**Proficient Grade 3 Readers with Continuous Enrollment
in SCS from Pre-K through Grade 3**
Prepared by the Department of Research & Performance Management

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Key Findings

Data from students continuously enrolled in SCS schools from pre-Kindergarten through grade 3 were analyzed in an attempt to identify characteristics of students who were grade 3 proficient readers as measured by the TNReady reading state achievement test. The cohort of students in the analyses began pre-K in fall 2014 and took the grade 3 TNReady assessment in spring 2019.

- A logistic regression analysis found that previous academic success was associated with proficient reading at grade 3.
- The group of students who were grade 3 proficient readers had very high median percentile ranks for Kindergarten and grade 1 MAP reading universal screeners.
- Academic performance for grade 3 proficient readers improved from Kindergarten to grade 1, but declined for grade 3 non-proficient readers over the same time period. The MAP reading median percentile for grade 3 proficient readers increased from Kindergarten to grade1, while the median percentile for grade 3 non-proficient readers decreased from Kindergarten to grade 1.
- Girls were more likely, and African American students less likely, to be proficient readers at grade 3 than their peers.
- K-3 attendance rate and K-3 mobility were not significant predictors of proficient reading in grade 3 for this cohort of students, and descriptive analyses revealed that students in these analyses generally had high attendance rates and low mobility.
- Priority group memberships (students with disabilities, direct certified students, or English learners) were also not significant predictors, although there was a lower percentage of students in priority groups among grade 3 proficient readers than among grade 3 non-proficient readers.
- Fewer students who were members of multiple priority groups were grade 3 proficient readers compared to those who were members of no or only one priority group. More students who were members of no priority group were grade 3 proficient readers compared to the overall cohort (36% vs. 25%, respectively).
- Recommendations focus on strengthening student experiences to develop stronger readers from their earliest enrollment in the District.

Introduction and Methods

Shelby County Schools (SCS) serves a wide range of students who have a variety of experiences in elementary schools before grade 3. For example, some students may be continuously enrolled in the same elementary school for multiple years, whereas others may move between district-managed elementary schools and charter schools during the early grades. Still other students may attend school in districts elsewhere in Tennessee or the Mid-South before enrolling in SCS. Some students may attend private pre-K and/or Kindergarten and then enroll in the District. These varied experiences underlie the students who take the mandated statewide TNReady achievement test for the first time at the end of grade 3.

To identify and describe one aspect of reading success in Shelby County Schools, this report analyzed student data from a cohort of students who were continuously enrolled in SCS District-managed schools for five consecutive years, from pre-K through grade 3. The purpose of these analyses was to

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highlight characteristics of students with similar educational experiences who were proficient readers as measured by the grade 3 TNReady reading assessment.

Students who were continuously enrolled in SCS schools but attended charter schools for any of the five years were excluded from the analyses for a variety of reasons. First, elements of charter programs may be different than District-managed schools. For example, charter schools may use different curricula or have differing amounts of instructional time per day or per year. Second, the student data available to analyze may not be common across District-managed and charter schools (e.g., different formative assessments may be used at charter schools compared to District-managed schools). Variability in the underlying programs or data would make it difficult to draw conclusions from the analyses or make recommendations.
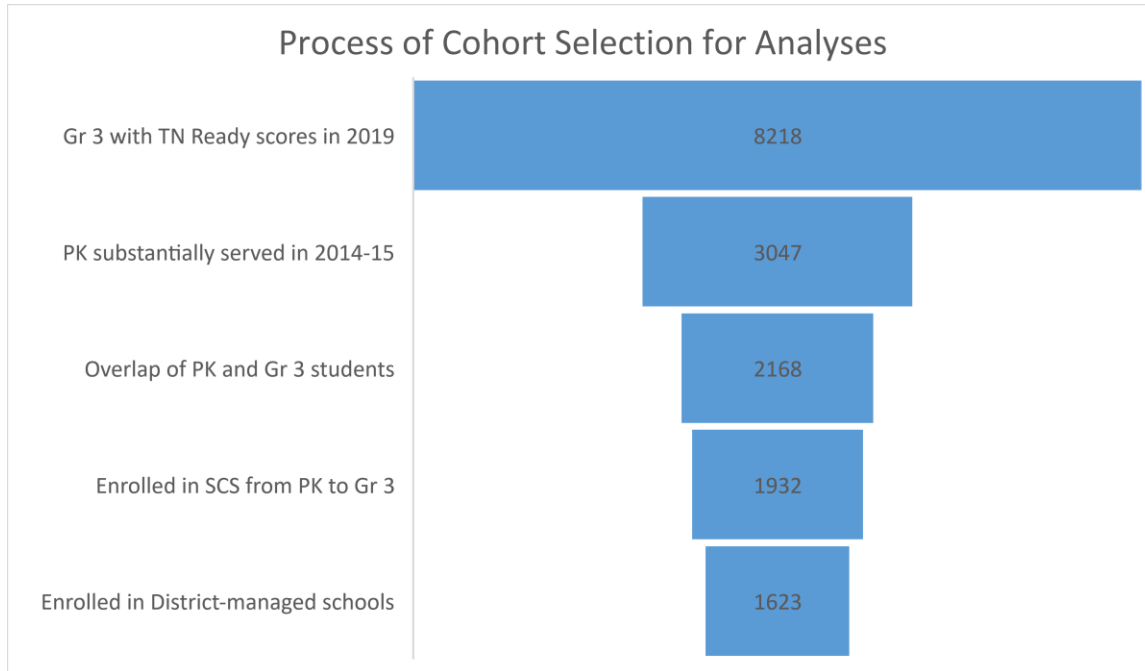
Cohort Selection

