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Differences in the Reading Performance of Texas Grade 4 Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools: A Multiyear Analysis

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ABSTRACT

In this investigation, the reading performance of Texas Grade 4 boys was compared by their enrollment or non-enrollment in Title I, Part A schools. Data were obtained from the Texas Education Agency Public Education Information Management System for all Grade 4 boys in Texas who took the State of Texas Assessment of Academic Readiness assessment in the 2016-2017, 2017-2018, and 2018-2019 school years. Inferential statistical analyses revealed the presence of statistically significant differences in all three school years. Boys enrolled in non-Title I, Part A schools outperformed boys enrolled in Title I, Part A schools in all three Reading Reporting Categories and in all three grade level standards. Recommendations for research and implications for policy and practice are suggested.

Keywords: Grade 4, Grade Level Standards, STAAR Reading, Title I, Part A

INTRODUCTION

In 2015, the Every Student Succeeds Act, was passed by the U.S. Department of Education. This law, which replaced the No Child Left Behind Act of 2002, was enacted with mandates aimed at ensuring all students receive an equitable, high-quality education. As such, states implemented processes to close educational achievement gaps (U.S.

Department of Education, 2017). Because the phrase, achievement gap, implies that individuals are to blame for their performance, we will use the phrase, opportunity gap, because of its connotations of institutional or systemic issues underlying student performance. Despite policies targeted at closing educational opportunity gaps, the 2015 Brown Center Report on American Education (2015) concluded, "The most recent results from reading tests of the National Assessment of Educational Progress (NAEP) show girls outscoring boys at every grade level and age examined" (p. 9). These results are consistent with historical NAEP data which indicate over the past decade the presence of substantial reading gender disparities, with girls outperforming boys at Grades 4, 8, and 12 (Zhang et al., 2020). Specifically, Reardon et al. (2019) determined that, "in virtually every school district in the United States, female students outperformed male students on ELA tests in Grades 3 through 8 during the 2008-2009 to 2015-2016 school years" (p. 2499). This gap, according to the researchers, is "larger than the effects of most large-scale educational interventions" (p. 2499). Furthermore, Kleinfeld (2009) explained, "Analysts argue that the fundamental issues are race and class, rather than sex, this is not the case. Racial gaps and socioeconomic gaps remain serious issues. Still it is boys who are performing at striking lower levels in literacy" (p. 126).

REVIEW OF THE LITERATURE

The intersection of poverty and gender should also be considered when it comes to student academic needs. According to Garrett-Peters et al. (2016), "family income poverty is the strongest predictor of school failure" (p. 16). As of 2021, 37.9 million people were living in poverty in the United States. Of this total, an estimated 14.5% were school-age children in school districts across the United States (United States Census Bureau, 2022). To support the academic needs of students living in poverty, the Title I program, originally authorized under the Elementary and Secondary Act of 1965, was reauthorized in 2015 under the Every Student Succeeds Act. The purpose of this title was to provide all children an opportunity to receive an equitable, high-quality education and to close educational opportunity gaps (U.S. Department of Education, 2018). Specifically, the Title I program provides additional resources to schools that serve students from low-income families. "These resources are used to improve the quality of education programs and ensure students from low-income families have opportunities to meet challenging state assessments" (Texas Education Agency, 2022, para. 1). Despite policies aimed at closing opportunity gaps, they continue to widen for students living in poverty.

With regard to the state of interest for this study, Texas, researchers (e.g., Hamilton & Slate, 2019; Mason et al., 2023; Pariseau, 2019; Schleeter et al., 2020) have analyzed the degree to which differences were present in the reading performance of Texas students on the State of Texas Assessments of Academic Readiness (STAAR), a mandated summative assessment, by their economic status (i.e., economically disadvantaged, not economically disadvantaged). In a recent Texas investigation, Hamilton and Slate (2019) examined the degree to which the economic status of Grade 3 Hispanic students and Black students was related to their reading achievement. They analyzed STAAR data for the 2015-2016 school year and established that Hispanic and Black students who were economically disadvantaged had statistically significantly lower reading achievement levels than their peers who were not in poverty. Regarding the three passing standards (i.e., Approaches Grade Level, Meets Grade Level, and Masters Grade Level), statistically significantly lower percentages of Hispanic and Black students in poverty met these three grade level standards than their peers who were not in poverty (Hamilton & Slate, 2019).

In a related study, Pariseau (2019) addressed the extent to which the economic status of Texas Grade 4 boys and girls in special education was related to their reading performance. He analyzed data for four school years (i.e., 2014-2015, 2015-2016, 2016-2017, 2017-2018) and documented statistically significantly lower reading achievement for boys and girls in special education who were in poverty than their peers in special education who were not economically disadvantaged. Regarding the passing standards (i.e. Approaches Grade Level, Meets Grade Level, and Masters Grade Level), statistically significantly lower percentages of boys and girls in special education who were economically disadvantaged met these grade level standards than their peers who were not in poverty and enrolled in special education (Pariseau, 2019).

