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**Texas Grade 3 Underrepresented Boys and
Economic Status Differences in Reading: A
Statewide, Multiyear Study**

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**Texas Grade 3 Underrepresented Boys and Economic Status Differences in
Reading: A Statewide, Multiyear Study**

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ABSTRACT

In this statewide, multiyear analysis, the extent to which differences were present in reading by the economic status of Grade 3 Asian, Black, and Hispanic boys was determined. Specifically examined was the relationship of poverty to the three State of Texas Assessment of Academic Readiness (STAAR) Reading Reporting Categories for Grade 3 Asian, Black, and Hispanic boys in the 2015-2016 through the 2018-2019 school years. Also examined was the relationship of poverty to the STAAR Grade Level Phase-in Standards for Grade 3 Asian, Black, and Hispanic boys. Inferential statistical analyses revealed the presence of statistically significant differences in reading as a function of the economic status of Asian boys, Black boys, and Hispanic boys. In every instance, Asian boys, Black boys, and Hispanic boys who were Poor were outperformed by their counterparts who were Not Poor. Considering the majority of students in Texas come from poverty backgrounds, these findings are of great concern. Implications of these findings and recommendations for future research are discussed.

Keywords: Texas, Grade 3, STAAR, Reading, Economic Status, Asian, Black, Hispanic Boys

Introduction

Literacy, a skill that encompasses word recognition, vocabulary, comprehension, and much more, is a necessary part of everyday life (Stinnett, 2014). Literacy skills can be divided into general categories, word-reading literacy skills, and knowledge-based competencies (Reardon, Valentino, & Shores, 2012). Word-reading skills, the necessary first steps in acquiring the ability to read, include letter-word recognition, beginning and ending sounds, fluency, and recognizing sight words (Reardon et al., 2012; Stinnett, 2014). Knowledge-based competencies, the application of the ability to read, encompass analysis, synthesis, and evaluation (Golden, 2012). Grade 3 is a vital point in the literacy development of students because students are required to make the transition from “learning to read” to “reading to learn” (Hernandez, 2011, p. 4). Unfortunately, some students have not developed the academic ability make this transition, as approximately 10% of 17-year old students have the literacy skills of 9-year old students (Reardon et al., 2012; Stinnett, 2014).

A lack of literacy skills beyond the early years of schooling is clearly detrimental because of the influence on social mobility and the reliance on literacy skills in the workforce (Reardon et al., 2012). Gaps in literacy skills could potentially perpetuate the “Matthew Effect” where students who do not come from poverty are more equipped to learn at a more rapid pace than their peers who have lived in poverty (Stanovich, 2017). Additionally, compared to students who are not poor, students in poverty do not have the same home advantages and background knowledge (Stanovich, 2017). For example, students who are economically disadvantaged have fewer chances to participate in literacy-related activities, fewer shared reading activities, and fewer library visits (Stinnett, 2014). Students who come from poverty have less exposure to varied vocabulary and syntax (Stinnett, 2014) than their more privileged peers. Moreover, children who live in poverty are more likely to have weaker language and narrative skills and lower emergent literacy scores (Gardner-Neblett & Iruka, 2015). Furthermore, educational opportunities for these children are minimized due to frequent absences attributed to increased health or family problems (Hernandez, 2011).

In the State of Texas, the population of students living in poverty has remained over 50% since the 2001-2002 school year (Texas Education Agency, 2003). In 2015-2016, almost 60% of the public school population was living in poverty. This figure remained steady in 2016-2017 and 2017-2018 before increasing to almost 61% of the population in 2018-2019 (Texas Education Agency, 2019a). Students are eligible for either the reduced lunch program or free lunch program depending on family income. Students qualify for the reduced lunch program with a family income of 131% to 185% of the federal poverty line (Burney & Beilke, 2008). The percentages of students who qualified for the reduced lunch program during the four school years from 2015-2016 to 2018-2019 ranged from just under 4.5% to 6% (Texas Education Agency, 2019c). More concerning is the percentage of students who qualified for the free lunch program for the same four years. These figures were comprised of just under 42% of students and just under 44% of students on the high end (Texas Education Agency, 2019a). Students who were eligible for the free lunch program have a family income of 130% or less of the federal poverty line (Burney & Beilke, 2008). For the purposes of this study, due to the small percentages of students qualifying for the reduced lunch program, all students qualifying for either free or reduced lunch programs will be considered Poor.

According to the Texas Education Agency (2019a), the percentages of Black students living in poverty increased from 71% to 74% from 2015-2016 to 2018-2019. The percentages of Asian and Hispanic students living in poverty also increased during this time. The increase of Asian students living in poverty was one percentage point, but the increase consisted of over 10,000 students. Hispanic students living in poverty experienced an increase of less than one percent, however, this statistic reflected a growth of over 78,000 students.

In addition to the influence of poverty on academic achievement, gender is a contributing factor, as well. Boys and girls differ in their reading skills. Nationally, boys are falling behind each year from kindergarten to Grade 3 (National Assessment of Educational Progress, 2019). The reading achievement of boys decreased from 2017 to 2019, and, in Texas, this achievement by boys is below the national average (National Assessment of Educational Progress, 2019). To determine reading

achievement, the Texas Education Agency has adopted the Texas Essential Knowledge and Skills as the guiding standards for what students must learn (Texas Education Agency, 2019c). The STAAR test is the instrument used to determine if students have achieved mastery of the standards (Texas Assessment, 2019). Grade 3 standards specifically require students to read a variety of texts, recognize characteristics of digital media, and engage in their reading by using metacognitive skills to deepen comprehension (Texas Administrative Code, 2019).

Several studies have been conducted by researchers (Harris, 2018; McGown, 2016; Schleeter, 2017) who have analyzed the reading achievement of boys as assessed by the Texas state-mandated assessment. McGown (2016) investigated Grade 3 STAAR Reading performance for three school years (i.e., 2012-2013, 2013-2014, 2014-2015). In all three school years, less than 40% of boys achieved the Level II Satisfactory Performance Standard, now referred to as Approaches Grade Level (Texas Education Agency, 2017). With regard to the STAAR Reading Reporting Category One, in all three school years, boys responded incorrectly to approximately two out of six questions, in Reporting Category Two, boys missed approximately seven out of 18 questions, and in Reporting Category Three, boys answered approximately five questions incorrectly out of 16 (McGown, 2016). Across the three years of Texas data examined by McGown (2016), results were consistent regarding the performance of boys.

In another Texas analysis conducted for the same three school years, Schleeter (2017) analyzed the passing rates of Grade 3 English Language Learner boys on the STAAR Reading Level III Advanced Performance Standard, now referred to as Masters Grade Level (Texas Education Agency, 2017). At no point in the 3-year period was the passing percentage on the Masters Grade Level standard for English Language Learner boys above 11%. At the Meets Grade Level standard, the passing percentage of English Language Learner boys was consistently below 50%. At the Approaches Grade Level, the passing percentage was always lower than 65% passing. Results for English Language Learner boys were remarkably consistent across the three years of Texas data (Schleeter, 2017).

In another related study, Harris (2018) conducted an analysis of the same three school years of statewide data for the STAAR Reading Level II Final Satisfactory Performance Standard, now referred to as Meets Grade Level (Texas Education Agency, 2017), by gender. In all three school years, statistically significant results for boys were present. The passing rate of Texas Grade 4 boys was not above 37% for any of the three school years.

In a comparison (Hamilton & Slate, 2019) of the reading performance of Grade 3 Black students by their economic status (i.e., Not Economically Disadvantaged or Economically Disadvantaged), Black students in poverty had statistically significantly lower passing rates than Black students who were not economically disadvantaged at the Approaches Grade Level, Meets Grade Level, and Masters Grade Level Phase-in standards on the Grade 3 STAAR Reading test. At the Approaches Grade Level standard, 53.6% of Black students who were Poor met the standard, compared to 81.7% of Black students who were Not Poor. At the Meets Grade Level standard, 21.8% of Black students who were Poor met the standard, compared to 50.7% of Black students who were Not Poor. At the Masters Grade Level standard, only 9.4% of Black students who were Poor met the standard, compared to 29.4% of Black students who were Not Poor.

Similar results were evident by the economic status of Hispanic students (Hamilton & Slate, 2019). At the Approaches Grade Level standard, 63.5% of Hispanic students who were Poor met the standard, compared to 87.8% of Hispanic students who were Not Poor. At the Meets Grade Level standard, 29.2% of Hispanic students who were Poor met the standard, compared to 59.1% of Hispanic students who were Not Poor. At the Masters Grade Level standard, 13.9% of Hispanic students who were Poor met the standard, compared to 35.6% of Hispanic students who were Not Poor. In the Hamilton and Slate (2019) Texas statewide investigation, poverty clearly had a strong influence on the reading achievement of Black and Hispanic Grade 3 students.

Within ethnic/racial groups, Hispanic boys, Black boys, and Asian boys all achieve at a lower rate than their girl counterparts (Husain & Millimet, 2009). As such, in this investigation only the reading achievement of boys was addressed. Though literature regarding a difference between boys and girls in reading achievement is plentiful, published empirical research of literacy academic

performance by only boys within an ethnic/racial group are limited. Analyses of the performance of boys with consideration to the variable of economic status is even more limited in the literature. As such, reading data on only Asian, Black, and Hispanic boys was examined in this multiyear, statewide investigation.

Statement of the Problem

Trends in reading achievement have, on average, revealed boys were outperformed by girls on the National Assessment of Educational Progress scores from 2003 to 2013 (David & Marchant, 2015). In Texas, gender is not one of the monitored subgroups in student academic achievement data. As such, opportunities to increase boys' knowledge could potentially be missed due to this lack of required monitoring. Continued analyses of gender-based data are necessary to understand the reading performance of boys.

Grade 3 is a pivotal year for literacy development. Grade 3 is the first year Texas students are assessed on the STAAR test, and although students are assessed yearly in reading until graduation, 26% of students who have lived in poverty and do not read on grade level in Grade 3 will not graduate from high school (Hernandez, 2011). Black and Hispanic students are much more likely to be economically disadvantaged, at a rate almost twice of the next-closest ethnic/racial group (National Center for Children in Poverty, 2017). Although only 10% of Asian children in Texas are living in poverty (National Center for Children in Poverty, 2017), the effects of living in poverty remain. The State of Texas has a 5% higher poverty rate than does the United States as a whole (National Center for Children in Poverty, 2017), and more than 60% of Texas public schoolchildren are classified as economically disadvantaged (Texas Education Agency, 2019a). Providing reading acquisition opportunities to these student groups is a necessity.

Purpose of the Study

The purpose of this study was to examine the degree to which the economic status (i.e., Poor, Not Poor) of Grade 3 Asian, Black, and Hispanic boys in Texas schools is related to their reading achievement. Specifically examined was the relationship of poverty to three STAAR Reading Reporting Categories and the STAAR Reading Phase-in standards. These relationships were determined separately for Asian, Black, and Hispanic boys in each of the three school years (i.e., 2015-2016, 2016-2017, 2017-2018, 2018-2019). Finally, the degree to which trends might be present for each of the three ethnic/racial groups of boys across the four school years was determined.

Significance of the Study

Little research regarding the intersection of economic status and reading achievement within ethnic/racial groups exists. To date, no researchers have conducted a within-group comparison in which the relationship between economic status and the reading achievement of Black, Hispanic, and Asian boys, as measured by the Texas state-mandated STAAR assessment, has been addressed. In analyzing the reading performance of Asian boys, Black boys, and Hispanic boys by their economic status, additional information can be provided to stakeholders. Stakeholders who could benefit from this study include literacy teachers and specialists, campus principals and associated decision-makers, curriculum directors, and district-level administrators.

Research Questions

The following overarching research question was addressed in this investigation: What is the difference in reading performance by the economic status (i.e., Poor, Not Poor) of Texas Grade 3 underrepresented boys (i.e., Asian, Black, and Hispanic)? Specific subquestions under this overarching research question were: (a) What is the difference in Reading Reporting Category One performance by

the economic status of Texas Grade 3 underrepresented boys?; (b) What is the difference in Reading Reporting Category Two by the economic status of Texas Grade 3 underrepresented boys?; (c) What is the difference in Reading Reporting Category Three performance by the economic status of Texas Grade 3 underrepresented boys?; (d) What is the difference in the Approaches Grade Level performance by the economic status of Texas Grade 3 underrepresented boys?; (e) What is the difference in the Meets Grade Level performance by the economic status of Texas Grade 3 underrepresented boys?; (f) What is the difference in the Masters Grade Level performance by the economic status of Texas Grade 3 underrepresented boys?; (g) To what extent is a trend present in the three Reading Reporting Categories performance by the economic status of Texas Grade 3 underrepresented boys for the 2015-2016 through the 2018-2019 school years?; and (h) To what extent is a trend present in the Approaches Grade Level, Meets Grade Level, and Masters Grade Level performance by the economic status of Texas Grade 3 underrepresented boys for the 2015-2016 through the 2018-2019 school years? The first six research questions were repeated separately for Asian, Black, and Hispanic boys for the 2015-2016, 2016-2017, 2017-2018, and 2018-2019 school years whereas the two trend questions will involve all four school years. Thus, 34 research questions were present in this investigation.

