80% + Attendance	381	35	27.3	-7.7		
00%	0-49% Attendance	9	15	14.7	-0.3		
80% + Enrollment	50–79% Attendance	135	36	32.9	-3.1		
Enronment	80% + Attendance	849	32	29.8	-2.2		
No tutoring		28,865	40	32.7	-7.3		
All Students		30,791*	40	32.7	-7.3		
*284 tutored students were removed because they were enrolled for less than 50% of the available days.							

Only 38% of the non-tutored group achieved or surpassed their projected math percentile rank. Nearly half (48%) of the most tutored group (being enrolled for at least 80% and attending at least 80%) achieved or surpassed their projected percentile rank on the TCAP. Table 22 shows these data points.

3 <sup>rd</sup> -8 <sup>th</sup> Grade Math TCAP Projection Achievement Level by Tutoring Dosage							
Tutoring	N	Missed	Achieved	Surpassed			
	0-49% Attendance	15	47%	7%	47%		
50-79% Enrollment	50-79% Attendance	253	58%	1%	41%		
	80% + Attendance	381	65%	1%	34%		
	0-49% Attendance	9	44%	0%	56%		
80% + Enrollment	50–79% Attendance	135	54%	0%	46%		
	80% + Attendance	849	<b>52%</b>	3%	45%		
No tutoring		28,865	62%	2%	36%		
All Students		30,791*	62%	2%	36%		
*284 tutored students were remo	oved because they were enrolled fo	r less than 50	% of the ava	ilable davs.			

Table 22.

Students in the most tutored group saw more upward performance level movement by group than non-tutored students in math TCAP. Table 23 shows that a third of the below group from 2020–21 in the most tutored group moved to a higher performance level. Similarly, the approaching and on-track students in the most tutoring group saw more stability in



performance level or upward movement than the non-tutored group. For all tutoring dosage groups, see table 34 in Appendix B.

Math TCAP Performance Level Movement from 2020–21 to 2021–22 by Tutoring Dosage							
2021 TCAP			2022 TCAP Performance Level				
Performance Tutor Type Level		Below	Approaching	Met Expectations	Exceeded Expectations		
		0-49% Attendance	88%	13%			
Polow	80% + Enrollment	50-79% Attendance	61%	35%	3%		
Below		80% + Attendance	66%	30%	3%	1%	
Non-Tutored			72%	26%	2%	0%	
Approaching	80% + Enrollment	0-49% Attendance					
		50-79% Attendance	14%	67%	19%		
		80% + Attendance	12%	52%	33%	3%	
	Non-	20%	52%	25%	3%		
		0-49% Attendance	-	-	_	-	
	80% + Enrollment	50-79% Attendance	0%	50%	50%		
Un-Track		80% + Attendance	4%	13%	63%	21%	
	Non-	Tutored	2%	21%	55%	21%	
		0-49% Attendance	-	-	-	-	
	80% + Enrollment	50-79% Attendance	-	-	-	-	
Mastereu		80% + Attendance	-	-	_	-	
	Non-	0%	3%	39%	58%		

Table 2	3
Table 2	3

#### 9th and 10th Grade EOC Analyses & Findings

The most tutored students in English I had the biggest difference between the median projected percentile rank and the median actual percentile rank with 10.4. This shows more growth than non-tutored students, however, the medians for the non-tutored group were greater than the tutored groups. Table 24 shows the rest of the breakdown for other tutoring dosage groups. English II had a very small group of students involved in tutoring. Students who were enrolled 50–79% and had 80% or more attendance saw the greatest difference between their projected percentile rank and their actual, among the tutoring dosage groups. See Table 35 in Appendix B for this broken down further.