Analyses covered the five year period which ended with the most recent TNReady assessment from spring 2019. Students who were in grade 3 in 2019 attended pre-K during the 2014-15 school year. The following process was used to select the cohort of students whose data were analyzed. In spring 2019, there were 8,493 students enrolled in SCS elementary schools, 8,218 of whom had TNReady assessment reading scores. In the 2014-15 school year, 3,047 students were enrolled in SCS pre-K classrooms who were substantially served.[1] The lists of grade 3 students with TNReady scores and substantially served pre-K students were merged resulting in an overlap of 2,168 students who were enrolled in SCS as pre-K students and had taken the TNReady assessment as an SCS grade 3 student. This list was filtered to remove students who were not continuously enrolled in SCS all five years resulting in 1,932 remaining students. The final filter removed any students who were enrolled in charter schools during their time in the District yielding 1,623 students whose data were included in the analyses. The graph below shows the cohort selection process.

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[1] Due to the continuous enrollment requirement for the pre-K program (i.e., students on the waiting list should be enrolled at any point during the school year if a classroom space opens), students who enroll on or before November 1 and remained enrolled through the entire school year are considered substantially served. Substantially served students receive at least six months of instruction from the pre-K program.

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Process of Cohort Selection for Analyses

Category	Value
Gr 3 with TN Ready scores in 2019	8218
PK substantially served in 2014-15	3047
Overlap of PK and Gr 3 students	2168
Enrolled in SCS from PK to Gr 3	1932
Enrolled in District-managed schools	1623

Data Selection for Analyses

The data used in the analyses of grade 3 reading proficiency were variables that have been linked to student reading achievement including demographic information, academic information, attendance rate, and mobility. Specifically, demographic variables were student race, student sex, grade 3 priority group membership (students with disabilities, direct certified students, and English learners), and student age at the end of grade 3. Academic data included the MAP universal screener scale scores from the fall assessment in Kindergarten and the spring assessment in grade 1, and TNReady reading performance level (proficient, not proficient) from spring in grade 2. In addition each student's attendance rate for grades K-3 and mobility in grades K-3 were included.

In some cases, data limitations constrained the variables that were used. For example, the academic data from the pre-K students' assessments in 2014-15 were incomplete for this cohort of students. Year-end iStation assessment scores were available for about half the pre-K students in the cohort. Given the amount of missing data, and since it is not likely that the data were missing at random, using statistical imputation to create values for the missing data is ill advised. Therefore, no academic measures were included in the analyses for the pre-K year. Additionally, attendance and mobility were not tracked for pre-K students as pre-K is not compulsory in Tennessee. The table below summarizes the data used in the analyses of grade 3 reading proficiency.

