DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE 4 BLACK

STUDENTS AS A FUNCTION OF THEIR GENDER AND ECONOMIC STATUS: A

MULTIYEAR, STATEWIDE INVESTIGATION

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A Dissertation

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Doctor of Education

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by

Rhonda Dean Mason

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DEDICATION

I dedicate this dissertation to my sons, Tristan and Ellis Mason. Concurrently serving as a parent and educator, has made me better at each. I set expectations for everything under my influence by asking myself one question, "Would this be good enough for Tristan and Ellis?". It is my hope that somehow witnessing my dedication to something that was difficult and at times tedious will inspire them to be resilient and finish what they start. My hope is that they extend themselves toward their hearts' desires without fear of failure or comparisons to others, understanding that their race is their race and mastering their own thoughts is the real opposition. They are the best things in my life.

Additionally, I dedicate this dissertation to my late father, Bergeon Raydell Dean. Starting in elementary school, he began calling me "Doctor Dean" and referencing college, scholarships, and the importance of education while he himself struggled to learn to read. His consistent appreciation for my love for learning, gave it value. The pride that I know he would feel right now, has motivated me to finish when I myself felt discouraged. This is for you, Daddy. Rejoice in Heaven knowing that your prayers and encouraging words were not in vain.

ABSTRACT

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Purpose

The overarching purpose of this journal-ready dissertation was to determine the extent to which Grade 4 Black students differed in their reading performance on the Texas state-mandated assessment by their gender and by their economic status. Specifically addressed was the degree to which differences were presented in their ability to understand and analyze a variety of texts across genres, in their ability to understand and to analyze literary texts, and in their ability to understand and to analyze informational texts. Also examined was their performance at the three different grade level performance standards (i.e., Approaches Grade Level, Meets Grade Level, and Masters Grade Level). The final purpose was to determine the extent to which trends were present in their reading performance across three school years (i.e., 2016-2017, 2017-2018, 2018-2019).

Method

For these quantitative analyses, a causal-comparative research design was utilized. Texas statewide archival date from the State of Texas Assessment of Academic Readiness (STAAR) Reading assessment for Grade 4 students was requested and obtained from the Texas Education Agency Public Education Information Management System for the 2016-2017, 2017-2018, and 2018-2019 school years.

Findings

Black girls outperformed Black boys on the Texas state mandated reading assessment, STAAR, for all three years and in all reporting categories. More Black girls reached the Approaches Grade Level, Meets Grade Level, and Masters Grade Level standards than Black boys in all three years. Regarding reading achievement by economic status, Black boys who were poor had lower reading test scores than Black boys who were not poor in all three reporting categories in all three years. Lower percentages of Black boys who were poor met each grade level standard than Black boys who were not in poverty. Similarly, Black girls who were poor had lower reading test scores than Black girls who were not poor in all three reporting categories in all three school years. Lower percentages of Black girls who were poor met the three grade level standards than Black girls who were not poor. Results in all three articles were consistent with the existing research literature regarding poverty and reading achievement.

KEY WORDS: Economic status, Poverty, Black, Gender, Reading performance, Texas, STAAR Reading Assessment, Grade 4, Boys, Girls, Literacy

ACKNOWLEDGMENTS

I want to start by acknowledging God's hand in my life. He allowed me experiences that developed perseverance, a strong work ethic, and resourcefulness at an early age. This made me strong, confident, and pushed me past fear and exhaustion. I rest knowing that what God has for me is for me and that no good thing will be withheld from me. This has been the most difficult professional journey that I have ever embarked on and I could not have continued to pursue my degree without my faith in God.

Second, I would like to thank my family. Ryan, my husband, whom I met at Sam Houston State University in 1995. Ryan and our boys have sacrificed time with me so I could pursue this degree. Freedom to spend time doing the things that make me happy and fulfill me, have been one of his greatest gifts to me in our 27 years together. My boys, Tristan and Ellis, have not had their mother at every sporting event or even home every night to help with homework, but they are proud to have a mom who they refer to lovingly as "a boss who takes no shortcuts."A huge thanks to my mother, Valerie Dean, for giving me your last and always trusting my independence. I have not reached Barbara Jordan status yet, but I know that you are still proud. My sisters, Rayshell, Niche, and Ashley as the oldest in the house, they gave me my first experiences as a leader. Additionally, my sisters Selena and Marlena who have looked for ways to support me through prayer and encouraging words. Finally, to my Mason family, Rob, Nika, Dad, Granny, Sue, Lucy, Robbyn, Damon, Rene, and Melvyn who forced me to look up from my laptop and experience the most important thing in life, family.

I must acknowledge my undergraduate and now doctoral alma mater, SHSU. The faculty and staff throughout my life have modeled servant leadership and

of it you will either have taken your classes or you won't." His faith in me has challenged me in ways that I never thought possible and I would not have had the professional experiences that I have had without his belief in me as a leader.

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I often say that some people collect valuable art, rare cars, and other material items of great worth. I however have a rare and treasured collection of friends. There are too many to name, but they have encouraged me throughout this process and provided balance in my life. I do not take any of them for granted.

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CHAPTER I

INTRODUCTION

Academic success plays an important role in creating future opportunities for students (Ilie & Lietz, 2010). Children who perform well in school are more likely to have higher salaries (Caro et al., 2015) and live overall happier lives (Tabbodi et al., 2015) than are children who perform poorly in school. Because academic achievement is a substantial predictor of professional and personal success in life, reading achievement gaps need to be addressed for Black boys and Black girls.

Family income poverty is the strongest predictor of academic performance in school (Garrett-Peters et al., 2016). Children living in poverty exhibit poor cognitive and language development skills that hinder their acquisition of vital basic reading skills (Garrett-Peters et al., 2016). Due to a lack of basic reading skills, children below the poverty line do not achieve at adequate levels (Stinnett, 2011). Many researchers (e.g., Conradi et al., 2016; Dearing et al., 2016; McGown, 2016; Tran et al., 2017) have examined the relationship between poverty and academic performance in reading. The influence of poverty on the ability to read fluently and proficiently as measured by standardized assessments has been documented by numerous researchers (e.g., Harris, 2018).

As supported by the extant literature, students who are economically disadvantaged score, on average, seven points lower on reading tests than students who are not economically disadvantaged (Crosnoe & Cooper, 2010). The economic disadvantages experienced by these students accumulate over time and they continue to lag behind their peers. The associations of poverty were at least two times the magnitude

of other factors identified as barriers to student success. Crosnoe and Cooper (2010) contended that "Income poverty plays a greater role in early learning than other elements" (p. 283). In the most recent school year of data available, 2020-2021, over 60% of Texas public school students were economically disadvantaged (Texas Education Agency, 2021). For Texas school districts to meet targets set by the Every Student Succeeds Act, which prioritizes the academic performance of special population including students labeled economically disadvantaged they must address these well documented achievement gaps.

Review of the Literature on Reading Performance for Black Boys and Black Girls

Extensive evidence exists that gender differences exist in reading (Logan & Johnston, 2010). Reilly et al. (2019) examined three decades of student achievement data in the United States in reading and writing from the National Assessment of Educational Progress about the extent to which gender differences were present. They documented the presence of a developmental progression from initially small gender differences in Grade 4 toward larger gender differences as students progressed through schooling. Gender differences in reading and writing achievement were established across all levels of the ability spectrum. Girls outperformed boys in reading and writing achievement, and these gender differences did not decline over the time-period analyzed (1988-2015). Statistically significantly more girls attained an advanced proficiency standard than did boys. Of note is that boys were greatly overrepresented in gender ratios for poor readers/writers (Reilly et al., 2019).

With reading being necessary for academic success, researchers (e.g., Harris, 2018) have sought to understand reading development differences between boys and

girls. Recently, Mullis et al. (2017) established in an international study that in reading, girls had higher average scores than boys in 48 of the 50 countries that participated in the 2016 Progress in International Reading Literacy Study. Boys did not have higher reading achievement scores than girls in any of the 50 countries (Mullis et al., 2017). After reviewing data on 8,503 kindergarten students in the Early Childhood Longitudinal Study-Kindergarten cohort, Wei et al. (2015) documented that girls had higher initial reading scores and greater reading growth rates than boys. Camarata and Woodcock (2006) and Chatterji (2006) have also established that girls have stronger reading skill development when they enter kindergarten and that this advantage is maintained or increased during elementary school and into adolescence.

Many of the previous researchers cited relied on international and national examinations to measure reading performance. In Texas, the State of Texas Assessments of Academic Readiness (STAAR) constitute the state-mandated testing program that was implemented in the 2011-2012 school year. The STAAR is an assessment program, which starts when students are in Grade 3, and is intended to measure the extent to which students have learned and are able to apply the knowledge and skills defined in the state-mandated curriculum standards, the Texas Essential Knowledge and Skills. One of the first researchers to analyze STAAR Reading test scores, McGown (2016) compared the performance of Grade 3 boys and girls. In the three years of Texas statewide data that she analyzed, girls had statistically significantly higher overall reading scores and higher STAAR Reading Reporting Category 1, 2, and 3 test scores than boys. Girls outperformed boys in all three reporting categories in all three school years examined.

Moreover, higher percentages of girls met the passing standard on the STAAR Reading test than boys in all three years of data that McGown (2016) analyzed.

In a recent multiyear analysis that was an extension of McGown's (2016) investigation, Harris (2018) conducted a statewide study to determine the extent to which Grade 4 boys and girls differed in their reading performance. In her investigation, she analyzed Texas statewide data from the 2012-2013, 2013-2014, and 2014-2015 school years. Harris (2018) examined the three STAAR Reading Reporting categories of reading across genres (i.e., Reporting Category 1), reading within literary texts (i.e., Reporting Category 2), and in their comprehension and analysis of informational texts (i.e., Reporting Category 3). Similar to McGown's (2016) results, girls outperformed boys in all three reporting categories in all three school years examined. Moreover, a statistically significantly higher percentage of Grade 4 girls, 3.9%, met the STAAR Reading Level II Satisfactory Standard than did Grade 4 boys. Continuing with this trend, girls outperformed boys by 4.9% in the 2013-2014 school year and by 6.9% in the 2014-2015 school year. These findings for Grade 4 students were congruent with the results of McGown's (2016) study of Grade 3 students in Texas on STAAR.

In a more recent investigation, Dietrich et al. (2020) compared social studies skills between Texas high school boys and girls for eight years. Previous to the STAAR assessment, Texas used the Texas Assessment of Knowledge and Skills examination to measure student mastery. In Dietrich et al.'s (2020) investigation, boys consistently outperformed girls in all social studies skills objectives for the 2004-2005 school year through the 2011-2012 school year. These gender differences remained consistent across the eight years of Texas statewide data analyzed by Dietrich et al. (2020).

Similar to the results for social studies, boys have also been documented to outperform girls in science. Vijil et al. (2012) compared the science performance of boys and girls in Texas for three years. In their investigation, they analyzed Texas state-mandated science test scores for three school years. In all three school years, boys had statistically significantly higher science test girls than did girls.

Though the researchers limited their discussion as to how boys outperformed girls in social studies and in science, gender differences in reading among English learners are aligned with the larger body of research reviewed. Schleeter et al. (2019) conducted a Texas statewide investigation for the 2012-2013 school year through the 2014-2015 school year. In their analysis of STAAR Reading scores of Texas Grade 3 English learners, they established that girls had statistically significantly better reading performance than boys in all three school years. Although the gaps were small, the results warrant attention because of the consistently increasing number of English learners in the State of Texas.

With reference to Black students, Washington et al. (2018) compared the language and reading skills of Black boys and Black girls in poverty from the same neighborhoods and schools. Using individual growth curve models to evaluate the reading and language performance of Grade 1 through Grade 5 students, Washington et al. (2018) analyzed data for seven outcomes: (a) language, (b) letter-word identification, (c) passage comprehension, (d) decoding, (e) reading fluency, (f) reading vocabulary, and (g) intelligence. One important finding was the lack of any statistically significant differences in performance on language or intelligence measures between Black boys and Black girls at any grade level. Readers should note that Black boys and Black girls,

however, had statistically significantly different reading skills (e.g., decoding, fluency, and reading vocabulary) in Grades 4 and 5. Black girls performed better in both grade levels than Black boys, as well as demonstrated slightly faster growth compared to Black boys on a measure of passage comprehension. Black boys had a substantial deceleration in reading fluency in Grade 5.

For decades educators have worked to close the gap between students of color and White students. This achievement gap between Grade 4 reading scores did not narrow substantially from 1992 to 2003. Black students continue to lag behind on national standardized achievement tests (Rothert, 2005). In 2015, the Every Student Succeeds Act was signed into law (United States Department of Education, 2017). The Every Student Succeeds Act maintains expectations of accountability and actions to increase student performance in low-performing schools, where groups of students are not making progress, and where graduation rates are low over extended periods of time. The STAAR data for schools are disaggregated to isolate the performance of subpopulations as meeting preset targets is required. School district leaders and school campus leaders must meet the targets set annually for the racial/ethnic subgroups selected or risk being closed.

Review of the Literature on Black Boys in Poverty and Reading Achievement

In 2019, the average percentage of children who lived in poverty was 29% and over 7,000,000 children are negatively influenced by poverty (National Center for Children in Poverty, 2019) in the United States. This percentage means that almost one in five children lives in poverty. Among all children under 18 years in the United States, 38% live in families with low incomes and 17% are regarded as being poor. Children are overrepresented among the poor as they represent 23% of the population but comprise

32% of all people in poverty. Many more children live in families with incomes just above the poverty threshold (National Center for Children in Poverty, 2019).

According to Jones et al. (2017), poverty is the strongest predictor of learning challenges and poor academic outcomes for children. For the past several decades, increased focus has been placed on the relationships of poverty and reading (e.g., Conradi et al., 2016; Reardon, 2013). As student poverty increases, reading performance becomes increasingly poorer. Sharkins et al. (2017) established that students living in poverty have poorer academic performance than their more affluent peers. As with grades, graduation rates, college admission, and degree completion, students in poverty underperform more privileged students on standardized assessments (Lee & Slate, 2014).

In the United States of America, 58% of Black children live in low income homes. This statistic is more than double the percentage of White children, 26%. Triple the amount of Black children (30%) live in poor homes than White children (10%) and more than triple the amount live in deep poverty, 14%, compared to 4% of White children under the age of 18 (National Center for Children in Poverty, 2019).

With respect to the state of interest for this article, Texas, researchers have investigated the relationships of poverty to the reading performance of Texas Grade 3 students. McGown (2016) conducted a study to determine the extent to which differences were present for Texas Grade 3 students on the State of Texas Assessment of Academic Readiness (STAAR) Reading test as a function of their economic status. Statewide data from the 2012-2013, 2013-2014, and 2014-2015 school years on the three Grade 3 STAAR Reading Reporting Categories were analyzed for three groups of students: students who did not qualify for the federal free or reduced price lunch program (i.e., Not

Poor), students who qualified for the reduced price lunch program (i.e., Moderately

Poor), and students who qualified for the free lunch program (i.e., Extremely Poor).

McGown (2016) established the presence of a stair-step effect for all three school years in

all three reporting categories. Texas Grade 3 students who were Extremely Poor had

statistically significant lower reading scores than students who were Moderately Poor and

students who were Not Poor. Students who were Moderately Poor had lower reading test

scores than students who were Not Poor all three school years. Regarding overall passing

rates, McGown (2016) documented that students who were Extremely Poor had lower

passing rates on the STAAR Level II Final Satisfactory Performance Standard in reading

that students who were Moderately Poor and students who were Not Poor. Moreover,

students who were Moderately Poor had lower passing rates than students who were Not

Poor. Statistically significant results were present in all three school years.

In a similar study but of Grade 4 Texas students, Harris (2018) analyzed STAAR

Reading test scores using the same three student economic groups as McGown (2016).

Data were analyzed for the 2012-2013, 2013-2014, and 2014-2015 school years.

Statistically significant differences were established in not only overall reading

performance, but also in all three Reading Reporting categories in all three years

examined. The higher the degree of poverty, the lower STAAR Reading test scores were.

Moreover, the higher the degree of poverty, the lower the percentages of students who

met the passing standard on the STAAR Reading exam. A stair step pattern existed.

Aligned with the findings from McGown's (2016) investigation on Texas Grade 3

students, economic achievement gaps in reading were clearly present for Texas Grade 3

students.

Recently, Hamilton and Slate (2019) documented the presence of differences in reading achievement for Hispanic and Black students by their economic status. They compared the reading performance of Texas students who were in poverty to their peers who were not economically disadvantaged. Utilizing data from the 2015-2016 state mandated reading assessment, statistically significant differences were established in the reading performance of Hispanic and Black children as a function of poverty. Statistically significantly lower percentages of Hispanic and Black children who were economically disadvantaged met the three grade level reading standards on the assessment than their counterparts who were not economically disadvantaged. Almost twice as many (59.2%) Hispanic students who were Not Poor met the standard in reading than Hispanic students who were Poor (29.1%). Nearly triple the percentage of Hispanic students (35.6%) who were Not Poor performed at the Masters Grade Level standard than Hispanic students (13.9%) who were Poor. More than twice as many Black students (50.7%) who were Not Poor met the reading assessment standard than Black students (21.8%) who were Poor. The gap at the Masters Grade Level standard widened even more as only 9.4% of Black students who were Poor achieved mastery whereas 29.4% of Black students who were Not Poor achieved mastery. Hamilton and Slate (2019) recommended that researchers replicate their study to determine the extent to which their results were generalizable to students at other grade levels.

In 2017, Harris and Slate analyzed the reading performance of Texas Grade 3 students to determine the effects of poverty on the reading achievement of Grade 3 Black boys from the 2015-2016 administration of the STAAR test. Three levels of performance existed, Phase I or unsatisfactory performance, Phase II or satisfactory, and Phase III or

advanced performance. As the poverty level increased, reading performance decreased. A stairstep effect was present, as the percentage of Black boys who were Extremely Poor increased, the percentage of Black boys who met the reading standard decreased.

In a two-decade examination of historical racial/ethnic disparities in academic achievement by economic status, Paschel et al. (2018) examined the interaction of race/ethnicity and poverty gaps in both mathematics and reading achievement from 1986-2005 for White, Black, and Hispanic students in three age groups (5-6, 9-10, and 13-14. They established that, across the 20-year time period, gaps between White students in poverty and students of color in poverty increased, whereas the gaps between White students and Hispanic students who were not in poverty narrowed. They concluded that understanding the nature of achievement gaps requires the examination of race/ethnicity and income simultaneously.

Review of the Literature on Reading and Black Girls in Poverty

In 2019, the average percentage of children who lived in poverty was 29% and over 7,000,000 children are negatively influenced by poverty (National Center for Children in Poverty, 2019) in the United States. This percentage means that almost one in five children lives in poverty. Among all children under 18 years in the United States, 38% live in families with low incomes and 17% are regarded as being poor. Children are overrepresented among the poor as they represent 23% of the population but comprise 32% of all people in poverty. Many more children live in families with incomes just above the poverty threshold (National Center for Children in Poverty, 2019).

In the State of Texas, 24% of children live in poverty, this rate is 5% higher than the national average (National Center for Children in Poverty, 2019). Further alarming is

that the number of students who are in poverty who attend Texas public schools constitute 59% of all elementary school students (National Center for Education Statistics, 2019). At the secondary level, 58% of middle school students (Write & Slate, 2015) and 43% of high school students (Lee & Slate, 2014) live in poverty. The sheer number of students in poverty is staggering, with over 7,000,000 children who experience the negative effects of poverty (National Center for Children in Poverty, 2019).