Table 24.							
9 <sup>th</sup> Grade ENG I EOC Median Projected Percentile Rank versus Median Actual Percentile Rank by Tutoring Dosage							
Tutoring DosageNMedian Projected Percentile RankMedian Actual Percentile RankDifference Between 							
50-79%	0-49% Attendance 7 29		31.4	2.4			
	50-79% Attendance	< 5	-	-	-		
Emonnent	80% + Attendance	30	32	20.6	-11.4		
	0-49% Attendance	< 5	-	-	-		
80% + Enrollment	50-79% Attendance	28	17	26.1	9.1		
	80% + Attendance	85	21	31.4	10.4		
No tutoring		4,945	32	37.4	5.4		
All Students		5,140*	32	37.4	5.4		
*40 tutored students were removed because they were enrolled for less than 50% of the available days.							

Sixty-five percent of the most tutored group achieved or surpassed their projected percentile rank in the English I EOC. This is a slightly higher percentage of the group than the non-tutored group which had 58% of their group achieve or surpass their projected percentile rank. See table 25 below for further tutoring dosage groups. Thirty-six percent of the most tutored group in English II achieved or surpassed their projected percentile rank. See table 36 in Appendix B for the full list of tutoring dosage groups.

Table 25.							
9th Grade English I TCAP Projection Achievement Level by Tutoring Dosage							
Tutoring	Ν	Missed	Achieved	Surpassed			
	0-49% Attendance	7	43%	0%	57%		
50-79% Enrollment	50-79% Attendance	< 5	-	-	-		
	80% + Attendance	30	50%	0%	50%		
	0-49% Attendance	< 5	-	-	-		
80% + Enrollment	50-79% Attendance	28	43%	4%	54%		
	80% + Attendance	85	35%	5%	60%		
No tutoring		4,945	42%	2%	56%		
All Students		5,140*	42%	2%	56%		

<sup>4</sup>40 tutored students were removed because they were enrolled for less than 50% of the available days.

Table 26 shows the breakdown of tutoring dosage groups in ninth grade Algebra I. The most tutored group was the only group that had a higher median actual percentile rank than their median projected percentile rank. They also had the highest median projected percentile



rank, meaning they were projected to have the highest percentile rank and then surpassed that as a group. Similarly, the most tutored students in Algebra II and Geometry also greatly exceeded their projected percentile ranks. Although, it should be noted that both subjects had very small sample sizes. These two subjects' tables can be found in Appendix B (Algebra II being table 37 and Geometry being table 38).

9 <sup>th</sup> Grade Algebra I Median Projected Percentile Rank versus Median Actual Percentile Rank by Tutoring Dosage								
Tutoring Dosage		N	Median Projected Percentile Rank	Median Actual Percentile Rank	Difference Between Median Projection & Median Actual			
F0 70%	0-49% Attendance	0	-	-	-			
50–79% Enrollment	50-79% Attendance	13	32	19.3	-12.7			
	80% + Attendance	45	32	24.7	-7.3			
	0-49% Attendance	< 5	-	-	-			
80% + Enrollment	50-79% Attendance	49	36	35.9	-0.1			
	80% + Attendance	59	40	49.3	9.3			
No tutoring		4,647	39	30.2	-8.8			
All Students		4,844*	39	30.2	-8.8			
*30 tutored students w	*30 tutored students were removed because they were enrolled for less than 50% of the available days.							

#### Table 26.

Only 39% of the non-tutored group achieved or surpassed their projected percentile ranking, while 59% of the most tutored group in Algebra I surpassed their projected percentile rank. Table 27 shows the breakdown of each tutoring dosage group for Algebra I. Seventy-eight percent of tutored students in Algebra II achieved or surpassed their projected percentile rank, and 65% of the most tutored group of students in Geometry either achieved or surpassed their projection. Breakdowns of these subjects by tutoring dosage group can be found in Appendix B, in table 39 and table 40, respectively.



Table 27.								
9th Grade Algebra I TCAP Projection Achievement Level by Tutoring Dosage								
Tutoring Dosage N Missed Achieved Sur								
	0-49% Attendance	0	-	-	-			
50-79% Enrollment	50–79% Attendance	13	77%	8%	15%			
	80% + Attendance	45	69%	2%	29%			
	0-49% Attendance	< 5	-	-	-			
80% + Enrollment	50–79% Attendance	49	55%	0%	45%			
	80% + Attendance	59	41%	0%	59%			
No tutoring		4,647	61%	2%	37%			
All Students		4,844*	61%	2%	37%			
*30 tutored students were removed because they were enrolled for less than 50% of the available days.								