Data Used in Analyses of Grade 3 Reading Proficiency		
Grade	**Data Used**	**Date**
Pre-Kindergarten	• Sex • Race	Fall 2014
Kindergarten	• MAP Universal Screener Reading	Fall 2015
Grade 1	• MAP Universal Screener Reading	Spring 2017

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Grade 2	• TNReady Grade 2 Reading	Spring 2018
Grade 3	• TNReady Grade 3 Reading • Disability Status • Direct Certification Status • English Learner Status • Age	Spring 2019
Grades K-3	• Attendance Rate • Mobility	Fall 2015 through Spring 2019

Analyses and Results

Of the 1,623 students in the analyses, 406 (25%) were grade 3 proficient readers and 1,217 (75%) were grade 3 non-proficient readers. (As a point of comparison, for all grade 3 students with TNReady reading scores in 2019 (N = 8,218), 22.5% were proficient readers and 77.5% were non-proficient readers.) To identify similarities and differences between the two groups within the continuously enrolled students, two different analyses were used to examine the data. First a binary logistic regression was conducted to determine the likelihood that a student enrolled in SCS schools for five consecutive years would be a proficient reader (as measured by the TNReady reading assessment) at the end of grade 3. Second, descriptive comparisons were used to examine the characteristics of grade 3 proficient and non-proficient readers.

Annual data were used to create two overall variables that were used in both analyses. The first variable created an overall attendance rate for each student across grades K-3. The K-3 attendance rate was calculated by taking the sum of the days the student was present over the four years and dividing it by the sum of the days the student was enrolled over the four year span. A K-3 attendance rate of 100% would mean that a student had perfect attendance for all four years.

The second variable was a mobility index that was created from each student's annual mobility status. Every year for grades K-3, each student's mobility was coded as a 0 for stable (indicating a student had no mid-year transfers between schools); a 1 for mobile (indicating the student had one mid-year transfer between schools); or a 2 for highly mobile (indicating that the student had two or more mid-year transfers). The sum of these four codes was used to create the K-3 mobility index, resulting in a 0-8 point scale. A 0 on this index would reflect a student who had no mid-year transfers between schools from Kindergarten through grade 3, whereas a 1 on this scale would indicate a student had one mid-year transfer across all four years. At the other end of the scale, an 8 would reflect a student had two or more mid-year transfers per year across all four years from Kindergarten to grade 3.

Binary Logistic Regression

Binary logistic regression was used to determine the likelihood of a student being a grade 3 proficient reader when considering the demographic, academic, attendance, and mobility factors associated with each student. In this analysis, students' grade 3 reading proficiency status was used as the outcome variable. Students were considered to be grade 3 proficient readers if they scored On Track or Mastered on the TNReady reading assessment in spring 2019. Students were considered to be grade 3 non-proficient readers if they scored Below or Approaching on the TNReady reading assessment. Predictor variables included the variables listed in the table above: sex, race, age in grade 3, disability status, direct certification status, English learner status, MAP reading scale scores

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from Kindergarten and grade 1 universal screeners, grade 2 TN Ready reading proficiency, K-3 attendance rate, and K-3 mobility. For the purposes of this analysis, race was coded as African American, Hispanic, or Other, with Other serving as the reference category.[2]

The Hosmer and Lemeshow goodness-of-fit test indicated that the model was an acceptable fit for the data (p = .48). Unlike most statistical analyses, a small p-value (i.e., p < .05) in a goodness-of-fit test is not the desired outcome, as it indicates that the model is not a good fit for the data. In the current analysis, with a p-value > .05, the logistic regression model was acceptable. The model also correctly classified 84.1% of the cases as grade 3 proficient or non-proficient readers.

In all, five variables were significant predictors in the model:[3] two demographic variables and three academic variables. Boys were less likely than girls to be grade 3 proficient readers (O.R. = .66), and African American students were less likely than students in the Other race category to be grade 3 proficient readers (O.R. = .50). Hispanic students did not differ from students in the Other race category (p = .62) in their likelihood of being grade 3 proficient readers.

All three academic variables entered into the model were significant. For both the Kindergarten MAP (O.R = 1.05) and the grade 1 MAP (O.R. = 1.07) universal screeners, increases in reading scale scores (RIT scores) were associated with a higher likelihood of being a grade 3 proficient reader. For every one point increase in the reading scale score on the Kindergarten MAP universal screener, the odds of a student being a grade 3 proficient reader increased 1.05 times. For every one point increase in the reading scale score for the grade 1 MAP universal screener, the odds of a student being a grade 3 proficient reader increased by 1.07 times. The grade 2 TNReady reading assessment was a categorical predictor variable in the model with students' scores categorized as proficient or non-proficient. Interestingly, students who were proficient on the grade 2 TNReady reading assessment were slightly *less* likely to be grade 3 proficient readers (O.R. = .20).