Academic achievement opens doors to numerous opportunities and experiences that may not otherwise be accessible due to a child's economic background. Positive outcomes associated with high academic achievement are far-reaching (Hill & Tyson, 2009). Decades have passed since the 1954 Supreme Court decision in Brown v. Board of Education allowing racial and ethnic integration within U.S. public schools. Another more recent effort, with one of the stated purposes being to close the achievement gap between minority and non-minority students, was the No Child Left Behind Act in 2001 (U. S. Department of Education, 2005). Despite these well-intentioned initiatives, gaps in academic achievement continue to be present between White and Black students (McGown, 2016). After nearly two decades of high stakes testing and robust state accountability systems, the intentions of ensuring that no child has been left behind or that every child succeeds still has not been achieved (American Psychological Association, 2012). Students with the highest needs such as students of color, students in special education, English learners, and students in poverty continue to be denied a free and appropriate public education commensurate with their mainstream peers (Ravitch, 2013).

Researchers (Lee & Madyun, 2009) have suggested that lower achievement of Black students may be attributed to the fact that Black students are more likely than their White counterparts to live in communities with high poverty and, therefore, attend schools with limited resources, with high rates of teacher turnover.

Opportunity gaps occur when a group of students receives more or fewer educational inputs, like access to high-quality teachers or learning opportunities, than another student group. Achievement gaps occur when one group of students performs better or worse than another group on measurements of student achievement, like standardized tests or graduation rates. (National Conference of State Legislators, 2018, para 2)

For the past several decades, increased focus has been placed on the relationships of poverty and reading (e.g., Conradi et al., 2016; Reardon, 2013). As student poverty increases, reading performance becomes increasingly poorer. Sharkins et al. (2017) established that students living in poverty have poorer academic performance than their more affluent peers. As with grades, graduation rates, college admission, and degree completion, students in poverty underperform more privileged students on standardized assessments (Lee & Slate, 2014). According to Jones et al. (2017), poverty is the strongest predictor of learning challenges and poor academic outcomes for children.

In a study sponsored by the Annie E. Casey Foundation, 4,000 students who did not read at grade level by Grade 3 were determined to be four times more likely to drop out of school than their peers who were reading at grade level (Hernandez, 2012). When poverty was combined with poor reading performance, the probability of dropping out exponentially increased, thus creating a "double jeopardy" that negatively influenced

high school graduation rates (p. 4). Of children who live in poverty, 22% of them will not graduate from high school. In a drastic contrast to the 6% dropout rate for students who never lived in poverty, the high school dropout rate is 32% for students who spend half of their life in poverty (Hernandez, 2012).

In a similar investigation, but based on Grade 6 students, Wright and Slate (2015) examined data from the 2010-2011 Texas Assessment of Knowledge and Skills Reading assessment, the standardized test predecessor to the State of Texas Assessment of Academic Readiness exam. Wright and Slate (2015) documented the presence of a 4% to 6% lower performance in reading of students in poverty in comparison to their peers who were not poor. Wright and Slate (2015) stated, "the academic achievement gap between students who were or were not economically disadvantaged has grown substantially over the past few generations" (p. 345).

In 2016, McGown analyzed the extent to which degree of economic status, gender, and ethnicity/race were related to the reading achievement of Texas elementary school students in the 2012-1013, 2013-2014, and 2014-2015 school years. In her study, students who were extremely poor (i.e., qualified for the free lunch program) had statistically significant lower average reading scores than students who were moderately poor (i.e., qualified for the reduced-price lunch program) on the Grade 3 STAAR Reading assessment. Both students who were extremely poor and students who were moderately poor had lower reading scores than students who were not poor. For all three STAAR Reading Reporting categories, a "stair-step of achievement effect" (Carpenter et al., 2006, p. 117) was present, in that the greater the degree of poverty the lower student

reading scores were. Analyses of passing standards revealed a similar pattern in that the greater the degree of poverty, the less likely students were to meet the passing standard.

McGown (2016) also addressed the degree to which differences were present in reading performance between boys and girls in elementary schools. In her investigation, boys had statistically significantly lower average reading scores than did girls in all STAAR Reading Reporting categories. McGown (2016) also determined the presence of ethnic/racial differences in reading performance. Hispanic and Black students had statistically significantly lower average reading scores than Asian and White students and Black students had the lowest average reading performance of all four ethnic/racial groups.

In 2017, Harris and Slate analyzed the reading performance of Texas Grade 3 Black girls to determine the effects of poverty. Reading data from the 2015-2016 administration of the STAAR test were analyzed for three groups of Black girls: Not Poor, Moderately Poor, and Extremely Poor. Three levels of performance existed, Phase I or unsatisfactory performance, Phase II or satisfactory, and Phase III or advanced performance. As the poverty level increased, reading performance decreased. A stairstep effect was present, as the percentage of Black girls who were Extremely Poor increased, the percentage of Black girls who met standard decreased.

Statement of the Problem

Although much emphasis has been placed on reading under the No Child Left Behind Act, test results were not required to be disaggregated by gender. With the inception of the Every Student Succeeds Act, academic performance by ethnicity/race is monitored, but in Texas, gender is not one of the monitored subgroups. Additionally,

trends regarding ethnicity/race and the progress toward closing the achievement gap between White and Asian students and other ethnic/racial groups have been monitored, the gap between girls and boys is still not an emphasis area for accountability. As such, a decline in Black boys' or Black girls' knowledge could potentially be missed due to this lack of required monitoring. Taking into account that only a third of children in the United States read on grade level (Sanchez, 2018), it is imperative that all performance differences be identified. With the inception of the Every Student Succeeds Act (2015), states are now required to disaggregate data by gender for accountability purposes. An analysis of the reading performance of Black boys and Black girls since the inception of the Every Student Succeeds Act in 2015 is now possible and needed.

Hernandez (2011) concluded that 26% of students who have lived in poverty and do not read on grade level in Grade 3 will not graduate from high school. Grade 4 is only one year after this milestone and the second year that most students will have participated in the STAAR. 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). 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 school students are classified as economically disadvantaged (Texas Education Agency, 2021). A study of the reading performance of Grade 4 Black boys and Black girls as a function of their economic status since the inception of the Every Student Succeeds Act in 2015 is also needed.

Purpose of the Study

The overarching purpose of this journal-ready dissertation was to determine the extent to which Grade 4 Black students differed in their reading performance on the Texas state-mandated assessment by their gender and by their economic status. Specifically addressed was the degree to which differences were presented in their ability to understand and analyze a variety of texts across genres, in their ability to understand and to analyze literary texts, and in their ability to understand and to analyze informational texts. Also examined was their performance at the three different phases in levels (i.e., Approaches Grade Level, Meets Grade Level, and Masters Grade Level). The final purpose was to determine the extent to which trends weree present in their reading performance across three school years (i.e., 2016-2017, 2017-2018, 2018-2019).

Significance of the Study

As noted previously, many researchers (e.g., Harris, 2018; Logan & Johnston, 2010; McGown, 2016; Reilly et al., 2019) focused on investigating gender differences in reading skills. Moreover, the overwhelming finding of the underachievement of boys is a matter garnering much attention in classrooms, districts, state, national, and international circles. However, to date, no published articles were located in which researchers had examined the relationship between gender and literacy in Grade 4 in the Black community as measured by the STAAR exam. By focusing exclusively on the reading performance of Black boys and Black girls in this article, gender and its relationship to reading skills acquisition can be revealed at the Grade 4 level for Black students. The findings of this research investigation may have practical applications for parents, activists, educational leaders such as principals, literacy coaches, and classroom teachers

in ensuring all Black students become literate. Additionally, educators could utilize these outcomes to design intervention plans, inform hiring practices, identify performance objectives based on gender, and inform budget planning and resource allocation. Moreover, educational and community leaders at both the district and state levels could work collaboratively to monitor persistent gaps and to develop strategies for closing the gender literacy achievement gap between Black boys and Black girls. All children, regardless of ethnicity/race, will benefit from an increased understanding of the specific genres and skills that present gaps between boys and girls.

Although researchers have conducted numerous investigations into the achievement gaps between White and Asian students and their Black counterparts, little concerted national or statewide effort has been addressed toward the education and social outcomes of Black males or Black females exclusively as a function of their economic status. Through investigating this issue, the intention is to add to the available research literature regarding the need for a specified office within the U.S. Department of Education or task force within Texas Education Agency with a primary focus on the success of Black males and Black females in reading and other achievement indicators. Additionally, results from this article could also support the need for legislative projects within local, state, or national budgets and national policy that would drive resources or attention to the issues.

Definition of Terms

Key terms are defined below to provide the readers with a clear understanding of the concepts presented in this journal-ready dissertation. This list is not inclusive of all terms but includes those critical to the reader.

Approaches Grade Level Standard

This performance label is assigned to students who did not meet the grade level passing score. Students in this category are not able to demonstrate a basic level of understanding of course expectations. Substantial remediation is recommended for the following school year (Texas Education Agency, The New STAAR Report Card Presentation, 2017, p. 11).

Black

A person of Black descent is defined as a person having origins in any of the Black racial groups of Africa (Texas Education Agency Appendix F, 2013).

Does Not Meet Grade Level

Performance in this category indicates that students are unlikely to succeed in the next grade or course without significant, ongoing academic intervention. Students in this category do not demonstrate a sufficient understanding of the assessed knowledge and skills (Texas Education Agency, The New STAAR Report Card Presentation, 2017, p. 11).

Economically Disadvantaged

Economically disadvantaged is synonymous with poverty. The Texas Education Agency (Appendix F, 2013) defined economically disadvantaged as "a student who is eligible for free or reduced-price meals under the national School Lunch and Child Nutrition Program" (para. 5).

Masters Grade Level Standard

This performance label is assigned to students who demonstrate mastery of the course knowledge and skills. Students in this category are on track for college and/or career readiness. No support is needed for the following year. These students have also

demonstrated that they are able to apply course content outside of the classroom (Texas Education Agency, The New STAAR Report Card Presentation, 2017, p. 8).

Meets Grade Level Standard

This performance label is assigned to students who demonstrate some knowledge of course content but may be missing critical elements. Students in this category are still in need of additional support. This level of performance constitutes a passing score with some remediation for the next school year (Texas Education Agency, The New STAAR Report Card Presentation, 2017, p. 10).

Moderately Poor

Students who were defined as Moderately Poor were students who qualify for reduced priced meals under the National School Lunch and Child Nutrition Program. Children whose families have an income from 131% to 185% of the Federal poverty guideline are eligible for reduced-priced meals at school. Eligibility is determined by multiplying the year's federal income poverty guidelines by 1.85 and rounding the results upward to the next whole dollar. Poverty guidelines begin with an annual income of less than $12,060 and increases as the number of family members in a household increase. Eligibility for reduced priced meals is 185% of the $12,060 figure, which would be an annual income of $22,311. This dollar amount increases as the number of family members increase (United States Department of Agriculture Food and Nutrition Services, 2017).

Not Poor

Students who were regarded as being in the Not Poor group were students who did not qualify for free nor reduced meals under the National School Lunch and Child Nutrition Program. Children whose families have an income more than 185% above the poverty guideline which begins at an annual income of $12,060 and increases as the number of family members increase do not qualify for free or reduced meals. The family income multiplied by 1.85 must total at least $22,331 to be ineligible for the free or reduced meals. This figure increases as the number of family members increase. (United States Department of Agriculture Food and Nutrition Services, 2017).

Public Education Information Management System

The Texas Public Education Information Management System is comprised of all data requested and received by the Texas Education Agency regarding public education, including student demographic and academic performance, personnel, financial, and organizational information. The Public Education Information Management System database only contains the necessary data for the legislature and the Texas Education Agency to perform their legally authorized functions in overseeing public education (Public Education Information Management System Overview, 2018 para. 1).

Reporting Category 1

The STAAR Reading assessment has three reporting categories. In the Reading Reporting Category 1, students' ability to understand and to analyze a variety of texts across reading genres is assessed. Five multiple-choice items are in the STAAR Reading Reporting Category 1(Texas Education Agency STAAR Accountability Manual, 2016).

Reporting Category II

Measured in the STAAR Reading Reporting Category 2 are students' ability to understand and to analyze literary texts. In addition, the STAAR Reading Reporting Category 2 consists of 15 multiple-choice items (Texas Education Agency STAAR Accountability Manual, 2016).

Reporting Category III

Assessed in the STAAR Reading Reporting Category 3 are students' ability to understand and to analyze informational texts. In addition, the STAAR Reading Reporting Category 3 is comprised of 14 multiple-choice items (Texas Education Agency STAAR Accountability Manual, 2016).

State of Texas Assessment of Academic Readiness (STAAR)

The State of Texas Assessments of Academic Readiness (STAAR) is the state testing program that was implemented in the 2011-2012 school year. The Texas Education Agency, in collaboration with the Texas Higher Education Coordinating Board and Texas educators, developed the STAAR program in response to requirements set forth by the 80th and 81st Texas legislatures. The STAAR is an assessment program, which starts when students are in Grade 3, intended to measure the extent to which students have learned and are able to apply the knowledge and skills defined in the state mandated curriculum standards, the Texas Essential Knowledge and Skills. Every STAAR question is directly aligned to the Texas Essential Knowledge and Skills currently implemented for the grade/subject or course being assessed (Texas Education Agency Student Assessment Division Frequently Asked Questions, 2016).

Texas Education Agency

The Texas Education Agency is the state agency that oversees primary and secondary public education in the state of Texas for more than 5 million students (Texas Education Agency, About TEA, 2018, para 1). The mission of the Texas Education Agency is to "provide leadership, guidance and resources to help schools meet the educational needs of all students" (Texas Education Agency About TEA, 2018, para 2).

Very Poor

Students who were in the Very Poor group were students who qualify for free meals under the National School Lunch and Child Nutrition Program. Children whose families have an income of 130% or less of the Federal poverty guideline can receive free meals at school. Eligibility is determined by multiplying the year's federal income poverty guidelines by 1.30 and rounding to the results upward to the next whole dollar. Poverty guidelines begin at an annual income below $12,060 and increases depending on the number of family members in a household. Eligibility for free meals is 130% of the $12,060 figure, which would be an annual income of $15,678. This dollar amount increases as the number of family members increase (United States Department of Agriculture Food and Nutrition Services, 20

<div align="center">

Literature Review Search Procedures

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For this journal-ready dissertation, published research articles about the academic performance of students and its relationship with gender, ethnicity/race, and economic status were reviewed. The following keywords were used to search for relevant literature: *reading achievement, gender differences, poverty, economic disadvantage, ethnicity/race, Black boys, and Black girls*. The searches of literature of this journal-ready dissertation

were performed through the EBSCO Host database for academic journals. Articles were filtered to include only published and peer reviewed articles in the last 11 years.

Delimitations

For this journal-ready dissertation, only the reading performance of Texas Grade 4 Black boys and Black girls as measured by the STAAR exam was analyzed. A delimitation is that only three years of data (i.e., 2016-2017, 2017-2018, 2018-2019) was examined which restricts generalizability of the results to these three years. Another delimitation is that economic status was limited to the definition provided by the federal government regarding free and reduced lunch program. The final delimitation involved a sole focus on the Black boys and Black girls of students in Texas public schools.

Limitations

For this journal-ready dissertation, only the reading achievement of Grade 4 Black boys and Black girls, as measured by the Texas state-mandated assessment, was analyzed. A limitation present is that the variables (i.e., academic performance, ethnicity/race, poverty status, and gender) of importance in this dissertation were coded through the Public Education Information Management System by local public school districts in Texas. As such, errors may exist. Such errors, if present, could influence the accuracy and reliability of results findings. Factors other than economic status, ethnicity/race, and gender also influence reading achievement, however, these factors were not addressed in this dissertation. Furthermore, Grade 4 is the second grade level that students participate in the Texas state-mandated assessment. As such, their familiarity with standardized tests of a high-stake nature is limited. Additionally, archival

data were analyzed for this causal-comparative study. Therefore, no conclusive determination of cause and effect relations can be made.

Assumptions

For the purpose of this journal-ready dissertation, the assumption was made that the achievement data and the economic status, gender, and ethnic/racial data in the Texas Education Agency Public Education Information Management System were accurately reported. Also assumed was the consistency in which Texas elementary schools collect and report student data. A final assumption was that the validity and consistency in which the STAAR Reading scores were collected from elementary schools across the State of Texas aligned with the stipulations outlined by the State of Texas. Correspondingly, any alterations to these assumptions may lead to inaccurate data and conflicting conclusions.

Organization of the Study

In this journal-ready dissertation, three research investigations were conducted. In the first study, research questions addressed were related to the reading achievement of Grade 4 Black girls and Black boys. In the second study, the degree to which Grade 4 reading achievement might differ as a function of the economic status of Black boys was addressed. In the final study, the focus was on the extent to which Grade 4 reading achievement might differ by the economic status of Grade 4 Black girls.

This journal-ready dissertation consists of five chapters. Included in Chapter I are the background of the study, statement of the problem, purpose of the study, significance of the study, definition of terms, delimitations, limitations, assumptions, and outline of the proposed journal-ready dissertation. In Chapter II, the emphasis was placed on the reading achievement of Grade 4 Black boys and Black girls. In Chapter III, the extent to

which the economic status of Grade 4 Black boys is related to their reading performance was determined. In Chapter IV the degree to which the economic status of Grade 4 Black girls is related to their reading achievement was addressed.   Finally, in Chapter V, the results interpreted in the three research articles were discussed.

CHAPTER II

GENDER DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE

4 BLACK STUDENTS: A MULTIYEAR, STATEWIDE INVESTIGATION

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This dissertation follows the style and format of *Research in the Schools (RITS)*.

Abstract

In this statewide, multiyear analysis, the extent to which Grade 4 Black boys and Black girls differed in their reading performance on the Texas state-mandated assessment were determined. Statistically significant differences were revealed in the reading performance over time. Black boys consistently answered fewer reading test items correctly than did Black girls on all three reading reporting categories. Statistically significantly lower percentages of Black boys met the three grade level standards than Black girls. As such, clear gender disparities were documented in reading between Black boys and Black girls.

Keywords: Black, Gender, Reading Performance, Texas, STAAR Reading Assessment, Grade 4

GENDER DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE

4 BLACK STUDENTS: A MULTIYEAR, STATEWIDE INVESTIGATION

Extensive evidence exists that gender differences exist in reading (Logan &

Johnston, 2010). Reilly et al. (2019) examined three decades of student achievement data

in the United States in reading and writing from the National Assessment of Educational

Progress (NAEP, 2019) about the extent to which gender differences were present. They

documented the presence of a developmental progression from initially small gender

differences in Grade 4 toward larger gender differences as students progressed through

schooling. Gender differences in reading and writing achievement were established

across all levels of the ability spectrum. Girls outperformed boys in reading and writing

achievement, and these gender differences did not decline over the time-period analyzed

(1988-2015). Statistically significantly more girls attained an advanced proficiency

standard than did boys. Of note is that boys were greatly overrepresented in gender ratios

for poor readers/writers.