## 11th and 12th Grade ACT Analyses & Findings

ACT projections are slightly different than TCAP projections. Students get assigned a category that indicates the likelihood that they would score a 21 or higher on the ACT; this is done for the composite score as well as the four portions of the assessment (English, math, science, and reading—for this analysis only the first two are included). Table 28 shows the projected probability of these tutoring dosage groups scoring a 21 or higher composite ACT score. Sixty percent of the most tutored group were in the least likely group to score a 21 or higher (< 10% probability).

	Table 28.							
Projected Lik	Projected Likelihood of Students Scoring a 21 or Higher Composite ACT Score by Tutoring Dosage							
Tutoring Dosage		N	< 10%	10- 34.9%	35- 50.9%	51- 69.9%	70- 84.9%	≥ 85%
50 70%	0-49% Attendance	< 5	-	-	-	-	-	-
50–79% Enrollment	50–79% Attendance	30	13%	13%	10%	13%	13%	37%
	80% + Attendance	39	67%	15%	8%	3%	8%	0%
	0-49% Attendance	< 5	-	-	-	-	-	-
80% + Enrollment	50–79% Attendance	18	61%	22%	6%	0%	6%	6%
	80% + Attendance	144	60%	16%	7%	4%	3%	10%
No tutoring		8,043	65%	15%	5%	5%	4%	6%
All Students		8,336*	65%	15%	5%	5%	4%	6%

Table 28.

\*57 tutored students were removed because they were enrolled for less than 50% of the available days.

Table 29 shows the percentage of each tutoring dosage group broken down by if they earned under a 21 composite score or if they earned a 21 or higher composite score. Nineteen percent of the most tutored group scored a 21 or higher compared with 14% of the non-tutored group. A table like this for the English and math portion of the ACT that shows



tutoring in those subjects are available in Appendix B, table 41 for English and table 42 for math.

Table 29.							
ACT Composite Score by Tutoring Dosage							
Tutoring Dosage N Under 21 21 or Ove							
	0-49% Attendance	< 5	-	-			
50–79% Enrollment	50–79% Attendance	30	37%	63%			
	80% + Attendance	39	87%	13%			
	0-49% Attendance	< 5	-	-			
80% + Enrollment	50–79% Attendance	18	78%	22%			
	80% + Attendance	144	81%	19%			
No tutoring		8,043	86%	14%			
All Students		8,336*	86%	14%			
*57 tutored students were removed because they were enrolled for less than 50% of the available days.							

The median ACT composite score for the most tutored group was 16, while the non-tutored group had a median score of 15. The highest score was found in the 50–79% enrolled with 50-79% attendance, however, this group was composed of only 30 students. Table 30 below shows all tutoring dosage groups' median scores. ACT English and math subject scores broken out by tutoring dosage groups are shown in Appendix B, as table 43 and 44, respectively.

Table 30.						
Median ACT Composite Score by Tutoring Dosage						
Tutoring	N	Median Composite Score				
	0-49% Attendance	< 5	_			
50–79% Enrollment	50-79% Attendance	30	22			
	80% + Attendance	39	15			
	0-49% Attendance	< 5	-			
80% + Enrollment	50-79% Attendance	18	14			
	80% + Attendance	144	16			
No tutoring		8,043	15			
All Students		8,336*	15			
*57 tutored students were removed because they were enrolled for less than 50% of the available days.						