The academic achievement of boys on the STAAR Reading test plays an integral role in providing valuable data on student progress toward mastery of literacy instruction in reading and all other content areas. In a recent Texas investigation, Hamilton (2020) examined the degree to which the economic status of Grade 3 Asian, Black, and Hispanic boys in Texas schools was related to their reading achievement. She analyzed data for four school years (i.e., 2015-2016, 2016-2017, 2017-2018, 2018-2019) and documented the presence of statistically significant differences in the reading performance of boys of color. In each of the four school years examined, Asian, Black, and Hispanic boys who were economically disadvantaged had statistically significantly lower reading achievement levels than their peers who were not poor (Hamilton, 2020).

In another study conducted in Texas, Harris (2018) addressed the reading performance of Texas Grade 4 boys. Analyzed in her study were three years of data (i.e., 2012-2013, 2013-2014, 2014-2015) from the state-mandated STAAR Reading assessment to determine whether gender differences were present. In her study, statistically significant gender opportunity gaps were present in reading for all three school years. Regarding the three reading reporting categories, girls outperformed boys (Harris, 2018). With respect to passing rates, Harris (2018) also documented that girls had higher passing rates in reading than boys.

Similarly, McGown (2016) examined the degree to which differences were present between boys and girls in Grade 3. She analyzed three years of Grade 3 STAAR Reading assessment data to determine whether trends were present in the data. Established by McGown (2016) was the presence of statistically significant gender opportunity gaps in reading for all three school years. Regarding the three reading reporting categories, girls outperformed boys (McGown, 2016). With respect to passing rates, McGown (2016) also documented that girls had higher passing rates in reading than boys.

Addressed in this study was the relationship between the reading achievement of Grade 4 boys and enrollment in Title I, Part A and non-Title I, Part A schools. Data collected from this study will add to the current literature as no published empirical articles could be located in which researchers had addressed the relationship between reading achievement and the combination of gender and enrollment in a Title I, Part A or non-Title I, Part A school.

Bernadowski (2016) explained, "Literacy instruction is unique in that teachers have the inimitable opportunity to teach students skills to become proficient, skilled readers, but they also teach curricular content due to the knowledge lurking in any written text" (p. 4). Due to connection of literacy to other content areas, educational leaders must ensure reading opportunities for all learners, regardless of gender, to demonstrate mastery of their learning. Relationships between gender and reading have been documented to exist (Hamilton, 2020; Harris, 2018; McGown, 2016). Researchers (e,g., Hamilton, 2020; McGown, 2016) have also examined the relationships between poverty and reading achievement. However, no published studies could be located in which researchers had addressed the relationship between reading achievement and the combination of gender and enrollment in a Title I, Part A or non-Title I, Part A school. For this reason, the focus of this study was on Grade 4 boys and the degree to which enrollment in a Title I, Part A or non-Title I, Part A school was related to reading performance on the state-mandated reading assessment in Texas.

PURPOSE OF THE STUDY

The purpose of this study was to determine the degree to which enrollment in a Title I, Part A school was related to the reading performance of Texas Grade 4 boys. Specifically addressed herein was the degree to which differences were present by the Title I, Part A school enrollment status of Texas Grade 4 boys on the three STAAR Reading Reporting Categories. Also examined was the extent to which Title I, Part A school enrollment differences existed in the percentages of Texas Grade 4 boys achieving at the three performance levels (i.e., Approaches Grade Level, Meets Grade Level, and Masters Grade Level). The final purpose of this study was to determine if any trends were present in the reporting categories and performance levels across three school years (i.e., 2016-2017, 2017-2018, 2018-2019) by the Title I, Part A school enrollment status of Texas Grade 4 boys.

RESEARCH QUESTIONS

In this study, the following overarching research question was addressed: What is the difference in the STAAR Grade 4 Reading performance of boys between Title I, Part A and non-Title I, Part A schools? Specific subquestions under this overarching research question were: (a) What is the difference in the understanding across genres performance on STAAR Grade 4 Reading for boys between Title I, Part A and non-Title I, Part A schools?; (b) What is the difference in the understanding/analysis of literary texts performance on STAAR Grade 4 Reading for boys between Title I, Part A and non-Title I, Part A schools?; (c) What is the difference in the understanding/analysis of informational texts performance on STAAR Grade 4 Reading for boys between Title I, Part A and non-Title I, Part A schools?; (d) What is the difference in the STAAR Grade 4 Reading Approaches Grade Level performance for boys between Title I, Part A and non-Title I, Part A schools?; (e) What is the difference in the STAAR Grade 4 Reading Meets Grade Level performance for boys between Title I, Part A and non-Title I, Part A schools?; (f) What is the difference in the STAAR Grade 4 Reading Masters Grade Level performance for boys between Title I, Part A and non-Title I, Part A schools?; and (g) What trends might be present in the performance of boys between Title I, Part A and non-Title I, Part A schools? These research subquestions were addressed for three school years (i.e., 2016-2017, 2017-2018, and 2018-2019).