With reading being necessary for academic success, researchers (e.g., Mullis et

al., 2017, Harris, 2018) have sought to understand reading development differences

between boys and girls. Recently, Mullis et al. (2017) established in an international

study, girls had higher average reading scores than boys in 48 of the 50 countries that

participated in the 2016 Progress in International Reading Literacy Study. Boys did not

have higher reading achievement scores than girls in any of the 50 countries (Mullis et

al., 2017). After reviewing data on 8,503 kindergarten students in the Early Childhood

Longitudinal Study-Kindergarten cohort, Wei et al. (2015) documented that girls had

higher initial reading scores and greater reading growth rates than boys. Camarata and

Woodcock (2006) and Chatterji (2006) have also established that girls have stronger reading skill development when they enter kindergarten and that this advantage is maintained or increased during elementary school and into adolescence.

Many of the previous researchers cited relied on international and national examinations to measure reading performance. In Texas, the State of Texas Assessments of Academic Readiness (STAAR) constitute the state-mandated testing program that was implemented in the 2011-2012 school year. The STAAR is an assessment program, which starts when students are in Grade 3 that is intended to measure the extent to which students have learned and are able to apply the knowledge and skills defined in the state-mandated curriculum standards, the Texas Essential Knowledge and Skills. One of the first researchers to analyze STAAR Reading test scores, McGown (2016) compared the performance of Grade 3 boys and girls. In the three years of Texas statewide data that she analyzed, girls had statistically significantly higher overall reading scores and higher STAAR Reading Reporting Category 1, 2, and 3 test scores than boys. Girls outperformed boys in all three reporting categories in all three school years examined. Moreover, higher percentages of girls met the passing standard on the STAAR Reading test than boys in all three years of data that McGown (2016) analyzed.

In a recent multiyear analysis that was an extension of McGown's (2016) investigation, Harris (2018) conducted a statewide study to determine the extent to which Grade 4 boys and girls differed in their reading performance. In her investigation, she analyzed Texas statewide data from the 2012-2013, 2013-2014, and 2014-2015 school years. Harris (2018) examined the three STAAR Reading Reporting categories of reading across genres (i.e., Reporting Category 1), reading within literary texts (i.e., Reporting

Category 2), and in their comprehension and analysis of informational texts (i.e.,

Reporting Category 3). Similar to McGown's (2016) results, girls outperformed boys in

all three reporting categories in all three school years examined. Moreover, a statistically

significantly higher percentage of Grade 4 girls, 3.9%, met the STAAR Reading Level II

Satisfactory Standard than did Grade 4 boys. Continuing with this trend, girls

outperformed boys by 4.9% in the 2013-2014 school year and by 6.9% in the 2014-2015

school year. These findings for Grade 4 students were congruent with the results of

McGown's (2016) study of Grade 3 students in Texas on the STAAR test.

In a more recent investigation, Dietrich et al. (2020) compared social studies skills

between Texas high school boys and girls for eight years. Previous to the STAAR

assessment, Texas used the Texas Assessment of Knowledge and Skills examination to

measure student mastery (Texas Education Agency Accountability Manual, 2016). In

Dietrich et al.'s (2020) investigation, boys consistently outperformed girls in all social

studies skills objectives for the 2004-2005 school year through the 2011-2012 school

year. These gender differences remained consistent across the eight years of Texas

statewide data analyzed by Dietrich et al. (2020).

Similar to the results for social studies, boys have also been documented to

outperform girls in science. Vijil et al. (2012) compared the science performance of boys

and girls in Texas for three years. In their investigation, they analyzed Texas state-

mandated science test scores for three school years. In all three school years, boys had

statistically significantly higher science test scores girls than did girls.

Though the researchers just discussed had boys outperforming girls in social

studies and in science, gender differences in reading among English Learners are aligned

with the larger body of research reviewed. Schleeter et al. (2019) conducted a Texas

statewide investigation for the 2012-2013 school year through the 2014-2015 school year.

In their analysis of STAAR Reading scores of Texas Grade 3 English learners, they

established that girls had statistically significantly better reading performance than boys

in all three school years. Although the gaps were small, the results warrant attention

because of the consistently increasing number of English learners in the State of Texas.

According to the Texas Education Agency, English Language Program Reports for the

2020-2021 school year, 581,186 English learners were enrolled in Texas public schools

(Texas Education Agency English Language Program Reports, 2021).

With reference to Black students, Washington et al. (2019) compared the

language and reading skills of Black boys and Black girls in poverty from the same

neighborhoods and schools. Using individual growth curve models to evaluate the

reading and language performance of Grade 1 through Grade 5 students, Washington et

al. (2019) analyzed data for seven outcomes: (a) language, (b) letter-word identification,

(c) passage comprehension, (d) decoding, (e) reading fluency, (f) reading vocabulary, and

(g) intelligence. One important finding was the lack of any statistically significant

differences in performance on language or intelligence measures between Black boys and

Black girls at any grade level. Readers should note that Black boys and Black girls,

however, had statistically significantly different reading skills (e.g., decoding, fluency,

and reading vocabulary) in Grades 4 and 5. Black girls performed better in both grade

levels than Black boys, as well as demonstrated slightly faster growth compared to Black

boys on a measure of passage comprehension. Black boys had a substantial deceleration

in reading fluency in Grade 5.

For decades educators have worked to close the gap between students of color and White students. This achievement gap between Grade 4 reading scores did not narrow substantially from 1992 to 2003. Black students continue to lag behind on national standardized achievement tests (Rothert, 2005). In 2015, the Every Student Succeeds Act was signed into law (U.S. Department of Education, 2017). The Every Student Succeeds Act maintains expectations of accountability and actions to increase student performance in low-performing schools, where groups of students are not making progress, and where graduation rates are low over extended periods of time. The STAAR data for schools are disaggregated to isolate the performance of subpopulations and meeting preset targets is required. School district leaders and school campus leaders must meet the targets set annually for the racial/ethnic subgroups selected or risk being closed.

Statement of the Problem

Although much emphasis has been placed on reading under the No Child Left Behind Act, test results were not required to be disaggregated by gender. Although trends regarding ethnicity/race and the progress toward closing the achievement gap between White and Asian students and other ethnic/racial groups have been monitored, the gap between girls and boys has not been an emphasis area for accountability. With the inception of the Every Student Succeeds Act (2015), states are now required to disaggregate data by gender for accountability purposes. Considering that only a third of children in the United States read on grade level (Sanchez, 2018), it is imperative that all performance differences be identified. An analysis of the reading performance of Black boys and Black girls since the inception of the Every Student Succeeds Act in 2015 is needed.

Purpose of the Study

The overarching purpose of this investigation was to determine the extent to which Grade 4 Black boys and Black girls differed in their reading performance on the Texas state-mandated assessment. Specifically addressed was the degree to which Black boys and Black girls differed in their ability to understand and analyze a variety of texts across genres, in their ability to understand and to analyze literary texts, and in their ability to understand and to analyze informational texts. Also examined was their performance at the three different phases in levels (i.e., Approaches Grade Level, Meets Grade Level, and Masters Grade Level). The final purpose was to determine the extent to which trends were present in the reading performance of Grade 4 Black boys and Black girls across three school years (i.e., 2016-2017, 2017-2018, 2018-2019).

Significance of the Study

As noted previously, many researchers (e.g., Harris, 2018; Logan & Johnston, 2010; McGown, 2016; Reilly et al. 2019) have focused on investigating gender differences in reading skills. To date, however, no published articles were located in which researchers had examined the relationship between gender and literacy in elementary grades of Black students, as measured by the Texas state-mandated STAAR exam. By focusing exclusively on the reading performance of Black boys and Black girls in this article, gender and its relationship to reading skills acquisition can be revealed at the Grade 4 level for Black students. Findings of this research investigation may have practical applications for parents, activists, educational leaders such as principals, literacy coaches, and classroom teachers in ensuring all Black students become literate. Additionally, educators could utilize these outcomes to design intervention plans, inform

hiring practices, identify performance objectives based on gender, and inform budget planning and resource allocation. All children, regardless of ethnicity/race, will benefit from an increased understanding of the specific genres and skills that present gaps between boys and girls.

Research Questions

The following overarching research question was addressed in this study: What is the difference between Black boys and Black girls in their Grade 4 reading performance? The following sub-questions under this overarching research question were: (a) What is the difference between Black boys and Black girls in their ability to understand and analyze a variety of texts across genres (i.e., STAAR Reading Reporting Category 1)?; (b) What is the difference between Black boys and Black girls in their ability to understand and to analyze literary texts (i.e., STAAR Reading Reporting Category 2)?; (c) What is the difference between Black boys and Black girls in their ability to understand and to analyze informational texts (i.e., STAAR Reading Reporting Category 3)?; (d) What is the difference between Black boys and Black girls in performance on the Approaches Grade Level on the STAAR Reading examination?; (e) What is the difference between Black boys and Black girls in their Meets Grade Level performance on the STAAR Reading examination?; (f) What is the difference between Black boys and Black girls in their Masters Grade Level performance on the STAAR Reading examination?; (g) What is the degree to which trends are present on the STAAR Reading Reporting Categories for Grade 4 Black boys and girls across three school years?; and (h) What is the degree to which trends are present on the STAAR Reading Grade Level Standards for Grade 4 Black boys and girls across three school years? The first six research questions were repeated for the

2016-2017, 2017-2018, and 2018-2019 school years, whereas the last two research

questions involved a comparison of results spanning across all three school years.

Method

Research Design

Present in this study was a non-experimental, causal-comparative research design

(Creswell, 2014; Johnson & Christensen, 2017). Archival data were analyzed regarding

the reading performance of Black elementary students who were enrolled in Texas

elementary schools in the 2016-2017, 2017-2018, 2018-2019 school years. The

independent variable involved in this research article was student gender and the

dependent variables were the three reporting categories (i.e., Reporting Category I,

Reporting Category II, Reporting Category III) from the 2016-2017, 2017-2018, and

2018-2019 STAAR Reading assessments.

Additional dependent variables were Grade 4 STAAR Reading Approaches Grade

Level standard, Meets Grade Level standard, and Masters Grade Level standard in the

2016-2017, 2017-2018, and 2018-2019 school years. Because existing data were

analyzed in this multi-year, empirical investigation, neither the independent variable of

gender nor the dependent variables of the STAAR Reading passing standards and

reporting categories can be manipulated. Accordingly, the degree to which cause-and-

effect relationships can be determined is limited (Creswell, 2014; Johnson & Christensen,

2017).

Participants and Instrumentation

Participants in this study were Grade 4 Black students in Texas who had taken the STAAR Reading assessment in the 2016-2017, 2017-2018, and 2018-2019 school years. Data were requested from the Texas Education Agency Public Education Information Management System.

Reading achievement was determined based on the three STAAR Reading Reporting Categories. In Reporting Category 1, student ability to understand and to analyze a variety of texts across reading genres is assessed. Measured in STAAR Reading Reporting Category 2 is student ability to understand and analyze literary texts. Finally, in Reporting Category 3, the assessment measures student ability to understand and to analyze informational texts.

In addition to the STAAR Reading Reporting Categories, three performance level standards were analyzed in this study. In 2017, the Texas Education Agency introduced three performance levels to determine how well students performed on the STAAR Reading Assessment (Texas Education Agency, 2017). The Approaches Grade Level standard is assigned to students who do not meet the grade level passing score. Students in this category are not able to demonstrate a basic level of understanding the course expectations. This designation predicts that students will be likely to succeed in the next grade level or course with targeted academic interventions to assist in the student's academic progress. In the Meets Grade Level standard, students will be expected to succeed in the next grade level with some form of short-term, targeted academic interventions. Students who perform in the Masters Grade Level standard are expected to succeed in the next grade level. Students in this category will need very little to no

academic intervention and are on track for college and/or career readiness (Texas

Education Agency, 2017). Analyses were conducted based on student gender,

performance level (i.e., Approaches Grade Level, Meets Grade Level, Masters Grade

Level), and across the three STAAR Reading Reporting Categories (i.e., Reporting

Category 1, Reporting Category 2, and Reporting Category 3). Readers are directed to the

Texas Education Agency website for further information regarding score validities and

score reliabilities for the STAAR Reading Assessment.

Results

Prior to addressing the first three research questions regarding the STAAR

Reading Reporting Categories, the underlying assumptions of the MANOVA were

checked. Although not all of the assumptions were met, Field (2013) contends that the

MANOVA procedure is still appropriate to use. As such, a separate MANOVA was

conducted for each school year starting with 2016-2017 and ending with the 2018-2019

school year and will be reported in that order.

Overall Reading Reporting Category Results for Black Boys and Black Girls

Regarding the 2016-2017 school year, the MANOVA revealed a statistically

significant difference, Wilks' $\Lambda = .98$, $p < .001$, partial $\eta^2 = .02$, in overall reading

performance between Grade 4 Black boys and Black girls. The effect size for this

statistically significant difference was small (Cohen, 1988). Concerning the 2017-2018

school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .98$,

$p < .001$, partial $\eta^2 = .02$, small effect size (Cohen, 1988), in overall reading performance

between Grade 4 Black boys and Black girls. The effect size for this statistically

significant difference was small (Cohen, 1988). With respect to 2018-2019, the

MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .98$, $p < .001$, partial $\eta^2 = .02$, small effect size, in overall reading performance between Grade 4 Black boys and Black girls. In all three school years, effect sizes were small.

Reading Reporting Category I Results Across All Three School Years

Following the overall results of the MANOVA, univariate follow-up Analysis of Variance (ANOVA) procedures were conducted for all three school years. A statistically significant difference was yielded between Black boys and Black girls in their Reading Reporting Category I performance in the 2016-2017 school year, $F(1, 22621) = 143.61$, $p < .001$, partial $\eta^2 = .006$, below small effect size; in the 2017-2018 school year, $F(1, 18122) = 38.00$, $p < .001$, partial $\eta^2 = .002$, below small effect size; and in the 2018-2019 school year, $F(1, 18678) = 173.15$, $p < .001$, partial $\eta^2 = .009$, below small effect size. . In all three school years, effect sizes were below small (Cohen, 1988).

In regard to the Reading Reporting Category I scores, the reading performance of Black boys was 3.39% lower than the average reading performance of Black girls in the 2016-2017 school year; 2.39% lower in the 2017-2018 school year; and 5.02% lower in the 2018-2019 school year. In the 2016-2017 school year, Black girls responded correctly on 49.96% of questions whereas Black boys only responded correctly to 46.57% of questions. In the 2017-2018 school year, Black girls responded correctly on 63.05% of the questions whereas Black boys only responded correctly to 60.66% of the questions. Finally, in the 2018-2019 school year, Black girls responded correctly to 65.74% of the questions whereas Black boys answered 60.72% of the questions correctly. Black girls consistently answered more test items correctly than did Black boys on the Reading

Reporting Category I in all three school years. Table 2.1 contains the descriptive

statistics for all three school years.

Insert Table 2.1 about here

Reading Reporting Category II Results Across All Three School Years

A statistically significant difference was yielded between Black boys and Black

girls in their Reading Reporting Category II performance in the 2016-2017 school year,

$F(1, 22621) = 255.49$, $p < .001$, partial $\eta^2 = .01$, small effect size; in the 2017-2018

school year, $F(1, 18122) = 183.43$, $p < .001$, partial $\eta^2 = .01$, small effect size; and in the

2018-2019 school year, $F(1, 18678) = 378.733$, $p < .001$, partial $\eta^2 = .02$, small effect

size. In all three school years, effect sizes were small (Cohen, 1988).

Concerning the Reading Reporting Category II scores, the reading performance of

Black boys was 4.14% lower than the average reading performance of Black girls in the

2016-2017 school year; 4.69% lower in the 2017-2018 school year; and 6.51% lower in

the 2018-2019 school year. In the 2016-2017 school year, Black girls responded correctly

to 50.75% of the questions whereas Black boys answered 46.61% of the questions

correctly. In the 2017-2018 school year, Black girls responded correctly to 61.52% of the

questions whereas Black boys answered 56.83% of the questions correctly. Finally, in the

2018-2019 school year, Black girls responded correctly to 61.43% of the questions

whereas Black boys answered 54.92% of the items correctly. Black girls consistently

answered more test items correctly than did Black boys on the Reading Reporting

Category II in all three school years. Revealed in Table 2.2 are the descriptive statistics for this reporting category across all three school years.

Insert Table 2.2 about here

Reading Reporting Category III Results Across All Three School Years

A statistically significant difference was revealed between Black boys and Black girls in their Reading Reporting Category III performance in the 2016-2017 school year, $F(1, 22621) = 349.20$, $p < .001$, partial $\eta^2 = .02$, small effect size; in the 2017-2018 school year, $F(1, 18122) = 296.876$, $p < .001$, partial $\eta^2 = .02$, small effect size; and in the 2018-2019 school year, $F(1, 18678) = 207.116$, $p < .001$, partial $\eta^2 = .01$, small effect size. In all three school years, effect sizes were small (Cohen, 1988).

With respect to the Reading Reporting Category III scores, the reading performance of Black boys was 5.21% lower than the average reading performance of Black girls in the 2016-2017 school year; 6.35% lower in the 2017-2018 school year; and 5.01% lower in the 2018-2019 school year. In the 2016-2017 school year, Black girls responded correctly on 42.87% of question whereas Black boys only responded correctly in 37.66% of questions. In the 2017-2018 school year, Black girls responded correctly on 60.25% of questions whereas Black boys only responded correctly to 53.85% of questions. Finally, in the 2018-2019 school year, Black girls responded correctly to 58.57% of questions whereas Black boys answered 53.56% correctly. Black girls consistently answered more test items correctly than did Black boys consistently on the

Reading Reporting Category III in all three school years. Table 2.3 contains the descriptive statistics for this reporting category across all three school years.

Insert Table 2.3 about here

Results for the Approaches Grade Level Standard Across Three School Years

Student performance on the three STAAR Reading grade level standards was addressed through the use of Pearson chi-square procedures. This statistical procedure was the most appropriate statistical procedure for these grade level performance standards because they were nominal in nature (i.e., Met or Not Met). Because a large sample size was present, the assumptions for utilizing Pearson chi-square procedures were met (Field, 2013).

Concerning the Approaches Grade Level standard, the result for the 2016-2017 school year was statistically significant, $\chi^2(1) = 234.63$, $p < .001$, Cramer's V of .10, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls, 10.2% more, met the Approaches Grade Level standard than did Black boys. More than half of Black girls met this standard compared to less than half of Black boys who met this standard. Table 2.4 contains the descriptive statistics for this analysis.

Insert Table 2.4 about here

With respect to the 2017-2018 school year, a statistically significant difference was present, $\chi^2(1) = 160.74$, $p < .001$, Cramer's V of .09, below small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls, 9.3% more, met the Approaches

Grade Level standard than did Black boys. In total, 63.2% of Black girls met the Approaches

Grade Level standard compared to 53.9% of Black boys who met this grade level standard.

Delineated in Table 2.4 are the descriptive statistics for this school year.

Regarding the 2018-2019 school year, a statistically significant difference was

yielded, $\chi^2(1) = 240.91$, $p < .001$, Cramer's V of .11, small effect size (Cohen, 1988). A

statistically significantly higher percentage of Black girls, 11% more, met the Approaches

Grade Level performance standard than did Black boys. A total of 67.3% of Black girls met

the Approaches Grade Level standard compared to 56.3% of Black boys who met this

standard. Revealed in Table 2.4 are the descriptive statistics for this analysis.