Research Design

For this empirical investigation, a non-experimental, causal-comparative research design was used (Creswell & Creswell, 2018; Johnson & Christensen, 2017). Causal-comparative research is used by researchers to find relationships between independent and dependent after the individual variables have already occurred (Johnson & Christensen, 2017). Extraneous variables are not controlled in this study design (Johnson & Christensen, 2017). The independent variable in this study was level of poverty (i.e., Poor, Not Poor) and the dependent variables were the three reporting categories (i.e., Reporting Category I, Reporting Category II, Reporting Category III) and the three Phase-in Standards (i.e., Approaches Grade Level, Meets Grade Level, Masters Grade Level) from the 2015-2016, 2016-2017, 2017-2018, and 2018-2019 STAAR assessments. Regarding the three reporting categories, because each reporting category contains a different number of questions, data were converted from raw scores to percentages to compare differences between scores

Participants and Instrumentation

Archival data were obtained from the Texas Education Agency Public Education Information Management System for the 2015-2016 through the 2018-2019 school years for Black, Hispanic, and Asian Grade 3 boys who took the STAAR Reading assessment, as well as their student demographic characteristics. To obtain the data, a Public Information Request was submitted to the Texas Education Agency.

Three reporting categories are assessed by the STAAR Reading test at three Phase-in standard levels. Assessed in Reporting Category I is reading and vocabulary development across genres of a variety of texts (Texas Education Agency, 2011). The Grade 3 STAAR Reporting Category II assesses students' abilities to understand and analyze literary texts, including fiction, literary nonfiction, poetry, and media literacy (Texas Education Agency, 2011). Measured in the Grade 3 STAAR Reading Reporting Category Three is students' abilities to understand and analyze informational texts, including expository, procedural, and media literacy (Texas Education Agency, 2011).

The Phase-In standards attempt to predict the level of success attainable, and the amount of academic intervention potentially required, in the following school year (Texas Education Agency, 2017). Did Not Meet Grade level on the STAAR demonstrates future success is unlikely without substantial and consistent academic intervention. Students at this level do not exhibit an understanding of the knowledge and skills assessed (Texas Education Agency, 2017). Approaches Grade Level on the STAAR indicates targeted academic intervention will be required in the following school year for a student to be successful. Students achieving at this level do not typically exhibit an understanding of the knowledge and skills assessed (Texas Education Agency, 2017). Meets Grade level on the STAAR indicates the students will most likely be successful in the following school year but may need short-

term academic intervention. In this category, students demonstrate the ability to apply the knowledge and skills assessed in familiar contexts. Additionally, a general ability to think critically is evident (Texas Education Agency, 2017). Finally, Masters Grade Level on the STAAR indicates the students will be successful in the following school year with little or no intervention. At the Masters Grade Level, students show the ability to think critically, apply knowledge and skills in familiar contexts, and utilize knowledge and skill in unfamiliar contexts (Texas Education Agency, 2017).

For the purpose of this article, economic status included the categories of Poor and Not Poor. Boys not eligible for free or reduced lunch were referred to as Not Poor. Boys who were eligible for the reduced lunch program, indicating a family income of 131% to 185% of the federal poverty line (Burney & Beilke, 2008), and boys who were eligible for the free lunch program, which indicates a family income of 130% or less of the federal poverty line (Burney & Beilke, 2008), were referred to as Poor. Due to the small percentages of boys qualifying for the reduced lunch program, all boys qualifying for either free or reduced lunch programs were considered Poor. For the purposes of this study, underrepresented boys referred to Asian, Black, and Hispanic boys.

Findings

Prior to conducting multivariate analysis of variance (MANOVA) procedures, its underlying assumptions were checked. Though the majority of these assumptions were not met, the robustness of a MANOVA procedure made it appropriate to use in this study (Field, 2009). Results of statistical analyses will be described by racial/ethnic group by Reading Reporting Category followed by Phase-in Standard. The results in this study will be discussed in chronological order by year and then for Asian boys, then for Black boys, and then for Hispanic boys.

Reading Reporting Category Results for Asian Boys

Regarding 2015-2016, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .77$, $p < .001$, partial $\eta^2 = .23$, in overall reading performance as a function of the economic status of Asian boys. The effect size for this statistically significant difference was large (Cohen, 1988). Concerning 2016-2017, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .82$, $p < .001$, partial $\eta^2 = .18$, large effect size (Cohen, 1988). With respect to 2017-2018, a statistically significant difference was revealed, Wilks' $\Lambda = .86$, $p < .001$, partial $\eta^2 = .14$, large effect size (Cohen, 1988). Regarding 2018-2019, a statistically significant difference was yielded, Wilks' $\Lambda = .83$, $p < .001$, partial $\eta^2 = .17$, large effect size (Cohen, 1988). In all four school years, effect sizes were large for Asian boys.

Following the overall results of the MANOVA, univariate follow-up Analysis of Variance (ANOVA) procedures were conducted for all four school years. A statistically significant difference was yielded between Asian boys who were Poor and Asian boys who were Not Poor in their Reading Reporting Category I performance in 2015-2016, $F(1, 3073) = 792.33$, $p < .001$, partial $\eta^2 = .20$, large effect size; in 2016-2017, $F(1, 3290) = 562.50$, $p < .001$, partial $\eta^2 = .15$, large effect size; in 2017-2018, $F(1, 3077) = 358.00$, $p < .001$, partial $\eta^2 = .10$, moderate effect size; and in 2018-2019, $F(1, 3369) = 484.57$, $p < .001$, partial $\eta^2 = .13$, moderate effect size. In regard to the Grade 3 STAAR Reading Reporting Category I scores, Asian boys who were Poor had an average score approximately 34% lower than the average score for Asian boys who were Not Poor in 2015-2016; 26% lower than the average score for Asian boys who were Not Poor in 2016-2017; 24% lower in 2017-2018; and 31% lower in 2018-2019.

A statistically significant difference was yielded between Asian boys who were Poor and Asian boys who were Not Poor in their Reading Reporting Category II performance in 2015-2016, $F(1, 3073) = 723.35$, $p < .001$, partial $\eta^2 = .19$, large effect size; in the 2016-2017 school year, $F(1, 3290) = 582.13$, $p < .001$, partial $\eta^2 = .15$, large effect size; in 2017-2018, $F(1, 3077) = 385.84$, $p < .001$, partial $\eta^2 = .11$, moderate effect size; and in 2018-2019, $F(1, 3369) = 529.80$, $p < .001$, partial $\eta^2 = .14$, large effect

size. In regard to the Grade 3 STAAR Reading Reporting Category II scores, Asian boys who were Poor had an average score approximately 30% lower than the average score for Asian boys who were Not Poor in 2015-2016; 28% lower than the average score for Asian boys who were Not Poor in 2016-2017; and 27% lower than the average score for Asian boys who were Not Poor in 2017-2018 and 2018-2019.

A statistically significant difference was yielded between Asian boys who were Poor and Asian boys who were Not Poor in their Reading Reporting Category III performance in 2015-2016, $F(1, 3073) = 666.58$, $p < .001$, partial $\eta^2 = .18$, large effect size; in 2016-2017, $F(1, 3290) = 512.47$, $p < .001$, partial $\eta^2 = .14$, large effect size; in 2017-2018, $F(1, 3077) = 340.43$, $p < .001$, partial $\eta^2 = .10$, moderate effect size; and in 2018-2019, $F(1, 3369) = 412.00$, $p < .001$, partial $\eta^2 = .11$, moderate effect size. In regard to the Grade 3 STAAR Reading Reporting Category III scores, Asian boys who were Poor had an average score approximately 29% lower than the average score for Asian boys who were Not Poor in 2015-2016; 26% lower than the average score for Asian boys who were Not Poor in 2016-2017 and 2017-2018; and 29% lower than the average score for Asian boys who were Not Poor in 2018-2019. Delineated in Table 1 are the descriptive statistics for these analyses. Depicted in Figures 1, 2, and 3 are these results for Asian boys by their economic status.

Table 1. Descriptive Statistics for the STAAR Grade 3 Reading Reporting Category Scores by the Economic Status of Asian Boys for the 2015-2016, 2016-2017, 2017-2018, and 2018-2019 School Years

Reporting Category and Year	<i>n</i>	<i>M%</i>	<i>SD%</i>
Reporting Category I: 2015-2016			
Not Poor	2,777	87.00	18.59
Poor	298	52.68	30.16
Reporting Category I: 2016-2017			
Not Poor	3,031	92.48	15.37
Poor	261	66.13	31.66
Reporting Category I: 2017-2018			
Not Poor	2,927	93.14	13.93
Poor	152	68.95	32.45
Reporting Category I: 2018-2019			
Not Poor	3,215	90.00	16.26
Poor	156	58.72	32.34
Reporting Category II: 2015-2016			
Not Poor	2,777	83.03	16.39
Poor	298	53.80	27.87
Reporting Category II: 2016-2017			
Not Poor	3,031	82.40	16.70
Poor	261	54.66	27.70
Reporting Category II: 2017-2018			
Not Poor	2,927	82.91	15.31
Poor	152	56.40	28.39
Reporting Category II: 2018-2019			
Not Poor	3,215	88.88	13.27
Poor	156	62.18	26.40
Reporting Category III: 2015-2016			
Not Poor	2,777	81.31	17.61
Poor	298	51.89	26.81
Reporting Category III: 2016-2017			
Not Poor	3,031	85.12	16.44
Poor	261	59.25	28.67
Reporting Category III: 2017-2018			
Not Poor	2,927	82.75	15.73
Poor	152	57.19	29.24
Reporting Category III: 2018-2019			
Not Poor	3,215	81.46	16.82
Poor	156	52.56	26.19

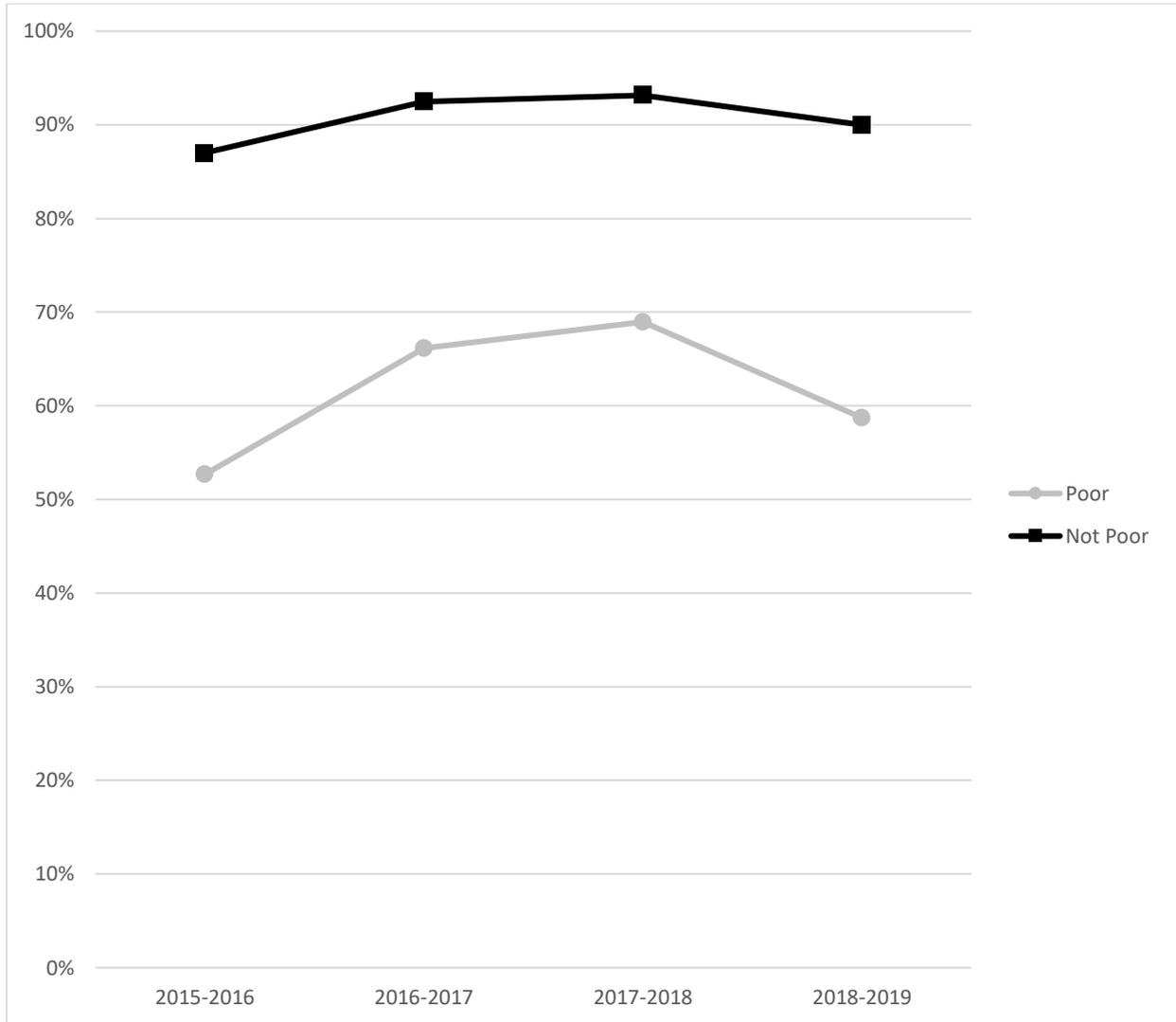


Figure 1. Grade 3 Reading Reporting Category I scores by the economic status of Asian boys for the 2015-2016 through the 2018-2019 school years.