RESEARCH METHOD

Research Design

For this investigation, the research design was non-experimental, quantitative, causal comparative (Johnson & Christensen, 2020). A causal comparative design was used to find relationships between independent and dependent variables that have already taken place (Johnson & Christensen, 2020). In this investigation, statewide archival data of the reading achievement of Grade 4 boys enrolled in Title I, Part A and non-Title I, Part A schools were analyzed to ascertain the effect of enrollment in a Title I, Part A school on their achievement in reading. The independent variable in this investigation was enrollment status (i.e., Title I Part, A or non-Title I, Part A) of Grade 4 boys in Texas. The dependent variables were the three STAAR Reading Reporting Categories (i.e., Reporting Category 1, Reporting Category 2, and Reporting Category 3) and the three STAAR Reading Performance Levels (i.e., Approaches Grade Level, Meets Grade Level, Masters Grade Level) for Grade 4 boys enrolled in Title I, Part A and non-Title I, Part A schools in Texas.

Participants and Instrumentation

The data analyzed in this investigation were requested from the Texas Education Agency Public Education Information Management System. Participants in this investigation were Grade 4 boys enrolled in Tile I, Part A and non-Title I, Part A schools in Texas who were administered the STAAR Reading exam in the 2016-2017, 2017-2018, and 2018-2019 school years. The request was made for datasets that included: (a) Grade 4 boys enrolled in Title I, Part A and non-Title I, Part A schools, (b) STAAR Reporting Categories, and (c) STAAR Reading Performance levels for the years of data in this investigation.

Reading achievement was ascertained using the three STAAR Reading Reporting Categories and the three STAAR Reading Performance Levels. The three STAAR Reading Reporting Categories were assessed to determine student reading achievement. In STAAR Reading Reporting Category 1, students' ability to understand and analyze written texts across multiple genres is measured. In STAAR Reading Reporting Category 2, students' ability to understand and analyze literary texts is measured. In STAAR Reading Reporting Category 3, the students' ability to understand and analyze information texts is measured.

The Texas Education Agency introduced three performance levels (i.e., Approaches Grade Level, Meets Grade Level, Masters Grade Level) in 2017 to communicate how well students achieved on the STAAR Reading Assessment (Texas Education Agency, 2017). At the Approaches

Grade Level standard, students are likely to succeed in the next grade or course with targeted academic intervention. Students in this category generally demonstrate the ability to apply the assessed knowledge and skills in familiar contexts (Texas Education Agency, 2017). At the Meets Grade Level standard, students are predicted to have the ability to succeed in the next grade level or course but will need short-term, targeted interventions. At the Masters Grade Level standard, students are predicted to have the ability to succeed in the next grade level or course with very little to no academic intervention (Texas Education Agency, 2017).

For the purpose of this investigation, a Title I, Part A school was defined by the United States Department of Education (2018) as a school in which children from low-income families make up at least 40% of enrollment and are eligible to use Title I funds to operate schoolwide programs that serve all children in the school to raise the achievement of the lowest-achieving students. Furthermore, the Texas Education Agency (2022) has outlined that Title I, Part A, of the Elementary and Secondary Education Act, as amended by the Every Student Succeeds Act of 2015, provides supplemental funding to state and local educational agencies to acquire additional educational resources at schools serving high concentrations of students from low-income homes. These resources are used to improve the quality of education programs and ensure students from low-income families have opportunities to meet challenging state assessments. A low-income family was defined as a family in which students have been categorized by the Texas Education Agency as economically disadvantaged. According to the Texas Education Agency (2015), a student who is economically disadvantaged is eligible for free or reduced-price meals under the National School Lunch and Child Nutrition Program. Eligibility for free lunch requires a family income of 130% or less than the federal poverty line. Eligibility for reduced-price lunch requires a family income of 131% -185% of the federal poverty line (Texas Education Agency, 2021b).

RESULTS

Data Analysis

Prior to conducting inferential statistics to determine whether statistically significant differences were present in Grade 4 STAAR Reading performance for boys between Title I, Part A and non-Title I, Part schools, the procedure's underlying assumptions were checked (Slate, 2023). Specifically examined were data normality, Box's Test of Quality of Covariance, and the Levene's Test of Quality of Error Variances. Although not all of the assumptions were met, Field (2009) contends that

the Multivariate Analysis of Variance (MANOVA) procedure is sufficiently robust to withstand assumption violations. Results of statistical analyses for the 2016-2017, 2017-2018, and 2018-2019 school years will be described by Reading Reporting Category in chronological order.

