



## ESSER Reduced Class Sizes: Fall Report

Prepared by the Department of Research & Performance Management

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### ESSER Reduced Class Sizes Program Outcome Goals

- Outcome 1: Increase student mastery
- Outcome 2: Decrease K–2 teacher vacancies
- Outcome 3: Improved culture and climate

### Evaluation Overview Statement

Many of the analyses conducted so far and reported in this paper are meant to serve as a baseline snapshot of where students are now in comparison to where they were at the beginning of the pre-pandemic comparison years. Most Specialized Educational Assistants (SEAs) were not in the classroom long enough at the time of fall 2021 testing to meaningfully influence student achievement thus far. These measures should be used as a baseline only and do not reflect the effectiveness of the SEA program.

### Key Findings

- 82% of SEA position are filled as of October 5, 2021.
- Outcome 1: Increase student mastery
  - On the fall iReady assessment, there was a 6 to 7-point decline in median percentile achievement rank for K–2 students compared to fall 2019–20.
  - There were racial and socioeconomic disparities in median achievement with students of Asian descent outperforming the national average and Latinx/Hispanic students scoring well below other groups.
  - On the fall FastBridge assessment, the median percentile rank was 21 points lower this year compared to fall 2019–20 in ELA. For math there was a 13- to 14-point decline.
  - K–1 students' median percentile rank was 44 in math, only slightly below to the national average. However, 50% of second-graders fell into the bottom quartile in math.
- Outcome 3: Improved culture and climate
  - Overall, the reduction in behavior incidents has decreased by over 68% far exceeding the goal to reduce incidents by 5%.
  - For almost all measures, the rates in reduction are similar for students in the various priority groups.

### ESSER Program Overview

Shelby County Schools received Elementary and Secondary School Emergency Relief (ESSER) funds which aim to address the ongoing impacts that the Covid-19 pandemic has on K–12 education. A portion of those funds was allocated to help reduce class sizes in K–2 classrooms, so that the adult to student ratio would average 13:1. Specialized Educational Assistants (SEAs) were hired for each K–2 core content classroom beginning in the fall of 2021.



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### Implementation

There are 747 SEA positions allocated for SCS K–2 classrooms. As of October 5, 2021, 615 SEA positions were filled and working at 86 SCS elementary schools. The majority (64.6%) of SEAs were hired on or before the first day of school, August 9, 2021. A breakdown of hire dates by month can be found in [Appendix A](#).

### Outcome 1: Increase Student Mastery

The first outcome goal for the program is to improve student mastery of grade-level content. The program seeks to increase the number of students who are “on-track” or “mastered” by 10% on the TCAP exam during 3<sup>rd</sup> grade. The first cohort of students in the reduced class size program will complete 3<sup>rd</sup> grade in 2022–23. In the meantime, to provide meaningful benchmarks of the program’s success, iReady and Fastbridge Illuminate assessments will be used to measure student academic success. Sample sizes for each assessment by priority group are reported in [Appendix A](#).

### iReady Fall Assessment

iReady was first implemented District-wide in 2019–20. The fall and winter assessment windows were completed before the pandemic, so those will be used as the pre-pandemic baseline data for comparisons. The window for the fall iReady assessment in 2021 was August 9–27<sup>th</sup>. Again, because students took this assessment before receiving any meaningful interactions with SEAs, the following data should not be used to assess the effectiveness of SEAs.

### Median Achievement Percentile

Median percentiles measure the national percentile cut point at which half the students scored above and half below. A median percentile of 50 would indicate that, as a group, SCS students are achieving on par with the national average. The graphs that follow show the median percentile and interquartile range of SCS students’ iReady scores. The boxes represent where the middle 50% of SCS students fall, while the white diamond shows the median percentile for SCS students. More graphs and tables representing the following data can be found in [Appendix B](#).

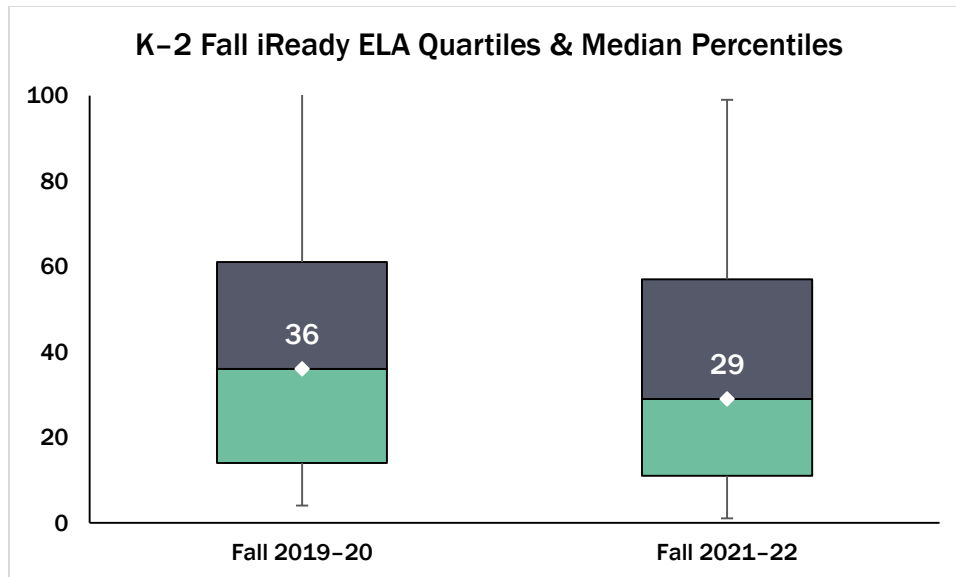
### English Language Arts

At the beginning of the year, SCS students had a median achievement percentile of 29 in English Language Arts (ELA), indicating that half of SCS students had a national percentile rank greater than 29, and almost half of SCS students are in the bottom 30% of K–2 U.S. students. The graph below shows that there was a 7-point decline in the median percentile rank from 2019–20 to this year. This means that our students are entering their K–2 classrooms further behind their peers across the U.S compared to pre-pandemic.