#### Limitations

Because this was the first year of the tutoring program, there were quite a few limitations of this evaluation. Some of the main limitations came from the way data were tracked and stored. Enrollment and attendance were measured by days, however, depending on the school, a day of tutoring could mean an hour or an hour and a half long session. It was not possible to backtrack and convert the days to hours for this evaluation. Another limitation is that the type of tutor was not tracked; the data used indicated if a student was tutored by a District employee or by Peer Power only. Based on the business rules for each of the assessments, there were different limitations surrounding sample sizes such as only including students in the analysis if they took all of the assessments within the correct window. Lastly, this evaluation was not able to control for other variables that could have predicted differences in student growth measures. This does not detract from the tutoring program, rather, it shows that students are involved in many programs and have both academic and environmental factors that were not included or controlled for in this study.

#### **Conclusion & Next Steps**

Across all analyses, this evaluation found that the most tutored students are often outperforming and/or showing more relative growth than their non-tutored peers. This was shown more significantly when looking at the District's lowest performing students. More focus should be put on students who are in the "Below" and/or "Approaching" categories of TCAP. Students should be encouraged to come to as many sessions as possible, as the most tutored students had the most statistically significant findings. For the 2022–23 school year, many changes are being made to the way data are tracked for this program. Enrollment and attendance will be measured by hours and analysis will be done by looking at hours present in tutoring rather than looking at enrollment and attendance. Secondly, tutor type will be tracked with more detail. This will allow more research into if the type of tutor shows a significant difference in student growth.



Appendix A.

# **During School Tutoring Analyses & Findings**

Because the during school tutoring program was a pilot program, only descriptive statistics will be shown. Only 23 students received ELA tutoring during school and of these 23, 18 had taken all three i-Ready diagnostics within the specified testing window (78% of group). Figure 6 shows the i-Ready Reading scale scores of fall, winter, and spring of 2022 with the target scale score of a 5% gain. The spring median scale score for this group was 448, and 50% of the students who had all three tests met their 5% gain goal (*N* with all three tests = 18; *N* that met the 5% gain = 9).



Figure 6.

Figure 7 shows the relative performance levels of i-Ready reading of the during school tutored students. Overall, by spring, 6% of these students were considered early on grade level and the 3 or More Grade Levels Below group decreased by 22 percentage points.



## Figure 7.



Table 31 shows performance level movement of this group. Of the group that was 3 or more grade levels below in the fall, 36% moved up at least one performance level. All performance levels are shown in Table 4.

Table 31.							
	<b>ELA i-Ready Pe</b>	rformance Level	Movement				
E-III DI	S	Spring i-Ready Pe	erformance Leve	el			
Performance Level	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level			
3 or More Grade Levels Below	63.6%	27.3%	9.1%	0.0%			
2 Grade Levels Below	0.0%	25.0%	75.0%	0.0%			
1 Grade Level Below	0.0%	33.3%	33.3%	33.3%			

During school math tutoring had 143 students enrolled and a sample of 79 students who took all three i-Ready tests within their testing windows (55% of group). Figure 8 shows the i-Ready Math scale scores of fall, winter, and spring of 2022 with the target scale score of a 5% gain. The spring median scale score for this group was 417, and 48% of the students who had all three tests met their 5% gain goal (*N* with all three tests = 79; *N* that met the 5% gain = 38).



Figure 8.



Figure 9 shows the relative performance levels of i-Ready math of the during school tutored students. Overall, by spring, 10% of these students were considered Early On grade level and almost 4% were considered Mid or Above Grade Level. The 2 Grade Levels Below group decreased by 27 percentage points.



#### Figure 9.

Unlabeled Percentages on Figure 9: Winter 2022: 3.8% Early On Grade Level and 1.3% Mid or Above Grade Level; Spring 2022: 3.8% Mid or Above Grade Level



Table 32 shows performance level movement of this group. Of the group that was 3 or more grade levels below in the fall, 39% moved up at least one performance level. Fifty-five percent of those in the 2 Grade Levels Below group moved up at least one performance level by spring. All performance levels are shown in Table 32.