Overall Results for the Three School Years

Regarding the 2016-2017 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .89$, $p < .001$, partial $\eta^2 = .11$, in the overall reading performance of boys as a function of their enrollment in a Title I, Part A school. The effect size for this statistically significant difference was moderate (Cohen, 1988). Concerning the 2017-2018 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .88$, $p < .001$, partial $\eta^2 = .12$, in the overall reading performance of boys as a function of their enrollment in a Title I, Part A school. Based on Cohen's (1988) criteria, the effect size was moderate. With respect to the 2018-2019 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .89$, $p < .001$, partial $\eta^2 = .11$, moderate effect size (Cohen, 1988). In all three school years, the effect sizes for the statistically significant differences were moderate.

Reading Reporting Category 1 Results Across all Three School Years

Following the overall results of the MANOVA, univariate follow-up Analysis of Variance (ANOVA) procedures were conducted for each of the three STAAR Reading Reporting Categories. For the 2016-2017 school year, a statistically significant difference in Reading Reporting Category 1 for boys by their enrollment in a Title I, Part A school was yielded, $F(1, 101634) = 10{,}331.68$, $p < .001$, partial $\eta^2 = .09$, moderate effect size. Concerning the 2017-2018 school year, a statistically significant difference was revealed on Reading Reporting Category 1 for boys by their enrollment in a Title I, Part A school, $F(1, 83403) = 7{,}164.11$, $p < .001$, partial $\eta^2 = .08$, moderate effect size. With respect to the 2018-2019 school year, a statistically significant difference was again yielded on the Reading Reporting Category 1 for boys by their enrollment in a Title I, Part A school, $F(1, 81885) = 7{,}949.19$, $p < .001$, partial $\eta^2 = .09$, moderate effect size. Effects sizes for the statistically significant differences on the Reading Reporting Category 1 were moderate for all three school years.

Concerning the 2016-2017 school year, boys enrolled in non-Title I, Part A schools answered 1.41 more items correctly than did boys enrolled in Title I, Part A schools. Regarding the 2017-2018 school year,

boys enrolled in non-Title I, Part A schools answered 1.22 more items correctly than did boys enrolled in Title I, Part A schools. With respect to the 2018-2019 school year, boys enrolled in non-Title I, Part A schools answered 1.29 more items correctly than boys enrolled in Title I, Part A schools. Table 1 contains the descriptive statistics for this analysis.

Table 1

Descriptive Statistics for the STAAR Grade 4 Reading Reporting Category 1 Scores of Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Enrollment Status	*n*	*M*	*SD*
2016-2017			
Non-Title I, Part A	27,300	6.68	1.51
Title I, Part A	74,336	5.27	2.10
2017-2018			
Non-Title I ,Part A	24,359	6.57	1.53
Title I, Part A	59,046	5.35	2.04
2018-2019			
Non-Title I, Part A	23,933	6.75	1.51
Title I, Part A	57,954	5.46	2.01

Reading Reporting Category 2 Results Across all Three School Years

Next, ANOVA procedures were conducted for the STAAR Reading Reporting Category 2. For the 2016-2017 school year, a statistically significant difference in Reading Reporting Category 2 for boys by their enrollment in a Title I, Part A school was yielded, $F(1, 101634) = 10{,}603.44$, $p < .001$, partial $\eta^2 = .09$, moderate effect size. Concerning the 2017-2018 school year, a statistically significant difference was revealed on the Reading Reporting Category, $F(1, 83403) = 10{,}252.38$, $p < .001$, partial $\eta^2 = .11$, moderate effect size. With respect to the 2018-2019 school year, a statistically significant difference was again yielded on the Reading Reporting Category, $F(1, 81885) = 7{,}330.78$, $p < .001$, partial $\eta^2 = .08$, moderate effect size. Effects sizes for Reading Reporting Category 2 were moderate for all three school years.

Concerning the 2016-2017 school year, boys enrolled in non-Title I, Part A schools answered 2.37 more items correctly than did boys enrolled in Title I, Part A schools. Regarding the 2017-2018 school year, boys enrolled in non-Title I, Part A schools answered 2.50 more items correctly than did boys enrolled in Title I, Part A schools. With respect to the 2018-2019 school year, boys enrolled in non-Title I, Part A schools

answered 2.12 more items correctly than boys enrolled in Title I, Part A schools. Table 2 contains the descriptive statistics for this analysis.

Table 2

Descriptive Statistics for the STAAR Grade 4 Reading Reporting Category 2 Scores of Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Enrollment Status	*n*	*M*	*SD*
2016-2017			
Non-Title I, Part A	27,300	11.89	2.77
Title I, Part A	74,336	9.52	3.42
2017-2018			
Non-Title I ,Part A	24,359	11.93	2.64
Title I, Part A	59,046	9.43	3.45
2018-2019			
Non-Title I, Part A	23,933	11.48	2.74
Title I, Part A	57,954	9.36	3.40

Reading Reporting Category 3 Results Across all Three School Years

Next, ANOVA procedures were calculated for the STAAR Reading Reporting Category 3 for each school year. For the 2016-2017 school year, a statistically significant difference in Reading Reporting Category 3 for boys by their enrollment in a Title I, Part A school was yielded, $F(1, 101634) = 10{,}466.05$, $p < .001$, partial $\eta^2 = .09$, moderate effect size. Concerning the 2017-2018 school year, a statistically significant difference was revealed on the Reading Reporting Category, $F(1, 83403) = 9{,}317.94$, $p < .001$, partial $\eta^2 = .10$, moderate effect size. With respect to the 2018-2019 school year, a statistically significant difference was again yielded on the Reading Reporting Category, $F(1, 81885) = 7{,}960.31$, $p < .001$, partial $\eta^2 = .09$, moderate effect size. Effects sizes for Reading Reporting Category 3 were moderate for all three school years.