No other variables that were analyzed were significant predictors in the model. The variables that did not enter the model were priority group membership (students with disabilities, direct certified students, and English learners), age in grade 3, K-3 attendance rate, and K-3 mobility.

The findings from the logistic regression are consistent with previous research on reading that has found that reading proficiency is associated with previous academic progress and demographic variables (e.g. *Report of the National Reading Panel*, NICHD, 2000). It is somewhat surprising that in the current analysis grade 2 reading proficiency was *negatively* associated with grade 3 reading proficiency. Before discussing possible reasons for this finding, descriptive analyses will be presented.

Descriptive Comparison of Grade 3 Continuously Enrolled Cohort and Grade 3 Overall

The table below provides a comparison of demographic and academic data for the grade 3 continuously enrolled cohort used in the present analyses and the grade 3 students overall from the

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[2] In logistic regression, one group of a categorical variable is determined to be the reference. Analyses then compare each group, in turn, to the reference group. In this model, the first analysis examined African American students compared to students in the Other race category. The second analysis examined Hispanic students compared to students in the Other race category.

[3] The model output table for the binary logistic regression is included in the Appendix.

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2018-19 school year. The cohort is very similar to grade 3 overall with a few exceptions. First, the racial breakdown of continuously enrolled students has a slightly higher percentage of Black/African American and Hispanic students and a lower percentage of students of other races compared to the grade 3 overall, which could be due to fewer Asian or White students enrolling in pre-K.

Descriptive Information for Grade 3 Continuously Enrolled Cohort and Grade 3 Overall		
	Continuously Enrolled Cohort N = 1,623	**Grade 3 Overall** N = 8,218
Demographic Information		
Male	48%	51%
Female	52%	49%
Black/African American	76%	72%
Hispanic	18%	16%
Other	6%	12%
Priority Groups		
Direct Certified Students	67%	65%
Students with Disabilities	8%	8%
English Learners	9%	10%
K-3 Attendance Rate	95%	N/A
K-3 Mobility Index Score^	.32	N/A
Academic		
Grade K MAP Median Percentile	54th	48th
Grade 1 MAP Median Percentile	49th	44th
Grade 2 TNReady Proficiency*		
Proficient	18%	17%
Non-Proficient	82%	83%
Mastered	4%	4%
On Track	15%	14%
Approaching	45%	44%
Below	36%	38%
Grade 3 TNReady Proficiency**		
Proficient	25%	22.5%
Non-Proficient	75%	77.5%
Mastered	5%	4%
On Track	20%	18%
Approaching	44%	42%
Below	31%	36%

*Gr 2 TNReady Reading: Proficient = Mastered/On Track; Non-Proficient = Below/Approaching
**Gr 3 TNReady Reading: Proficient = Mastered/On Track; Non-Proficient = Below/Approaching
^Average mobility based on a 0-8 point mobility scale

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Second, the MAP median percentiles for Kindergarten and grade 1 are notably higher for the continuously enrolled cohort compared to grade 3 overall. There could be many reasons for this, however, it appears that students who were enrolled in the District for either one or both of those assessments, but not continuously enrolled for 5 consecutive years, had individual test scores at lower percentiles compared to their continuously enrolled peers.

Finally, the percentage of students in the different TNReady proficiency levels for the grade 2 and grade 3 reading assessment are remarkably similar, with one exception. In grade 3, a slightly higher percentage of continuously enrolled students scored as proficient readers compared to grade 3 overall (25% vs 22.5%, respectively).

Descriptive Comparison of Grade 3 Continuously Enrolled Proficient and Non-Proficient Readers

Descriptive information for the continuously enrolled grade 3 proficient and non-proficient readers is presented in the table below. Data in the far right column represents the overall cohort of 1,623 students who were continuously enrolled in the District from pre-K through grade 3. Data in the middle two columns divide the information between proficient and non-proficient readers.

As can be seen, data for the overall sample and the non-proficient readers were quite similar for the demographic variables sex and race. Overall, about half the cohort was male and half female, as was the case for non-proficient readers. In the group of proficient readers, however, 62% of the students were female and 38% male. For race, just over three quarters of the students were Black/African American in both the overall cohort and the group of non-proficient readers, 18% were Hispanic, and about 5% were students of other races. (The races represented in the Other category in this cohort included Asian, Pacific Islander, Multiple Races, and White.) Among grade 3 proficient readers, fewer students were Black/African American (70%) and more students were in the Other race category (11%) compared to the non-proficient readers and the overall cohort.