Math i-Ready Performance Level Movement								
		Spring i-Re	ady Performa	nce Level				
Fall i-Ready Performance Level	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level	Mid or Above Grade Level			
3 or More Grade Levels Below	60.9%	17.4%	17.4%	4.3%	0.0%			
2 Grade Levels Below	7.0%	37.2%	44.2%	11.6%	0.0%			
1 Grade Level Below	0.0%	8.3%	58.3%	16.7%	16.7%			
Early On Grade Level	0.0%	0.0%	0.0%	0.0%	100.0%			

#### Table 32.



# Appendix B.

	ELA TCAP Performance Level Movement from 2020–21 to 2021–22 by Tutoring Dosage								
2021 TCAP				2022 TCAP Performance Level					
Performance Level	Tuto	r Туре	Below	Approaching	Met Expectations	Exceeded Expectations			
50–79% Enrollment		0-49% Attendance	71%	12%	12%	6%			
	50–79% Enrollment	50-79% Attendance	77%	23%	0%				
		80% + Attendance	70%	28%	2%	0%			
Below	Below	0-49% Attendance	70%	30%	0%				
	80% + Enrollment	50-79% Attendance	68%	30%	2%	0%			
Ne		80% + Attendance	68%	29%	3%	0%			
	Non-T	utored	avel Movement from 2020-21 to 2021-22 by Tutoring D   Below Approaching Met Expectat   -49% Attendance 71% 12% 12%   -79% Attendance 77% 23% 0%   0% + Attendance 70% 28% 2%   -49% Attendance 70% 30% 0%   -79% Attendance 68% 30% 2%   -49% Attendance 68% 30% 2%   -49% Attendance 68% 29% 3%   ed 71% 26% 2%   -49% Attendance 63% 15% 0%   0% + Attendance 20% 57% 19%   -49% Attendance 20% 57% 19%   -49% Attendance 20% 57% 18%   0% + Attendance 24% 57% 18%   0% + Attendance 0% 40% 60%   -79% Attendance - - -   -79% Attendance 0% 50% 50%   -49% Attend	2%	0%				
50–79% Enrollment Approaching 80% + Enrollment		0-49% Attendance	-	_	_	_			
	50–79% Enrollment	50-79% Attendance	23%	63%	15%				
		80% + Attendance	20%	57%	19%	3%			
		0-49% Attendance	20%	80%	0%				
	80% + Enrollment	50-79% Attendance	25%	54%	18%	4%			
		80% + Attendance	24%	57%	18%	1%			
	Non-T	utored	20%	57%	21%	2%			
		0-49% Attendance	-	_	_	_			
	50–79% Enrollment	50-79% Attendance	0%	40%	60%				
		80% + Attendance	0%	28%	59%	13%			
On-Track		0-49% Attendance	0%	50%	50%				
	80% + Enrollment	50–79% Attendance	14%	21%	57%	7%			
		80% + Attendance	2%	25%	61%	13%			
	Non-T	utored	1%	22%	58%	20%			
		0-49% Attendance	-	-	-	-			
	50–79% Enrollment	50–79% Attendance	-	-	-	-			
		80% + Attendance	-	-	_	-			
Mastered		0–49% Attendance	-	-	-	-			
	80% + Enrollment	50–79% Attendance	-	-	-	-			
		80% + Attendance	-	-	-	-			
	Non-T	utored	0%	4%	35%	61%			