Concerning the 2016-2017 school year, boys enrolled in non-Title I, Part A schools answered 2.37 more items correctly than did boys enrolled in Title I, Part A schools. Regarding the 2017-2018 school year, boys enrolled in non-Title I, Part A schools answered 2.24 more items correctly than did boys enrolled in Title I, Part A schools. With respect to the 2018-2019 school year, boys enrolled in non-Title I, Part A schools answered 2.01 more items correctly than boys enrolled in Title I, Part A schools. Table 3 contains the descriptive statistics for this analysis.

Table 3

Descriptive Statistics for the STAAR Grade 4 Reading Reporting Category 3 Scores of Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Enrollment Status	*n*	*M*	*SD*
2016-2017			
Non-Title I, Part A	27,300	9.68	2.94
Title I, Part A	74,336	7.31	3.38
2017-2018			
Non-Title I ,Part A	24,359	10.38	2.54
Title I, Part A	59,046	8.14	3.22
2018-2019			
Non-Title I, Part A	23,933	10.15	2.51
Title I, Part A	57,954	8.14	3.10

Grade Level Results

Student performance on the three STAAR grade level standards (i.e., Approaches Grade Level Standard, Meets Grade Level Standard, Masters Grade Level Standard) were examined through the use of Pearson chi-square procedures. This statistical procedure was the most appropriate statistical procedure to use because dichotomous data were present for all three STAAR Performance Standards (i.e., did not meet this standard or met this standard) and dichotomous data were present for the enrollment status of Grade 4 boys (i.e., Title I, Part, A, non-Title I, Part A). As such, the chi-square is the preferred statistical procedure when variables are categorical (Field, 2018; Slate, 2023). The assumptions for utilizing a chi-square were met because a large sample size was present.

Approaches Grade Level Standard Results Across all Three School Years

With respect to the Approaches Grade Level Standard between boys enrolled in Title I, Part A and non-Title I, Part A schools, the result for the 2016-2017 school year was statistically significant, $\chi^2(1) = 7280.13$, $p < .001$. The effect size for this finding, Cramer's V, was small, .27 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Approaches Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 27.7% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Readers are referred to Table 4 for the frequencies and percentages for the 2016-2017 school year.

Table 4

Frequencies and Percentages for the STAAR Grade 4 Reading Approaches Grade Level Standard for Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years

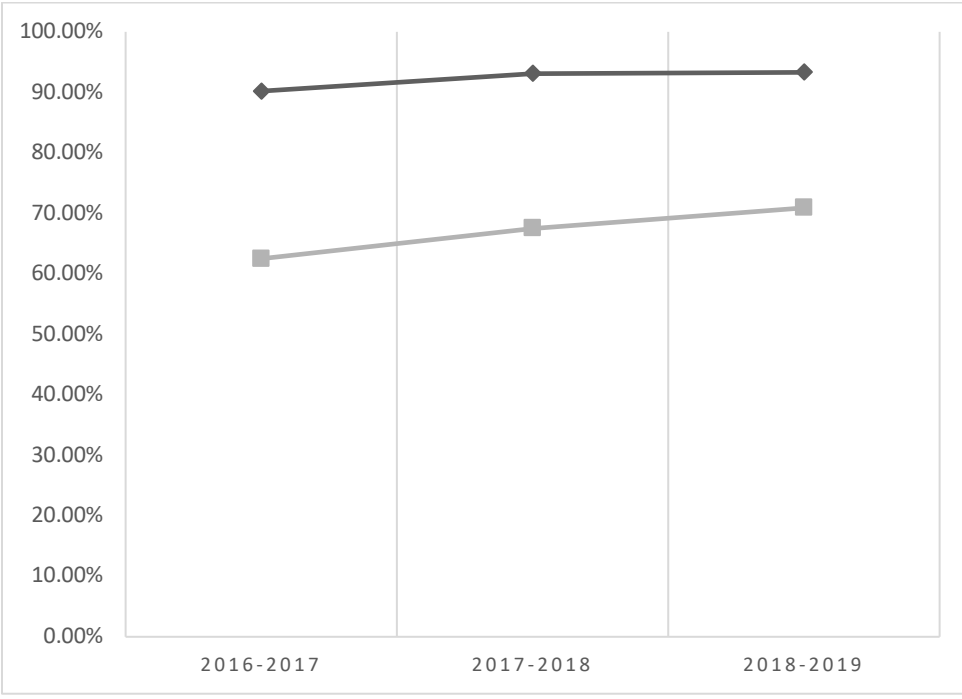
	Did Not Meet Standard		Met Standard	
School Year and Enrollment Status	*n*	*%*	*n*	*%*
2016-2017				
Non-Title I, Part A	2,683	9.8	24,617	90.2
Title I, Part A	27,891	37.5	46,445	62.5
2017-2018				
Non-Title I, Part A	1,690	6.9	22,669	93.1
Title I, Part A	19,174	32.5	39,872	67.5
2018-2019				
Non-Title I, Part A	1,592	6.7	22,341	93.3
Title I, Part A	16,855	29.1	41,099	70.9