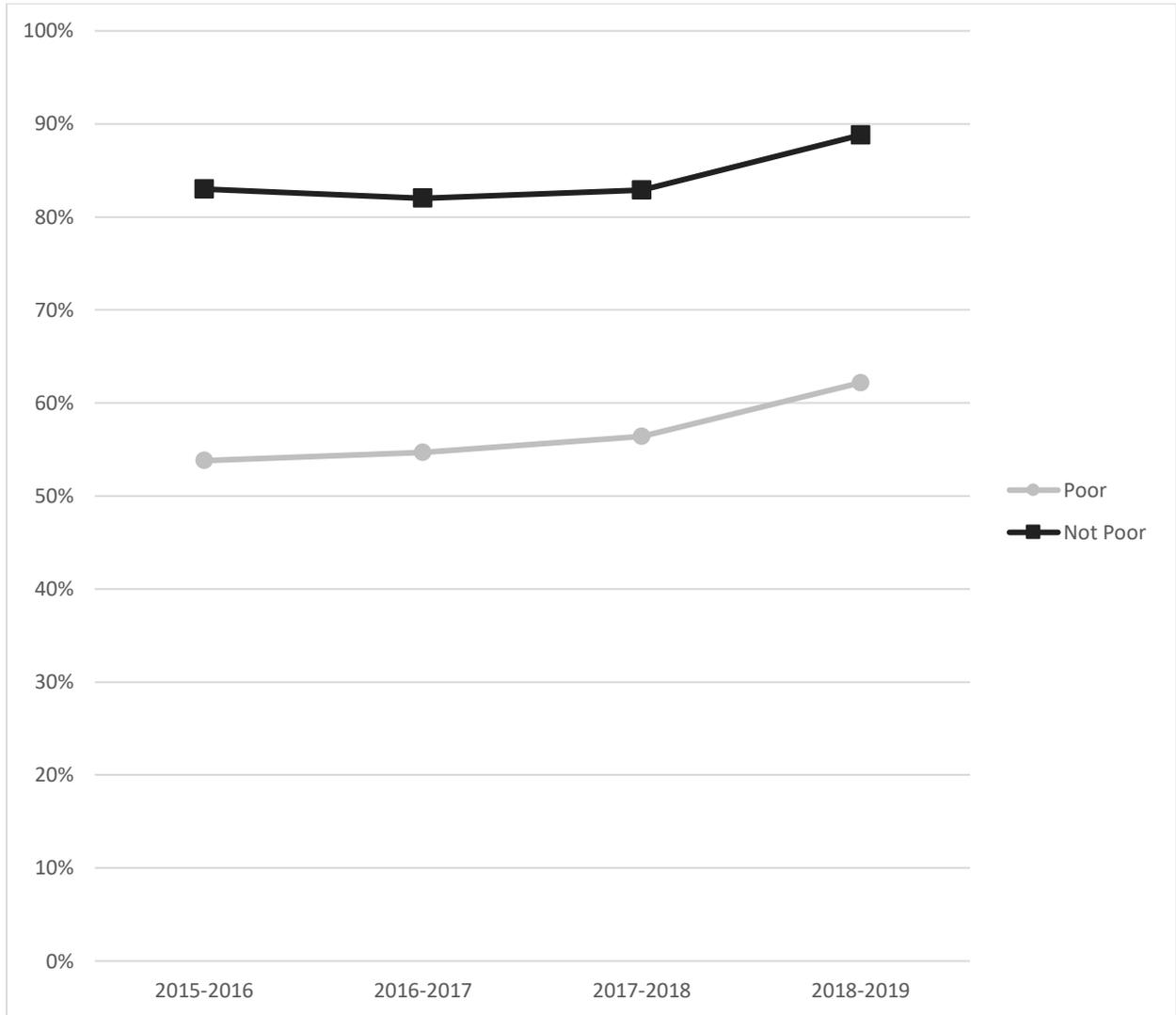


Figure 2. Grade 3 Reading Reporting Category II scores by the economic status of Asian boys for the 2015-2016 through the 2018-2019 school years.

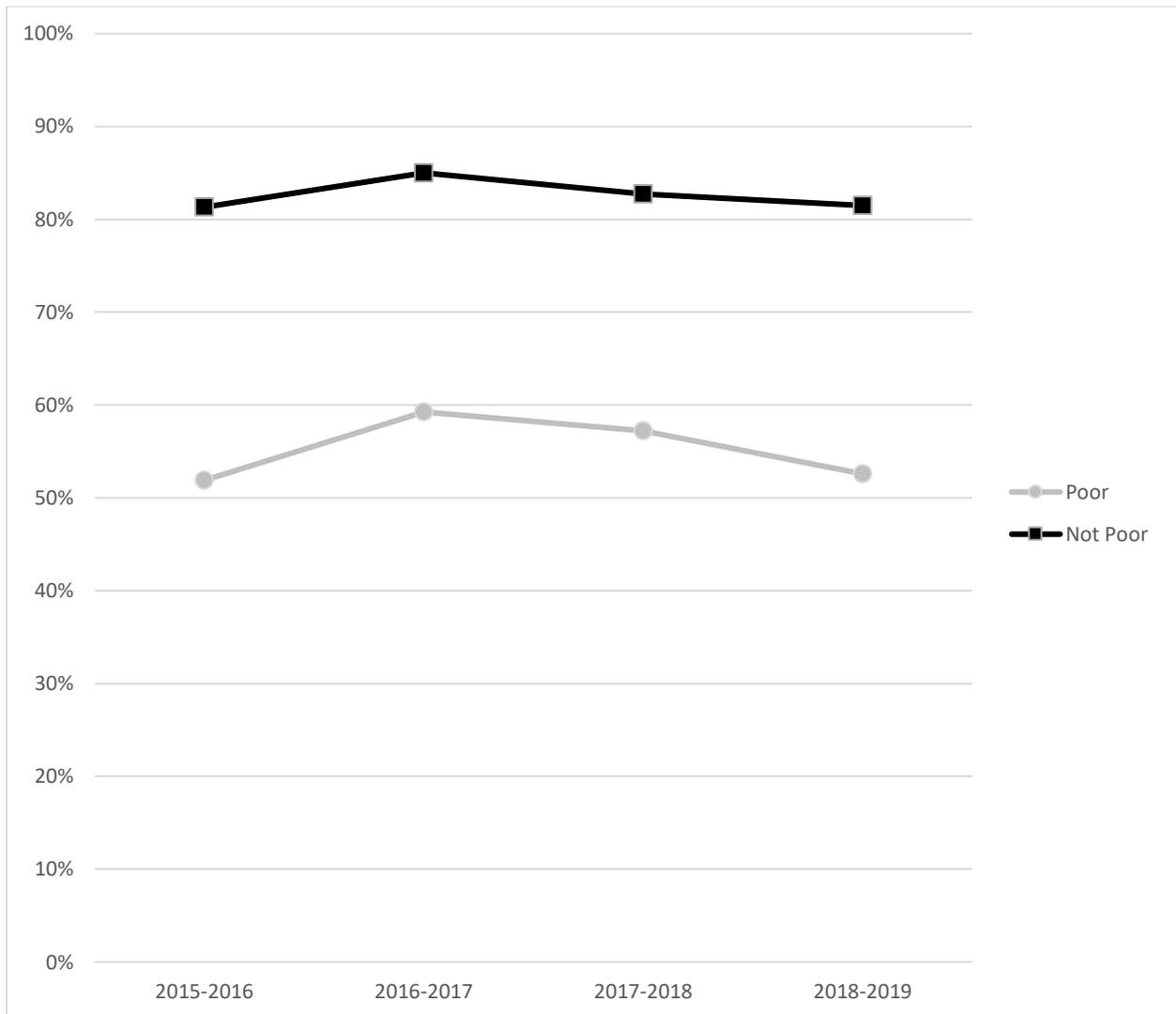


Figure 3. Grade 3 Reading Reporting Category III scores by the economic status of Asian boys for the 2015-2016 through the 2018-2019 school years.

Reading Reporting Category Results for Black Boys

Concerning 2015-2016, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .93$, $p < .001$, partial $\eta^2 = .07$, in overall reading performance as a function of the economic status of Black boys. Using Cohen's (1988) criteria, the effect size was moderate. With respect to 2016-2017, the MANOVA yielded a statistically significant difference, Wilks' $\Lambda = .94$, $p < .001$, partial $\eta^2 = .06$, moderate effect size (Cohen, 1988). Regarding 2017-2018, a statistically significant difference was yielded, Wilks' $\Lambda = .94$, $p < .001$, partial $\eta^2 = .06$, moderate effect size (Cohen, 1988). In 2018-2019, a statistically significant difference was revealed, Wilks' $\Lambda = .94$, $p < .001$, partial $\eta^2 = .06$, moderate effect size. Effect sizes were moderate for Black boys in all four school years.

Following the overall results of the MANOVA, univariate follow-up ANOVA procedures were conducted for all four school years. With regard to Reading Reporting Category I performance, a statistically significant difference was yielded between Black boys who were Poor and Black boys who were Not Poor in 2015-2016, $F(1, 9483) = 452.37$, $p < .001$, partial $\eta^2 = .05$, small effect size; in 2016-2017, $F(1, 10653) = 461.14$, $p < .001$, partial $\eta^2 = .04$, small effect size; in 2017-2018, $F(1, 8002) = 340.19$, $p < .001$, partial $\eta^2 = .04$, small effect size; and in 2018-2019, $F(1, 7342) = 256.85$, $p < .001$, partial $\eta^2 = .03$, small effect size. Concerning the Grade 3 STAAR Reading Reporting Category I scores, Black boys who were Poor had an average score approximately 16% lower than the average

score for Black boys who were Not Poor in 2015-2016 and 2016-2017; 15% lower than the average score for Black boys who were Not Poor in 2017-2018; and 14% lower than the average score for Black boys who were Not Poor in 2017-2018.

With regard to the performance in Reading Reporting Category II, a statistically significant difference was yielded between Black boys who were Poor and Black boys who were Not Poor in 2015-2016, $F(1, 9483) = 577.59$, $p < .001$, partial $\eta^2 = .06$, small effect size; in 2016-2017, $F(1, 10653) = 455.67$, $p < .001$, partial $\eta^2 = .04$, small effect size; in 2017-2018, $F(1, 8002) = 456.60$, $p < .001$, partial $\eta^2 = .05$, small effect size; and in 2018-2019, $F(1, 7342) = 409.18$, $p < .001$, partial $\eta^2 = .05$, small effect size. Concerning the Grade 3 STAAR Reading Reporting Category II scores, Black boys who were Poor had an average score approximately 15% lower than the average score for Black boys who were Not Poor in 2015-2016; 14% lower than the average score for Black boys who were Not Poor in 2016-2017; 13% lower than the average score for Black boys who were Not Poor in 2017-2018; and 15% lower than the average score for Black boys who were Not Poor in 2018-2019.