#### Table 33.



N	Math TCAP Performance Level Movement from 2020–21 to 2021–22 by Tutoring Dosage					
2021 TCAP				2022 TCAP	Performance Le	vel
Performance Level	Tut	or Type	Below	Approaching	Met Expectations	Exceeded Expectations
		0-49% Attendance	60%	40%	0%	
50–79 Enrollm	50–79% Enrollment	50-79% Attendance	65%	32%	2%	0%
	LINGHINGIR	80% + Attendance	71%	28%	1%	0%
Below		0-49% Attendance	88%	13%		
	80% + Enrollment	50-79% Attendance	61%	35%	3%	
		80% + Attendance	66%	30%	3%	1%
	Non	-Tutored	72%	26%	2%	0%
		0-49% Attendance	-	-	-	
	50-79% Enrollment	50-79% Attendance	16%	53%	28%	3%
	Linointion	80% + Attendance	27%	43%	31%	0%
Approaching		0-49% Attendance				
8	80% + Enrollment	50-79% Attendance	14%	67%	19%	
		80% + Attendance	12%	52%	33%	3%
	Non	-Tutored	20%	52%	25%	3%
	E0 70%	0-49% Attendance	-	-	-	-
	50-79% Enrollment	50-79% Attendance	20%	40%	40%	0%
		80% + Attendance	5%	15%	65%	15%
On-Track		0-49% Attendance	-	-	-	-
	80% + Enrollment	50-79% Attendance	0%	50%	50%	
		80% + Attendance	4%	13%	63%	21%
	Non	-Tutored	2%	21%	55%	21%
	F0 70%	0-49% Attendance	-	-	-	-
	50-79% Enrollment	50-79% Attendance	-	-	-	-
	Linoinnoin	80% + Attendance	-	-	-	-
Mastered		0-49% Attendance	-	-	-	-
	80% + Enrollment	50-79% Attendance	-	-	-	-
		80% + Attendance	-	-	-	_
	Non	-Tutored	0%	3%	39%	58%

Table 34.



	Table 35.								
10 <sup>th</sup> Grade Eng	10 <sup>th</sup> Grade English II EOC Median Projected Percentile Rank versus Median Actual Percentile Rank by								
		Tuto	oring Dosage						
Tutorin	g Dosage	N	Median Projected Percentile Rank	Median Actual Percentile Rank	Difference Between Median Projection & Median Actual				
F0 70%	0-49% Attendance	0	-	-	-				
50-79% Enrollment	50-79% Attendance	6	27.5	24.45	-3.05				
Emointent	80% + Attendance	33	39	41.6	2.6				
00%	0-49% Attendance	< 5	-	-	-				
80% + Enrollment	50-79% Attendance	10	41	40.65	-0.35				
Linoinneitt	80% + Attendance	28	29	9.75	-19.25				
No tutoring		4,554	35	39	4				
All Students		4,633	35	39	4				

# Table 36.

10th Grade English II TCAP Projection Achievement Level by Tutoring Dosage							
Tutoring Dosage			Missed	Achieved	Surpassed		
	0-49% Attendance	0	-	-	-		
50–79% Enrollment	50–79% Attendance	6	50%	0%	50%		
	80% + Attendance	33	58%	0%	42%		
	0-49% Attendance	< 5	-	-	-		
80% + Enrollment	50-79% Attendance	10	60%	10%	30%		
	80% + Attendance	28	64%	4%	32%		
No tutoring		4,554	45%	3%	52%		
All Students		4,633	45%	3%	51%		

Т	а	b	le	Э	3	7	
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10 <sup>th</sup> Grade Algebra II EOC Median Projected Percentile Rank versus Median Actual Percentile Rank by Tutoring Dosage								
Tutoring Dosage	N	Median ProjectedMedian ActualDifference Between Median ActualPercentile RankPercentile RankProjection & Median Actual						
Tutored	9	51	64.7	13.7				
No tutoring	1,612	41	31.4	-9.6				
All Students	1,621	41	31.4	-9.6				



Table 38.									
10 <sup>th</sup> Grade Geo	10 <sup>th</sup> Grade Geometry EOC Median Projected Percentile Rank versus Median Actual Percentile Rank by Tutoring Dosage								
Tutorii	ng Dosage	N	Median Projected Percentile Rank	Median Actual Percentile Rank	Difference Between Median Projection & Median Actual				
	0-49% Attendance	< 5	-	-	-				
50-79% Enrollment	50-79% Attendance	13	26	50.7	24.7				
Emoliment	80% + Attendance	24	33	38.2	5.2				
00%	0-49% Attendance	< 5	-	-	-				
80% + Enrollment	50–79% Attendance	22	25	24.1	-0.9				
Linointient	80% + Attendance	23	24	44.7	20.7				
No tutoring		2,866	33	31.2	-1.8				
All Students		2,990*	33	31.2	-1.8				
*38 tutored students	were removed because the	y were enro	lled for less than 50% of	of the available days.					