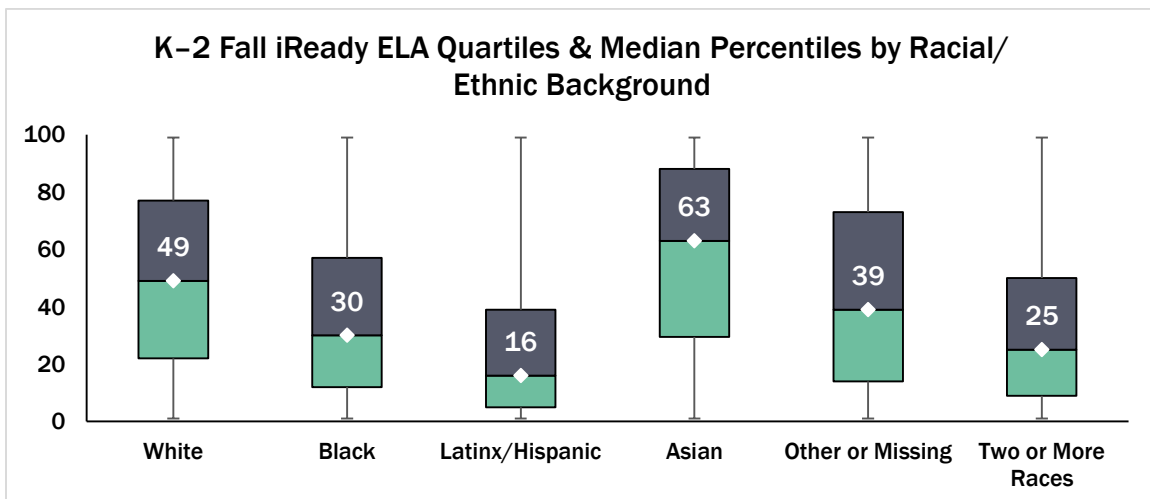


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When the median percentile is examined by priority group, some disparities emerge. For Direct Certified students, i.e., those who are economically disadvantaged, their median percentile rank was 24 compared to their more affluent peers who had a median percentile rank of 35. For racial groups, Asian students scored well above the national average (median percentile of 63), while White students were just below the national average. Latinx/Hispanic students fared the worst with a median percentile of 16, indicating that half of Latinx/Hispanic SCS students had an achievement percentile in the bottom 16% of all U.S. K-2 students, though it is important to note that 70.4% of this population are English Learners ( $n = 1,772$ ; EL). Black students and students who identify with more than one race had a median percentile in the bottom third compared to the national average.



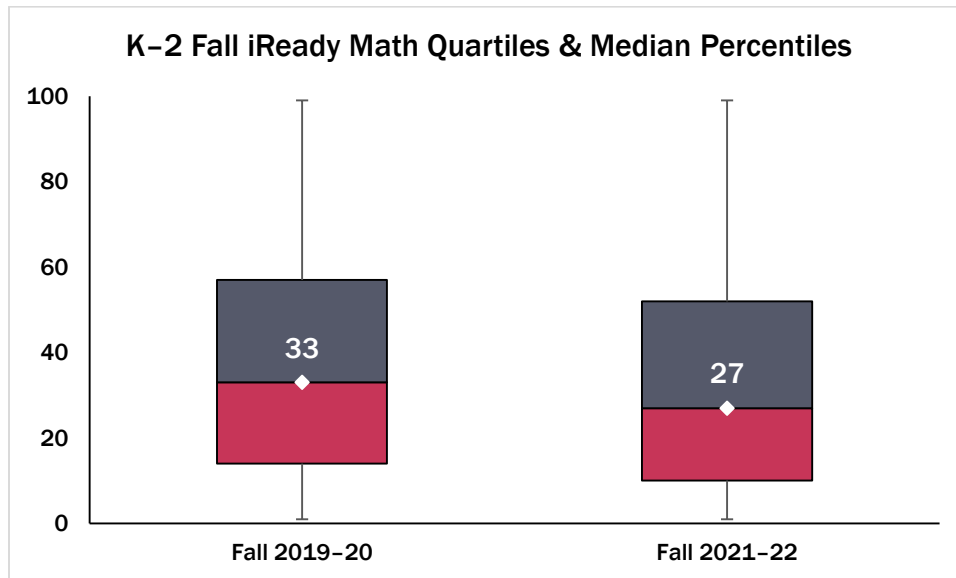


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### Mathematics

In math, students scored just behind their ELA median percentiles. Only half of SCS students scored above the 27<sup>th</sup> national percentile rank, meaning that half of SCS students are in the bottom 27% of all K-2 students across the U.S. in math. Depicted in the graph below, we can see that there is a slight decline in students' mathematical knowledge coming into the classroom compared to a pre-pandemic year.

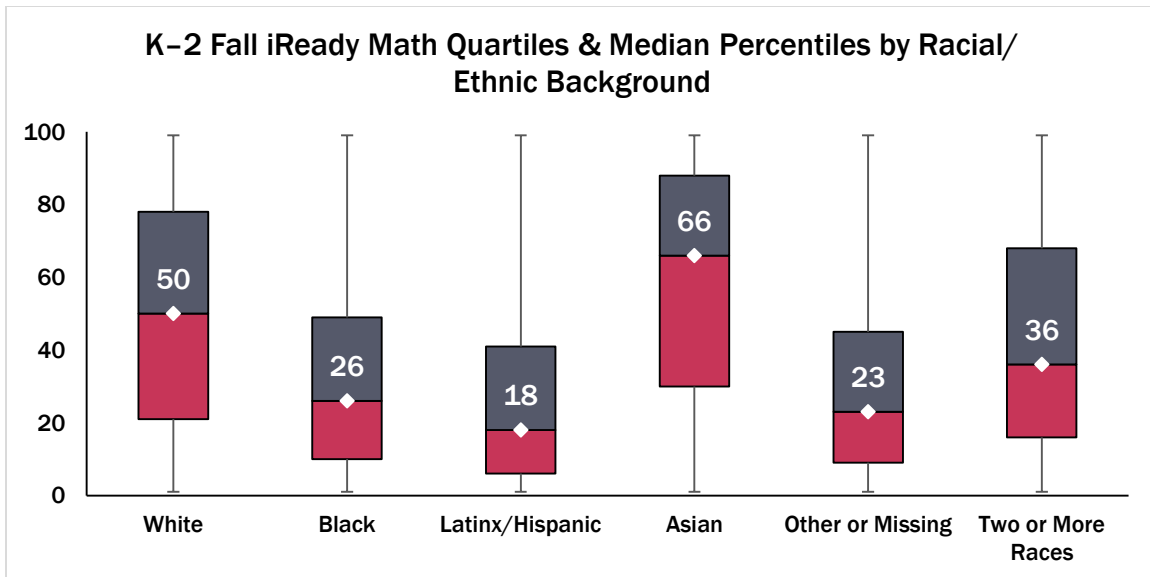


Just like with ELA, differences in median percentile are evident when looking at priority groups. Direct Certified students had a median percentile rank of 22 while non-DC students had a median percentile rank 9 points higher. The racial/ethnic breakdown is depicted below and the trends seen in the ELA rankings are mimicked in math as well. Latinx/Hispanic students showed the lowest median percentile rank, 18, followed closely by those categorized as “race other or missing”.<sup>1</sup> Black students had a median percentile rank of 26, indicating that just under 50% of Black SCS students are in the bottom 25% of U.S. students in math. White students scored on par with the national average, while Asian students scored well above average.

<sup>1</sup> Students who identify as Native American, Alaskan, Hawaiian or Pacific Islander or who did not list a race were grouped together into the “other” racial category. Masking their data would be required if shown separately due to the small number of students who identify with those racial grouping for this grade range.



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**Percentage of Students On Grade Level**

Students' raw scores are categorized into two placement ranks, 1) overall placement, which is an "on-grade level interpretation" of their score, and 2) relative placement rank, how students scored relative to the assessment window. Relative placement rank is broken into five categories: 1) mid- or above grade level, 2) early on grade level, or 3) one, 4) two, or 5) three or more grade levels below. These were then reduced to a dichotomous classification of either "below grade level" or "on or above grade level". The following sections depict if students are at least on grade level when entering school this fall. Additional tables and graphs for these data are located in [Appendix C](#).