Results for the Grade 4 STAAR Reading Performance at the Meets Grade Level

Standard Over Time

Concerning the Meets Grade Level performance standard, the result for the 2016-

2017 school year was statistically significant, $\chi^2(1) = 153.71$, $p < .001$, Cramer's V of .08,

below small effect size8 (Cohen, 1988). A statistically significantly higher percentage of

Black girls, 7.3% more, met the Meets Grade Level standard than did Black boys. Nearly

30% of Black girls met this standard compared to less than 23% of Black boys who met this

standard. Table 2.5 contains the descriptive statistics for this school year.

Insert Table 2.5 about here

With respect to the 2017-2018 school year, the result was statistically significant,

$\chi^2(1) = 122.42$, $p < .001$, Cramer's V of .08, below small effect size (Cohen, 1988). A

statistically significantly higher percentage of Black girls, 7.7% more, met the Meets Grade

Level standard than did Black boys. More than a third, 35%, of Black girls met this standard

compared to 27.3% of Black boys who met this standard. Revealed in Table 2.5 are the descriptive statistics for this school year.

Regarding the 2018-2019 school year, a statistically significant difference was yielded, $\chi^2(1) = 155.58$, $p < .001$, Cramer's V of .09, below small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls, 8.4% more, met the Meets Grade Level standard than Black boys. About one-third, 33.7%, of Black girls met the standard compared to only 25.3% of Black boys who met this standard. Delineated in Table 2.5 are the descriptive statistics for this analysis.

Results for the Masters Grade Level Standard Across Three School Years

Concerning the Masters Grade Level standard performance standard, the result for the 2016-2017 school year was statistically significant, $\chi^2(1) = 119.63$, $p < .001$, Cramer's V of .07, below small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls, 4.7% more, met the Masters Grade Level performance than Black boys. Nearly 15% of Black girls met the standard compared to almost 10% of Black boys who met this standard. Table 2.6 contains the descriptive statistics for this school year.

Insert Table 2.6 about here

With respect to the 2017-2018 school year, the result was statistically significant, $\chi^2(1) = 75.15$, $p < .001$, below small effect size, Cramer's V of .06 (Cohen, 1988). A statistically significantly higher percentage of Black girls, 4.5% more, met the Masters Grade Level standard performance than Black boys. Readers should note the very low percentages, 16.7% of Black girls and 12.2% of Black boys who met this standard. Revealed in Table 2.6 are the descriptive statistics for this analysis.

Regarding the 2018-2019 school year, a statistically significant difference was yielded, $\chi^2(1) = 63.78$, $p < .001$, below small effect size, Cramer's V of .06 (Cohen, 1988). A statistically significantly higher percentage of Black girl, 3.9% more, met the Masters Grade Level standard than Black boys. Almost 15% of Black girls met the Masters Grade Level standard compared to 10.5% of Black boys. Delineated in Table 2.6 are the descriptive statistics for this school year.

Trends in Reading Performance by Gender

In analyzing the reading achievement of Grade 4 Black students in Texas across the three years of data that were examined, trends in scores were present by gender. In each STAAR Reading Reporting Category and in all three years investigated, Black girls outperformed Black boys. In regard to the Reading Reporting Category I scores, the reading performance of Black boys was 3.39% lower than the average reading performance of Black girls in the 2016-2017 school year; 2.39% lower in the 2017-2018 school year; and 5.02% lower in the 2018-2019 school year. Black girls consistently answered more test items correctly than did Black boys on the Reading Reporting Category I in all three school years analyzed.

Concerning the Reading Reporting Category II scores, the reading performance of Black boys was 4.14% lower than the average reading performance of Black girls in the 2016-2017 school year; 4.69% lower in the 2017-2018 school year; and 6.51% lower in the 2018-2019 school year. Black girls consistently answered more test items correctly than did Black boys on the Reading Reporting Category II in all three school years.

With respect to the Reading Reporting Category III scores, the reading performance of Black boys was 5.21% lower than the average reading performance of Black girls in the 2016-2017 school year; 6.35% lower in the 2017-2018 school year; and

5.01% lower in the 2018-2019 school year. Black girls consistently answered more test items correctly than did Black boys on the Reading Reporting Category III in all three school years.

Pertaining to the three STAAR Reading grade level standards, Black girls again outperformed Black boys. Across all three years, statistically significantly higher percentages of Black girls met the Approaches Grade Level standard, 10.2% more in the 2016-2017 school year; 9.3% more in the 2017-2018 school year; and 11% more in the 2018-2019 school year than did Black boys. Statistically significantly higher percentages of Black girls met the Meets Grade Level standard, 7.3% more in the 2016-2017 school year; 7.7% more in the 2017-2018 school year; and 8.4% more in 2018-2019 school year, than Black boys. Statistically significantly higher percentages of Black girls met the Masters Grade Level standard, 4.7% more in the 2016-2017 school year; 4.5% more in the 2017-2018 school year, and 3.9% more in the 2018-2019 school year, than Black boys. Depicted in Figures 2.1 through 2.6 are the average performance of these two groups of Black students on the STAAR Reading measures.

Insert Figures 2.1 to 2.6 about here

Discussion

Analyzed in this investigation was the extent to which differences were present in the reading performance between Texas Grade 4 Black boys and girls. Three years of statewide data on the three Grade 4 STAAR Reading Reporting Categories were examined for Black boys and Black girls. Statistically significant results were present in all three school years. Following these statistical analyses, the Grade Level Performance

Standards were examined and yielded statistically significant results in all three school years.

In each of the three STAAR Reading Reporting Categories, Black boys had statistically lower scores that Black girls in all three years. In each reporting category, the gap between the two student groups was at least 2%. Reporting Category II had the largest gaps over time, ranging from over 4% to 6.5%. Reporting Category III was close with gaps as large as 6.4% in the 2017-2018 school year.

Similarly, in each of the three Grade Level Performance Standards in all three years investigated, lower percentages of Black boys met this standard than did Black girls. Effect sizes for the reading performance of Black students were below small each year at each Grade Level standard. The only exception was the Approaches Grade Level Performance Standard in the 2016-2017 school year, which was a small effect size.

Connections to Existing Literature

As revealed in this study, gender differences were present in reading achievement of Grade 4 Black students. These findings were congruent with the results of other national and international researchers who have analyzed gender differences (Logan & Johnston, 2010; Mullis et al., 2017; Reilly et al., 2019; Wei et al., 2015). Moreover, results are commensurate with research conducted in Texas using the STAAR examination (e.g., Harris, 2018; McGown, 2016; Schleeter et al., 2019). Congruent with these researchers, higher percentages of girls met the passing standard on the STAAR Reading test than was met by boys. With reference to Black students, Washington et al. (2018) compared the language and reading skills of Black boys and Black girls in poverty. Black girls performed better in both grade levels than Black boys, as well as

demonstrated slightly faster growth compared to Black boys on a measure of passage comprehension.

Implications for Policy and for Practice

Considering the results discussed herein, several implications for policy and practice can be suggested based on the findings of this multiyear statewide investigation. Regarding policy implications, one of the most powerful ways for schools and districts to bring about change is through the analysis of data that, in turn, fuels the content of school improvement plans. These plans are the blueprint for change. Currently in the state of Texas, data is analyzed, and districts are held accountable for the success of students who are poor but there are no subgroups within that group. Unfortunately, until the state analyzes data by gender within subgroups, it will remain challenging for schools and districts to complete improvement plans that directly address the achievement gap in reading performance of grade 4 Black students based on gender differences. A better analysis of the subgroups would allow leaders to be more intentional when planning for campus improvement. Change will happen through practice, not policy, until this shift occurs.

Concerning practice implications, one of the most effective ways to currently address the achievement gap in Black students based on gender is by changing some currently accepted solutions. Because of the sheer gravity of the many issues that need to be addressed within a school system, there cannot be a one size fits all approach to providing support to students who are more likely to improve with supports that are tailored to their needs. With the combined efforts of all stakeholders, including school leaders, teachers, content specialists, curriculum writers and district-level administrators

focused on the need to address the continuing achievement gaps in reading performance of Texas Grade 4 Black students based on gender differences, much more can be accomplished. With the combined efforts of all stakeholders, administrators at all levels will gain the understanding how to improve content, programming, and practices. The goal is to recognize the need to engage Black boys and Black girls differently. Teachers, school administrators and instructional support staff should be differentiating support based on gender differences within the subgroups. Literacy can be a stumbling block for many students and the realities of those struggles have lifelong impact in college readiness, career readiness, future earnings, and the ability to build generational wealth thus impacting the entire Black community. Therefore, principals, district level administrators, and teachers must strengthen and differentiate their curriculum in the younger grades and target students struggling in ways that prevent achievement gaps from occurring in the first place.

Recommendations for Future Research

Several recommendations for future research can be offered based on the results of this statewide, multiyear investigation. First, researchers should determine if similar gaps exist in other grade levels, content areas, and within other ethnic groups. Second, researchers should examine how gender may affect the reading achievement of boys and girls differently and determine any socio-economic differences that may be a function of the differences. Third, researchers should conduct this study in other states using other assessments to determine if similar trends exist; findings presented herein would be generalizable to other states. Fourth, researchers should isolate Grade 4 Black boys and girls and investigate differences with the race and gender based on economic status. Last,

researchers should include qualitative and mixed studies to obtain a better understanding regarding the relationship to academic achievement within an ethnic group based on gender.

Conclusion

The purpose of this research study was to determine the extent to which differences were present in the reading achievement of Texas Grade 4 Black students as a function of their gender. Analysis of three school years of Texas statewide data yielded statistically significant differences in the reading achievement between Black boys and girls. In all three school years and in all three reporting categories, Black boys scored lower than Black girls. In all three Grade Level Performance Standards, Black girls demonstrated a higher level of mastery of the TEKS. Findings were consistent with prior researchers (e.g., Harris, 2018; McGown, 2016; Mullis et al., 2017; Schleeter et al., 2019; Combs et al., 2010).

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Table 2.1

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category I Scores for

Black Boys and Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Gender	*n*	*M%*	*SD%*
2016-2017			
Boys	11,338	46.57	21.53
Girls	11,283	49.96	20.95
2017-2018			
Boys	8,716	60.66	26.24
Girls	9,406	63.05	25.89
2018-2019			
Boys	8,875	60.72	26.99
Girls	9,803	65.74	25.19

Table 2.2

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category II Scores for

Black Boys and Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Gender	*n*	*M%*	*SD%*
2016-2017			
Boys	11,338	46.61	19.77
Girls	11,283	50.75	19.21
2017-2018			
Boys	8,716	56.83	23.77
Girls	9,406	61.52	22.85
2018-2019			
Boys	8,875	54.92	23.20
Girls	9,803	61.43	22.48

Table 2.3

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category III Scores for

Black Boys and Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Gender	*n*	*M%*	*SD%*
2016-2017			
Boys	11.338	37.66	20.61
Girls	11,283	42.87	21.28
2017-2018			
Boys	8,716	53.85	25.03
Girls	9,406	60.25	24.96
2018-2019			
Boys	8,875	53.56	24.07
Girls	9,803	58.57	23.43

Table 2.4

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the

Approaches Grade Level Standard for Black Boys and Black Girls for the 2016-2017,

2017-2018, and 2018-2019 School Years

School Year and Gender	Did Not Meet n and %age of Total	Met n and %age of Total
2016-2017		
Boys	($n = 6,069$) 53.5%	($n = 5,269$) 46.5%
Girls	($n = 4,891$) 43.3%	($n = 6,392$) 56.7%
2017-2018		
Boys	($n = 4,014$) 46.1%	($n = 4,702$) 53.9%
Girls	($n = 3,459$) 36.8%	($n = 5,947$) 63.2%
2018-2019		
Boys	($n = 3,880$) 43.7%	($n = 4,995$) 56.3%
Girls	($n = 3,204$) 32.7%	($n = 6,599$) 67.3%

Table 2.5

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the Meets

Grade Level Standard for Black Boys and Black Girls for the 2016-2017, 2017-2018, and

2018-2019 School Years

School Year and Gender	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Boys	($n = 8,772$) 77.4%	($n = 2,566$) 22.6%
Girls	($n = 7,911$) 70.1%	($n = 3,372$) 29.9%
2017-2018		
Boys	($n = 6,334$) 72.7%	($n = 2,382$) 27.3%
Girls	($n = 6,118$) 65.0%	($n = 3,288$) 35.0%
2018-2019		
Boys	($n = 6,626$) 74.7%	($n = 2,249$) 25.3%
Girls	($n = 6,500$) 66.3%	($n = 3,303$) 33.7%

Table 2.6

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the Masters

Grade Level Standard for Black Boys and Black Girls for the 2016-2017, 2017-2018, and

2018-2019 School Years

School Year and Gender	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Boys	(*n* = 10,228) 90.2%	(*n* = 1,110) 9.8%
Girls	(*n* = 9,642) 85.5%	(*n* = 1,641) 14.5%
2017-2018		
Boys	(*n* = 7,656) 87.8%	(*n* = 1,060) 12.2%
Girls	(*n* = 7,835) 83.3%	(*n* = 1,571) 16.7%
2018-2019		
Boys	(*n* = 7,944) 89.5%	(*n* = 931) 10.5%
Girls	(*n* = 8,395) 85.6%	(*n* = 1,408) 14.4%

Figure 2.1.

Average Performance of Black Boys and Girls on the Grade 4 STAAR Reading Reporting

Category I for the 2016-2017, 2017-2018, and 2018-2019 School Years
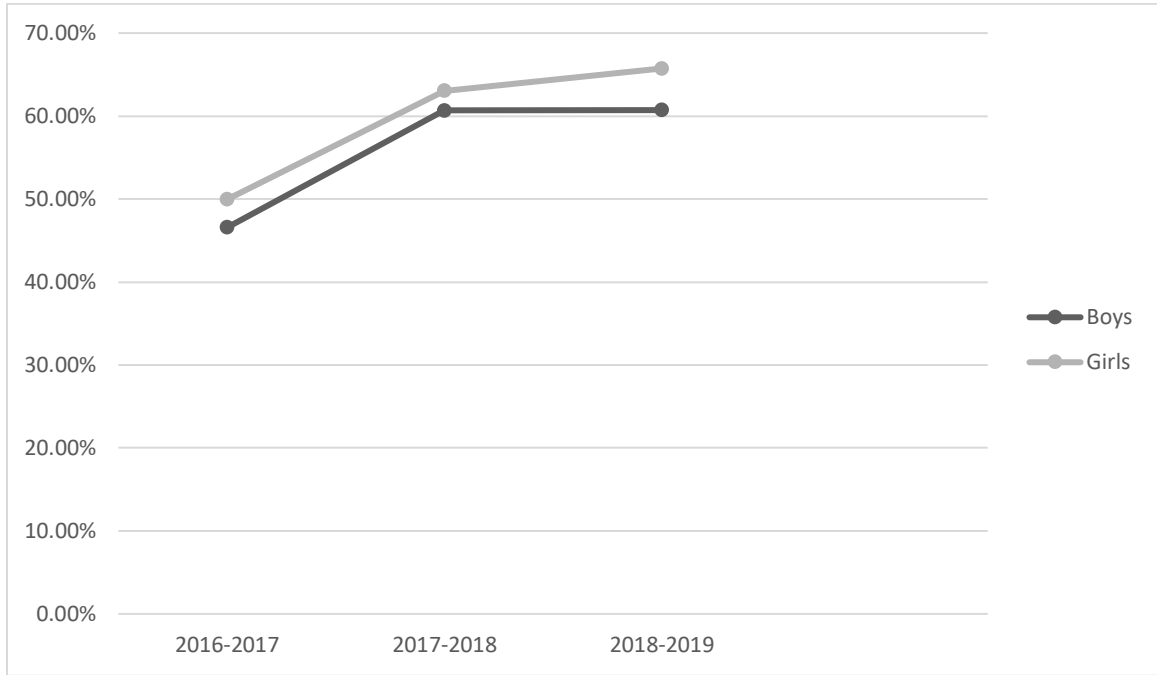
Figure 2.2

Average Performance of Black Boys and Girls on the Grade 4 STAAR Reading Reporting

Category II for the 2016-2017, 2017-2018, and 2018-2019 School Years
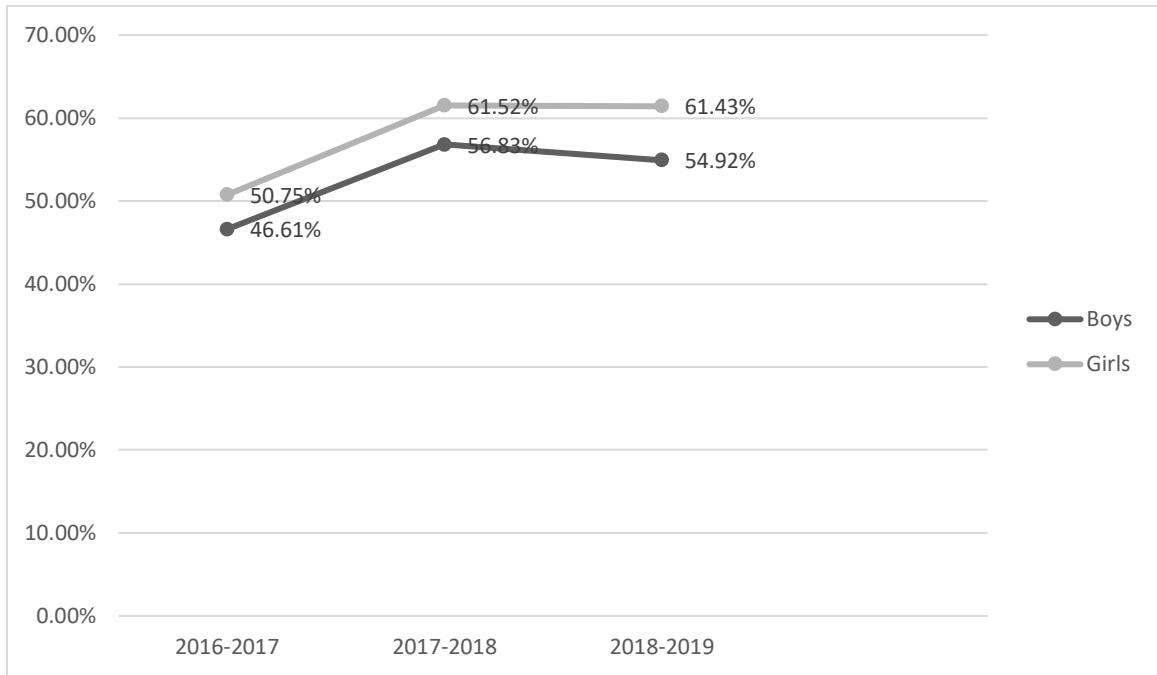
Figure 2.3

Average Performance of Black Boys and Girls on the Grade 4 STAAR Reading Reporting