Descriptive Information for Grade 3 Proficient and Non-Proficient Readers**			
	Proficient Readers N = 406	**Non-Proficient Readers** N = 1,217	**Overall** N = 1,623
Demographic Information			
Male	38%	52%	48%
Female	62%	48%	52%
Black/African American	70%	77%	76%
Hispanic	19%	18%	18%
Other	11%	5%	6%
Priority Groups			
Direct Certified Students	58%	70%	67%
Students with Disabilities	1%	10%	8%
English Learners	3%	11%	9%
K-3 Attendance Rate	96%	95%	95%
K-3 Mobility Index Score^	.24	.35	.32

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Academic			
Grade K MAP Median Percentile	73rd	48th	54th
Grade 1 MAP Median Percentile	80th	38th	49th
Grade 2 TN Ready Proficiency*			
Proficient	54%	7%	18%
Non-Proficient	46%	93%	82%
Mastered	12%	0.4%	4%
On Track	41%	6%	15%
Approaching	44%	46%	45%
Below	3%	47%	36%

*Gr 2 TNReady Reading: Proficient = Mastered/On Track; Non-Proficient = Below/Approaching

**Gr 3 TNReady Reading: Proficient = Mastered/On Track; Non-Proficient = Below/Approaching

^Average mobility based on a 0-8 point mobility scale

As might be expected, membership in the priority groups varied between proficient and non-proficient readers. Fewer students among proficient readers than in the overall cohort were direct certified students (58% vs. 67%), students with disabilities (1% vs. 8%), and English learners (3% vs. 9%). By contrast, slightly more students among non-proficient readers were members of these priority groups compared to the students in the overall cohort: direct certified students (70% vs. 67%), students with disabilities (10% vs. 8%), and English learners (11% vs. 9%).

Attendance rates and mobility did not vary much across the different groups. The average K-3 attendance rate for the overall cohort and the non-proficient readers was 95%, and the average rate for proficient readers was 96%. The average mobility index score for each of the three groups was less than one. A 0 on this index indicated that a student had no mid-year school transfers over the 4-year period from Kindergarten to grade 3. A 1 on this index indicated the student had one mid-year school transfer over that four-year time period. These average index scores indicate that the group of students in the overall cohort was quite stable between Kindergarten and grade 3. Additionally there was little variation between proficient and non-proficient grade 3 readers.

Academic variables showed the most variation across the groups. As incoming Kindergarten students, the median percentile on the MAP reading universal screener for the overall cohort was the 54th percentile. For the grade 3 non-proficient readers it was lower at the 48th percentile and for the grade 3 proficient readers it was higher at the 73rd percentile. These differences were amplified at the end of grade 1 when the median percentile on the MAP reading universal screener for the overall cohort was the 49th percentile. Grade 3 non-proficient readers had a median percentile at the 38th percentile and grade 3 proficient readers had a median percentile at the 80th percentile.

In second grade, students were assessed at the end of the year with the TNReady state achievement test. For the overall cohort, 18% of the students scored proficient on the grade 2 TNReady reading assessment, 7% of the grade 3 non-proficient readers were proficient at grade 2, and 54% of the grade 3 proficient readers were proficient at grade 2. Although 46% of grade 3 proficient readers were non-proficient in grade 2, the majority of those scored Approaching in performance level. Very few (only 3%) grade 3 proficient readers scored Below in performance level as grade 2 students.

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The descriptive statistics parallel the findings from the binary logistic regression. The findings from the two different analyses revealed similar pictures of the variables associated with grade 3 proficient readers who attended SCS schools for five consecutive years.

Discussion & Recommendations

Academic Findings

The earliest data available show that the grade 3 proficient readers entered Kindergarten with higher early literacy skills than the grade 3 non-proficient readers. The median percentile on the fall Kindergarten MAP reading universal screener for grade 3 proficient readers was the 73rd percentile compared the 48th percentile for the grade 3 non-proficient readers. The difference between the two groups was even greater by the end of grade 1 showing median percentiles at the 80th percentile and the 38th percentile, respectively. It is interesting to note that not only did the grade 3 proficient readers' median percentile increase over two years, the grade 3 non-proficient readers' median percentile also decreased over this time period. Over the course of the two years from the beginning of Kindergarten to the end of grade 1, more students who ultimately were not proficient readers in grade 3 were falling behind in early literacy, as measured by the MAP reading universal screeners.