**English Language Arts**

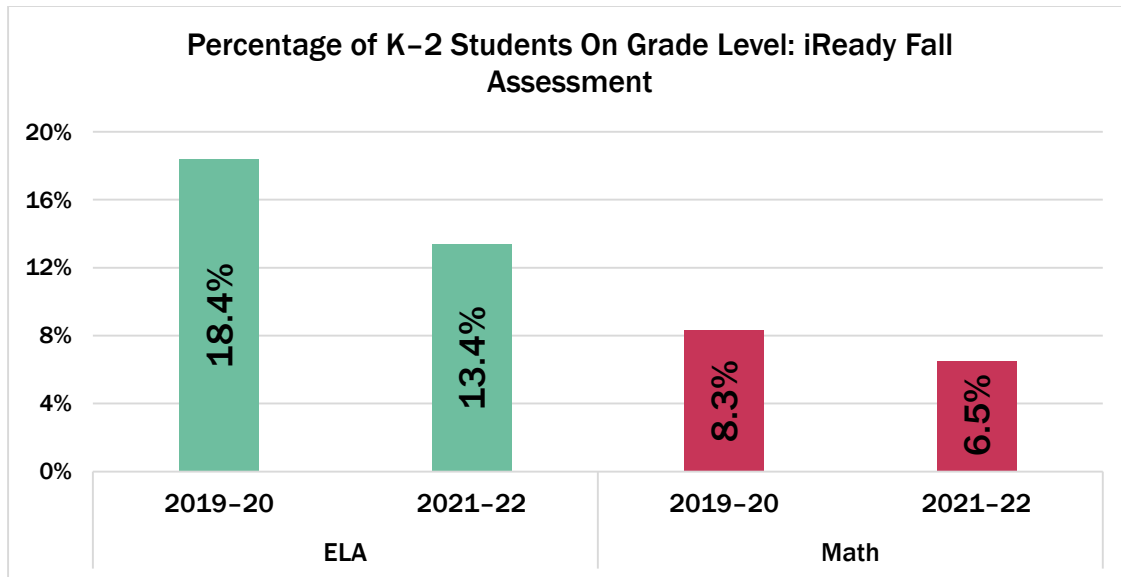
In ELA, 15,345 K-2 students had a relative placement rank for the fall assessment window. Of these, 13.4% were on grade level while the majority of students were one or two grade levels below (67.9% and 34.6% respectively). Compared to the pre-pandemic baseline, our students are 5 percentage points lower this year.

Looking at priority groups, 17.5% of non-Direct Certified students entered their classroom on grade level, while only 9.5% of economically disadvantaged (DC) students started the year on grade level. The racial/ethnic trends are similar to the median percentile ranks. Only 6.7% of Latinx/Hispanic students scored on grade level, and a little over a tenth of Black students entered their K-2 classrooms on grade level (12.9%). Almost a quarter of White students were on grade level (24.8%) and student of Asian descent had the highest percentage of students on grade level (39.9%).



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### Mathematics

In math 15,034 students took the iReady fall diagnostic and received their relative placement rank ( $n = 2,982$  or 16.6% were missing scores or relative placement ranks). Only 6.5% of K-2 SCS students who took the assessment were “on or above grade level.” This is a slight decrease of almost 2 percentage points from 2019-20.

While the racial and economic grouping trends remain consistent the degree to which students came in underprepared was starker in math than ELA. For Black students, 95% started the year below grade level, and only 96.3% of Latinx/Hispanic students were below grade level in August. Over three-quarters of White students were underprepared as well (81.4%), while Asian students only fared slightly better (71.8% below grade level).

### FastBridge Illuminate

FastBridge was first used as a formative assessment in the District during the 2019-20 school year. Like iReady, the fall and winter assessment windows were completed before the pandemic, so those will be used as the pre-pandemic baseline data for comparisons. The window for the fall FastBridge screening assessment in 2021 was August 30<sup>th</sup> through September 17<sup>th</sup>.

### Median Achievement Percentiles

Like iReady, median achievement percentiles show at what national percentile half of SCS students score above and half below. A median percentile of 50 would indicate that, as a group, SCS students are achieving on par with the national average. FastBridge Early Reading assesses Kindergarteners and first-grade students across four domains of reading through a teacher-delivered test, while math focuses on early numeracy. Second-grade students take a different computer-delivered tests, aReading and aMath. Since the tests are disparate, the data will be reported for K-1 and then second grade separately. More graphs and tables representing the following data can be found in [Appendix D](#).



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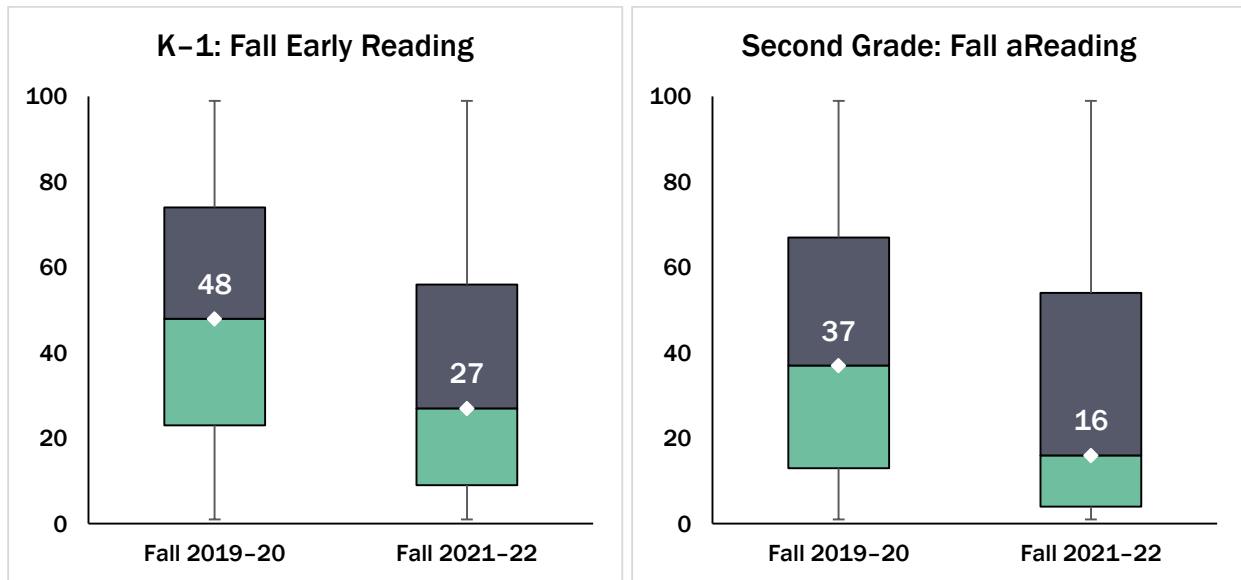
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### Reading

#### Early Reading

Kindergarteners and first-graders ( $n = 11,967$ ) were tested on concepts of print, onset sounds, and letter names and sounds. SCS students had a median achievement percentile rank of 27, indicating that half of SCS students fell in the bottom 27% of students across the U.S.

#### FastBridge Reading Quartiles & Median Percentiles



#### aReading

The graph above shows that second-grade students in 2021-22 had a median achievement percentile in fall of 16 ( $n = 6,144$ ). This indicates that at least half of SCS students fell in the bottom 20% of all U.S. second graders. This is a sharp decline from where second-grade students were pre-pandemic in 2019-20, median percentile rank of 37.