With regard to the Reading Reporting Category III performance, a statistically significant difference was yielded between Black boys who were Poor and Black boys who were Not Poor in 2015-2016, $F(1, 9483) = 655.62$, $p < .001$, partial $\eta^2 = .07$, small effect size; in 2016-2017, $F(1, 10653) = 566.26$, $p < .001$, partial $\eta^2 = .05$, small effect size; in 2017-2018, $F(1, 8002) = 438.47$, $p < .001$, partial $\eta^2 = .05$, small effect size; and in 2018-2019, $F(1, 7342) = 387.04$, $p < .001$, partial $\eta^2 = .05$, small effect size. Concerning the Grade 3 STAAR Reading Reporting Category III, Black boys who were Poor had an average score approximately 16% lower than the average score for Black boys who were Not Poor in 2015-2016; 15% lower than the average score for Black boys who were Not Poor in 2016-2017 and 2017-2018; and 14% lower than the average score for Black boys who were Not Poor in 2018-2019. Revealed in Table 2 are the descriptive statistics for these analyses. Portrayed in Figures 4 through 6 are the results of Reading Reporting Category I, 2, and 3 scores for Black boys who were Poor and Black boys who were Not Poor.

Table 2. Descriptive Statistics for the STAAR Grade 3 Reading Reporting Category Scores by the Economic Status of Black Boys for the 2015-2016, 2016-2017, 2017-2018, and 2018-2019 School Years

Reporting Category and Year	<i>n</i>	<i>M%</i>	<i>SD%</i>
Reporting Category I: 2015-2016			
Not Poor	1,689	71.59	26.44
Poor	7,796	55.75	28.03
Reporting Category I: 2016-2017			
Not Poor	1,966	74.79	26.95
Poor	8,689	59.07	29.81
Reporting Category I: 2017-2018			
Not Poor	1,314	82.42	22.94
Poor	6,690	67.52	27.45
Reporting Category I: 2018-2019			
Not Poor	1,209	75.90	25.99
Poor	6,135	61.49	29.05
Reporting Category II: 2015-2016			
Not Poor	1,689	68.24	22.02
Poor	7,796	53.70	22.65
Reporting Category II: 2016-2017			
Not Poor	1,966	63.78	25.00
Poor	8,689	50.49	24.92
Reporting Category II: 2017-2018			
Not Poor	1,314	68.42	21.28
Poor	6,690	54.03	22.51
Reporting Category II: 2018-2019			
Not Poor	1,209	75.80	21.77
Poor	6,135	60.64	24.20
Reporting Category III: 2015-2016			
Not Poor	1,689	63.70	23.48
Poor	7,796	47.67	23.28
Reporting Category III: 2016-2017			
Not Poor	1,966	63.34	25.46
Poor	8,689	48.81	24.22
Reporting Category III: 2017-2018			
Not Poor	1,314	66.59	22.26
Poor	6,690	51.96	23.31
Reporting Category III: 2018-2019			
Not Poor	1,209	61.41	23.23
Poor	6,135	47.54	22.25

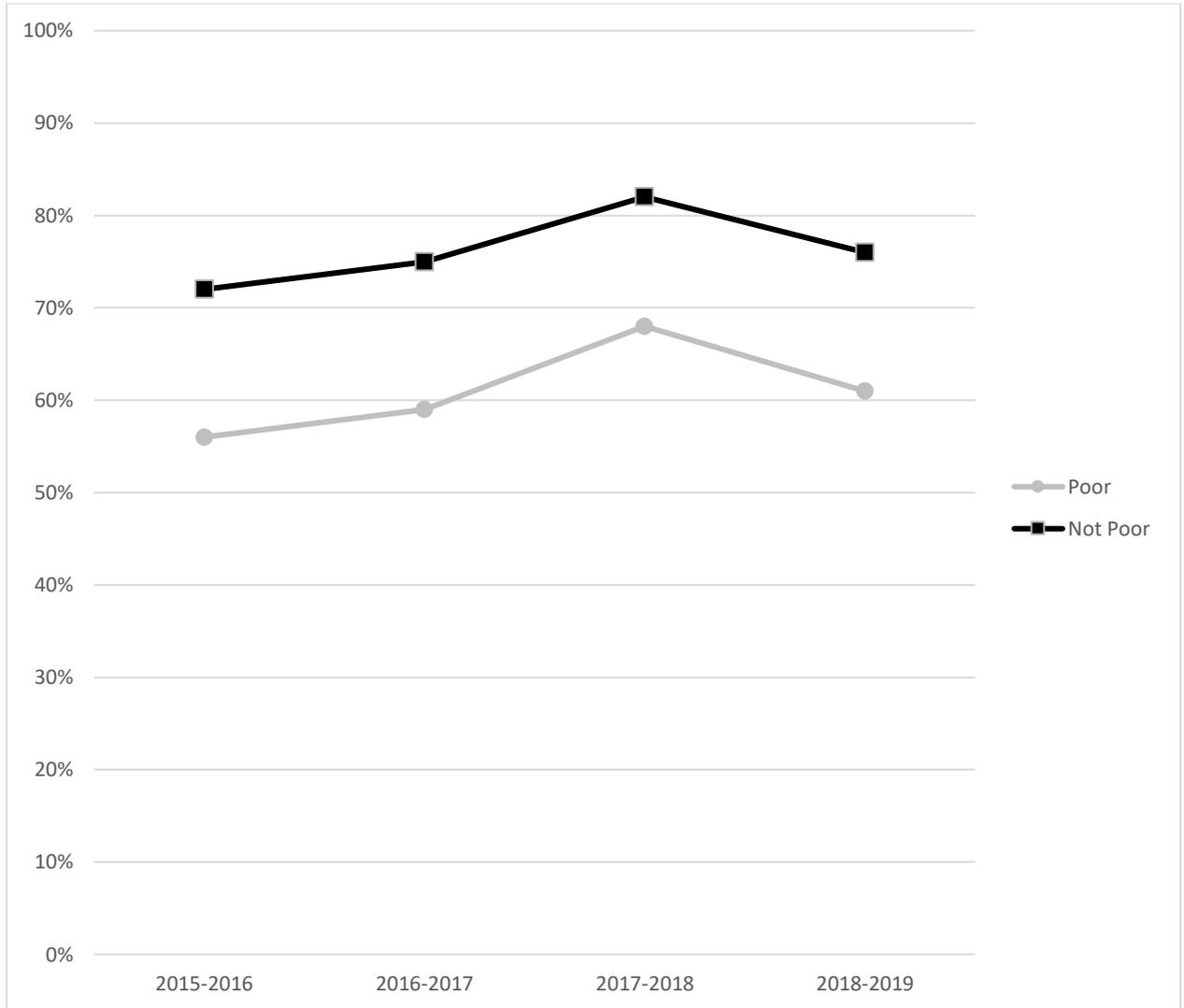


Figure 4. Grade 3 Reading Reporting Category I scores by the economic status of Black boys for the 2015-2016 through the 2018-2019 school years.

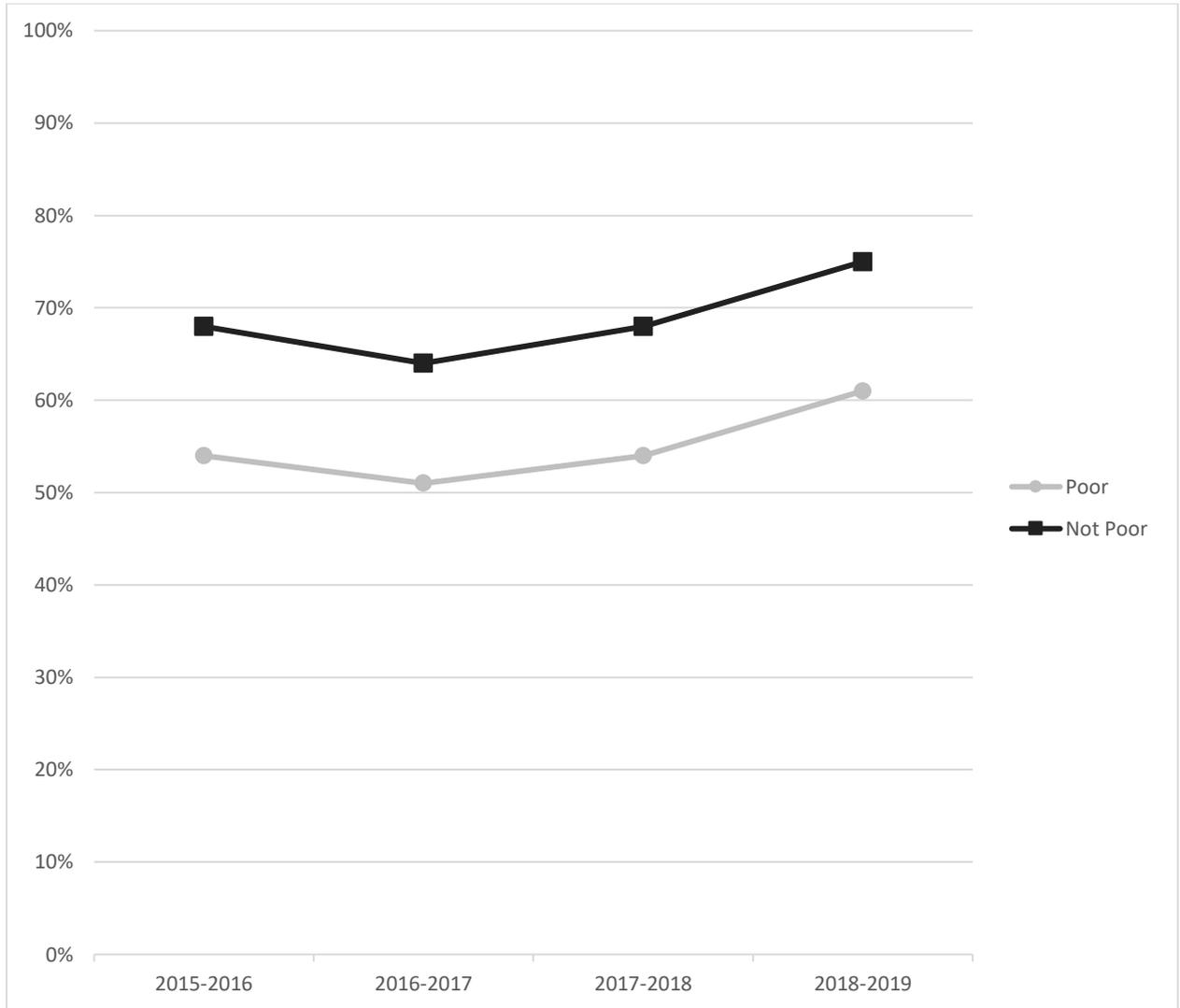


Figure 5. Grade 3 Reading Reporting Category II scores by the economic status of Black boys for the 2015-2016 through the 2018-2019 school years.

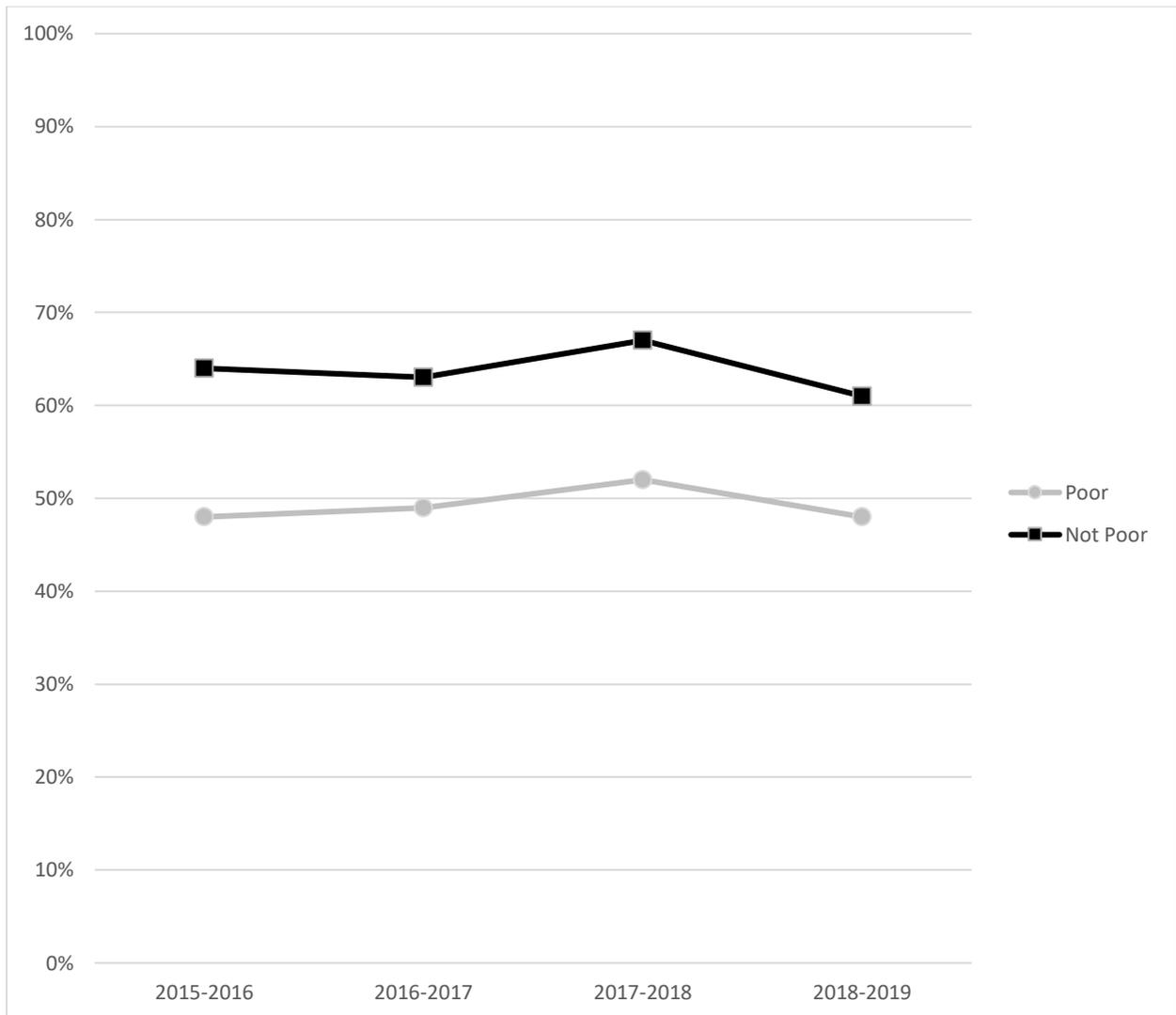


Figure 6. Grade 3 Reading Reporting Category III scores by the economic status of Black boys for the 2015-2016 through the 2018-2019 school years.