> **Recommendation 1** – The downward shift in the median percentile for the same cohort of students (grade 3 non-proficient readers) across grades K-1 suggests that teachers and District staff should closely monitor student progress throughout the year and be ready to bolster all struggling students, not just those who qualify for Tier 2 or Tier 3 level interventions. The Third Grade Commitment tracking system could help with this process. The first success criterion for students in grades K-2 is their performance on the fall universal screener. Students who miss this criterion should have an academic support plan put in place as soon as possible to capitalize on the instructional support opportunities during the first quarter. Waiting to see how students perform on a second success criterion before implementing an academic support plan allows too much of the school year to pass before student supports are implemented.

At the end of grade 2, students were assessed with the grade 2 TNReady assessment. Interestingly, 46% of the grade 3 proficient readers scored as not proficient on the grade 2 TNReady reading assessment. This seems surprising, especially given the high median percentiles for this group in grades K-1 on the MAP reading universal screeners. However, unlike the universal screeners, the grade 2 TNReady ELA assessment covers comprehension, language conventions, grammar and spelling, writing, and listening as well as the foundational literacy skills. It may be that these students have a relatively firm grasp on foundational literacy skills but have not quite yet mastered reading skills of increasing complexity when assessed at the end of grade 2. By the end of grade 3 however, these skills have developed and strengthened students' assessment performance.

> **Recommendation 2** –These analyses suggest that, as is the case with any developmental process, teachers and District staff should be mindful of both the early literacy skills students must master at each grade level and the next steps in the process of learning to read. It may be beneficial to revisit the extent to which teachers engage in vertical alignment of the curriculum between grade levels to ensure that students understand that foundational literacy skills are part of a bigger process.

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Finally, the data indicate that students experiencing difficulties with reading should be supported from the earliest grades. In this sample, the majority of the grade 3 proficient readers did well on the MAP reading universal screeners in grades K-1, indicating they had a strong understanding of the foundational literacy skills assessed, which in turn was, no doubt, key to their reading proficiency in subsequent grades. Only a few students who were ultimately grade 3 proficient readers had individual universal screener scores below the 50th percentile. Of the 406 students who were grade 3 proficient readers, 53 (13%) had a MAP reading universal screener score below the 50th percentile at the beginning of Kindergarten, and 48 (12%) scored below the 50th percentile at the end of grade 1. Further, only 18 students (4%) scored below the 50th percentile in both Kindergarten and grade 1. By contrast, 52% of the grade 3 non-proficient readers scored below the 50th percentile in Kindergarten and 66% in grade 1. Forty percent (40%) of the students in this cohort scored below the 50th percentile on the MAP universal screener in both grades K and 1.

> **Recommendation 3** – SCS should ensure that its strongest teachers are teaching the District's youngest students (grades PK-2) to develop the early literacy skills needed to become proficient readers. Additionally, support systems and interventions that are provided to bolster early literacy skills should be continued as the students move into subsequent grades. As the Council of the Great City Schools recently noted in guidance to member districts, schools should not remove students from programs too quickly when positive student growth is identified because the additional supports are usually necessary to maintain the positive gains that the students experience.[4] Removing the supporting efforts too soon usually leads to students losing the gains they have experienced.

> **Recommendation 4** - The District should also continue its current efforts to expand pre-K spaces. District and national data show that students who attend pre-K begin Kindergarten stronger academically compared to peers without a pre-K experience. Because these analyses showed that early academic progress in reading is a strong predictor of grade 3 reading proficiency, expanding pre-K is a way to provide more students the experiences needed to become grade 3 proficient readers.

Membership in Priority Groups

A second issue that merits discussion is how the challenge of being a member of a priority group can affect the process of learning to read. In these analyses, student membership in the priority groups of Direct Certified students, students with disabilities, and English Learners was examined. The descriptive analyses revealed that there was a lower percentage of students in each of these categories among grade 3 proficient readers compared to grade 3 non-proficient readers.