### Mathematics

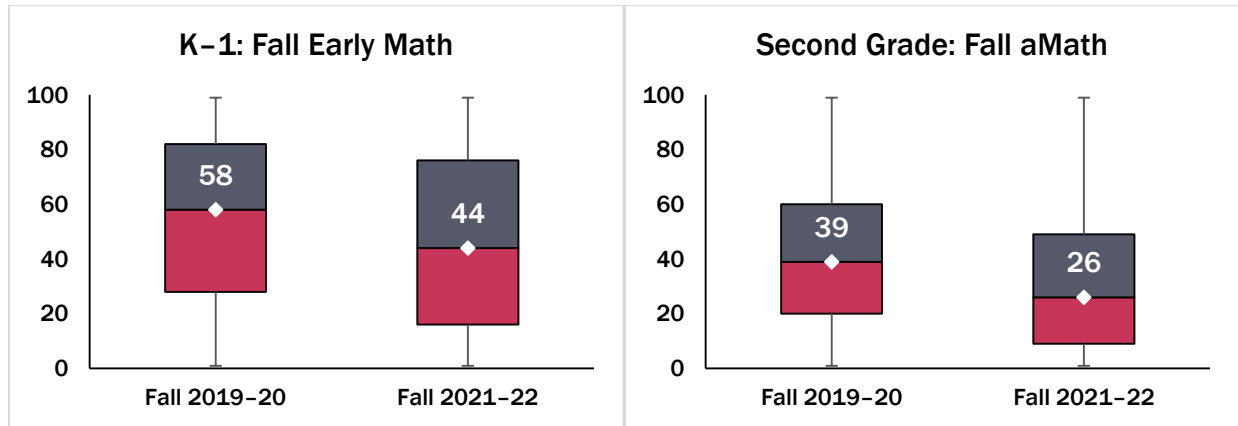
#### Early Math

Entering Kindergarteners and first graders did relatively well on the fall FastBridge Early Math assessment. Overall, their national median percentile was 44. In 2019-20, K-1 students started the year above average in math. Prior to the pandemic, the SCS median percentile rank was 58, so while SCS students were just below the national average this year, it does equate to a 14 percentile point decline compared to the baseline year.



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FastBridge Math Quartiles & Median Percentiles



**aMath**

SCS second-grade students did not perform as well as their younger peers on the FastBridge aMath assessment. This year just under half of SCS students started the year in the bottom quarter of all second graders across the U.S. It mimicked Early Math with a 13 percentile-point decline compared to 2019-20.

**Priority Groups**

The median achievement percentile score on FastBridge for priority groups is represented in the table below. Across both grade bands and content areas, students from more affluent backgrounds outscored their economically disadvantaged peers. When examining the percentile scores by race/ethnic background Asian students outperformed all other groups of students. On most measures, students with a Latinx/Hispanic background performed lower than their peers, on average 70% of these students are classified as English Learners. Additional graphs for these data are presented in [Appendix D](#).

Median Placement Rank by Priority Group					
		ELA		Math	
		K-1 <sup>st</sup>	2 <sup>nd</sup>	K-1 <sup>st</sup>	2 <sup>nd</sup>
<b>Race/Ethnicity</b>					
	White	41.5	52.5	68	64
	Black	30	15	47	24
	Latinx/Hispanic	14	10	25	23
	Asian	68	72	78	75.5
	Other Race or Missing	20	10	34	17
	Two or More Races	44	32	69	39
<b>Socioeconomic Status</b>					
	Direct Certified	23	11	37	20
	Non-DC	37	25	53	33





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**Outcome 3: Improved Culture and Climate**

**Student Discipline**

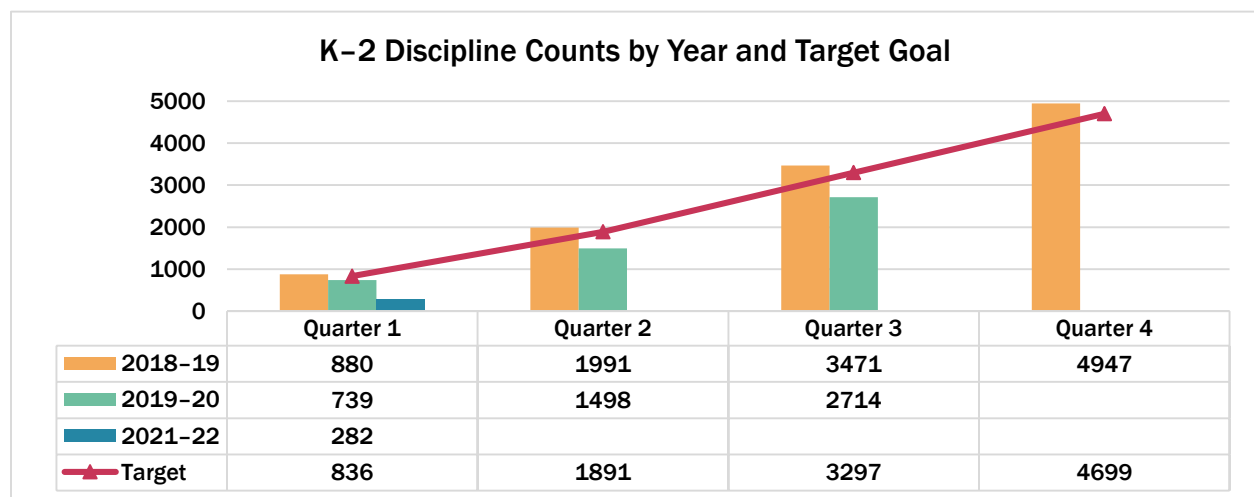
The 2018–19 discipline data is reported for the full year. In 2019–20 the first three quarters have complete data. Quarter four did not have any discipline data due to school closures as a results of the pandemic. The 2020–21 data is not used as a baseline since all students were remote for the majority of the academic year. The target discipline rate<sup>2</sup> for 2021–22 is a 5% reduction from the same point in 2018–19.

Measure of Success: 5% Reduction in Student Discipline Incidents

In-school and out-of-school suspensions (ISS & OSS) are exclusionary discipline actions where students are removed from their classroom and thus miss valuable learning opportunities. Through adding an additional adult in the classroom, the hope is that teachers will be better able to manage student discipline in the classroom which would, in turn, reduce the number of behavioral incidents recorded. The following are various measures to track if that goal is being met. Additional graphs and tables are depicted in [Appendix E](#).

Overall Discipline Counts

In quarter one of 2021–22, there were only 282 discipline infractions for K–2 students at SCS-managed schools. This is a sharp reduction compared to both 2018–19 ( $n = 880$ ) and 2019–20 ( $n = 739$ ) at the same point in time. The graph below shows the targeted 5% reduction rate represented by the red line. It is obvious that the blue bar, representing 2021–22 counts, is far below the targeted goal.



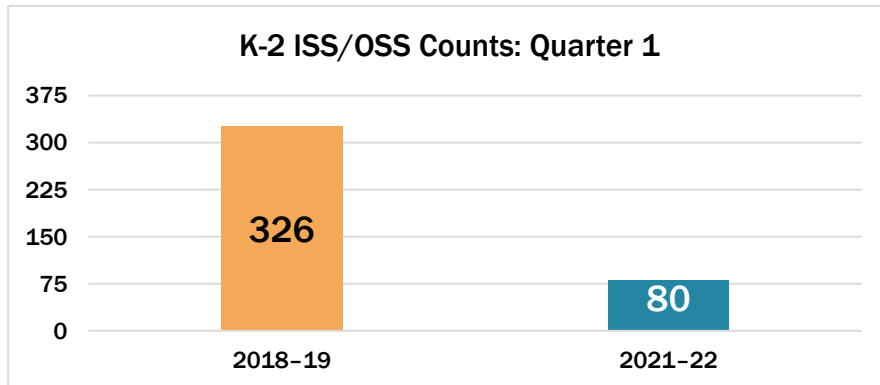
<sup>2</sup> Number of incidents categorized as progressive discipline, ISS, or OSS.