Category III for the 2016-2017, 2017-2018, and 2018-2019 School Years
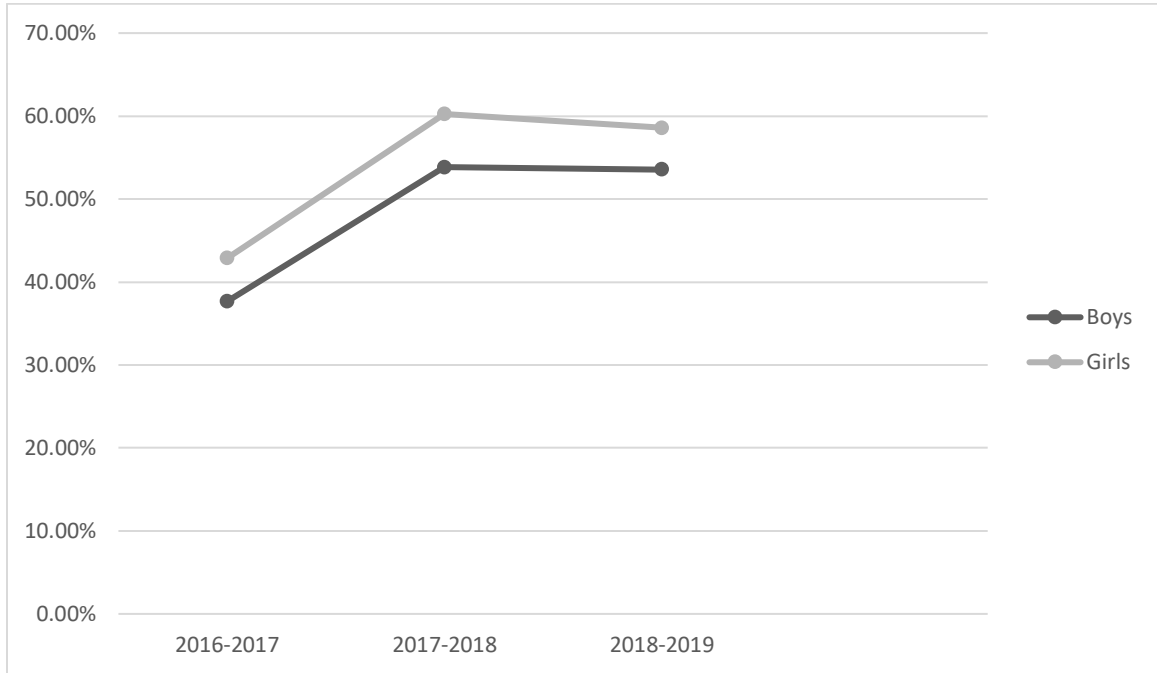
Figure 2.4

Percentages of Black Boys and Girls Who Met the Grade 4 STAAR Reading Approaches

Grade Level Standard in the 2016-2017, 2017-2018, and 2018-2019 School Years
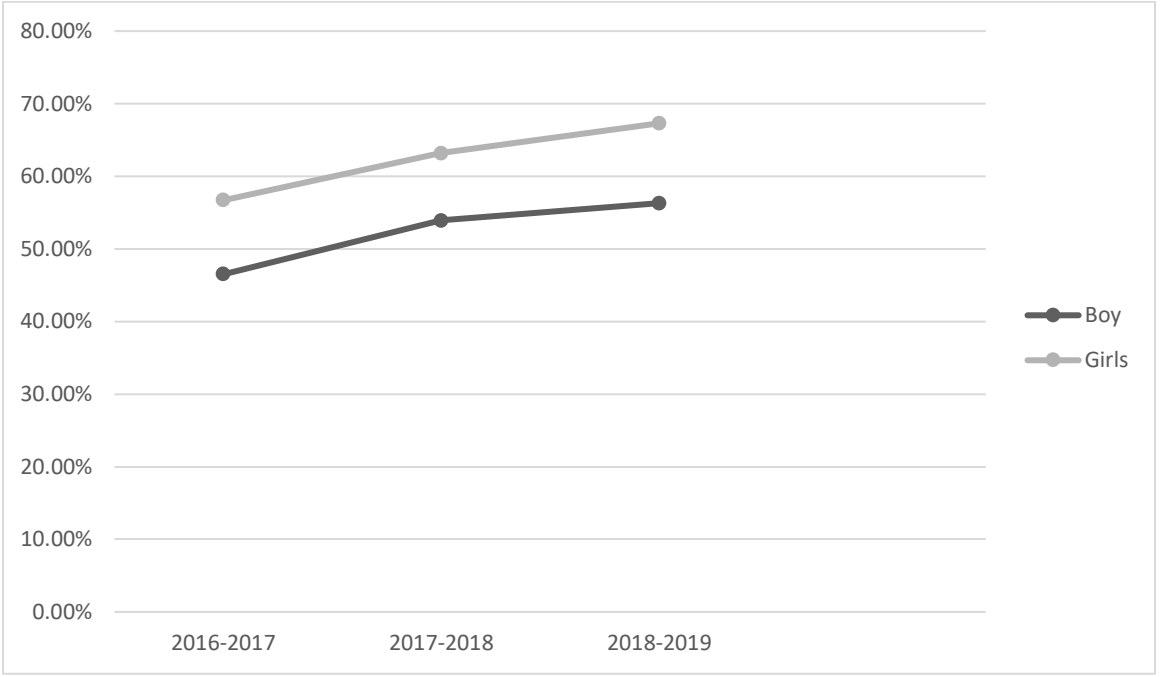
Figure 2.5

Percentages of Black Boys and Girls Who Met the Grade 4 STAAR Reading Meets Grade

Level Standard in the 2016-2017, 2017-2018, and 2018-2019 School Years
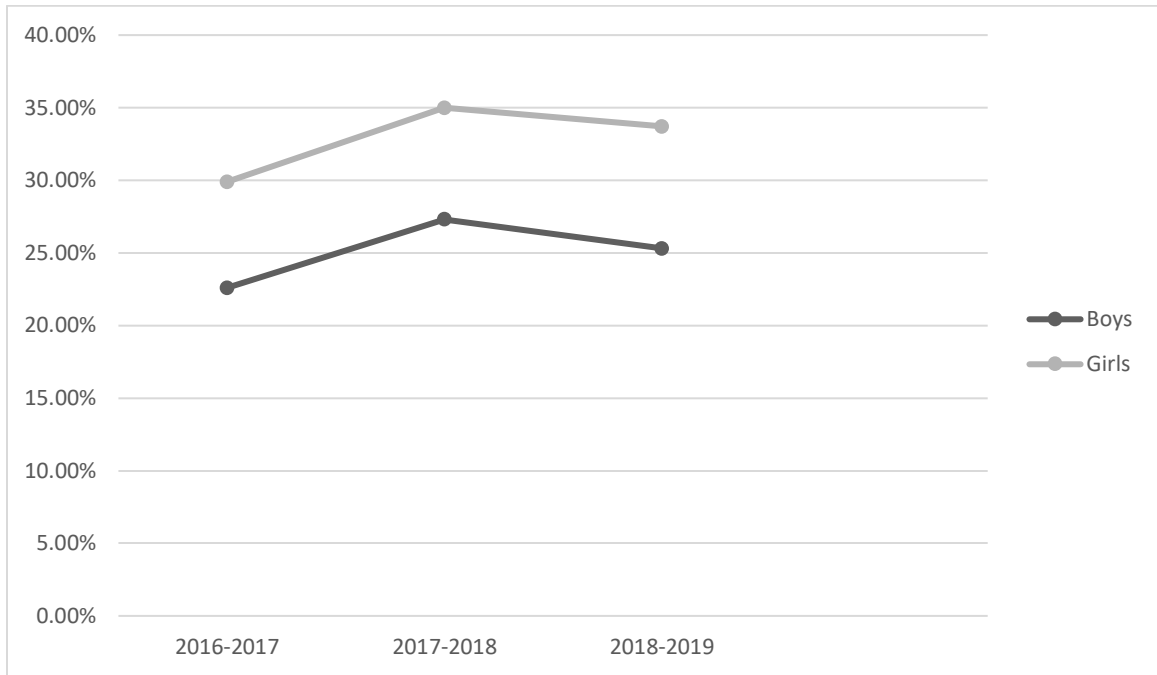
Figure 2.6

Percentages of Black Boys and Girls Who Met the Grade 4 STAAR Reading Masters

Grade Level Standard in the 2016-2017, 2017-2018, and 2018-2019 School Years
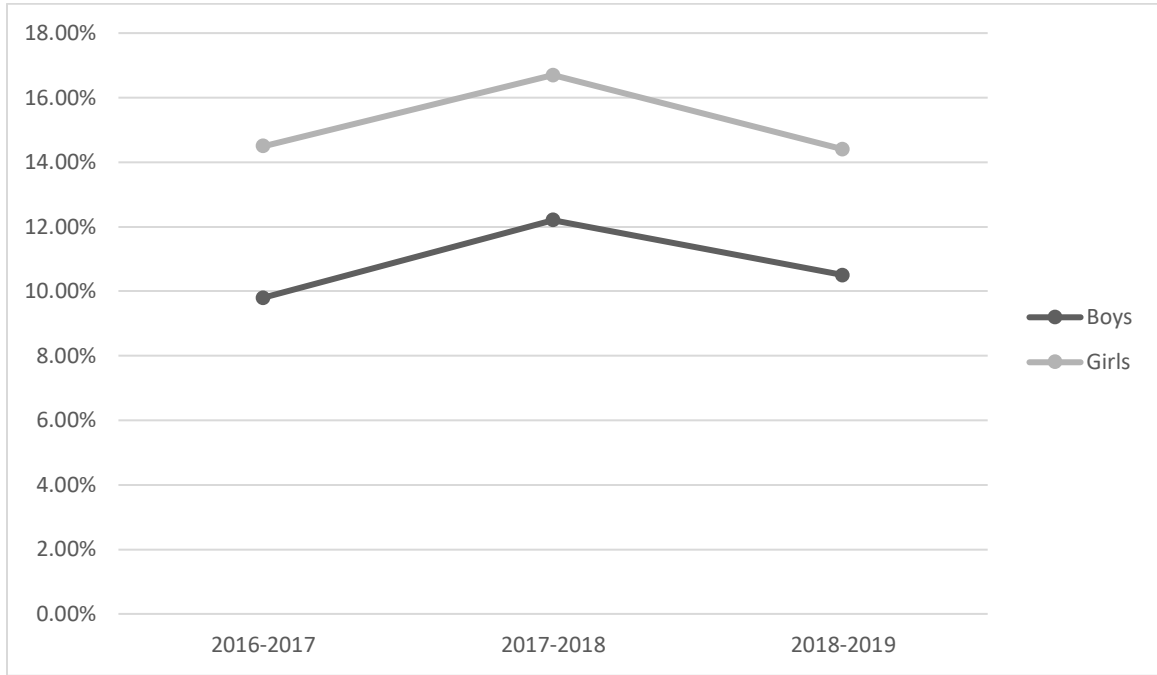
CHAPTER III

DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE 4 BLACK

BOYS AS A FUNCTION OF THEIR ECONOMIC STATUS: A MULTIYEAR,

STATEWIDE INVESTIGATION

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This dissertation follows the style and format of *Research in the Schools (RITS)*.

Abstract

In this statewide, multiyear analysis, the extent to which Grade 4 Black boys differed in their reading performance on the Texas state-mandated reading assessment as function of their economic status (i.e., economically disadvantaged and not economically disadvantaged) was determined. Analysis of three school years of Texas statewide data yielded statistically significant differences in reading by the economic status of Black boys. In all three school years and in all three reporting categories, Black boys who were in poverty answered statistically significantly fewer items correctly than Black boys who were not in poverty. Similarly, statistically significantly lower percentages of Black boys who were in poverty met the three grade level standards than Black boys who were not in poverty. Implications for policy and for practice, along with recommendations for future research, were provided.

Keywords: Economic status, Poverty, Black, Reading Performance, Texas, STAAR Grade, Boys

DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE 4 BLACK

BOYS AS A FUNCTION OF THEIR ECONOMIC STATUS: A MULTIYEAR,

STATEWIDE INVESTIGATION

In 2019, the average percentage of children who lived in poverty was 29% and

over 7,000,000 children are negatively influenced by poverty (National Center for

Children in Poverty, 2019) in the United States. This percentage means that almost one in

five children lives in poverty. Among all children under 18 years in the United States,

38% live in families with low incomes and 17% are regarded as being poor. Children are

overrepresented among the poor as they represent 23% of the population but comprise

32% of all people in poverty. Many more children live in families with incomes just

above the poverty threshold (National Center for Children in Poverty, 2019).

According to Jones et al. (2017), poverty is the strongest predictor of learning

challenges and poor academic outcomes for children. For the past several decades,

increased focus has been placed on the relationships of poverty and reading (e.g., Conradi

et al., 2016; Reardon, 2013). As student poverty increases, reading performance becomes

increasingly poorer. Sharkins et al. (2017) established that students living in poverty

have poorer academic performance than their more affluent peers. As with grades,

graduation rates, college admission, and degree completion, students in poverty

underperform more privileged students on standardized assessments (Lee & Slate, 2014).

In the United States of America, 58% of Black children live in low-income

homes. This statistic is more than double the percentage of White children, 26%. Triple

the amount of Black children (30%) live in poor homes than White children (10%) and

more than triple the amount live in deep poverty, 14%, compared to 4% of White

children under the age of 18 (National Center for Children in Poverty, 2019).

With respect to the state of interest for this article, Texas, researchers have

investigated the relationships of poverty to the reading performance of Texas Grade 3

students. McGown (2016) conducted a study to determine the extent to which differences

were present for Texas Grade 3 students on the State of Texas Assessment of Academic

Readiness (STAAR) Reading test as a function of their economic status. Statewide data

from the 2012-2013, 2013-2014, and 2014-2015 school years on the three Grade 3

STAAR Reading Reporting Categories were analyzed for three groups of students:

students who did not qualify for the federal free or reduced price lunch program (i.e., Not

Poor), students who qualified for the reduced price lunch program (i.e., Moderately

Poor), and students who qualified for the free lunch program (i.e., Extremely Poor)

student groups. McGown (2016) established the presence of a stair-step effect for all

three school years in all three reporting categories. Texas Grade 3 students who were

Extremely Poor had statistically significant lower reading scores than students who were

Moderately Poor and students who were Not Poor. Students who were Moderately Poor

had lower reading test scores that students who were Not Poor all three school years.

Regarding overall passing rates, McGown (2016) documented that students who were

Extremely Poor had lower passing rates on the STAAR Level II Final Satisfactory

Performance Standard in reading that students who were Moderately Poor and students

who were Not Poor. Moreover, students who were Moderately Poor had lower passing

rates that students who were Not Poor. Statistically significant results were present in all

three school years.

In a similar study but of Grade 4 Texas students, Harris (2018) analyzed STAAR Reading test scores using the same three student economic groups as McGown (2016). Data were analyzed for the 2012-2013, 2013-2014, and 2014-2015 school years. Statistically significant differences were established in not only overall reading performance, but also in all three Reading Reporting categories in all three years examined. The higher the degree of poverty, the lower STAAR Reading test scores were. Moreover, the higher the degree of poverty, the lower the percentages of students who met the passing standard on the STAAR Reading exam. A stair step pattern existed. Aligned with the findings from McGown's (2016) investigation on Texas Grade 3 students, economic achievement gaps in reading were clearly present for Texas Grade 3 students.

Recently, Hamilton and Slate (2019) documented the presence of differences in reading achievement for Hispanic and Black students by their economic status. They compared the reading performance of Texas students who were in poverty to their peers who were not economically disadvantaged. Utilizing data from the 2015-2016 state mandated reading assessment, statistically significant differences were established in the reading performance of Hispanic and Black children as a function of poverty. Statistically significantly lower percentages of Hispanic and Black children who were economically disadvantaged met the three Grade Level Reading Standards on the assessment than their counterparts who were not economically disadvantaged. Almost twice as many (59.2%) Hispanic students who were Not Poor met the standard in reading than Hispanic students who were Poor (29.1%). Nearly triple the percentage of Hispanic students (35.6%) who were Not Poor performed at the Masters Grade Level standard than Hispanic students

(13.9%) who were Poor. More than twice as many Black students (50.7%) who were Not Poor met the reading assessment standards than Black students (21.8%) who were Poor. The gap at the Masters Grade Level standard widened even more as only 9.4% of Black students who were Poor achieved mastery whereas 29.4% of Black students who were Not Poor achieved mastery. Hamilton and Slate (2019) recommended that researchers replicate their study to determine the extent to which their results were generalizable to students at other grade levels.

In 2017, Harris and Slate analyzed the reading performance of Texas Grade 3 students to determine the effects of poverty on the reading achievement of Grade 3 Black boys from the 2015-2016 administration of the STAAR test. Three levels of performance existed, Phase I or unsatisfactory performance, Phase II or satisfactory, and Phase III or advanced performance. As the poverty level increased, reading performance decreased. A stairstep effect was present, as the percentage of Black boys who were Extremely Poor increased, the percentage of Black boys who met the reading standard decreased.

In a two-decade examination of historical racial/ethnic disparities in academic achievement by economic status, Paschel et al. (2018) examined the interaction of race/ethnicity and poverty gaps in both mathematics and reading achievement from 1986-2005 for White, Black, and Hispanic students in three age groups (5-6, 9-10, and 13-14. They established that, across the 20-year time period, gaps between White students in poverty and students of color in poverty increased, whereas the gaps between White students and Hispanic students who were not in poverty narrowed. They concluded that understanding the nature of achievement gaps requires the examination of race/ethnicity and income simultaneously.

Statement of the Problem

With the inception of Every Student Succeeds Act (United Department of Education, 2017), academic performance by ethnicity/race is monitored, but in Texas, gender is not one of the monitored subgroups. As such, a decline in Black boys' knowledge could potentially be missed due to a lack of required monitoring. Taking into account that only a third of children in the United States read on grade level (Sanchez, 2018), it is imperative that all performance differences be identified. Hernandez (2011) concluded that 26% of students in poverty and who do not read on grade level in Grade 3 will not graduate from high school. 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). 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 school students are classified as economically disadvantaged (Texas Education Agency, 2021). An investigation intof the reading performance of Grade 4 Black boys as a function of their economic status since the inception of the Every Student Succeeds Act in 2015 is needed.

Purpose of the Study

The overarching purpose of this investigation was to determine the extent to which Grade 4 Black boys might differ in their reading performance on the Texas state-mandated assessment as a function of their economic status (i.e., Not Poor, Poor). Specifically addressed was the degree to which Grade 4 Black boys differ in their understanding across genres, comprehension and analysis of literary texts, and comprehension and analysis of informational texts by the economic status. Also examined

was their performance at the three different grade levels (i.e., student's standard, recommended, and advanced) as a function of their economic status. The final purpose was to determine the extent to which trends might be present in the reading performance of Grade 4 Black boys by their economic status across three school years.

Significance of the Study

Although researchers have conducted numerous investigations into the achievement gaps between White and Asian students and their Black counterparts, little concerted national or statewide effort has been addressed toward the education and social outcomes of Black males, in particular. Through investigating this issue, the intention is to add to the available research literature regarding the need for a specified office at the national or state level with a primary focus on the success of Black males in reading and other achievement indicators.

Research Questions

The following overarching research question were addressed in this study: What is the difference in the reading performance of Grade 4 Black boys as a function of their economics status (i.e., Not Poor, Poor)? Specific sub-questions under this overarching research question were: (a) What is the difference in understanding across genres (i.e., STAAR Reading Reporting Category 1) by the economic status of Grade 4 Black boys?; (b) What is the difference in comprehension and analysis of literary texts (i.e., STAAR Reading Reporting Category 2) by the economic status of Grade 4 Black boys?; (c) What is the difference in comprehension and analysis of informational texts by the economic status of Grade 4 Black boys (i.e., STAAR Reading Reporting Category 3)?; (d) What is the difference in the Approaches Grade Level performance of Grade 4 Black boys by their

economic status?; (e) What is the difference in the Meets Grade Level performance of Grade 4 Black boys by their economic status?; (f) What is the difference in the Masters Grade Level performance of Grade 4 Black boys by their economic status?; (g) What is the degree to which trends are present by the economic status of Grade 4 Black boys on the STAAR Reading Reporting Categories across three school years?; and (h) What is the degree to which trends are present by the economic status of Grade 4 Black boys on the STAAR Reading grade level Standards across three school years. The first six research questions will be repeated for the 2016-2017, 2017-2018, and 2018-2019 school years, whereas the last two research questions will involve a comparison of results spanning across all three school years.