Concerning the 2017-2018 school year, a statistically significant difference was present, $\chi^2(1) = 5994.53$, $p < .001$. The effect size yielded for this finding, Cramer's V, was small, .27 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Approaches Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 25.6% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Delineated in Table 4 are the frequencies and percentages for the 2017-2018 school year.

Regarding the 2018-2019 school year, a statistically significant difference was present, $\chi^2(1) = 4883.41$, $p < .001$, small effect size, Cramer's V of .24 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Approaches Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 22.4% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Table 4 contains the frequencies and percentages for the 2018-2019 school year. Shown in Figure 1 are the descriptive statistics across these three school years.

Figure 1

Grade 4 STAAR Reading Approaches Grade Level Performance Standard of Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years



Meets Grade Level Standard Results Across all Three School Years

With respect to the Meets Grade Level Standard between boys enrolled in Title I, Part A and non-Title I, Part A schools, the result for the 2016-2017 school year was statistically significant, $\chi^2(1) = 10040.53$, $p <$ .001. The effect size for this finding, Cramer's V, was moderate, .31 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Meets Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 35.2% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Readers are referred to Table 5 for the frequencies and percentages for the 2016-2017 school year.

Table 5

Frequencies and Percentages for the STAAR Grade 4 Reading Meets Grade Level Standard for Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years

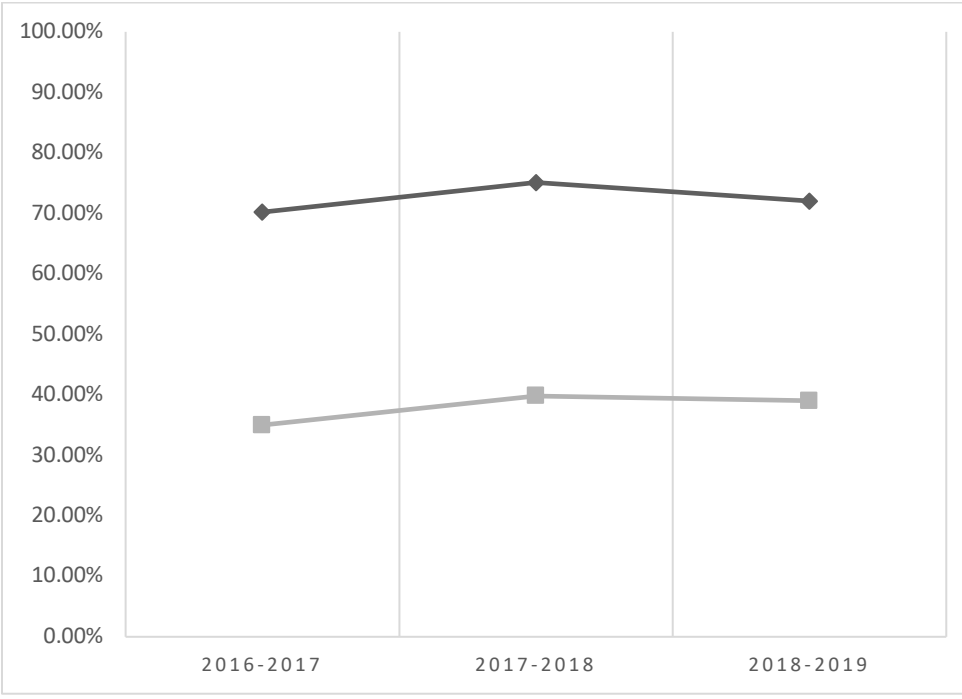
	Did Not Meet Standard		Met Standard	
School Year and Enrollment Status	*n*	*%*	*n*	*%*
2016-2017				
Non-Title I, Part A	8,126	29.8	19,174	70.2
Title I, Part A	48,321	65.0	26,015	35.0
2017-2018				
Non-Title I, Part A	6,057	24.9	18,302	75.1
Title I, Part A	35,538	60.2	23,508	39.8
2018-2019				
Non-Title I, Part A	6,700	28.0	17,233	72.0
Title I, Part A	35,333	61.0	22,621	39.0

Concerning the 2017-2018 school year, a statistically significant difference was present, $\chi^2(1) = 8605.92$, $p < .001$. The effect size yielded for this finding, Cramer's V, was moderate, .32 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Meets Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 35.3% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Delineated in Table 5 are the frequencies and percentages for the 2017-2018 school year.