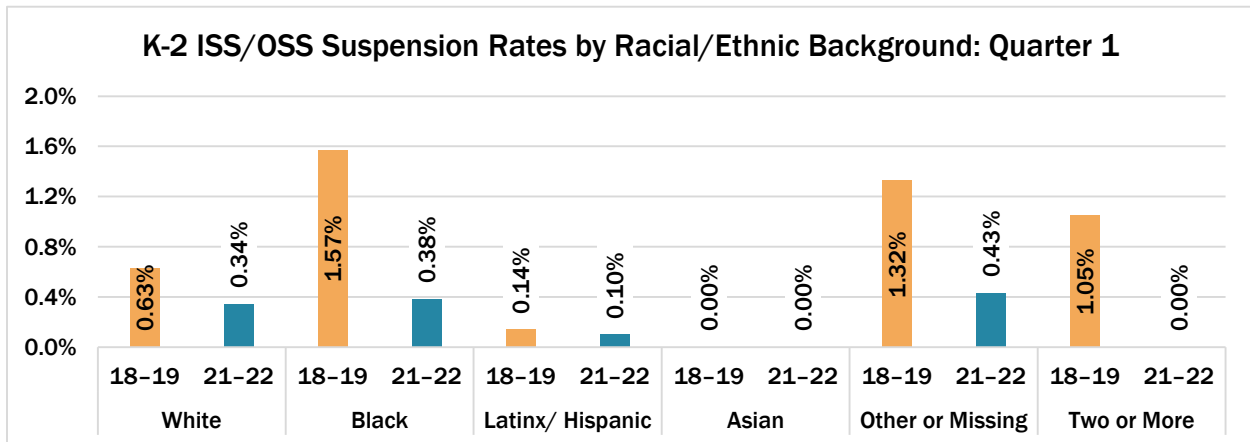
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**ISS/OSS Counts**

The number of students who received a disciplinary infraction resulting in ISS or OSS was drastically lower this year compared to 2018–19.<sup>3</sup> This represents a 75.5% decrease in ISS or OSS discipline actions.



Since student racial groups are not even in SCS, providing counts alone would not give a true picture of the equity in discipline data. Actual counts can be found in the appendix, while this section will show the percentage discipline incidents in relation to the number of active students in each racial/ethnic group.<sup>4</sup> The graph below shows the historic and current suspension rate by active students based on racial/ethnic background.<sup>5</sup> Across the board, suspension rates are much lower this year. In 2018–19 Black students, multiracial students, and students of other races or missing a race category had the highest rates, but in 2021–22 White and Black students and students of other races or missing a race category had the highest rates.



<sup>3</sup> It is important to note that there was a stark decrease in disciplinary actions for this age group between 2018–19 and 2019–20 in just the first three quarters. However, because the year over year decrease cannot be calculated using 2019–20 data, the 2018–19 data was selected as the baseline.

<sup>4</sup> For 2018–19 active students are those who were active on the last day of school. For 2021–22 active students are those who were active on the last day of quarter 1.

<sup>5</sup> Suspension rates factor in ISS and OSS. Expulsion and remand actions are not captured within these data.

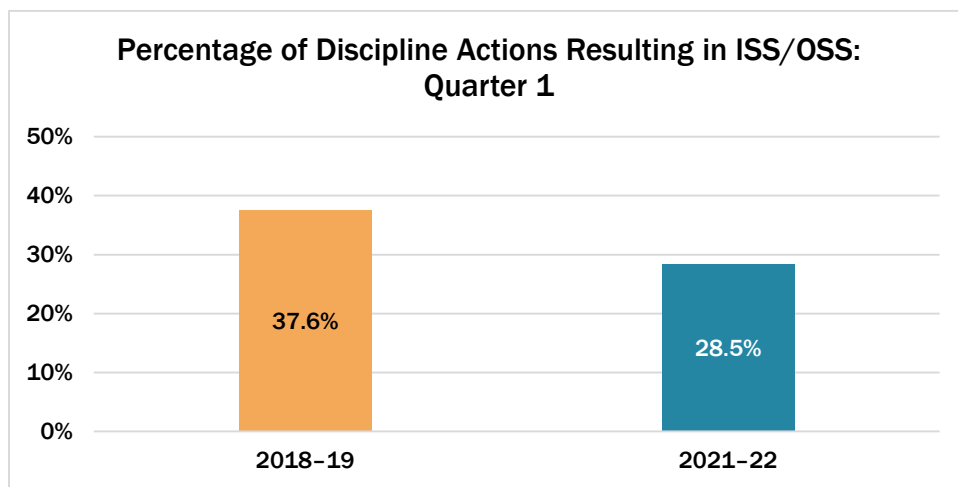


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### Progressive Discipline to ISS/OSS

Students can receive a discipline actions that is categorized as a suspension, ISS or OSS, or they can receive progressive discipline which is a gradual, sequential, and strategic responses (i.e. interventions, restorative practices) implemented to deter negative student behavior and reduce exclusionary consequences. Incidents coded as progressive discipline could be things like disruptive behavior, rules violations, or even fighting. The hope is that students are more frequently given progressive discipline actions since those are non-exclusionary. The graphs and tables below show the percentage of discipline actions that resulted in ISS or OSS. The hope is that these would trend downward as a result of having an additional SEA in the classroom.



This year the percentage of all discipline actions that resulted in ISS or OSS was 28.5% a decrease of 9.1 percentage points from 2018-19. When examining the priority groups there was a reduction in the ratio of ISS/OSS for both Direct Certified and non-DC students, though non-DC students did have a higher percentage of ISS/OSS compared to their peers in 2021-22 (33.6% and 25.0%, respectively).

When viewing the metrics by racial/ethnic background, the downward trend was seen for Black students, those of other or missing race categories, or multiracial students. However, for White and Latinx/Hispanic students, there was an upward tick in the ratio of ISS/OSS actions to progressive discipline.



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ISS/OSS and Progressive Discipline Counts by Priority Group						
	2018-19			2021-22		
	ISS/OSS	Progressive Discipline	Ratio	ISS/OSS	Progressive Discipline	Ratio
<b>Race/Ethnicity</b>						
White	13	33	0.4	6	12	0.5
Black	299	479	0.6	64	140	0.5
Latinx/Hispanic	6	19	0.3	4	10	0.4
Asian	0	2	0.0	0	0	0.0
Other/ Missing	2	2	1.0	6	34	0.2
Multiple Races	6	7	0.9	0	5	0.0
<b>Direct Certified Status</b>						
Direct Certified	256	419	0.6	42	126	0.3
non-DC	70	123	0.6	38	75	0.5

**Most Prevalent Discipline Action Counts**

In 2018-19 the two most prevalent discipline reasons were “disruptive behavior” ( $n = 269$ ) and “rules violations” ( $n = 296$ ). Together those two categories made up 64.2% of discipline actions. In quarter one of 2021-22, 77.3% of discipline reasons were “rules violations” ( $n = 218$ ).