Reading Reporting Category Results for Hispanic Boys

Regarding 2015-2016, the MANOVA yielded a statistically significant difference, Wilks' $\Lambda = .93, p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen, 1988) in overall reading performance as a function of the economic status of Hispanic boys. Concerning 2016-2017, a statistically significant difference was revealed, Wilks' $\Lambda = .93, p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen, 1988). With respect to 2017-2018, a statistically significant difference was present, Wilks' $\Lambda = .93, p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen, 1988). Regarding 2018-2019, a statistically significant difference was revealed, Wilks' $\Lambda = .92, p < .001$, partial $\eta^2 = .07$, moderate effect size. Effect sizes for the statistically significant differences in overall reading performance were moderate for Hispanic boys in all four school years.

Following the overall results of the MANOVA, univariate ANOVA procedures were conducted for all four school years. A statistically significant difference was yielded between Hispanic boys who were Poor and Hispanic boys who were Not Poor in their Reading Reporting Category I performance in 2015-2016, $F(1, 51689) = 2471.24, p < .001$, partial $\eta^2 = .05$, small effect size; in 2016-2017, $F(1, 44518) = 1783.72, p < .001$, partial $\eta^2 = .04$, small effect size; in 2017-2018, $F(1, 34403) = 1503.68, p < .001$, partial $\eta^2 = .04$, small effect size; and in 2018-2019, $F(1, 31187) = 1658.59, p < .001$, partial $\eta^2 = .05$, small effect size. With regard to the Grade 3 STAAR Reading Reporting Category I scores, Hispanic boys who were Poor had an average score approximately 15% lower than the average score for Hispanic boys who were Not Poor in 2015-2016; 14% lower than the average score for Hispanic boys who were Not Poor in 2016-2017 and 2017-2018; and 16% lower than the average score for Hispanic boys who were Not Poor in 2018-2019.

A statistically significant difference was yielded between Hispanic boys who were Poor and Hispanic boys who were Not Poor in their Reading Reporting Category II performance in 2015-2016, $F(1, 51689) = 3671.78, p < .001$, partial $\eta^2 = .07$, moderate effect size; in 2016-2017, $F(1, 44518) = 3040.85, p < .001$, partial $\eta^2 = .06$, moderate effect size; in 2017-2018, $F(1, 34403) = 1875.47, p < .001$, partial $\eta^2 = .05$, small effect size; and in 2018-2019, $F(1, 31187) = 2150.33, p < .001$, partial $\eta^2 = .07$, moderate effect size. With regard to the Grade 3 STAAR Reading Reporting Category II scores, Hispanic boys who were Poor had an average score approximately 15% lower than the average score for Hispanic boys who were Not Poor in 2015-2016; 16% lower than the average score for Hispanic boys who were Not Poor; 13% lower than the average score for Hispanic boys who were Not Poor in 2017-2018; and 15% lower than the average score for Hispanic boys who were Not Poor in 2018-2019.

A statistically significant difference was yielded between Hispanic boys who were Poor and Hispanic boys who were Not Poor in their Reading Reporting Category III performance in 2015-2016, $F(1, 51689) = 3022.38, p < .001$, partial $\eta^2 = .06$, moderate effect size; in 2016-2017, $F(1, 44518) = 2645.21, p < .001$, partial $\eta^2 = .06$, moderate effect size; in 2017-2018, $F(1, 34403) = 2129.23, p < .001$, partial $\eta^2 = .06$, moderate effect size; and in 2018-2019, $F(1, 31187) = 2100.19, p < .001$, partial $\eta^2 = .06$, moderate effect size. With regard to the Grade 3 STAAR Reading Reporting Category III scores, Hispanic boys who were Poor had an average score approximately 14% lower than the average score for Hispanic boys who were Not Poor in 2015-2016 and approximately 15% lower than the average score for Hispanic boys who were Not Poor in 2016-2017, 2017-2018, and 2018-2019. Delineated in Table 3 are the descriptive statistics for these analyses. Illustrated in Figures 7, 8, and 9 are these results for Hispanic boys by their economic status.

Table 3. Descriptive Statistics for the STAAR Grade 3 Reading Reporting Category Scores by the Economic Status of Hispanic Boys for the 2015-2016, 2016-2017, 2017-2018, and 2018-2019 School Years

Reporting Category and Year	<i>n</i>	<i>M%</i>	<i>SD%</i>
Reporting Category I: 2015-2016			
Not Poor	9,111	75.77	24.04
Poor	42,580	60.60	26.92
Reporting Category I: 2016-2017			
Not Poor	8,059	81.68	23.51
Poor	36,461	67.46	28.12
Reporting Category I: 2017-2018			
Not Poor	6,041	86.02	20.65
Poor	28,364	72.40	25.59
Reporting Category I: 2018-2019			
Not Poor	5,990	80.47	23.08
Poor	25,199	64.88	27.40
Reporting Category II: 2015-2016			
Not Poor	9,111	73.61	19.50
Poor	42,580	58.32	22.32
Reporting Category II: 2016-2017			
Not Poor	8,059	71.28	22.02
Poor	36,461	55.02	24.36
Reporting Category II: 2017-2018			
Not Poor	6,041	72.37	20.24
Poor	28,364	59.12	21.86
Reporting Category II: 2018-2019			
Not Poor	5,990	79.75	18.75
Poor	25,199	65.09	22.71
Reporting Category III: 2015-2016			
Not Poor	9,111	69.91	21.31
Poor	42,580	55.52	22.96
Reporting Category III: 2016-2017			
Not Poor	8,059	71.90	22.46
Poor	36,461	56.58	24.57
Reporting Category III: 2017-2018			
Not Poor	6,041	72.25	20.83
Poor	28,364	57.67	22.59
Reporting Category III: 2018-2019			
Not Poor	5,990	69.17	21.56
Poor	25,199	54.26	22.88

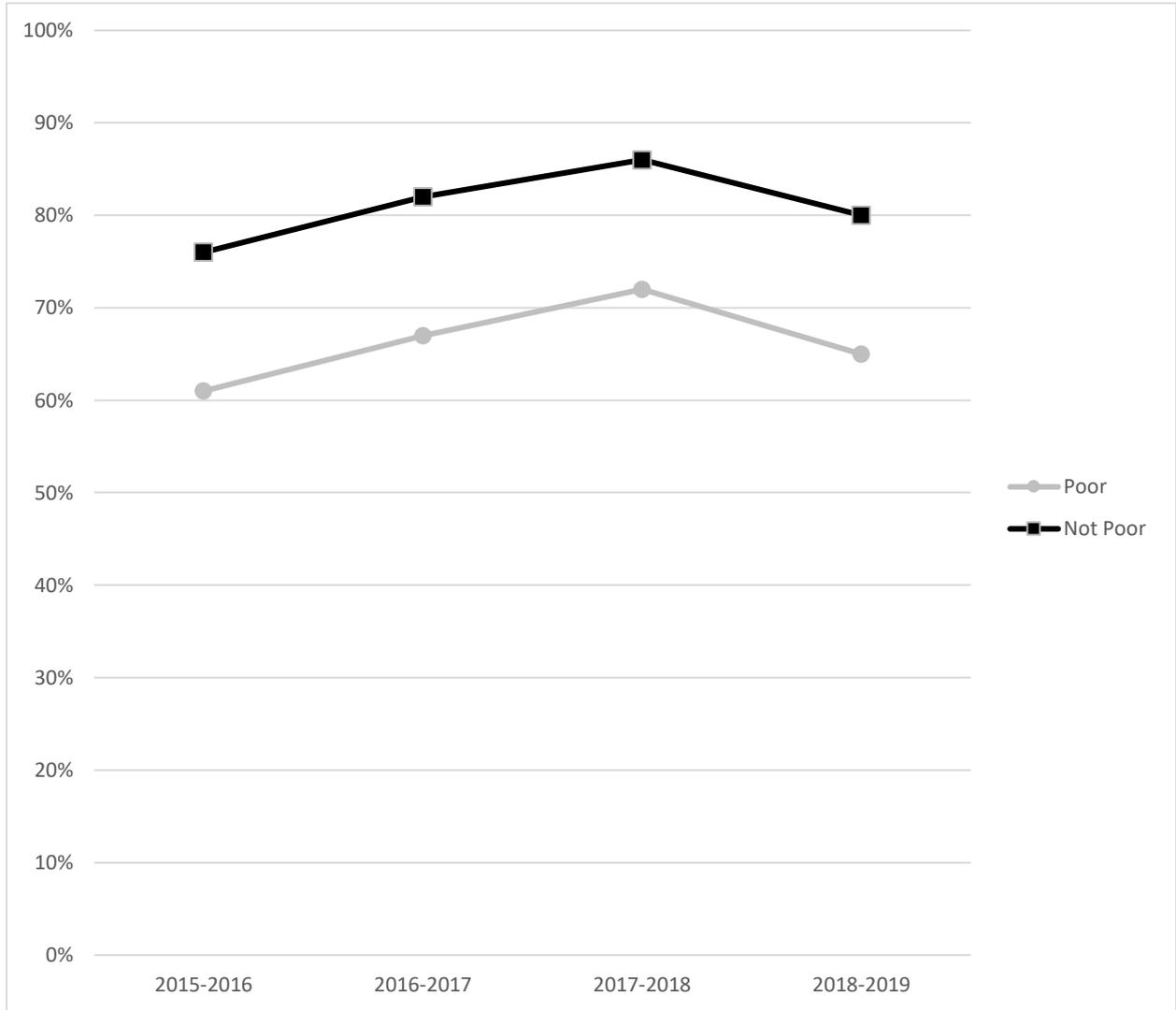


Figure 7. Grade 3 Reading Reporting Category I scores by the economic status of Hispanic boys for the 2015-2016 through the 2018-2019 school years.