#### Table 39.

10th Grade Algebra II TCAP Projection Achievement Level by Tutoring Dosage								
Tutoring Dosage	Ν	Missed	Achieved	Surpassed				
Tutored	9	22%	0%	78%				
No tutoring	1,612	66%	2%	32%				
All Students	1,621	66%	2%	32%				

# Table 40.

10th Grade Geometry TCAP Projection Achievement Level by Tutoring Dosage							
Tutoring Dosage			Missed	Achieved	Surpassed		
	0-49% Attendance	< 5	-	-	Ι		
50–79% Enrollment	50-79% Attendance	13	31%	0%	69%		
	80% + Attendance	24	67%	0%	33%		
	0-49% Attendance < 5		-	-	-		
80% + Enrollment	50-79% Attendance	22	59%	0%	41%		
	80% + Attendance	23	35%	4%	61%		
No tutoring		2,866	55%	3%	42%		
All Students		2,990*	55%	3%	43%		
*38 tutored students were remov	ad because they were enrolled for le	se than 500	of the avails	able dave			

38 tutored students were removed because they were enrolled for less than 50% of the available days.



Table 41.								
ACT English Score by Tutoring Dosage								
Tutoring	Ν	Under 21	21 or Over					
	0-49% Attendance	0	-	-				
50–79% Enrollment	50-79% Attendance	6	67%	33%				
	80% + Attendance	23	100%	0%				
	0-49% Attendance	0	-	-				
80% + Enrollment	50-79% Attendance	16	100%	0%				
	80% + Attendance	21	100%	0%				
No tutoring		8,043	84%	16%				
All Students		8,336*	84%	16%				
*< 5 tutored students were remo	oved because they were enrolled for	or less than 50	% of the availab	le days.				

ACT Math Score by Tutoring Dosage								
Tutoring Dosage		Ν	Under 21	21 or Over				
	0-49% Attendance	< 5	-	-				
50–79% Enrollment	50-79% Attendance	5	80%	20%				
	80% + Attendance	15	100%	0%				
	0-49% Attendance	< 5	-	-				
80% + Enrollment	50–79% Attendance	12	100%	0%				
	80% + Attendance	46	89%	11%				
No tutoring		8,230	91%	9%				
All Students		8,336*	91%	9%				
*25 tutored students were remo	ved because they were enrolled for	less than 50°	% of the available	e davs.				

# Table 42.



Table 43.						
Median English Portion of ACT Score by Tutoring Dosage						
Tutoring Dosage			Median English Score			
	0-49% Attendance	0	-			
50-79% Enrollment	50-79% Attendance	6	13			
	80% + Attendance	23	12			
80% + Enrollment	0-49% Attendance	0	-			
	50-79% Attendance	16	12			
	80% + Attendance	21	10			
No tutoring		8,043	14			
All Students		8,336*	14			
*< 5 tutored students were removed because they were enrolled for less than 50% of the available days.						

Median Math Portion of ACT Score by Tutoring Dosage						
Tutoring	N	Median Math Score				
	0-49% Attendance	< 5	-			
50-79% Enrollment	50-79% Attendance	5	17			
	80% + Attendance	15	15			
80% + Enrollment	0-49% Attendance	< 5	-			
	50-79% Attendance	12	14			
	80% + Attendance	46	15			
No tutoring		8,230	15			
All Students		8,336*	15			
*25 tutored students were removed because they were enrolled for less than 50% of the available days.						