**Next Steps**

The next report on the K-2 reduced class size ESSER program will be available later in the fall semester. It will consist of SEA, teacher, and principal survey responses and feedback about the program. The next outcomes based report will come in early spring and provide updates to the measures used in this first report along with baseline data on others. It will include quarter two behavioral data points, the winter iReady and FastBridge assessments, baseline Panorama and Insight data on school climate and culture, and metrics on teacher and SEA vacancies.

**Conclusion**

The findings in this first report on the outcomes associated with the K-2 reduced class size ESSER program provide a starting point to see how impactful having an additional adult in every early elementary classroom can be. The academic achievement results show that our students are starting the year further behind their peers compared to previous years. While disheartening, this bolsters the need for the SEA’s role in the classroom.

The behavior measures associated with “Outcome 3: Improve Climate and Culture” show a promising picture. For quarter one, the decrease in disciplinary actions far exceeds the goal of 5%. The hope is that SEAs in the classroom will continue to show positive impacts on our students through supporting classroom management and student discipline.



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**APPENDIX A. Roster Data**

**Table 1: Specialized Educational Assistants Hire Dates by Month**

<b>SEA Hire Dates by Month</b>			
	<i>n</i>	Percentage of Filled Positions	Percentage of Total Positions
Vacant Positions	<b>132</b>	—	<b>17.7%</b>
<b>Filled Positions</b>			
Hired on or before first day of school	<b>397</b>	<b>64.6%</b>	<b>53.1%</b>
Hired in August after first day of school	<b>112</b>	<b>18.2%</b>	<b>15.0%</b>
Hired in September	<b>71</b>	<b>11.5%</b>	<b>9.5%</b>
Hired in October	<b>35</b>	<b>5.7%</b>	<b>4.7%</b>

[Return to the SEA section in the document.](#)

**Table 2: Student Sample Size by Assessment Type and Priority Groups**

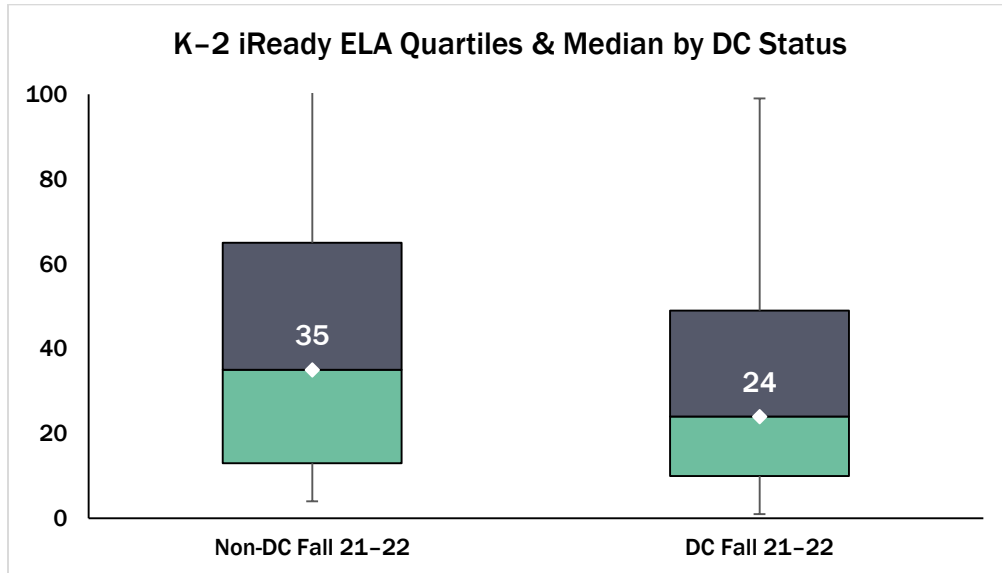
<b>Sample Size by Assessment and Priority Group</b>						
	i-Ready		FastBridge 2nd Grade		FastBridge K-1	
	ELA	Math	ELA	Math	ELA	Math
<b>Total</b>	<b>15,345</b>	<b>15,034</b>	<b>6,144</b>	<b>6,129</b>	<b>11,967</b>	<b>11,998</b>
<b>Racial/Ethnic Group</b>						
Black	10,046	9,861	4,201	4,186	7,840	7,864
White	1,323	1,297	408	406	1,042	1,046
Latinx/Hispanic	2,516	2,449	1,047	1,052	1,810	1,820
Asian	153	149	43	42	124	123
Multiple Races	535	527	359	358	248	245
Other/Missing	772	751	86	85	903	900
<b>Direct Certified Status</b>						
DC	7,803	7,607	3,190	3,179	6,172	6,202
Non-DC	7,542	7,427	2,954	2,950	5,795	5,796



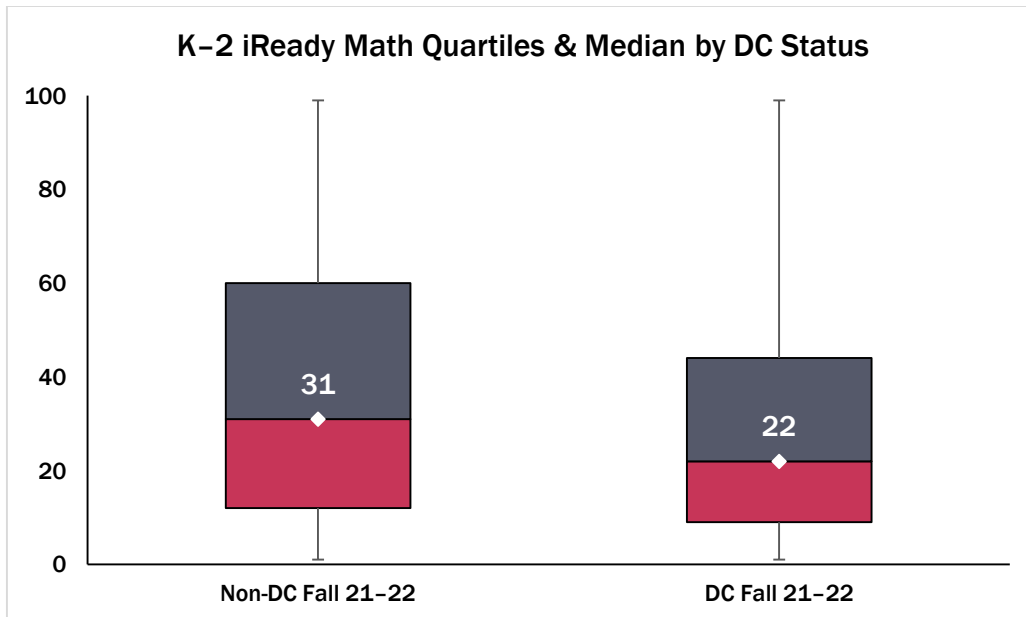
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**APPENDIX B. Median Percentile Rankings on iReady Fall Diagnostic**

**Figure 1: ELA Quartiles and Median Percentile Ranks by Direct Certified Status**



**Figure 2: Math Quartiles and Median Percentile Ranks by Direct Certified Status**



[Return to the iReady median percentile section in the document.](#)



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**APPENDIX C. Percentage on Grade Level on iReady Fall Diagnostic**

**Table 3: Relative Placement Rankings**

Relative Placement Rank				
	ELA		Math	
	n	%	n	%
<b>On or Above Grade Level</b>				
Early On Grade Level	1,234	8.0%	556	3.7%
Mid or Above Grade Level	821	5.4%	425	2.8%
<b>Below Grade Level</b>				
1 Grade Below	9,505	67.9%	9,721	64.7%
2 Grades Below	3,782	24.6%	4,329	28.8%
3 Grades Below	<5	0.0%	<5	0.0%
Missing*	3,086	16.7%	2,982	16.6%
The % in the "missing" row is the % of total students missing a ranking. The % listed in the categories above are the % of students of who took the test who received that ranking.				