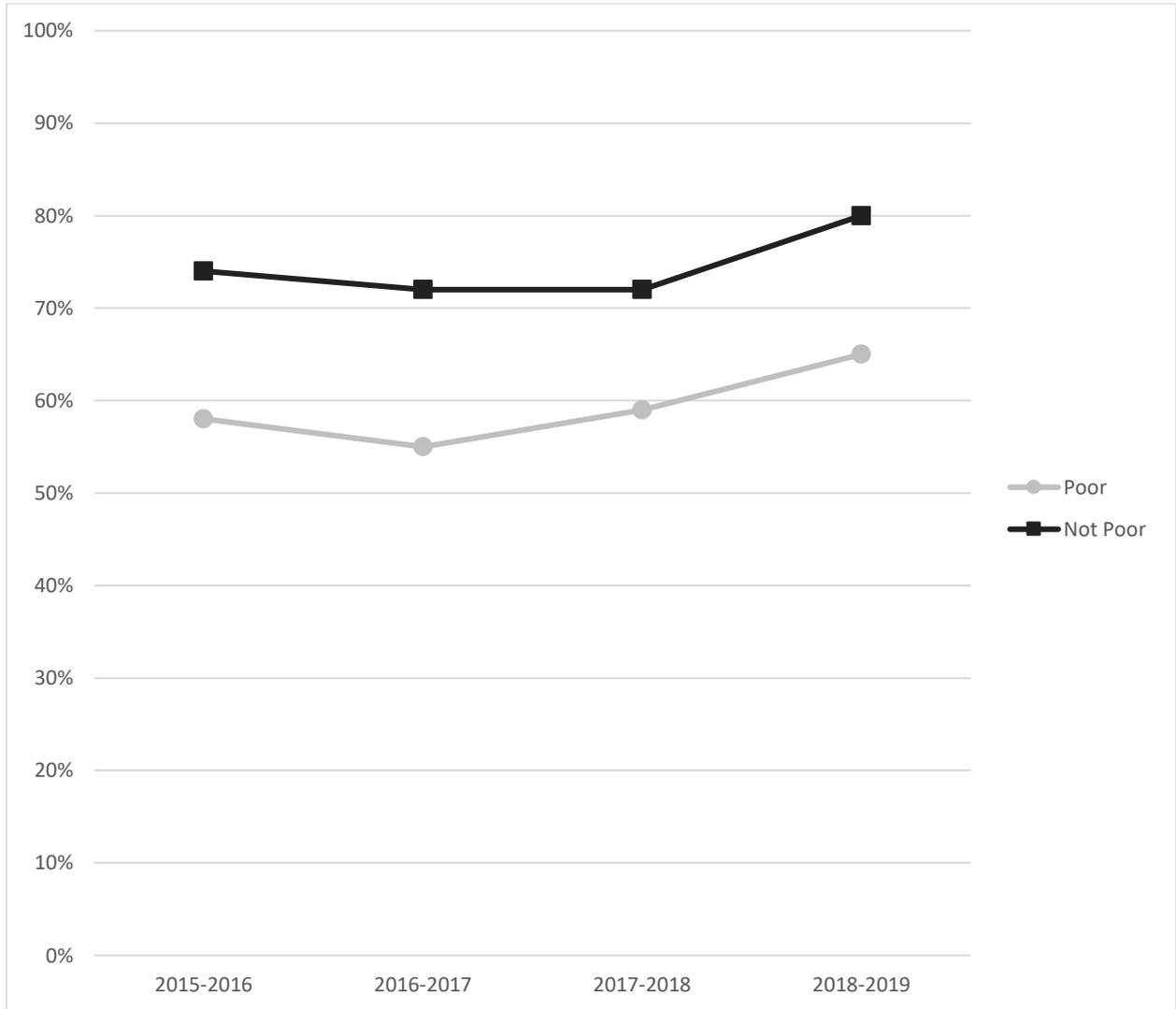


Figure 8. Grade 3 Reading Reporting Category II scores by the economic status of Hispanic boys for the 2015-2016 through the 2018-2019 school years.

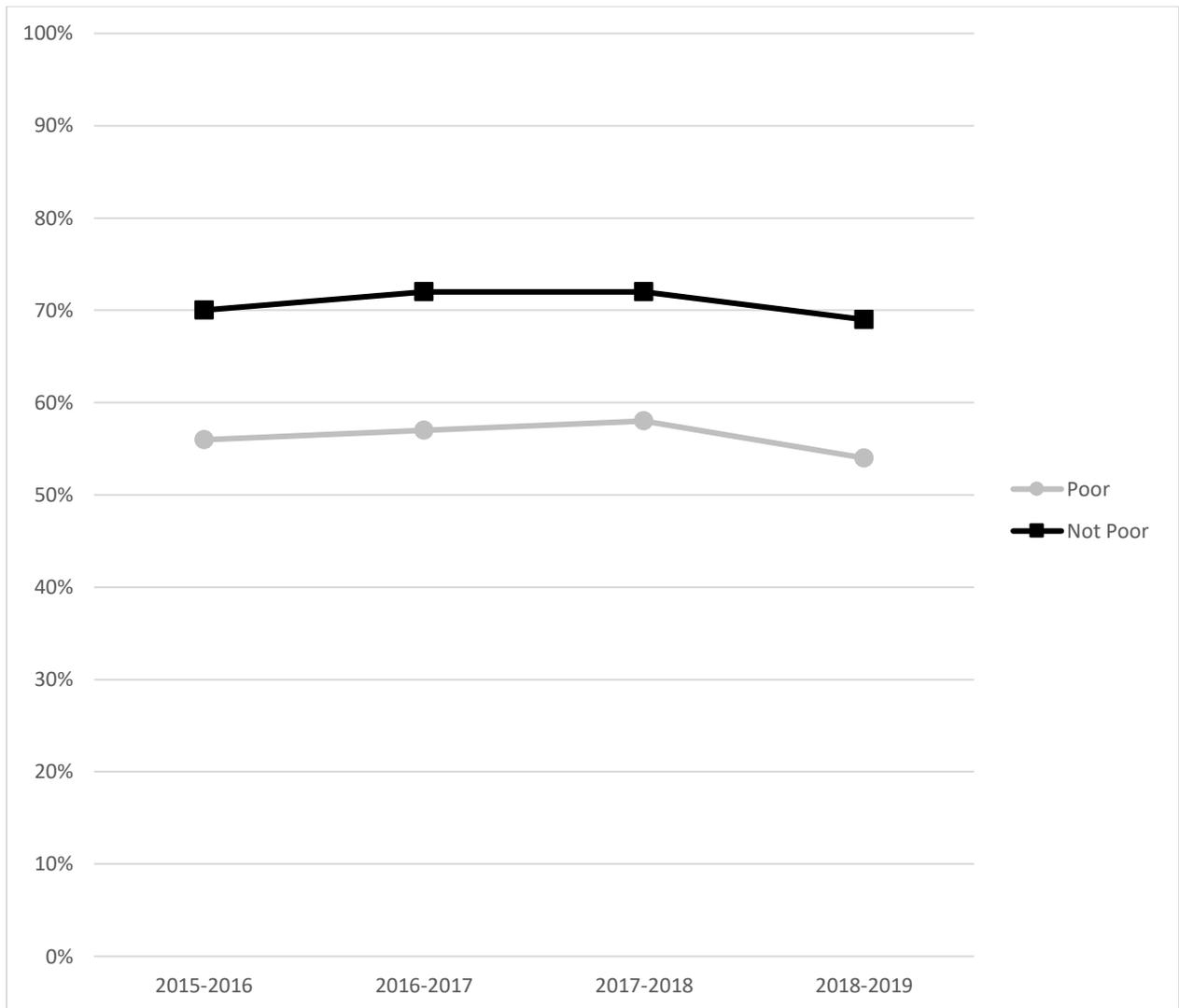


Figure 9. Grade 3 Reading Reporting Category III scores by the economic status of Hispanic boys for the 2015-2016 through the 2018-2019 school years.

To ascertain whether differences were present in the three Grade 3 STAAR Reading Phase-in standards (i.e., Approaches Grade Level, Meets Grade Level, or Masters Grade Level) by the economic status of underrepresented boys, Pearson chi-square analyses were conducted. Because frequency data were present for the independent and dependent variables, this statistical procedure was optimal. When both variables are categorical, chi-squares are the statistical procedure of choice (Slate & Rojas-LeBouef, 2011).

Grade Level Standard Results for Asian Boys

Regarding the economic status of Asian boys in 2015-2016 and their performance on the Approaches Grade Level standard, the result was statistically significant, $\chi^2(1) = 516.09, p < .001$, Cramer’s V of .41, moderate effect size (Cohen, 1988). Slightly over 55% of Asian boys who were Poor met the Approaches Grade Level standard, compared to approximately 95% of Asian boys who were Not Poor who met this standard. In regard to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 466.45, p < .001$, Cramer’s V of .39, moderate effect size (Cohen, 1988). At the Meets Grade Level standard, less than 26% of Asian boys who were Poor met this standard in comparison to over 81% of Asian boys who were Not Poor. Finally, for the Masters Grade Level performance level, the result was statistically significant, $\chi^2(1) = 260.59, p < .001$, Cramer’s V of .29, small effect size (Cohen, 1988). Less than 15% of Asian boys who were Poor met this standard, whereas slightly less than 62% of Asian boys who were Not Poor met this standard.

Concerning the economic status of Asian boys in 2016-2017 and their performance on the Approaches Grade Level standard, a statistically significant difference was yielded, $\chi^2(1) = 472.04, p < .001$, Cramer’s V of .38, moderate effect size (Cohen, 1988). Less than 62% of Asian boys who were Poor met the Approaches Grade

Level standard, compared to approximately 96% of Asian boys who were Not Poor who met this standard. In regard to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 344.72$, $p < .001$, Cramer's V of .32, moderate effect size (Cohen, 1988). At the Meets Grade Level standard, only about 35% of Asian boys who were Poor met this standard compared to over 83% of Asian boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was revealed, $\chi^2(1) = 231.66$, $p < .001$, Cramer's V of .26, small effect size (Cohen, 1988). Less than 21% of Asian boys who were Poor met this highest standard, whereas slightly less than 68% of Asian boys who were Not Poor met this standard. Table 4 contains the descriptive statistics for these analyses.

Table 4. Frequencies and Percentages of Grade 3 STAAR Reading Performance of Asian Boys by Their Economic Status for the 2015-2016 and the 2016-2017 School Years

School Year, Performance, and Group Membership	Did Not Meet Standard <i>n</i> and %age of Total	Met Standard <i>n</i> and %age of Total
2015-2016 Approaches Grade Level		
Not Poor	(<i>n</i> = 142) 5.1%	(<i>n</i> = 2,635) 94.9%
Poor	(<i>n</i> = 133) 44.6%	(<i>n</i> = 165) 55.4%
2015-2016 Meets Grade Level		
Not Poor	(<i>n</i> = 511) 18.4%	(<i>n</i> = 2,266) 81.6%
Poor	(<i>n</i> = 222) 74.5%	(<i>n</i> = 76) 25.5%
2015-2016 Masters Grade Level		
Not Poor	(<i>n</i> = 1,061) 38.2%	(<i>n</i> = 1,716) 61.8%
Poor	(<i>n</i> = 259) 86.9%	(<i>n</i> = 39) 13.1%
2016-2017 Approaches Grade Level		
Not Poor	(<i>n</i> = 114) 3.8%	(<i>n</i> = 2,917) 96.2%
Poor	(<i>n</i> = 100) 38.3%	(<i>n</i> = 161) 61.7%
2016-2017 Meets Grade Level		
Not Poor	(<i>n</i> = 501) 16.5%	(<i>n</i> = 2,530) 83.5%
Poor	(<i>n</i> = 169) 64.8%	(<i>n</i> = 92) 35.2%
2016-2017 Masters Grade Level		
Not Poor	(<i>n</i> = 976) 32.2%	(<i>n</i> = 2,055) 67.8%
Poor	(<i>n</i> = 207) 79.3%	(<i>n</i> = 54) 20.7%

With respect to the economic status of Asian boys in 2017-2018 and their performance on the Approaches Grade Level standard, the result was statistically significant, $\chi^2(1) = 431.39$, $p < .001$, Cramer's V of .37, moderate effect size (Cohen, 1988). Slightly less than 65% of Asian boys who were Poor met the Approaches Grade Level standard in comparison to approximately 98% of Asian boys who were Not Poor who met this standard. Concerning the Meets Grade Level performance level, a statistically significant difference was yielded, $\chi^2(1) = 221.52$, $p < .001$, Cramer's V of .27, small effect size (Cohen, 1988). At the Meets Grade Level standard, less

than 33% of Asian boys who were Poor met this standard compared to over 82% of Asian boys who were Not Poor. Finally, for the Masters Grade Level performance level, the result was statistically significant, $\chi^2(1) = 107.05$, $p < .001$, Cramer's V of .19, small effect size (Cohen, 1988). Only 20% of Asian boys who were Poor met this standard, whereas almost 63% of Asian boys who were Not Poor met this standard.

Regarding the economic status of Asian boys in 2018-2019 and their performance on the Approaches Grade Level standard, a statistically significant difference was revealed, $\chi^2(1) = 534.89$, $p < .001$, Cramer's V of .40, moderate effect size (Cohen, 1988). Only 60% of Asian boys who were Poor met the Approaches Grade Level standard, compared to almost all, 98%, of Asian boys who were Not Poor who met this standard. With respect to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 309.90$, $p < .001$, Cramer's V of .30, moderate effect size (Cohen, 1988). At the Meets Grade Level standard, only 30% of Asian boys who were Poor met this standard compared to approximately 85% of Asian boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was yielded, $\chi^2(1) = 177.04$, $p < .001$, Cramer's V of .23, small effect size (Cohen, 1988). Less than 20% of Asian boys who were Poor met this standard, whereas approximately 70% of Asian boys who were Not Poor met this standard. Revealed in Table 5 are the descriptive statistics for the analyses of the Grade 3 STAAR Reading Performance of Asian boys by economic status for the 2017-2018 and the 2018-2019 school years.