Method

Research Design

A non-experimental causal-comparative research design was used in this study (Creswell, 2014; Johnson & Christensen, 2017). The independent variable cannot be manipulated, because of this type of non-experimental, causal comparative research. Archival data that was examined from past assessment results. The individual variables already occurred, and dependent variables were not controlled in this study design (Johnson & Christensen, 2017). The independent variable in this research study was the economic status of Black boys (i.e., economically disadvantaged, not economically disadvantaged) and the dependent variables that were analyzed is the performance of Black boys in each reporting category and grade level standards.

Students who were in the economically disadvantaged group were Grade 4 Black boys who qualified for either the reduced price meals or for free meals under the National

School Lunch and Child Nutrition Program. Children whose families have an income of 130% or less of the Federal poverty guideline can receive free meals at school. Poverty guidelines begin at an annual income below $12,060 and increases depending on the number of family members in a household. Eligibility for free meals is 130% of the $12,060 figure, which would be an annual income of $15,678. This dollar amount increases as the number of family members increase (United States Department of Agriculture Food and Nutrition Services, 2017).

Children whose families have an income from 131% to 185% of the Federal poverty guideline are eligible for reduced-priced meals at school. Eligibility for reduced priced meals is 185% of the $12,060 figure, which would be an annual income of $22,311. This dollar amount increases as the number of family members increase (United States Department of Agriculture Food and Nutrition Services, 2017). Students who were not economically disadvantaged were Grade 4 Black boys who did not qualify for either the reduced price meals or for the free meals under the National School Lunch and Child Nutrition Program (United States Department of Agriculture Food and Nutrition Services, 2017).

Participants and Instrumentation

The STAAR test is the state testing program that was implemented in the 2011-2012 school year. The Texas Education Agency, in collaboration with the Texas Higher Education Coordinating Board and Texas educators, developed the STAAR program in response to requirements set forth by the 80th and 81st Texas legislatures. The STAAR is an assessment program, which starts when students are in Grade 3, intended to measure the extent to which students have learned and are able to apply the knowledge and skills

defined in the state mandated curriculum standards, the Texas Essential Knowledge and Skills. Every STAAR question is directly aligned to the Texas Essential Knowledge and Skills currently implemented for the grade/subject or course being assessed

The STAAR Reading assessment has three reporting categories. In the Reading Reporting Category 1, students' ability to understand and to analyze a variety of texts across reading genres is assessed. Measured in the STAAR Reading Reporting Category 2 are students' ability to understand and to analyze literary texts. Assessed in the STAAR Reading Reporting Category 3 are students' ability to understand and to analyze informational texts. (Texas Education Agency STAAR Accountability Manual, 2016).

Participants in this study were Grade 4 Black boys in Texas who took the STAAR Reading assessment in the 2016-2017, 2017-2018, and 2018-2019 school years. Data were requested from the Texas Education Agency Public Education Information Management System. Analyses were conducted based on student economic status (i.e., economically disadvantaged, not economically disadvantaged), across the three STAAR Reading Reporting Categories (i.e., Reporting Category 1, Reporting Category 2, and Reporting Category 3), and across three grade level standards (i.e., Approaches Grade Level, Meets Grade Level, Masters Grade Level).

In addition to the STAAR Reading Reporting Categories, three performance level standards were analyzed in this study. In 2017, the Texas Education Agency introduced three performance levels to determine how well students performed on the STAAR Reading Assessment (Texas Education Agency, 2017). The Approaches Grade Level standard is assigned to students who do not meet the grade level passing score. Students in this category are not able to demonstrate a basic level of understanding the course

expectations. This designation predicts that students will be likely to succeed in the next grade level or course with targeted academic interventions to assist in the student's academic progress. In the Meets Grade Level standard, students will be expected to succeed in the next grade level with some form of short-term, targeted academic interventions. Students who perform in the Masters Grade Level standard are expected to succeed in the next grade level and, as such, should require little to no academic intervention and are on track for college and/or career readiness (Texas Education Agency, 2017). Readers are directed to the Texas Education Agency website for further information regarding score validities and score reliabilities for the STAAR Reading Assessment.

Results

Prior to addressing the first three research questions regarding Reading Reporting Categories, the underlying assumptions of the MANOVA were checked. Although not all of the assumptions were met, Field (2013) contends that the MANOVA procedure is still appropriate to use. As such, a separate MANOVA was conducted for each school year starting with the 2016-2017 school year and ending with the 2018-2019 school year and will be reported in that order.

Overall Reading Reporting Category Results for Black Boys

Regarding the 2016-2017 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .93$, $p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen, 1988), in overall reading performance between Grade 4 Black boys who were poor and who were not poor. Concerning the 2017-2018 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .92$, $p < .001$, partial $\eta^2 = .08$,

moderate effect size (Cohen, 1988), in overall reading performance between Grade 4

Black boys who were poor and who were not poor. With respect to 2018-2019, the

MANOVA revealed a statistically significant difference, Wilks' Λ = .93, p < .001, partial

η^2 = .07, moderate effect size (Cohen, 1988), in overall reading performance between

Grade 4 Black boys who were poor and who were not poor. In all three school years,

effect sizes 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 all three school years. A statistically

significant difference was yielded between by the economic status of Black boys in their

Reading Reporting Category I performance in the 2016-2017 school year, F(1, 10193) =

556.22, p < .001, partial η^2 = .05, small effect size; in the 2017-2018 school year, F(1,

7501) = 443.21, p < .001, partial η^2 = .06, moderate effect size; and in the 2018-2019

school year, F(1, 7644) = 438.66, p < .001, partial η^2 = .05, small effect size. Effect sizes

were small in two of the school years and moderate in one school year (Cohen, 1988).

In regard to the Reading Reporting Category I scores, the reading performance of

Black boys in poverty was 11.21% lower than the average reading performance of Black

boys who were not poor in the 2016-2017 school year; 16.19% lower in the 2017-2018

school year; and 16.41% lower in the 2018-2019 school year. In the 2016-2017 school

year, Black boys who were not poor responded correctly on 55.76% of questions whereas

Black boys who were poor only responded correctly to 44.55% of questions. In the 2017-

2018 school year, Black boys who were not poor responded correctly on 74.78% of the

questions whereas Black boys who were poor only responded correctly to 58.59% of the

questions. Finally, in the 2018-2019 school year, Black boys who were not poor responded correctly to 74.80% of the questions whereas Black boys who were poor answered 58.39% of the questions correctly. Black boys who were not economically disadvantaged consistently answered more test items correctly than Black boys in poverty on the Reading Reporting Category I in all three school years. Table 3.1 contains the descriptive statistics for all three school years.

Insert Table 3.1 about here

Reading Reporting Category II Results Across All Three School Years

A statistically significant difference was yielded by the economic status of Black boys in their Reading Reporting Category II performance in the 2016-2017 school year, $F(1, 10193) = 602.49$, $p < .001$, partial $\eta^2 = .06$, moderate effect size; in the 2017-2018 school year, $F(1, 7501) = 559.06$, $p < .001$, partial $\eta^2 = .07$, moderate effect size; and in the 2018-2019 school year, $F(1, 7644) = 445.30$, $p < .001$, partial $\eta^2 = .06$, moderate effect size. Effect sizes were moderate in all three school years (Cohen, 1988).

In regard to the Reading Reporting Category II scores, the reading performance of Black boys who were economically disadvantaged was 11.64% lower than the average reading performance of Black boys who were not poor in the 2016-2017 school year; 16.36% lower in the 2017-2018 school year; and 14.15% lower in the 2018-2019 school year. In the 2016-2017 school year, Black boys who were not poor responded correctly on 56.26% of questions whereas Black boys who were poor only responded correctly to 44.62% of questions. In the 2017-2018 school year, Black boys who were not poor

responded correctly on 71.19% of the questions whereas Black boys who were poor only

responded correctly to 54.83% of the questions. Finally, in the 2018-2019 school year,

Black boys who were not poor responded correctly to 67.11% of the questions whereas

Black boys who were poor answered 52.96% of the questions correctly. Black boys who

were not economically disadvantaged consistently answered more test items correctly

than Black boys in poverty on the Reading Reporting Category II in all three school

years. Table 3.2 contains the descriptive statistics for all three school years.

Insert Table 3.2 about here

Reading Reporting Category III Results Across All Three School Years

A statistically significant difference was revealed by the economic status of Black

boys in their Reading Reporting Category III performance in the 2016-2017 school year,

$F(1, 10193) = 721.80$, $p < .001$, partial $\eta^2 = .07$, moderate effect size; in the 2017-2018

school year, $F(1, 7501) = 573.53$, $p < .001$, partial $\eta^2 = .07$, moderate effect size; and in

the 2018-2019 school year, $F(1, 7644) = 494.48$, $p < .001$, partial $\eta^2 = .06$, moderate

effect size. In all three school years, effect sizes were moderate (Cohen, 1988).

In regard to the Reading Reporting Category III scores, the reading performance

of Black boys who were economically disadvantaged was 13.27% lower than the average

reading performance of Black boys who were not poor in the 2016-2017 school year;

17.57% lower in the 2017-2018 school year; and 15.52% lower in the 2018-2019 school

year. In the 2016-2017 school year, Black boys who were not poor responded correctly

on 48.59% of questions whereas Black boys who were poor only responded correctly to

35.32% of questions. In the 2017-2018 school year, Black boys who were not poor responded correctly on 69.19% of the questions whereas Black boys who were poor only responded correctly to 51.62% of the questions. Finally, in the 2018-2019 school year, Black boys who were not poor responded correctly to 67.09% of the questions whereas Black boys who were poor answered 51.57% of the questions correctly. Black boys who were not economically disadvantaged consistently answered more test items correctly than Black boys in poverty on the Reading Reporting Category III in all three school years. Delineated in Table 3.3 are the descriptive statistics for all three school years.

Insert Table 3.3 about here

Results for the Approaches Grade Level Standard Over Three School Years

Student performance on the three STAAR Reading grade level standards was 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 grade level standards (i.e., Met, Not Met) and for economic status (i.e., economically disadvantaged, not economically disadvantaged). Accordingly, chi-square procedures are appropriate when all variables are categorical (Field, 2013). Because a statewide sample size was present, the assumptions chi-square procedures were met.

Concerning the Approaches Grade Level standard by student economic status, the result for the 2016-2017 school year was statistically significant, $\chi^2(1) = 590.33$, $p < .001$, Cramer's V of .24, small effect size (Cohen, 1988). A statistically significantly higher

percentages of Black boys who were not poor, 29.9% more, met the Approaches Grade

Level standard than Black boys who were poor. Near three-fourths of Black boys who

were not poor met the standard whereas only 41.2% of Black boys who were in poverty

met this standard. Table 3.4 contains the descriptive statistics for this analysis.

Insert Table 3.4 about here

With respect to the 2017-2018 school year, a statistically significant difference was

yielded, $\chi^2(1) = 470.63$, $p < .001$, Cramer's V of .25, small effect size (Cohen, 1988). A

statistically significantly higher percentages of Black boys who were not poor, 32.7% more,

met the Approaches Grade Level standard than Black boys who were in poverty. More than

80% of Black boys who were not poor met the standard compared to less than 50% of Black

boys who were poor. Table 3.4 contains the descriptive statistics for this school year.

Regarding the 2018-2019 school year, the result was statistically significant, $\chi^2(1) =$

411.79, $p < .001$, Cramer's V of .23, small effect size (Cohen, 1988). A statistically

significantly higher percentages of Black boys who were not poor, 30% more, met the

Approaches Grade Level standard than Black boys who were in poverty. As delineated in

Table 3.4, more than 80% of Black boys who were not poor met the standard compared to

only about 50% of Black boys who were economically disadvantaged.

Results for the Meets Grade Level Standard Over Three School Years

Concerning the Meets Grade Level standard by student economic status, a

statistically significant difference was revealed for the 2016-2017 school year, $\chi^2(1) = 660.64$,

$p < .001$, Cramer's V of .26, small effect size (Cohen, 1988). A statistically significantly

higher percentage of Black boys who were not poor, 26.9% more, met the Meets Grade Level

standard than Black boys who were in poverty. Almost 45% of Black boys who were not poor met the standard compared to only 17.9% of Black boys who were economically disadvantaged who met this grade level standard. Revealed in Table 3.5 are the descriptive statistics for this analysis.

Insert Table 3.5 about here

With respect to the 2017-2018 school year, the result was statistically significant, $\chi^2(1) = 593.38$, $p < .001$, Cramer's V of .28, small effect size (Cohen, 1988). A statistically significantly higher percentages of Black boys who were not poor, 33.4% more, met the Meets Grade Level standard than Black boys who were in poverty. More than 55% of Black boys who were not poor met the Meets Grade Level standard whereas only 22.7% of Black boys who were economically disadvantaged met this standard. Table 3.5 contains the descriptive statistics for this school year.

Regarding the 2018-2019 school year, a statistically significant difference was revealed, $\chi^2(1) = 463.71$, $p < .001$, Cramer's V of .25, small effect size (Cohen, 1988). A statistically significantly higher percentages of Black boys who were not poor, 28.3% more, met the Meets Grade Level standard than Black boys who were in poverty. As delineated in Table 3.5, almost half of Black boys who were not poor met the Meets Grade Level standard compared to about 20% of Black boys who were economically disadvantaged met this grade level standard.

Results for the Masters Grade Level Standard Across Three School Years

Concerning the Masters Grade Level standard for the 2016-2017 school year, a statistically significant difference was yielded, $\chi^2(1) = 510.21$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black boys who were not poor, 16.9% more, met the Masters Grade Level standard than Black boys who were in poverty. Almost one-fourth of Black boys who were not poor met the Masters Grade Level standard whereas less than one-tenth of Black boys who were economically disadvantaged met this grade level standard. Revealed in Table 3.6 are the descriptive statistics for this school year.

Insert Table 3.6 about here

With respect to the 2017-2018 school year, the result was statistically significant, $\chi^2(1) = 313.82$, $p < .001$, Cramer's V of .21, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black boys who were not poor, 18% more, met the Masters Grade Level standard than Black boys who were in poverty. In this school year, more than a one-fourth of Black boys who were not poor met the Masters Grade Level standard whereas less than a one-tenth of Black boys who were economically disadvantaged met this grade level standard. Table 3.6 contains the descriptive statistics for this analysis.

Regarding the 2018-2019 school year, a statistically significant difference was yielded, $\chi2(1) = 305.84$, $p < .001$, Cramer's V of .20, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black boys who were not poor, 16.2% more, met the Masters Grade Level standard than Black boys who were in poverty. As presented in Table 3.6, almost a fourth of Black boys who were not poor met the Masters Grade Level

standard whereas less than a one-tenth of Black boys who were economically disadvantaged met this grade level standard.

Trends in Reading Performance by Economic Status

In analyzing the reading achievement of Grade 4 Black boys in Texas across the three years of data that were examined, trends in scores were present by economic status. In each STAAR Reading Reporting Category and in all three years investigated, Black boys who were not poor outperformed Black boys who were poor. In regard to the Reading Reporting Category I scores, the reading performance of Black boys who were poor was 11.21% lower than the average reading performance of Black boys who were not poor in the 2016-2017 school year; 16.19% lower in the 2017-2018 school year; and 16.41% lower in the 2018-2019 school year. Black boys who were not poor consistently outperformed Black boys in poverty on the Reading Reporting Category I in all three school years of data analyzed.

Concerning the Reading Reporting Category II scores, the reading performance of Black boys who were poor was 11.64% lower than the average reading performance of Black boys who were not poor in the 2016-2017 school year; 16.36% lower in the 2017-2018 school year; and 14.15% lower in the 2018-2019 school year. Black boys who were not poor consistently outperformed Black boys in poverty on the Reading Reporting Category II in all three school years.

Regarding Reading Reporting Category III scores, the reading performance of Black boys who were poor was 13.27% lower than the average reading performance of Black boys who were not poor in the 2016-2017 school year; 17.57% lower in the 2017-2018 school year; and 15.52% lower in the 2018-2019 school year. Black boys who were

not poor consistently outperformed Black boys in poverty on the Reading Reporting Category III in all three school years.

With respect to the three grade level standards, statistically significantly higher percentages of Black boys who were not poor met these grade level standards than Black boys who were economically disadvantaged. Across all three school years, statistically significantly higher percentages of Black boys who were not poor met the Approaches Grade Level standard, 29.9% more in the 2016-2017 school year; 32.7% more in the 2017-2018 school year; and 30% more in the 2018-2019 school year, than Black boys in poverty. Statistically significantly higher percentages of Black boys who were not poor met the Meets Grade Level standard, 26.9% more in the 2016-2017 school year; 33.4% more in the 2017-2018 school year; and 28.3% more in 2018-2019 school year, than Black boys who were in poverty. Statistically significantly higher percentages of Black boys who were not poor met the Masters Grade Level standard, 16.9% more in the 2016-2017 school year; 18% more in the 2017-2018 school year, and 16.2% more in the 2018-2019 school year, than Black boys who were in poverty. These average percentages for both groups of Black boys are depicted in Figures 3.1 through 3.6.

Insert Figures 3.1 to 3.6 about here

Discussion

Analyzed in this investigation was the extent to which differences were present in the reading performance of Texas Grade 4 Black boys by their economic status. Three years of statewide data on the three Grade 4 STAAR Reading Reporting Categories and on three grade level standards were compared for Black boys who were in poverty and

who were not in poverty. Statistically significant results were present in all reporting categories and all grade level standards.

In each of the three STAAR Reading Reporting Category results in all three years were analyzed. Black boys who were poor had statistically lower scores that Black boys who were not poor. In each reporting category, the gap between the two student groups was at least 11% with Black boys who were poor scoring lower. The largest gaps were in the 2017-18 and 2018-19 school years, ranging from 14% to over 17.5% differences in performance.

Similarly, in each of the three grade level standards in all three years investigated, statistically significantly lower percentages of Black boys who were poor met these three grade level standards than Black boys who were not in poverty. Differences in the percentage of students who met the Approaches Grade Level standard ranged from 29.9% to 32.7% across the three years; 26.9 to 33.4% at the Meets Grade Level standard; and 16.2% to 18% at the Masters Grade Level standard. The largest differences in each performance level existed in the 2017-18 school year with a 32.7% difference at the Approaches Grade Level standard; 33.4% at the Meets Grade Level Standard; and 18% at the Masters Grade Level standard.

Connections to Existing Literature

According to Jones et al. (2017), poverty is the strongest predictor of learning challenges and poor academic outcomes for children. For the past several decades, increased focus has been placed on the relationships of poverty and reading (e.g., Conradi et al., 2016; Reardon, 2013). As student poverty increases, reading performance becomes increasingly poorer. In terms of Black boys and socio-economic status, research indicates

a stairstep effect was present, and as the percentage of Black boys who were extremely

poor increased, the percentage of Black boys who met the reading standard decreased.

The results of this research were congruent with that of other researchers who have

addressed the relationships between poverty and reading (Harris & Slate, 2017;

McGown, 2016; Paschel et al., 2018).