Regarding the 2018-2019 school year, a statistically significant difference was present, $\chi^2(1) = 7371.18$, $p < .001$, moderate effect size, Cramer's V of .30 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Meets Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 33.0% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Table 5 contains the frequencies and percentages for the 2018-2019 school year. Illustrated in Figure 2 are these statistics across the three school years.

Figure 2

Grade 4 STAAR Reading Meets Grade Level Performance Standard of Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years



Masters Grade Level Standard Results Across all Three School Years

With respect to the Masters Grade Level Standard between boys enrolled in Title I, Part A and non-Title I, Part A schools, the result for the 2016-2017 school year was statistically significant, $\chi^2(1) = 8607.07$, $p < .001$. The effect size for this finding, Cramer's V, was small, .29 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Masters Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 28.5% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Readers are referred to Table 6 for the frequencies and percentages for the 2016-2017 school year.

Table 6

Frequencies and Percentages for the STAAR Grade 4 Reading Masters Grade Level Standard for Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years

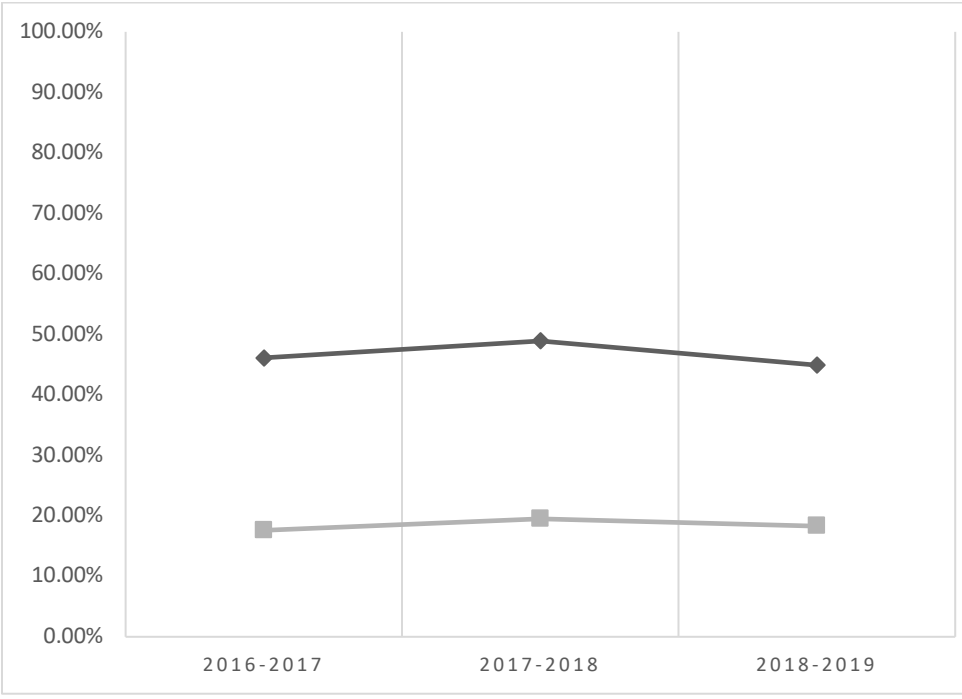
	Did Not Meet Standard		Met Standard	
School Year and Enrollment Status	*n*	*%*	*n*	*%*
2016-2017				
Non-Title I, Part A	14,708	53.9	12,592	46.1
Title I, Part A	61,255	82.4	13,081	17.6
2017-2018				
Non-Title I, Part A	12,439	51.1	11,920	48.9
Title I, Part A	47,553	80.5	11,493	19.5
2018-2019				
Non-Title I, Part A	13,196	55.1	10,737	44.9
Title I, Part A	47,336	81.7	10,618	18.3

Concerning the 2017-2018 school year, a statistically significant difference was present, $\chi^2(1) = 7417.50$, $p < .001$. The effect size yielded for this finding, Cramer's V, was moderate, .30 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Masters Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 29.4% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Delineated in Table 6 are the frequencies and percentages for the 2017-2018 school year.

Regarding the 2018-2019 school year, a statistically significant difference was present, $\chi^2(1) = 6189.50$, $p < .001$, small effect size, Cramer's V of .28 (Cohen, 1988). Statistically significantly higher percentages of boys enrolled in non-Title I, Part A schools met the Masters Grade Level standard than boys enrolled in Title I, Part A schools. Approximately 26.6% more boys enrolled in non-Title I, Part A schools met this standard than boys enrolled in Title I, Part A schools. Table 6 contains the frequencies and percentages for the 2018-2019 school year. Depicted in Figure 3 are these statistics across the three school years.