**Table 4: Dichotomous Relative Placement Rankings by Race/Ethnic Group**

Relative Placement Rank by Race/Ethnic Grouping				
	ELA		Math	
	On Grade Level	Below Grade Level	On Grade Level	Below Grade Level
Black	12.9%	87.1%	5.0%	95.0%
White	24.8%	75.2%	18.6%	81.4%
Hispanic or Latinx	6.7%	93.3%	3.8%	96.2%
Asian	39.9%	60.1%	28.2%	71.8%
Other Racial Groups	10.5%	89.5%	5.2%	94.8%
Two or More Races	23.2%	76.8%	12.9%	87.1%

**Table 5: Dichotomous Relative Placement Rankings by Direct Certified Status**

Relative Placement Rank by Direct Certified Status				
	ELA		Math	
	On Grade Level	Below Grade Level	On Grade Level	Below Grade Level
Direct Certified	9.5%	90.5%	3.9%	96.1%
Non-Direct Certified	17.5%	82.5%	9.2%	90.8%

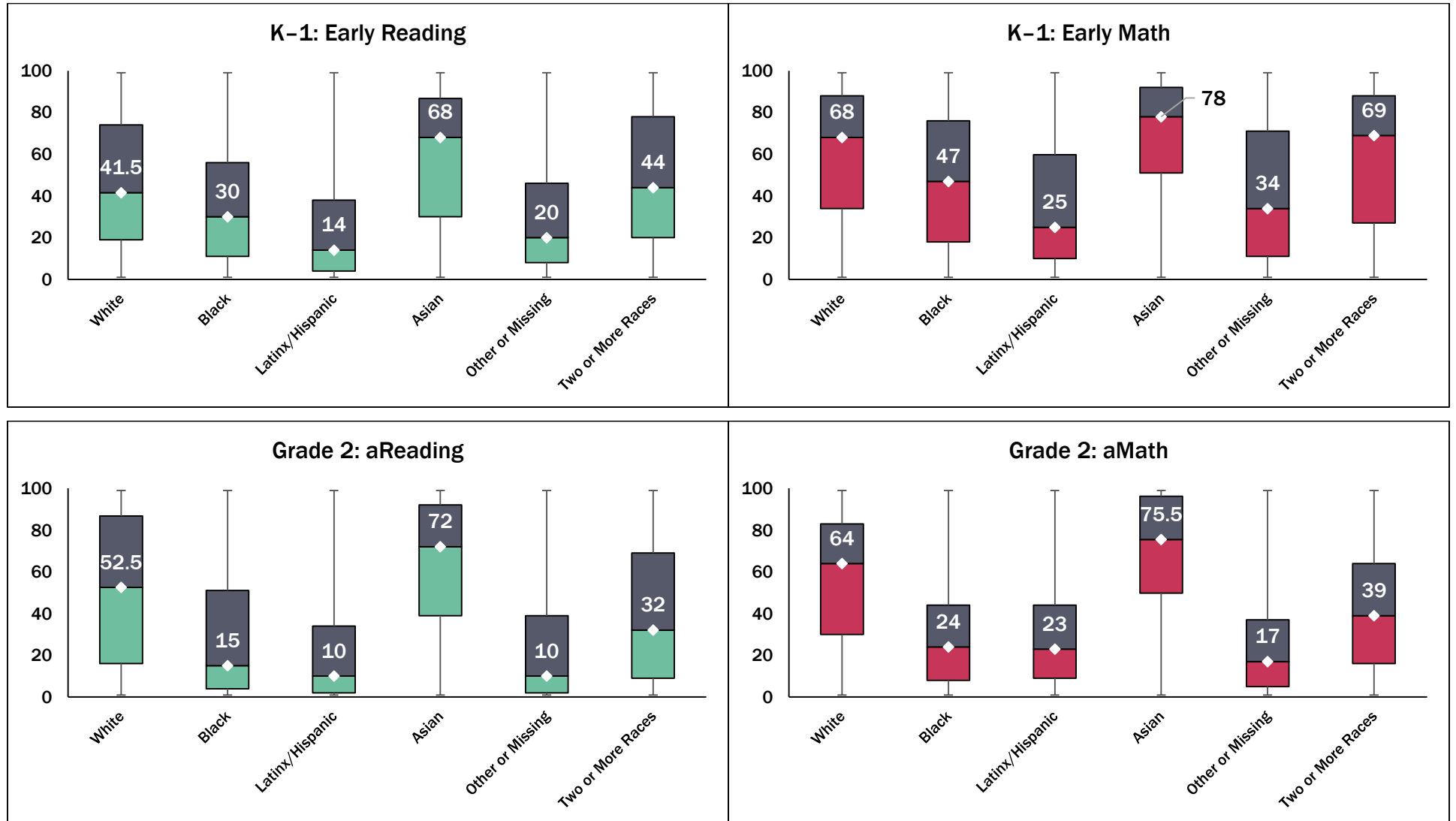
[Return to the iReady on-grade level section in the document.](#)



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APPENDIX D. Median Percentile Rankings on FastBridge Fall Diagnostic