Below is an additional analysis that examines how students fared as their membership in multiple priority groups increased. In the overall sample, regardless of priority group membership, 25% of the students were grade 3 proficient readers. However, when disaggregated, the data show that among students who were not a member of any priority group, 36% were grade 3 proficient readers. As membership in priority groups increased, the percentage of grade 3 proficient students decreased

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[4] Council of the Great City Schools (2021). *Assessing the Impact and Distribution of Federal ARP Funds: Research, Evaluation, and Assessment Guidance for Districts (draft).*

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notably (membership in 1 priority group: 23% grade 3 proficient readers; membership in 2 priority groups: 9%; membership in 3 priority groups: 0%).

Priority Group Membership and Grade 3 Reading Proficiency		
	Proficient Readers	**Non-Proficient Readers**
Overall (N = 1,623)	25%	75%
Membership in:		
0 Priority Groups (N = 464)	36%	64%
1 Priority Groups (N = 972)	23%	77%
2 Priority Groups (N = 180)	9%	91%
3 Priority Groups (N = 7)	0%	100%

> **Recommendation 5** – Schools should be aware that students who face multiple challenges by virtue of their membership in multiple priority groups may need additional support to ultimately master the curriculum standards. Students in certain priority groups may receive intervention through different District offices such as Exceptional Children or English as a Second Language, however more may be needed in the classroom to ensure success, including to the extent possible, coordinating support services from Exceptional Services and ESL so that students do not miss out on Tier 1 classroom instruction.

Characteristics of the Cohort

The group of students who comprised the cohort in these analyses was just over half (53%) of the students who were substantially served in pre-K during the 2014-15 school year. As a group, this cohort did not face some of the difficulties that challenge many students. For example, the data showed that this group had low mobility averaging less than one mid-year school transfer over the four years between Kindergarten and grade 3. This cohort also had a relatively high K-3 attendance rate (95%) across all four years. Interestingly, mobility and attendance rate did not vary much between grade 3 proficient readers and grade 3 non-proficient readers. Perhaps for this cohort, families felt they were invested in their children's school, leading to a sense of commitment and belonging.

Another factor to note is the attrition rate among the 3,047 pre-K students who were substantially served in 2014-15. The following year (the 2015-16 school year), 90% of those students (2,733 students) enrolled in SCS schools, yet by the end of grade 3, just above half the cohort (1,623 students) remained in SCS District-managed schools and had grade 3 TNReady reading scores. Student retention prior to grade 3 could account for some of the attrition, but not the majority. While the academic progress of students who left the District is unknown, it may be that factors prevalent among that group of students could inform reading proficiency. To the extent that more students remain continuously enrolled in District schools, further analyses could reveal additional information.

Finally, analyses revealed that the MAP median percentiles in Kindergarten and grade 1 were higher for the continuously enrolled cohort compared to grade 3 overall. The extent to which higher median percentiles and continuous enrollment are linked is unknown. Perhaps, however, the familiarity provided by the continuity allows students to focus more easily on academic content.

> **Recommendation 6** – District elementary schools should strive to build a sense of belonging for families and their students from their first enrollment that includes the

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idea that students will be at the school from pre-K (or Kindergarten) until the end of grade 5. Schools should be mindful of the transitions between grades as these may be times when families or students need extra support.

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Appendix

Binary Logistic Regression Model Output Table

Variable	B	S.E.	Wald	Sig (p value)	Exp(B) (Odds Ratio)	Confidence Interval
Gr 2 TN Ready Proficiency	-1.64	.18	82.09	.00	.20	.14, .29
Gr 1 Spring MAP	0.06	.01	86.54	.00	1.07	1.05, 1.08
Gr K Fall MAP	0.05	.01	26.86	.00	1.05	1.03, 1.07
Sex	-.42	.15	7.20	.01	.66	.49, .89
Race (Black)	-.69	.30	5.41	.02	.50	.28, .90
Race (Hispanic)	.17	.34	0.24	.62	1.18	.60, 2.32
Students with Disabilities	1.06	.55	3.66	.06	2.88	.98, 8.53
Direct Certified Students	.08	.16	0.22	.64	1.08	.79, 1.48
English Learners	.47	.36	1.69	.19	1.60	.79, 3.26
Gr 3 Age	-.01	.02	0.06	.81	.99	.95, 1.04
K-3 Attendance Rate	.01	.03	0.19	.67	1.01	.96, 1.06
K-3 Mobility	-.09	.11	0.68	.41	.91	.73, 1.14