Table 5. Frequencies and Percentages of Grade 3 STAAR Reading Performance of Asian Boys by Their Economic Status for the 2017-2018 and the 2018-2019 School Years

School Year, Performance, and Group Membership	Did Not Meet Standard <i>n</i> and %age of Total	Met Standard <i>n</i> and %age of Total
2017-2018 Approaches Grade Level		
Not Poor	(<i>n</i> = 65) 2.2%	(<i>n</i> = 2,862) 97.8%
Poor	(<i>n</i> = 54) 35.5%	(<i>n</i> = 98) 64.5%
2017-2018 Meets Grade Level		
Not Poor	(<i>n</i> = 524) 17.9%	(<i>n</i> = 2,403) 82.1%
Poor	(<i>n</i> = 103) 67.8%	(<i>n</i> = 49) 32.2%
2017-2018 Masters Grade Level		
Not Poor	(<i>n</i> = 1,098) 37.5%	(<i>n</i> = 1,829) 62.5%
Poor	(<i>n</i> = 121) 79.6%	(<i>n</i> = 31) 20.4%
2018-2019 Approaches Grade Level		
Not Poor	(<i>n</i> = 78) 2.4%	(<i>n</i> = 3,137) 97.6%
Poor	(<i>n</i> = 63) 40.4%	(<i>n</i> = 93) 59.6%
2018-2019 Meets Grade Level		
Not Poor	(<i>n</i> = 491) 15.3%	(<i>n</i> = 2,724) 84.7%
Poor	(<i>n</i> = 110) 70.5%	(<i>n</i> = 46) 29.5%
2018-2019 Masters Grade Level		
Not Poor	(<i>n</i> = 973) 30.3%	(<i>n</i> = 2,242) 69.7%
Poor	(<i>n</i> = 127) 81.4%	(<i>n</i> = 29) 18.6%

Grade Level Standard Results for Black Boys

Regarding the economic status of Black boys in the 2015-2016 school year and their performance on the Approaches Grade Level standard, the result was statistically significant, $\chi^2(1) = 468.86$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). Less than half of Black boys who were Poor met the Approaches Grade Level standard, compared to approximately 78% of Black boys who were Not Poor who met this standard. In regard to the Meets Grade Level performance level, a statistically significant difference was revealed, $\chi^2(1) = 542.52$, $p < .001$, Cramer's V of .24, small effect size (Cohen, 1988). At the Meets Grade Level standard, less than 20% of Black boys who were Poor met this standard in comparison to over 45% of Black boys who were Not Poor. Finally, for the Masters Grade Level performance level, the result was statistically significant, $\chi^2(1) =$

406.61, $p < .001$, Cramer's V of .21, small effect size (Cohen, 1988). Less than 8% of Black boys who were Poor met this standard, whereas slightly less than 25% of Black boys who were Not Poor met this standard.

Concerning the economic status of Black boys in 2016-2017 and their performance on the Approaches Grade Level standard, a statistically significant difference was yielded, $\chi^2(1) = 398.50$, $p < .001$, Cramer's V of .19, small effect size (Cohen, 1988). Less than half of Black boys who were Poor met the Approaches Grade Level standard, compared to almost three-fourths of Black boys who were Not Poor who met this standard. In regard to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 515.31$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). At the Meets Grade Level standard, less than 20% of Black boys who were Poor met this standard, compared to approximately 45% of Black boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was revealed, $\chi^2(1) = 414.04$, $p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). Less than 10% of Black boys who were Poor met this highest standard, whereas slightly less than 27% of Black boys who were Not Poor met this standard. Table 6 contains the descriptive statistics for these analyses.

Table 6. Frequencies and Percentages of Grade 3 STAAR Reading Performance of Black Boys by Their Economic Status for the 2015-2016 and the 2016-2017 School Years

School Year, Performance, and Group Membership	Did Not Meet Standard <i>n</i> and %age of Total	Met Standard <i>n</i> and %age of Total
2015-2016 Approaches Grade Level		
Not Poor	<i>n</i> = 375) 22.2%	<i>n</i> = 1,314) 77.8%
Poor	<i>n</i> = 3,989) 51.2%	<i>n</i> = 3,807) 48.8%
2015-2016 Meets Grade Level		
Not Poor	<i>n</i> = 926) 54.8%	<i>n</i> = 763) 45.2%
Poor	<i>n</i> = 6,338) 81.3%	<i>n</i> = 1,458) 18.7%
2015-2016 Masters Grade Level		
Not Poor	<i>n</i> = 1,271) 75.3%	<i>n</i> = 418) 24.7%
Poor	<i>n</i> = 7,181) 92.1%	<i>n</i> = 615) 7.9%
2016-2017 Approaches Grade Level		
Not Poor	<i>n</i> = 545) 27.7%	<i>n</i> = 1,421) 72.3%
Poor	<i>n</i> = 4,573) 52.6%	<i>n</i> = 4,116) 47.4%
2016-2017 Meets Grade Level		
Not Poor	<i>n</i> = 1,102) 56.1%	<i>n</i> = 864) 43.9%
Poor	<i>n</i> = 6,979) 80.3%	<i>n</i> = 1,710) 19.7%
2016-2017 Masters Grade Level		
Not Poor	<i>n</i> = 1,444) 73.4%	<i>n</i> = 522) 26.6%
Poor	<i>n</i> = 7,854) 90.43%	<i>n</i> = 835) 9.6%

Regarding the economic status of Black boys in 2017-2018 and their performance on the Approaches Grade Level standard, the result was statistically significant, $\chi^2(1) = 331.47, p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). More than half, 56%, of Black boys who were Poor met the Approaches Grade Level standard compared to over 83% of Black boys who were Not Poor who met this standard. With respect to the Meets Grade Level performance level, a statistically significant difference was yielded, $\chi^2(1) = 423.61, p < .001$, Cramer's V of .23, small effect size (Cohen, 1988). At the Meets Grade Level standard, 21% of Black boys who were Poor met this standard compared to approximately 47% of Black boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was revealed, $\chi^2(1) = 317.75, p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). Less than 9% of Black boys who were Poor met this standard, whereas approximately 26% of Black boys who were Not Poor met this standard.

With respect to the economic status of Black boys in 2018-2019 and their performance on the Approaches Grade Level standard, a statistically significant difference was yielded, $\chi^2(1) = 302.76, p < .001$, Cramer's V of .20, moderate effect size (Cohen, 1988). Slightly less than 56% of Black boys who were Poor met the Approaches Grade Level standard in comparison to approximately 82% of Black boys who were Not Poor who met this standard. Concerning the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 370.86, p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). At the Meets Grade Level standard, less than 23% of Black boys who were Poor met this standard compared to approximately 50% of Black boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was revealed, $\chi^2(1) = 307.71, p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). Only 11% of Black boys who were Poor met this standard, whereas almost 30% of Black boys who were Not Poor met this standard. Revealed in Table 7 are the descriptive statistics for these analyses for the 2017-2018 and the 2018-2019 school years.

Table 7. Frequencies and Percentages of Grade 3 STAAR Reading Performance of Black Boys by Their Economic Status for the 2017-2018 and the 2018-2019 School Years

School Year, Performance, and Group Membership	Did Not Meet Standard <i>n</i> and % age of Total	Met Standard <i>n</i> and % age of Total
2018-2019 Approaches Grade Level		
Not Poor	(<i>n</i> = 220) 16.7%	(<i>n</i> = 1,094) 83.3%
Poor	(<i>n</i> = 2,914) 43.6%	(<i>n</i> = 3,776) 56.4%
2018-2019 Meets Grade Level		
Not Poor	(<i>n</i> = 691) 52.6%	(<i>n</i> = 623) 47.4%
Poor	(<i>n</i> = 5,316) 79.5%	(<i>n</i> = 1,374) 20.5%
2018-2019 Masters Grade Level		
Not Poor	(<i>n</i> = 970) 73.8%	(<i>n</i> = 344) 26.2%
Poor	(<i>n</i> = 6,096) 91.1%	(<i>n</i> = 594) 8.9%
2018-2019 Approaches Grade Level		
Not Poor	(<i>n</i> = 215) 17.8%	(<i>n</i> = 994) 82.2%
Poor	(<i>n</i> = 2,738) 44.6%	(<i>n</i> = 3,397) 55.4%
2018-2019 Meets Grade Level		
Not Poor	(<i>n</i> = 615) 50.9%	(<i>n</i> = 594) 49.1%
Poor	(<i>n</i> = 4,766) 77.7%	(<i>n</i> = 1,369) 22.3%
2018-2019 Masters Grade Level		
Not Poor	(<i>n</i> = 850) 70.3%	(<i>n</i> = 359) 29.7%
Poor	(<i>n</i> = 5,481) 89.3%	(<i>n</i> = 654) 10.7%

Grade Level Standard Results for Hispanic Boys

Concerning the economic status of Hispanic boys in 2015-2016 and their performance on the Approaches Grade Level standard, a statistically significant difference was revealed, $\chi^2(1) = 2159.60$, $p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). Less than 61% of Hispanic boys who were Poor met the Approaches Grade Level standard, compared to approximately 86% of Hispanic boys who were Not Poor who met this standard. In regard to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 3003.65$, $p < .001$, Cramer's V of .24, small effect size (Cohen, 1988). At the Meets Grade Level standard, only about 27% of Hispanic boys who were Poor met this standard in comparison to over 56% of Hispanic boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was yielded, $\chi^2(1) =$

2333.85, $p < .001$, Cramer's V of .21, small effect size (Cohen, 1988). Less than 13% of Hispanic boys who were Poor met this highest standard, whereas 33% of Hispanic boys who were Not Poor met this standard.

Regarding the economic status of Hispanic boys in 2016-2017 and their performance on the Approaches Grade Level standard, a statistically significant difference was yielded, $\chi^2(1) = 1930.53$, $p < .001$, Cramer's V of .21, small effect size (Cohen, 1988). Approximately 59% of Hispanic boys who were Poor met the Approaches Grade Level standard, compared to approximately 85% of Hispanic boys who were Not Poor who met this standard. In regard to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 2513.11$, $p < .001$, Cramer's V of .24, small effect size (Cohen, 1988). At the Meets Grade Level standard, less than 29% of Hispanic boys who were Poor met this standard compared to over 57% of Hispanic boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was revealed, $\chi^2(1) = 2120.53$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). Less than 16% of Hispanic boys who were Poor met this standard, whereas less than 39% of Hispanic boys who were Not Poor met this standard. Table 8 contains the descriptive statistics for these analyses.

Table 8. Frequencies and Percentages of Grade 3 STAAR Reading Performance of Hispanic Boys by Their Economic Status for the 2015-2016 and the 2016-2017 School Years

School Year, Performance, and Group Membership	Did Not Meet Standard <i>n</i> and %age of Total	Met Standard <i>n</i> and %age of Total
2015-2016 Approaches Grade Level		
Not Poor	(<i>n</i> = 1,282) 14.1%	(<i>n</i> = 7,829) 85.9%
Poor	(<i>n</i> = 16,898) 39.7%	(<i>n</i> = 25,682) 60.3%
2015-2016 Meets Grade Level		
Not Poor	(<i>n</i> = 3,975) 43.6%	(<i>n</i> = 5,136) 56.4%
Poor	(<i>n</i> = 31,148) 73.2%	(<i>n</i> = 11,432) 26.8%
2015-2016 Masters Grade Level		
Not Poor	(<i>n</i> = 6,104) 67.0%	(<i>n</i> = 3,007) 33.0%
Poor	(<i>n</i> = 37,257) 87.5%	(<i>n</i> = 5,323) 12.5%
2016-2017 Approaches Grade Level		
Not Poor	(<i>n</i> = 1,231) 15.3%	(<i>n</i> = 6,828) 84.7%
Poor	(<i>n</i> = 15,069) 41.3%	(<i>n</i> = 21,392) 58.7%
2016-2017 Meets Grade Level		
Not Poor	(<i>n</i> = 3,417) 42.4%	(<i>n</i> = 4,642) 57.6%
Poor	(<i>n</i> = 26,095) 71.6%	(<i>n</i> = 10,366) 28.4%
2016-2017 Masters Grade Level		
Not Poor	(<i>n</i> = 4,985) 61.9%	(<i>n</i> = 3,074) 38.1%
Poor	(<i>n</i> = 30,771) 84.4%	(<i>n</i> = 5,690) 15.6%

With respect to the economic status of Hispanic boys in 2017-2018 and their performance on the Approaches Grade Level standard, a statistically significant difference was revealed, $\chi^2(1) = 1117.60$, $p < .001$, Cramer's V of .18, small effect size (Cohen, 1988). Slightly less than 69% of Hispanic boys who were Poor met the Approaches Grade Level standard in comparison to approximately 90% of Hispanic boys who were Not Poor who met this standard. Concerning the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 1786.78$, $p < .001$, Cramer's V of .23, small effect size (Cohen, 1988). At the Meets Grade Level standard, less than 30% of Hispanic boys who were Poor met this standard compared to over 58% of Hispanic boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was yielded, $\chi^2(1) = 1670.94$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). Only 14% of Hispanic boys who were Poor met this standard, whereas almost 36% of Hispanic boys who were Not Poor met this standard.