Table 45.						
ELA TCAP						
2021 TCAP		2022 TCAP Performance Level				
Performance Level	Tutor Type	Below	Approaching	Met Expectations	Exceeded Expectations	
	Non-Tutored	71.3%	26.2%	2.3%	0.2%	
Below	District-Tutored	70.1%	27.3%	2.3%	0.3%	
	Peer Power	79.1%	18.7%	2.2%	0.0%	
	Non-Tutored	19.9%	56.8%	21.5%	1.9%	
Approaching	District-Tutored	23.6%	56.8%	18.0%	1.6%	
	Peer Power	26.5%	59.2%	14.3%	0.0%	
On-Track	Non-Tutored	1.0%	21.6%	57.8%	19.7%	
	District-Tutored	3.1%	31.0%	55.8%	10.1%	
	Peer Power	0.0%	18.2%	72.7%	9.1%	
Mastered	Non-Tutored	0.2%	3.8%	34.9%	61.0%	
	District-Tutored	0.0%	0.0%	28.6%	71.4%	
	Peer Power	0.0%	0.0%	0.0%	0.0%	

## Table 46.

ELA TCAP of Bottom Quartile Students					
2021 TCAP	Tutor Type	2022 TCAP Performance Level			
Performance Level		Below	Approaching	Met Expectations	Exceeded Expectations
	Non-Tutored	77.0%	21.4%	1.5%	0.1%
Below	<b>District-Tutored</b>	74.6%	23.9%	1.3%	0.2%
	Peer Power	79.8%	19.1%	1.1%	0.0%
	Non-Tutored	38.0%	53.4%	8.2%	0.3%
Approaching	District-Tutored	37.5%	55.4%	6.8%	0.3%
	Peer Power	42.9%	57.1%	0.0%	0.0%
On-Track	Non-Tutored	6.5%	46.8%	44.2%	2.6%
	<b>District-Tutored</b>	12.5%	75.0%	12.5%	0.0%
	Peer Power	0.0%	0.0%	0.0%	0.0%
Mastered	Non-Tutored	0.0%	100.0%	0.0%	0.0%
	<b>District-Tutored</b>	0.0%	0.0%	0.0%	0.0%
	Peer Power	0.0%	0.0%	0.0%	0.0%



Math TCAP					
2021 TCAP	Tutor Type	2022 TCAP Performance Level			
Performance Level		Below	Approaching	Met Expectations	Exceeded Expectations
	Non-Tutored	71.8%	25.6%	2.5%	0.2%
Below	District-Tutored	67.0%	29.9%	2.5%	0.6%
	Peer Power	75.0%	22.7%	2.3%	0.0%
	Non-Tutored	20.3%	52.3%	24.7%	2.7%
Approaching	District-Tutored	17.6%	51.4%	28.9%	2.0%
	Peer Power	13.8%	51.7%	34.5%	0.0%
	Non-Tutored	2.5%	21.1%	55.1%	21.4%
On-Track	District-Tutored	4.8%	19.4%	64.5%	11.3%
	Peer Power	0.0%	66.7%	0.0%	33.3%
Mastered	Non-Tutored	0.4%	2.7%	39.1%	57.8%
	District-Tutored	11.1%	11.1%	66.7%	11.1%
	Peer Power	0.0%	0.0%	0.0%	0.0%

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# Table 48.

Math TCAP of Bottom Quartile Students						
2021 TCAP	Tutor Type	2022 TCAP Performance Level				
Performance Level		Below	Approaching	Met Expectations	Exceeded Expectations	
	Non-Tutored	77.9%	20.7%	1.3%	0.1%	
Below	<b>District-Tutored</b>	72.6%	25.3%	1.8%	0.4%	
	Peer Power	83.6%	16.4%	0.0%	0.0%	
	Non-Tutored	43.3%	45.1%	10.5%	1.1%	
Approaching	District-Tutored	37.1%	47.1%	14.3%	1.4%	
	Peer Power	20.0%	80.0%	0.0%	0.0%	
On-Track	Non-Tutored	16.4%	36.1%	44.3%	3.3%	
	<b>District-Tutored</b>	100.0%	0.0%	0.0%	0.0%	
	Peer Power	0.0%	0.0%	0.0%	0.0%	
Mastered	Non-Tutored	0.0%	100.0%	0.0%	0.0%	
	<b>District-Tutored</b>	0.0%	0.0%	0.0%	0.0%	
	Peer Power	0.0%	0.0%	0.0%	0.0%	