Implications for Policy and for Practice

Regarding policy implications, one of the most important ways for schools and

districts to address the differences that are currently reflected in STAAR Reading scores

related to Black boys and economic status is to be deliberate in monitoring gender as a

subgroup. Currently, data are analyzed, and districts are held accountable for the success

of students who are poor, but no subgroup data are examined within that group.. In other

words, when the state begins to change policies that require the measurement, or

monitoring, of gender and economic status as a subgroup, they will have taken the first

step to addressing the problem by no longer missing the problem. In short, they will

begin to identify the performance differences and begin to investigate reading

performance as a function of economic status. A better analysis of subgroups would

allow all stakeholders, including school leaders, teachers, content specialists, curriculum

writers and district-level administrators to better meet the specific needs of subgroups

when planning for campus improvement. Until policies shift, changes will only happen

through informal and well-intended practices, not policies.

Concerning practice implications, one of the most important first steps to

addressing the gap in reading achievement with Black boys who are poor, is to no longer

accept some long-practiced, yet ineffective solutions. Because of the volume of issues

and challenges facing educators, it is, unfortunately, common to attempt a "one size fits all solution" to problems that require a more tailored approach. With a strong understanding of the problems, often identified with accurate and specific data, practices can be refined to specifically address the fact that Black boys and students who were poor are not achieving at the same rate as Asian and White students in relation to reading. With a clear picture of the reality, all stakeholders can combine their efforts to focus on solutions specific to this subgroup by differentiating support based on gender and economic status. Once the solutions are identified, they must be put into campus improvement plans, the blueprints for change. Literacy can be a stumbling block for many students and the realities of those struggles have lifelong impact in college readiness, career readiness, future earnings, and the ability to build generational wealth thus impacting the entire Black community. Therefore, high school principals, district level administrators, and teachers must strengthen their curriculum in the younger grades and target students who are struggling.

Recommendations for Future Research

Several recommendations for future research can be offered based on the results of this statewide, multiyear investigation. First, researchers should determine if similar gaps exist in other grade levels such as Grade 8 Reading and English I and II End of Course exams. Second, analyzing data from other content areas such as Mathematics would help to determine if these trends are only identified in reading. Thirdly, research focused on identifying differences within other ethnic groups such as Hispanic, White, and Asian groups is needed. Fourth, researchers should examine how economic status may affect the reading achievement of Black girls differently and determine any

economic and socio-economic differences that may be a function of the differences. Fifth, researchers should conduct this study in other states using other assessments to determine if similar trends exist, and therefore the findings presented herein would be generalizable to other states. Last, researchers should include qualitative and mixed studies to obtain a better understanding regarding the relationship to academic achievement within a racial group based on gender and economic status. Family structure, parents educational background, and students' experiences with trauma would all be good topics for investigation within ethnic groups.

Conclusion

Clearly established in this multiyear, statewide investigation were statistically significant differences in reading by the economic status of Black boys. For all three reporting categories and for all three grade level standards, Black boys in poverty had lower reading test scores than Black boys who were not economically disadvantaged. Moreover, lower percentages of Black boys in poverty met the three reading grade level standards than Black boys who were not economically disadvantaged. Congruent with the results of other researchers (e.g., (e.g., Harris, 2018; McGown, 2016; Sharkins et al., 2017; Lee & Slate, 2014), poverty clearly affects student achievement.

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Table 3.1

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category I Scores by

Economic Status for Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School

Years

School Year and Economic Status	*n*	*M%*	*SD%*
2016-2017			
Not Poor	2,062	55.76	20.68
Poor	8,131	44.55	21.06
2017-2018			
Not Poor	1,314	74.78	22.77
Poor	6,187	58.59	25.83
2018-2019			
Not Poor	1,358	74.80	24.08
Poor	6,286	58.39	26.62

Table 3.2

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category II Scores by

Economic Status for Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School

Years

School Year and Economic Status	*n*	*M%*	*SD%*
2016-2017			
Not Poor	2,062	56.26	19.66
Poor	8,131	44.62	19.11
2017-2018			
Not Poor	1,114	71.19	21.15
Poor	6,187	54.83	23.12
2018-2019			
Not Poor	1,358	67.11	21.41
Poor	6,286	52.96	22.63

Table 3.3

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category III Scores by

Economic Status for Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School

Years

School Year and Economic Status	*n*	*M%*	*SD%*
2016-2017			
Not Poor	2,062	48.59	21.69
Poor	8,131	35.32	19.58
2017-2018			
Not Poor	1,314	69.19	23.59
Poor	6,187	51.62	24.28
2018-2019			
Not Poor	1,358	67.09	22.85
Poor	6,286	51.57	23.42

Table 3.4

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the

Approaches Grade Level Standard by Economic Status for Black Boys for the 2016-2017,

2017-2018, and 2018-2019 School Years

School Year and Economic Status	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Not Poor	(*n* = 596) 28.9%	(*n* = 1,466) 71.1%
Poor	(*n* = 4,782) 58.8%	(*n* = 3,349) 41,2%
2017-2018		
Not Poor	(*n* = 228) 17.4%	(*n* = 1,066) 82.6%
Poor	(*n* = 3,099) 50.1%	(*n* = 3,088) 49.9%
2018-2019		
Not Poor	(*n* = 240) 17.7%	(*n* = 1,118) 82.3%
Poor	(*n* = 2,997) 47.7%	(*n* = 3,289) 52.3%

Table 3.5

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the Meets

Grade Level Standard by Economic Status for Black Boys for the 2016-2017, 2017-2018,

and 2018-2019 School Years

School Year and Economic Status	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Not Poor	(*n* = 1,139) 55.2%	(*n* = 923) 44.8%
Poor	(*n* = 6,672) 82.1%	(*n* = 1,459) 17.9%
2017-2018		
Not Poor	(*n* = 577) 43.9%	(*n* = 737) 56.1%
Poor	(*n* = 4,784) 77.3%	(*n* = 1,403) 22.7%
2018-2019		
Not Poor	(*n* = 688) 50.7%	(*n* = 670) 49.3%
Poor	(*n* = 4,963) 79.0%	(*n* = 1,323) 21.0%

Table 3.6

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the Masters

Grade Level Standard by Economic Status for Black Boys for the 2016-2017, 2017-2018,

and 2018-2019 School Years

School Year and Economic Status	Did Not Meet	Met
	n and %age of Total	n and %age of Total
2016-2017		
Not Poor	($n = 1,574$) 76.3%	($n = 488$) 23.7%
Poor	($n = 7,578$) 93.2%	($n = 553$) 6.8%
2017-2018		
Not Poor	($n = 951$) 72.4%	($n = 363$) 27.6%
Poor	($n = 5,590$) 90.4%	($n = 597$) 9.6%
2018-2019		
Not Poor	($n = 1,029$) 75.8%	($n = 329$) 24.2%
Poor	($n = 5,786$) 92.0%	($n = 500$) 8%

Figure 3.1

Average Performance on the Grade 4 STAAR Reading Reporting Category I by the

Economic Status of Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School
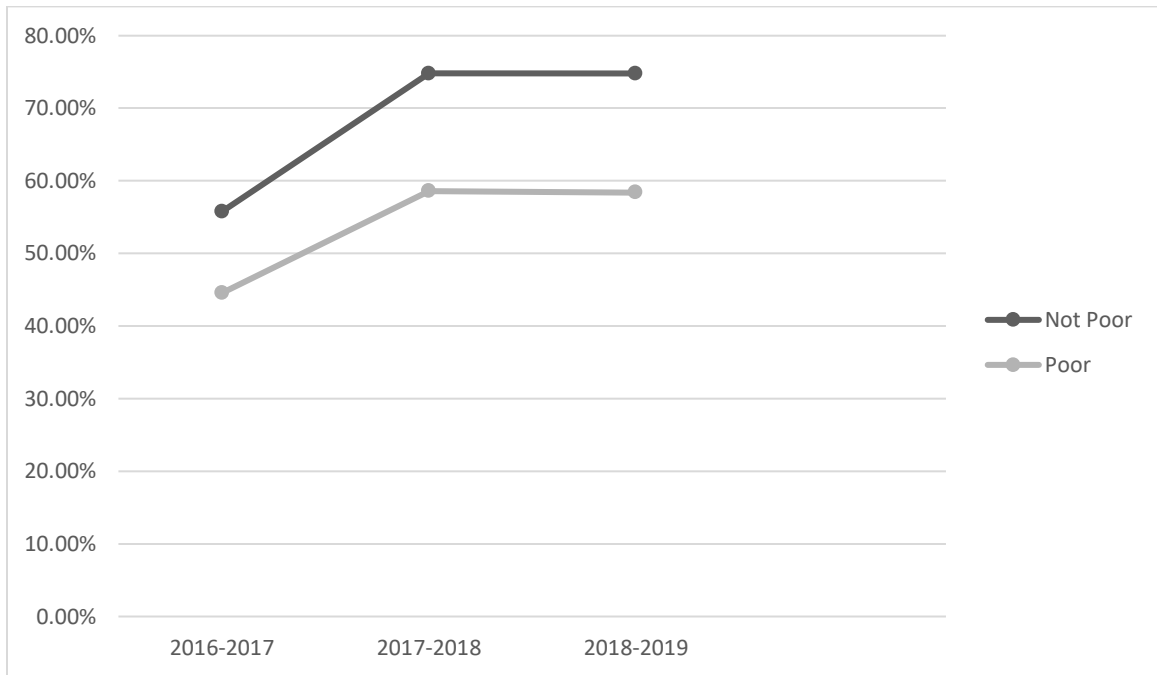
Years

Figure 3.2

Average Performance on the Grade 4 STAAR Reading Reporting Category II by the

Economic Status of Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School
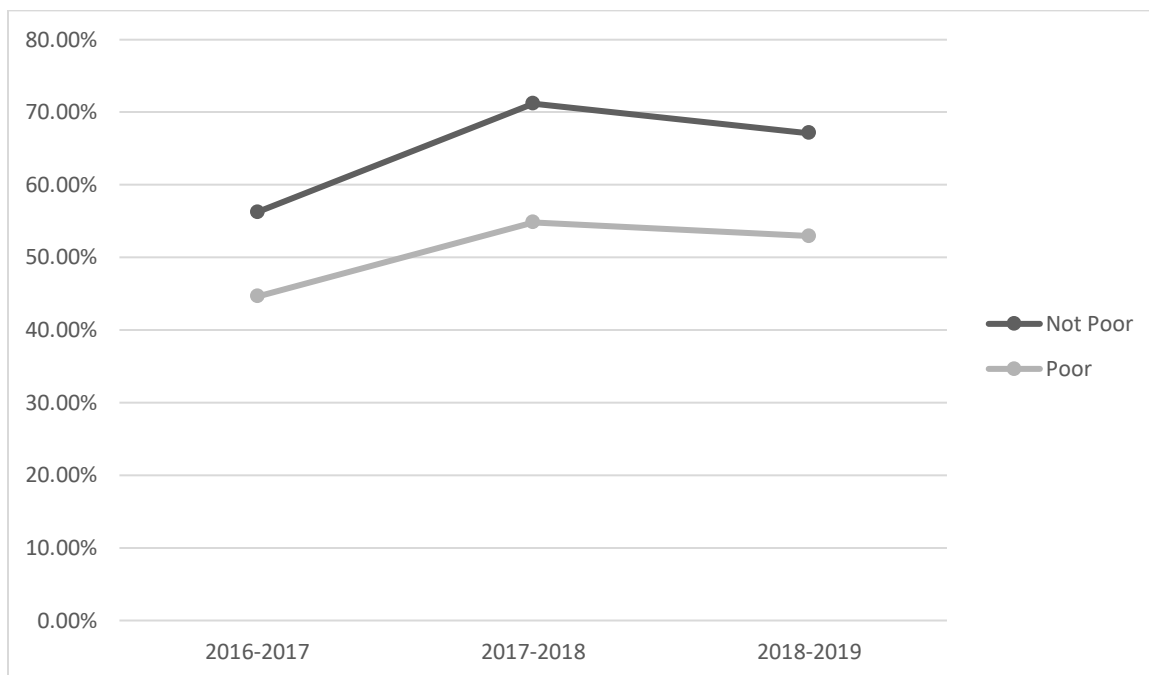
Years

Figure 3.3

Average Performance on the Grade 4 STAAR Reading Reporting Category III by the

Economic Status of Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School
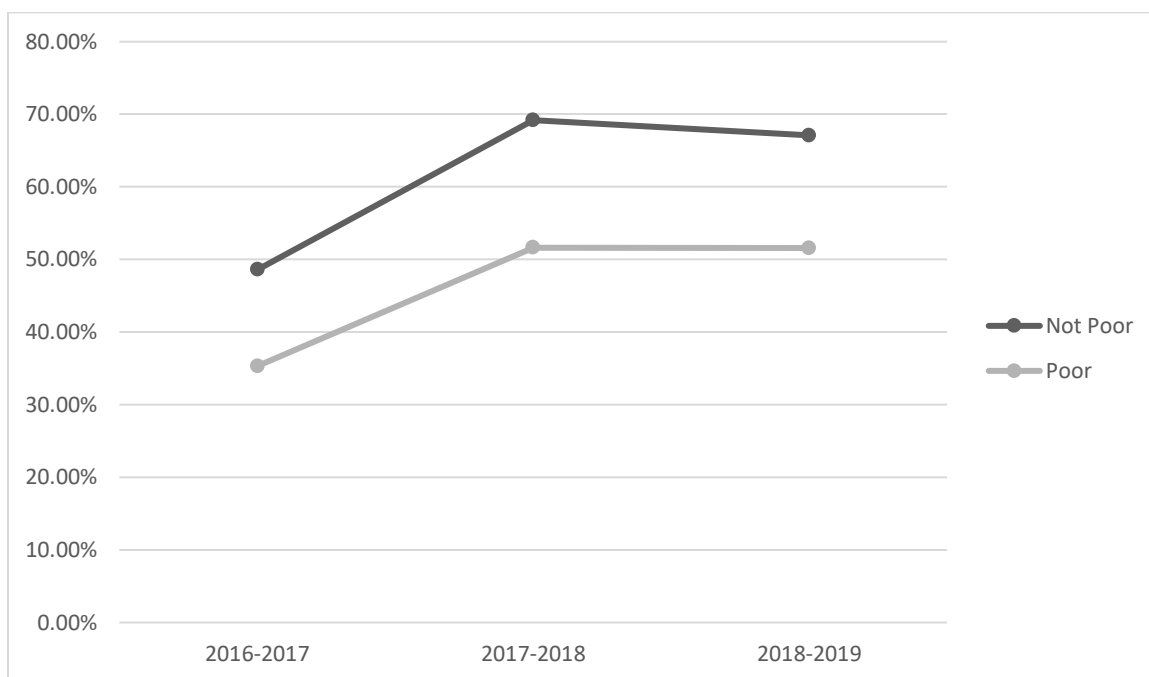
Years

Figure 3.4

Percentage of Black Boys Who Met the Grade 4 STAAR Reading Approaches Grade

Level Standard in the 2016-2017, 2017-2018, and 2018-2019 School Years
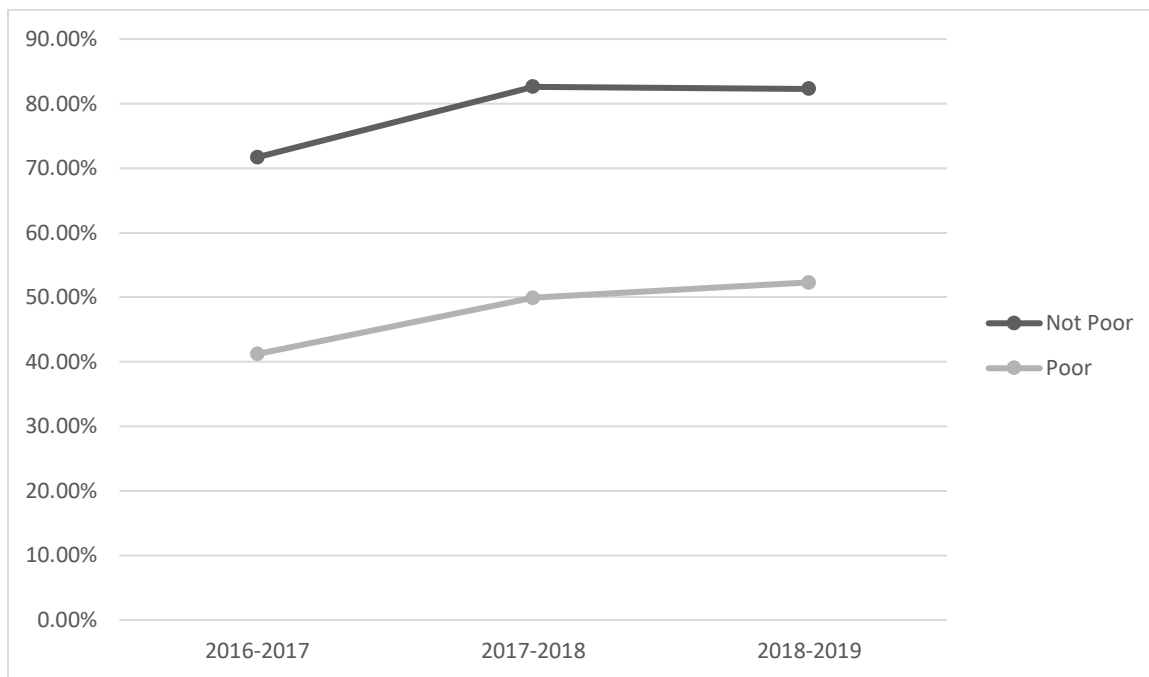
Figure 3.5

Percentage of Black Boys Who Met the Grade 4 STAAR Reading Meets Grade Level

Standard in the 2016-2017, 2017-2018, and 2018-2019 School Years
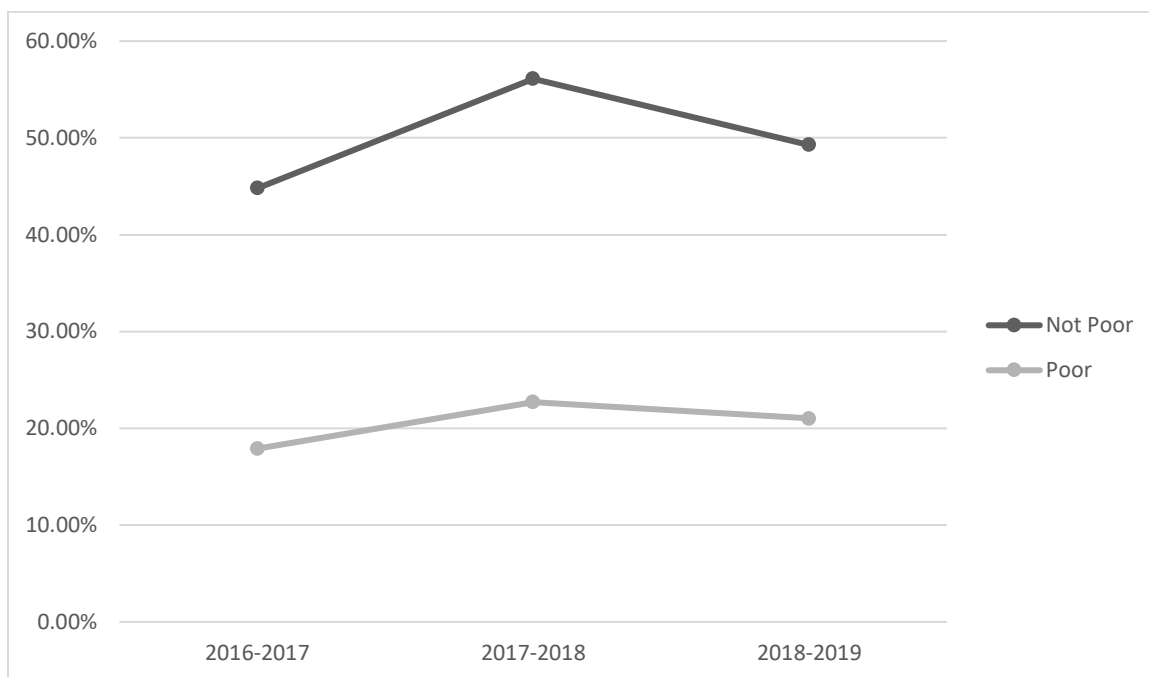
Figure 3.6