Regarding the economic status of Hispanic boys in 2018-2019 and their performance on the Approaches Grade Level standard, a statistically significant difference was revealed, $\chi^2(1) = 1252.60, p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). Only 67% of Hispanic boys who were Poor met the Approaches Grade Level standard compared to almost 90% of Hispanic boys who were Not Poor who met this standard. With respect to the Meets Grade Level performance level, the result was statistically significant, $\chi^2(1) = 1868.39, p < .001$, Cramer's V of .24, small effect size (Cohen, 1988). At the Meets Grade Level standard, only 31% of Hispanic boys who were Poor met this standard compared to approximately 61% of Hispanic boys who were Not Poor. Finally, for the Masters Grade Level performance level, a statistically significant difference was yielded, $\chi^2(1) = 1670.29, p < .001$, Cramer's V of .23, small effect size (Cohen, 1988). Less than 16% of Hispanic boys who were Poor met this standard, whereas approximately 40% of Hispanic boys who were Not Poor met this standard. Revealed in Table 9 are the descriptive statistics for the analyses of the Grade 3 STAAR Reading Performance of Hispanic boys by economic status for the 2018-2019 and the 2018-2019 school years.

Table 9. Frequencies and Percentages of Grade 3 STAAR Reading Performance of Hispanic Boys by Their Economic Status for the 2017-2018 and the 2018-2019 School Years

School Year, Performance, and Group Membership	Did Not Meet Standard <i>n</i> and %age of Total	Met Standard <i>n</i> and %age of Total
2017-2018 Approaches Grade Level		
Not Poor	<i>(n</i> = 630) 10.4%	<i>(n</i> = 5,411) 89.6%
Poor	<i>(n</i> = 8,988) 31.7%	<i>(n</i> = 19,376) 68.3%
2017-2018 Meets Grade Level		
Not Poor	<i>(n</i> = 2,531) 41.9%	<i>(n</i> = 3,510) 58.1%
Poor	<i>(n</i> = 19,966) 70.4%	<i>(n</i> = 8,398) 29.6%
2017-2018 Masters Grade Level		
Not Poor	<i>(n</i> = 3,882) 64.3%	<i>(n</i> = 2,159) 35.7%
Poor	<i>(n</i> = 24,479) 86.3%	<i>(n</i> = 3,885) 13.7%
2018-2019 Approaches Grade Level		
Not Poor	<i>(n</i> = 603) 10.1%	<i>(n</i> = 5,387) 89.9%
Poor	<i>(n</i> = 8,333) 33.1%	<i>(n</i> = 16,866) 66.9%
2018-2019 Meets Grade Level		
Not Poor	<i>(n</i> = 2,354) 39.3%	<i>(n</i> = 3,636) 60.7%
Poor	<i>(n</i> = 17,442) 69.2%	<i>(n</i> = 7,757) 30.8%
2018-2019 Masters Grade Level		
Not Poor	<i>(n</i> = 3,623) 60.5%	<i>(n</i> = 2,367) 39.5%
Poor	<i>(n</i> = 21,206) 84.2%	<i>(n</i> = 3,993) 15.8%

Results for the Reading Reporting Categories Analyses Over Time

With regard to trends in the differences in the Reading Reporting Category scores between Asian boys who were Poor and Asian boys who were Not Poor from the 2015-2016 through the 2018-2019 school years, Asian boys who were Poor scored below Asian boys who were Not Poor at every measure. Asian boys who were Poor had statistically significantly lower average scores in each Reading Reporting Category. Concerning the Reading Reporting Category I scores, Asian boys who were Poor scored an average of 29% lower than Asian boys who were Not Poor. With respect to the Reading Reporting Category II scores, Asian boys who were Poor scored an average of approximately 28% less than Asian boys who were Not Poor. Regarding the Reading Reporting Category III scores, Asian boys who were Poor earned an average of approximately 27% less than Asian boys who were Not Poor.

Concerning the trends in the differences in the Reading Reporting Category scores between Black boys who were Poor and Black boys who were Not Poor from the 2015-2016 through the 2018-2019 school years, Black boys who were Poor scored below Black boys who were Not Poor at every measure. Black boys who were Poor had statistically significantly lower average scores in each Reading Reporting Category. Concerning the Reading Reporting Category I scores, Black boys who were Poor scored an average of 15% lower than Black boys who were Not Poor. With respect to the Reading Reporting Category II scores, Black boys who were Poor scored an average of approximately 14% less than Black boys who were Not Poor. Regarding the Reading Reporting Category III scores, Black boys who were Poor earned an average of approximately 15% less than Black boys who were Not Poor.

With respect to trends in the differences in the Reading Reporting Category scores between Hispanic boys who were Poor and Hispanic boys who were Not Poor from the 2015-2016 through the 2018-2019 school years, Hispanic boys who were Poor scored below Hispanic boys who were Not Poor at every measure. Hispanic boys who were Poor had statistically significantly lower average scores in each Reading Reporting Category. Concerning the Reading Reporting Category I scores, Hispanic boys who were Poor scored an average of approximately 15% lower than Hispanic boys who were Not Poor. With respect to the Reading Reporting Category II scores, Hispanic boys who were Poor scored an average of approximately 15% less than Hispanic boys who were Not Poor. Regarding the Reading Reporting Category III scores, Hispanic boys who were Poor earned an average of approximately 15% less than Hispanic boys who were Not Poor.

Results for the Grade Level Phase-In Standards Over Time

Concerning trends in the differences in the Grade Level Phase-in Standards between Asian boys who were Poor and Asian boys who were Not Poor from the 2015-2016 through the 2018-2019 school years, Asian boys who were Poor scored below Asian boys who were Not Poor at every measure. Asian boys who were Poor had statistically significantly lower rates of achieving each grade level standard. Asian boys who were Poor met the Approaches Grade Level standard an average of 36% less than Asian boys who were Not Poor. Asian boys who were Poor met the Meets Grade Level standard an average of 52% less than Asian boys who were Not Poor. Asian boys who were Poor met the Masters Grade Level standard an average of 47% less than Asian boys who were Not Poor.

With respect to trends in the differences in the Grade Level Phase-in Standards between Black boys who were Poor and Black boys who were Not Poor from the 2015-2016 through the 2018-2019 school years, Black boys who were Poor scored below Black boys who were Not Poor at every measure. Black boys who were Poor had statistically significantly lower rates of achieving each grade level standard. Black boys who were Poor met the Approaches Grade Level standard an average of approximately 27% less than Black boys who were Not Poor. Black boys who were Poor met the Meets Grade Level standard an average of approximately 26% less than Black boys who were Not Poor. Black boys who were Poor met the Masters Grade Level standard an average of approximately 18% less than Black boys who were Not Poor.

Concerning trends in the differences in the Grade Level Phase-in Standards between Hispanic boys who were Poor and Hispanic boys who were Not Poor from the 2015-2016 through the 2018-2019 school years, Hispanic boys who were Poor scored below Hispanic boys who were Not Poor at every measure. Hispanic boys who were Poor had statistically significantly lower rates of achieving each grade level standard. Hispanic boys who were Poor met the Approaches Grade Level standard an average of approximately 24% less than Hispanic boys who were Not Poor. Hispanic boys who were Poor met the Meets Grade Level standard an average of

approximately 29% less than Hispanic boys who were Not Poor. Hispanic boys who were Poor met the Masters Grade Level standard an average of approximately 22% less than Hispanic boys who were Not Poor.

Discussion

Analyzed in this investigation was the extent to which differences were present in the reading performance of Texas Grade 3 underrepresented boys by their economic status. Four years of statewide data on the three Grade 3 STAAR Reading Reporting Categories were examined for Poor and Not Poor Asian boys, Poor and Not Poor Black boys, and Poor and Not Poor Hispanic boys. Statistically significant results were present in all four school years. Following these statistical analyses, the Grade Level Phase-in Standards by the economic status of underrepresented boys were examined and yielded statistically significant results in all four school years.

In each of the three STAAR Reading Reporting Category results in all four years analyzed, underrepresented boys who were Poor had statistically significantly lower scores than underrepresented boys who were Not Poor. The differences were consistent regarding the gap between Asian boys who were Poor and Asian boys who were Not Poor. In each Reporting Category, the gap between the two student groups was over 27%. The Reporting Category with the lowest average score for all student groups was Reporting Category III.

Similarly, in each of the three Grade Level Phase-in Standards in all four years investigated, underrepresented boys who were Poor had statistically significantly lower achievement than underrepresented boys who were Not Poor. Effect sizes for the reading performance of Asian boys ranged from moderate to small each year at each Grade Level Phase-in Standard. Effect sizes for Black boys and Hispanic boys were small each year at each Grade Level Phase-in Standard.

Connections to Existing Literature

Clearly established in this multiyear, statewide analysis are the effects of poverty on student reading achievement. In previous articles, researchers (Hamilton & Slate, 2019; Harris, 2018; McGown, 2016; Schleeter, 2017) have documented statistically significant differences between students from poverty backgrounds and students who were not from poverty backgrounds. Results were consistent across grade levels and ethnic/racial backgrounds.

Researchers (Gardner-Neblett & Iruka, 2015; Hernandez, 2011; Stinnett, 2014) have examined the link between poverty and low-level literacy skills. The lack of literacy opportunities for students from poverty backgrounds is well-documented and contributes to lower literacy skills (Gardner-Neblett & Iruka, 2015; Hernandez, 2011; Stinnett, 2014). Literacy opportunities include exposure to varied vocabulary and syntax (Stinnett, 2014) and minimized time to learn due to frequent absences attributed to increased health or family problems (Hernandez, 2011).

Implications for Policy and Practice

Based on the analysis of four years of Texas statewide data, several implications for policy and for practice can be recommended. With respect to policy implications, legislators passed House Bill 3 (Texas Education Agency, 2019b) in 2019, creating funding for high-quality, full-day Pre-K for all eligible 4-year old children. The funding must be maintained beyond the current legislative session. Maintaining funding will allow researchers to conduct future studies and to determine the success rate of the program. Also included in House Bill 3 was a requirement for all elementary teachers to be trained on the science of reading (Texas Education Agency, 2019b). Continuing this requirement into future legislative sessions is necessary to ensure teachers are prepared to provide literacy instruction across all content areas.

Regarding implications for practice, underrepresented boys from poverty backgrounds require additional instruction to meet the rigorous standards assessed on the STAAR Reading test. Empowering teachers with additional knowledge, including being trained in the science of reading, to combat gaps in literacy development is necessary to ensure gaps do not grow in future school years. Furthermore, teachers should utilize resources designed to address the Texas standards. Curriculum leaders must review all adopted materials and check for alignment.

Recommendations for Future Research

Given the results of this empirical multiyear investigation, several recommendations for future research can be made. First, this study was conducted on data on only Grade 3 underrepresented boys. The degree to which findings obtained herein would be generalizable to underrepresented boys in other grade levels is not known. Accordingly, researchers are encouraged to examine the reading achievement of underrepresented boys at middle schools and at high schools. Second, because only reading performance was addressed in this article, researchers should examine the degree to which economic status is related to other subjects such as mathematics, science, and social studies. Third, researchers should ascertain the extent to which results from this Texas statewide analysis would be generalizable to underrepresented boys in other states. The extent to which the results of this investigation can be generalized to other states is unknown. Fourth, researchers are encouraged to examine the reading achievement of underrepresented girls, because only data on underrepresented boys were examined in this study. Finally, researchers are encouraged to conduct longitudinal studies in which they follow the progress of students over the course of their public-school careers. The results would allow researchers to analyze how economic status affects underrepresented boys over time.

Conclusions

The purpose of this research investigation was to determine the degree to which differences were present in the reading performance of Texas Grade 3 underrepresented boys as a function of their economic status. Inferential statistical procedures revealed the presence of statistically significant differences in the reading achievement of Asian boys, Black boys, and Hispanic boys by their economic status. By every measure, Asian boys who were Poor achieved at a lower rate than Asian boys who were Not Poor, Black boys who were Poor were less successful than Black boys who were Not Poor, and Hispanic boys who were Poor achieved at a lower rate than Hispanic boys who were Not Poor. As such, poverty was clearly established as a detrimental influence on student reading performance.

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