Figure 3

Grade 4 STAAR Reading Masters Grade Level Performance Standard of Boys Enrolled in Title I, Part A and Non-Title I, Part A Schools for the 2016-2017, 2017-2018, and 2018-2019 School Years



DISCUSSION AND CONCLUSIONS

The number of Texas public school students enrolled in Title I, Part A schools has increased considerably over the past decade. Of the years examined in this investigation, nearly 65% of Texas public school students were identified as Title I by the Texas Education Agency (Texas Education Agency, 2021a). In this investigation, the extent to which differences were present in Grade 4 STAAR Reading performance between boys enrolled in Title I, Part A and non-Title I, Part A schools was analyzed for the 2016-2017, 2017-2018, and 2018-2019 school years. Statewide data on the Grade 4 STAAR Reading Reporting Categories were examined for boys enrolled in Title I, Part A and non-Title I, Part A schools. Statistically significant results were present in all three school years. Following these statistical analyses, the three performance standards were examined and yielded statistically significant results in all three school years. Lower percentages of boys enrolled in Title I, Part A

schools met the Approaches Grade Level standard compared to boys enrolled in non-Title I, Part A schools. Differences in percentages between boys enrolled in Title I, Part A and non-Title I, Part A schools not meeting the Approaches Grade Level standard were 27.7%, 25.6%, and 22.4%, respectively for the three school years examined.

Differences also existed in the percentages of boys who met the Meets Grade Level standard. Lower percentages of boys enrolled in Title I, Part A schools earned the Meets Grade Level standard than boys enrolled in non-Title I, Part A schools. Differences were 35.2%, 35.3%, and 33.0%, respectively for the three school years examined. Similarly, differences also existed in the percentages of boys who met the Masters Grade Level standard. Lower percentages of boys enrolled in Title I, Part A schools earned the Masters Grade Level standard than boys enrolled in non-Title I, Part A schools. Differences were 28.5%, 29.4%, and 26.6%, respectively for the three school years examined. In examining the reading performance of Grade 4 boys in Texas across the three years of data that were analyzed herein, consistent trends were identified.

Connections with Existing Literature

The inability to read has profound effects on children's future academic success. Hernandez (2012) established that students who fail to demonstrate reading proficiency by the end of third grade are less likely to earn a high school diploma. Furthermore, Watts (2022) explained, "If the negative influences of poverty are not addressed, students will experience reading failure albeit they continue to transition to each grade" (p. 11). Results of this multiyear, statewide investigation are commensurate with the outcomes of other researchers (e.g., Hamilton & Slate, 2019; Pariseau, 2019) who demonstrated the presence of lower academic performance for students in poverty compared to students not in poverty. This investigation on differences in reading performance expanded on the work of previous researchers (e.g., Hamilton, 2020; Harris, 2018; McGown, 2016) who investigated in the reading performance of Texas elementary students.

IMPLICATIONS FOR POLICY AND PRACTICE

As outlined in this multiyear statewide investigation, students in poverty have academic deficits beyond the deficits of their peers that are not poor. Many students lack access to or have unequal access to quality teachers, quality instruction, and quality resources that are vital to their success. These disparities go against the work to close opportunity gaps that continue to be the focus of recent legislative actions such as the Every

Student Succeeds Act. In addition, these disparities have important implications for the future of young learners. For these reasons, the interests of state and local educational communities may best be served by focusing attention to helping all students achieve at the highest levels, specifically students who are underperforming.

Regarding policy implications, policymakers should provide additional funding to improve student outcomes and teacher retention at high poverty schools. Additional funding could be used to implement targeted interventions, support supplemental resources for students and staff, and provide incentives for teachers who choose to continue working in high poverty schools. Additional funding could also be used for professional development to ensure educators are fully prepared to address the needs of all students, specifically students enrolled in Title I, Part A schools.

Concerning practice implications, it is imperative that school leaders establish a cycle for continuous improvement on their campuses. Analyzing available data should be at the center of this process. After a thorough review of data, campus leaders should solicit feedback from campus staff and the surrounding community to implement effectively strategies aimed at positively impacting current student outcomes. Strategies should be monitored on a continual basis so that adjustments can be made as needed to ensure progress is made in closing opportunity gaps and every student is provided dynamic learning experiences that prepare them for college, career, and life.

RECOMMENDATIONS FOR FUTURE RESEARCH

Several recommendations for further research studies can be made given the results of this multiyear investigation. A first recommendation would be for researchers to examine the relationship between the Grade 4 STAAR Reading exam and other student demographic characteristics (e.g., race/ethnicity). A second recommendation would be for researchers to continue to expand the examination of Grade 4 STAAR Reading performance to also include student special population status. Additionally, researchers are encouraged explore other grade levels (e.g., Grades 5-8 STAAR Reading) to allow for the identification of trends through middle school reading performance. Data for this study were limited to students in the State of Texas. The extent to which results of this study can be generalized to other states is unknown. Accordingly, it is recommended that researchers expand the study of student reading performance on standardized tests to include other states. Researchers are also encouraged to analyze trends across other subject areas (e.g., writing,

mathematics) to determine if trends are present across multiple core content subjects.

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