Figure 3: FastBridge Median Percentile Ranks by Racial/Ethnic Background

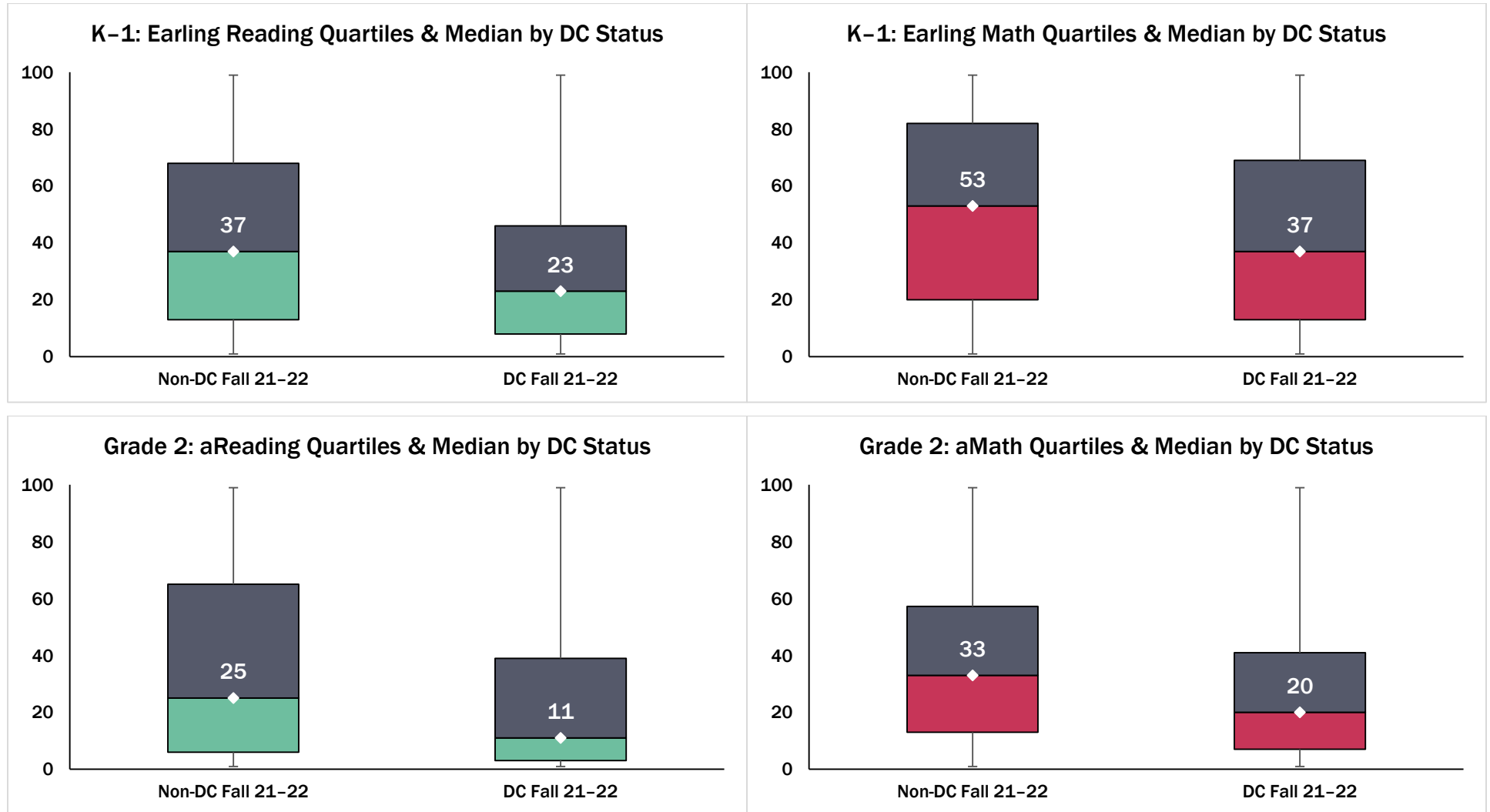






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Figure 4: FastBridge Median Percentile Ranks by Socioeconomic Status



[Return to the FastBridge median percentile section in the document.](#)



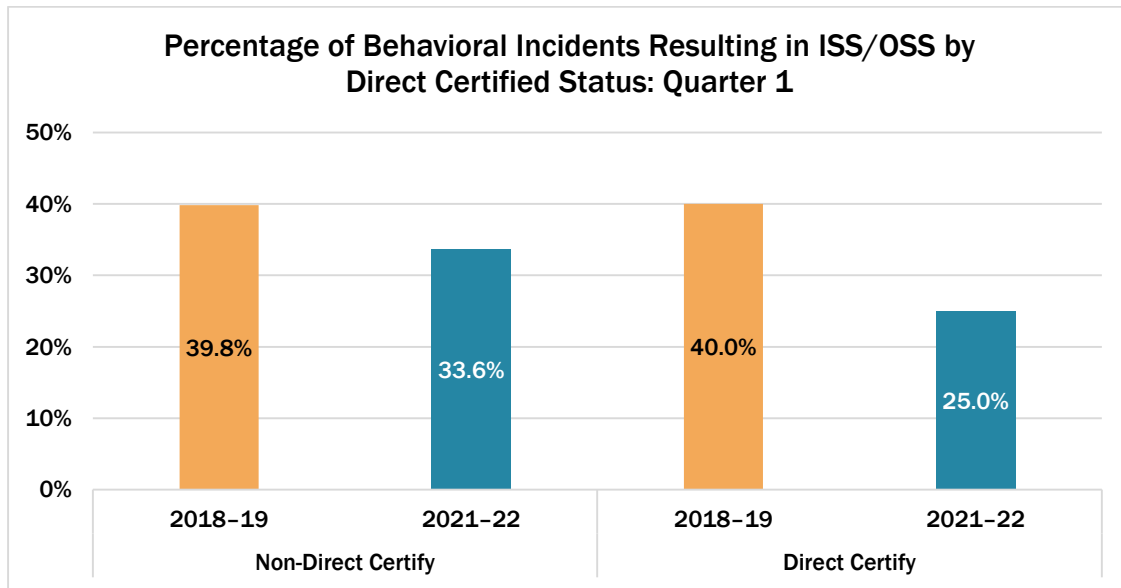
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**APPENDIX E. Behavioral Data**

**Table 6: Suspension Counts by Racial/Ethnic Background for Quarter 1**

ISS/OSS Counts Over Time by Race		
	Quarter 1	
	2018-19	2021-22
White	13	6
Black	299	64
Latinx/ Hispanic	6	4
Asian	0	0
Other/ Missing	2	6
Multiracial	6	0

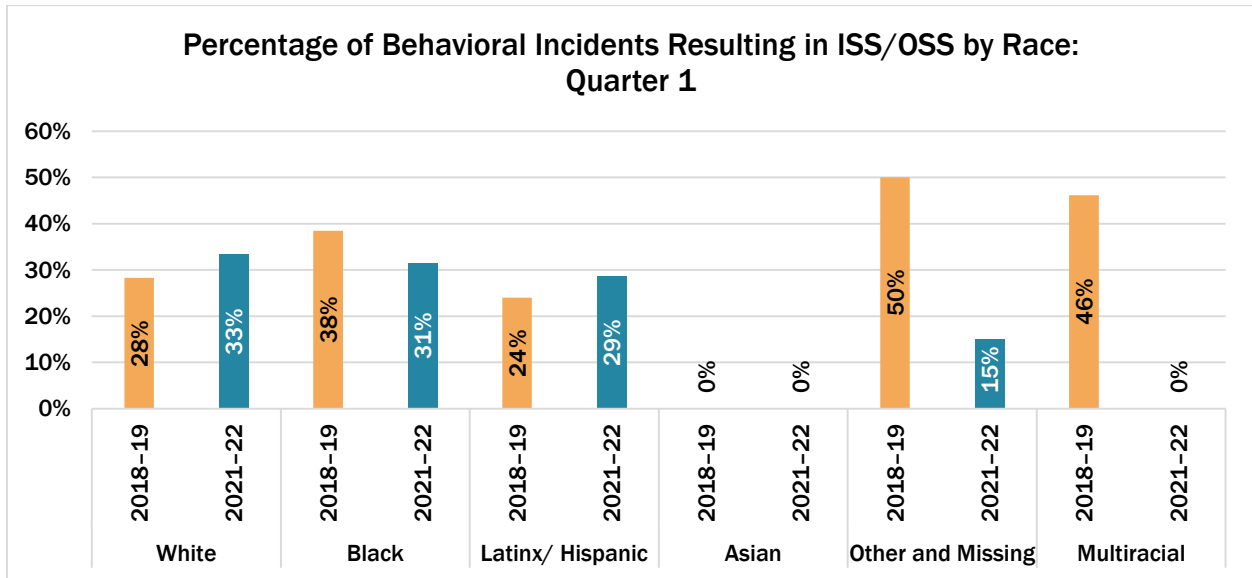
**Figure 5: ISS/OSS Ratio by Direct Certified Status for Quarter 1**





**ESSER Reduced Class Sizes: Fall Report**  
 Prepared by the Department of Research & Performance Management

**Figure 6: ISS/OSS Ratio by Racial/Ethnic Background for Quarter 1**



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