Percentage of Black Boys Who Met the Grade 4 STAAR Reading Masters Grade Level

Standard in the 2016-2017, 2017-2018, and 2018-2019 School Years
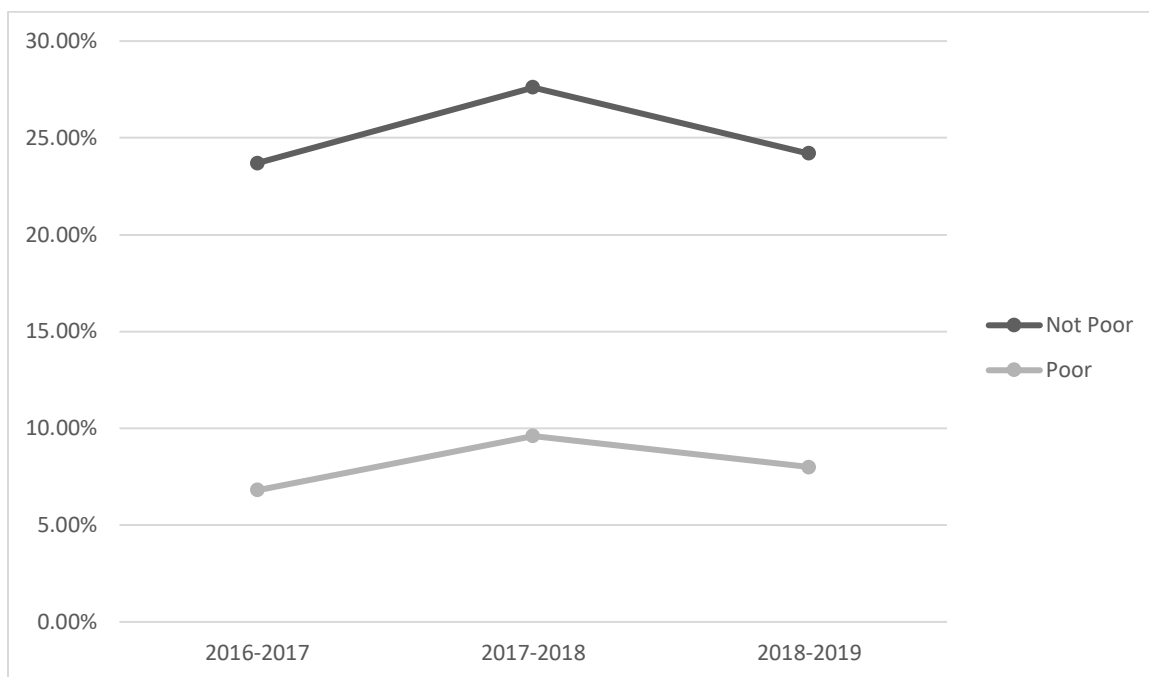
CHAPTER IV

DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE 4 BLACK

GIRLS AS A FUNCTION OF THEIR ECONOMIC STATUS: A MULTIYEAR,

STATEWIDE INVESTIGATION

———————————

This dissertation follows the style and format of *Research in the Schools (RITS)*.

Abstract

In this statewide, multiyear analysis, the extent to which Grade 4 Black girls differed in their reading performance on the Texas state-mandated reading assessment as function of their economic status (i.e., Not Poor and Poor) student groups was determined. Statistically significant differences were yielded in reading by the economic status of Black girls. In all three school years and in all three reporting categories, Black girls who were economically disadvantaged had statistically significantly lower reading test scores than Black girls who were not in poverty. Moreover, statistically significantly lower percentages of Black girls in poverty met the three grade level standards in reading than Black girls who were not poor. Implications of these findings and recommendations for future research were generated.

Keywords: Economic status, Poverty, Black, Reading Performance, Texas, STAAR Reading Assessment, Grade, Girls

DIFFERENCES IN THE READING PERFORMANCE OF TEXAS GRADE 4 BLACK
GIRLS AS A FUNCTION OF THEIR ECONOMIC STATUS: A MULTIYEAR,
STATEWIDE INVESTIGATION

In 2019, the average percentage of children who lived in poverty was 29% and
over 7,000,000 children are negatively influenced by poverty (National Center for
Children in Poverty, 2019) in the United States. This percentage means that almost one in
five children lives in poverty. Among all children under 18 years in the United States,
38% live in families with low incomes and 17% are regarded as being poor. Children are
overrepresented among the poor as they represent 23% of the population but comprise
32% of all people in poverty. Many more children live in families with incomes just
above the poverty threshold (National Center for Children in Poverty, 2019).

In the State of Texas, 24% of children live in poverty, this rate is 5% higher than
the national average (National Center for Children in Poverty, 2019). Further alarming is
that the number of students who were in poverty who attend Texas public schools
constitute 59% of all elementary school students (National Center for Education
Statistics, 2019). At the secondary level, 58% of middle school students (Write & Slate,
2015) and 43% of high school students (Lee & Slate, 2014) live in poverty. The sheer
number of students in poverty is staggering, with over 7,000,000 children who experience
the negative effects of poverty (National Center for Children in Poverty, 2019).

Academic achievement opens doors to numerous opportunities and experiences
that may not otherwise be accessible due to a child's economic background. Positive
outcomes associated with high academic achievement are far-reaching (Hill & Tyson,
2009). Decades have passed since the 1954 Supreme Court decision in Brown v. Board of

Education allowing racial and ethnic integration within U.S. public schools. Another more recent effort, with one of the stated purposes being to close the achievement gap between minority and non-minority students, was the No Child Left Behind Act in 2001 (U. S. Department of Education, 2005). Despite these well-intentioned initiatives, gaps in academic achievement continue to be present between White and Black students (McGown, 2016). After nearly two decades of high stakes testing and robust state accountability systems, the intentions of ensuring that no child has been left behind or that every child succeeds still has not been achieved (American Psychological Association, 2012). Students with the highest needs such as students of color, students in special education, English learners, and students in poverty continue to be denied a free and appropriate public education commensurate with their mainstream peers (Ravitch, 2013).

Researchers (e.g., Lee & Madyun, 2009) have suggested that lower achievement of Black students may be attributed to the fact that Black students are more likely than their White counterparts to live in communities with high poverty and, therefore, attend schools with limited resources, with high rates of teacher turnover.

Opportunity gaps occur when a group of students receives more or fewer educational inputs, like access to high-quality teachers or learning opportunities, than another student group. Achievement gaps occur when one group of students performs better or worse than another group on measurements of student achievement, like standardized tests or graduation rates. (National Conference of State Legislators, 2018, para 2)

For the past several decades, increased focus has been placed on the relationships of poverty and reading (e.g., Conradi et al., 2016; Reardon, 2013). As student poverty increases, reading performance becomes increasingly poorer. Sharkins et al. (2017) established that students living in poverty have poorer academic performance than their more affluent peers. As with grades, graduation rates, college admission, and degree completion, students in poverty underperform more privileged students on standardized assessments (Lee & Slate, 2014). According to Jones et al. (2017), poverty is the strongest predictor of learning challenges and poor academic outcomes for children.

In a study sponsored by the Annie E. Casey Foundation, 4,000 students who did not read at grade level by Grade 3 were determined to be four times more likely to drop out of school than their peers who were reading at grade level (Hernandez, 2012). When poverty was combined with poor reading performance, the probability of dropping out exponentially increased, thus creating a "double jeopardy" that negatively influenced high school graduation rates (p. 4). Of children who live in poverty, 22% of them will not graduate from high school. In a drastic contrast to the 6% dropout rate for students who were never lived in poverty, the high dropout rate is 32% for students who spend half of their life in poverty (Hernandez, 2012).

In a similar investigation, but based on Grade 6 students, Wright and Slate (2015) examined data from the 2010-2011 Texas Assessment of Knowledge and Skills Reading assessment, the standardized test predecessor to the State of Texas Assessment of Academic Readiness exam. Wright and Slate (2015) documented the presence of a 4% to 6% lower performance in reading of students in poverty in comparison to their peers who were not poor. Wright and Slate (2015) stated, "the academic achievement gap between

students who were or were not economically disadvantaged has grown substantially over the past few generations" (p. 345).

In 2016, McGown analyzed the extent to which degree of economic status, gender, and ethnicity/race were related to the reading achievement of Texas elementary school students in the 2012-1013, 2013-2014, and 2014-2015 school years. In her study, students who were extremely poor (i.e., qualified for the free lunch program) had statistically significant lower average reading scores than students who were moderately poor (i.e., qualified for the reduced-price lunch program) on the Grade 3 STAAR Reading assessment. Both students who were extremely poor and students who were moderately poor had lower reading scores than students who were not poor. For all three STAAR Reading Reporting categories, a "stair-step of achievement effect" (Carpenter et al., 2006, p. 117) was present, in that the greater the degree of poverty the lower student reading scores were. Analyses of passing standards revealed a similar pattern in that the greater the degree of poverty, the less likely students were to meet the passing standard.

McGown (2016) also addressed the degree to which differences were present in reading performance between boys and girls in elementary schools. In her investigation, boys had statistically significantly lower average reading scores than did girls in all STAAR Reading Reporting categories. McGown (2016) also determined the presence of ethnic/racial differences in reading performance. Hispanic and Black students had statistically significantly lower average reading scores than Asian and White students and Black students had the lowest average reading performance of all four ethnic/racial groups.

In 2017, Harris and Slate analyzed the reading performance of Texas Grade 3 Black girls to determine the effects of poverty. Reading data from the 2015-2016 administration of the STAAR test were analyzed for three groups of Black girls: Not Poor, Moderately Poor, and Extremely Poor. Three levels of performance existed, Phase I or unsatisfactory performance, Phase II or satisfactory, and Phase III or advanced performance. As the poverty level increased, reading performance decreased. A stairstep effect was present, as the percentage of Black girls who were Extremely Poor increased, the percentage of Black girls who met standard decreased.

Statement of the Problem

With the inception of Every Child Succeeds Act (U.S. Department of Education, 2017), academic performance by race is monitored, but in Texas, gender is not one of the monitored subgroups. As such, a decline in Black girls' reading performance could potentially be missed due to this lack of required monitoring. Taking into account that only a third of children in the United States read on grade level (Sanchez, 2018), it is imperative that all performance differences be identified. Hernandez (2011) concluded that 26% of students who have lived in poverty and do not read on grade level in Grade 3 will not graduate from high school. Grade 4 is only one year after this milestone and the second year that most students will have participated in the STAAR. 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). 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 school students are classified as economically disadvantaged (Texas Education Agency,

2021). A study of the reading performance of Grade 4 Black girls as a function of their economic status since the inception of the Every Student Succeeds Act in 2015 is needed.

Purpose of the Study

The overarching purpose of this investigation was to determine the extent to which Grade 4 Black girls differed in their reading performance on the Texas state-mandated reading assessment as function of their economic status (i.e., Not Poor, Poor). Specifically addressed was the degree to which Grade 4 Black girls differed in their understanding across genres, comprehension and analysis of literary texts, and comprehension and analysis of informational texts by their economic status. Also examined was their performance at the three different phases in levels (i.e., Approaches Grade Level, Meets Grade Level, and Masters Grade Level) as a function of their economic status. The final purpose was to determine the extent to which trends were present in the reading performance of Grade 4 Black girls by their economic status across three school years (i.e., 2016-2017, 2017-2018, and 2018-2019).

Significance of the Study

Although researchers have conducted numerous investigations into the achievement gaps between White and Asian students and their Black counterparts, little concerted national or statewide effort has been addressed toward the education and social outcomes of Black females. Through investigating this issue, the intention is to add to the research to support the need for a specified office within the U.S. Department of Education or task force within Texas Education Agency with a primary focus on the success of Black females in reading and other achievement indicators. Additionally, results from this article could also support the need for legislative projects within local,

state, or national budgets and national policy that would drive resources or attention to the issues.

Research Questions

The following overarching research question was addressed in this study: What is the difference in reading performance of Grade 4 Black girls as a function of their economic status (i.e., Not Poor, Poor)? Specific sub-questions under this overarching research question were: (a) What is the difference in understanding across genres (i.e., STAAR Reading Reporting Category 1) by the economic status of Grade 4 Black girls?; (b) What is the difference in comprehension and analysis of literary texts (i.e., STAAR Reading Reporting Category 2) by the economic status of Grade 4 Black girls?; (c) What is the difference in comprehension and analysis of informational texts by the economic status of Grade 4 Black girls (i.e., STAAR Reading Reporting Category 3)?; (d) What is the difference in the Approaches Grade Level performance of Grade 4 Black girls by their economic status??; (e) What is the difference in the Meets Grade Level performance of Grade 4 Black girls by their economic status?; (f) What is the difference in the Masters Grade Level performance of Grade 4 Black girls by their economic status?; (g) What is the degree to which trends are present by the economic status of Grade 4 Black girls on the STAAR Reading Reporting Categories across three school years?; and (h) What is the degree to which trends are present by the economic status of Grade 4 Black girls on the STAAR Reading grade level standards across three school years? The first six research questions were repeated for the 2016-2017, 2017- 2018 and 2018-2019 school years, whereas the last two research questions involved a comparison of results spanning across

all three school years. As such, this research investigation consisted of 26 research

questions.

Method

Research Design

A non-experimental causal-comparative research design was used in this study

(Creswell, 2014; Johnson & Christensen, 2017). In such a research design, the

independent variable cannot be manipulated. According to Johnson and Christensen

(2017), archival data that are examined denotes events that have already occurred. The

independent variable in this research study was student economic status (i.e.,

economically disadvantaged and not economically disadvantaged) and the dependent

variables that were analyzed were the scores in each of the STAAR Reading Reporting

Categories and the percentages of girls who were successful on the three STAAR grade

level reading standards.

Students who were in the Poor group were Grade 4 Black girls who qualified

either for free meals under the National School Lunch and Child Nutrition Program or for

reduced price meals. Children whose families have an income of 130% or less of the

Federal poverty guideline can receive free meals at school. Eligibility is determined by

multiplying the year's federal income poverty guidelines by 1.30 and rounding to the

results upward to the next whole dollar. Poverty guidelines begin at an annual income

below $12,060 and increases depending on the number of family members in a

household. Eligibility for free meals is 130% of the $12,060 figure, which would be an

annual income of $15,678. This dollar amount increases as the number of family

members increase (United States Department of Agriculture Food and Nutrition Services,

2017). Children whose families have an income from 131% to 185% of the Federal poverty guideline are eligible for reduced-priced meals at school. Eligibility is determined by multiplying the year's federal income poverty guidelines by 1.85 and rounding to the results upward to the next whole dollar. Poverty guidelines begin with an annual income of less than $12,060 and increases as the number of family members in a household increase. Eligibility for reduced priced meals is 185% of the $12, 060 figure, which would be an annual income of $22,311. This dollar amount increases as the number of family members increase (United States Department of Agriculture Food and Nutrition Services, 2017).

Students who were in the Not Poor group were Grade 4 Black girls who did not qualify for either the reduced-price lunch program nor the free lunch program nor reduced meals under the National School Lunch and Child Nutrition Program. Children whose families have an income more than 185% above the poverty guideline which begins at an annual income of $12,060 and increase as the number of family members increase do not qualify for free or reduced meals. The family income multiplied by 1.85 must total at least $22,331 to be ineligible for the free or reduced meals. This figure increases as the number of family members increase (United States Department of Agriculture Food and Nutrition Services, 2017).

Participants and Instrumentation

The State of Texas Assessments of Academic Readiness (STAAR) is the state testing program that was implemented in the 2011-2012 school year. The Texas Education Agency, in collaboration with the Texas Higher Education Coordinating Board and Texas educators, developed the STAAR program in response to requirements set

forth by the 80th and 81st Texas legislatures. The STAAR is an assessment program, which starts when students are in Grade 3, intended to measure the extent to which students have learned and are able to apply the knowledge and skills defined in the state mandated curriculum standards, the Texas Essential Knowledge and Skills. Every STAAR question is directly aligned to the Texas Essential Knowledge and Skills currently implemented for the grade/subject or course being assessed

The STAAR Reading assessment has three reporting categories. In the Reading Reporting Category 1, students' ability to understand and to analyze a variety of texts across reading genres is assessed. Measured in the STAAR Reading Reporting Category 2 are students' ability to understand and to analyze literary texts. Assessed in the STAAR Reading Reporting Category 3 are students' ability to understand and to analyze informational texts (Texas Education Agency STAAR Accountability Manual, 2016).

In addition to the STAAR Reading Reporting Categories, three performance level standards were analyzed in this study. In 2017, the Texas Education Agency introduced three performance levels to determine how well students performed on the STAAR Reading Assessment (Texas Education Agency, 2017). The Approaches Grade Level standard is assigned to students who do not meet the grade level passing score. Students in this category are not able to demonstrate a basic level of understanding the course expectations. This designation predicts that students will be likely to succeed in the next grade level or course with targeted academic interventions to assist in the student's academic progress. In the Meets Grade Level standard, students will be expected to succeed in the next grade level with some form of short-term, targeted academic interventions. Students who perform in the Masters Grade Level standard are expected to

succeed in the next grade level. Students in this category will need very little to no academic intervention and are on track for college and/or career readiness (Texas Education Agency, 2017). Readers are directed to the Texas Education Agency website for further information regarding score validities and score reliabilities for the STAAR Reading Assessment.

Results

Prior to addressing the first three research questions regarding the STAAR Reading Reporting Categories, the underlying assumptions of the MANOVA were checked. Although not all of the assumptions were met, Field (2013) contends that the MANOVA procedure is still appropriate to use. As such, a separate MANOVA was conducted for each school year starting with the 2016-2017 and ending with the 2018-2019 school year and will be reported in that order.

Overall Reading Reporting Category Results for Black Girls

Regarding the 2016-2017 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .92$, $p < .001$, partial $\eta^2 = .08$, moderate effect size (Cohen, 1988), in overall reading performance by the economic status of Grade 4 Black girls. Concerning the 2017-2018 school year, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .92$, $p < .001$, partial $\eta^2 = .08$, moderate effect size (Cohen, 1988), in overall reading performance by the economic status of Grade 4 Black girls. With respect to 2018-2019, the MANOVA revealed a statistically significant difference, Wilks' $\Lambda = .93$, $p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen, 1988). In all three school years, effect sizes 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 all three school years. Regarding the 2016-2017 school year, a statistically significant difference was yielded in the Reading Reporting Category I performance by the economic status of Black girls, $F(1, 10127) = 684.95$, $p < .001$, partial $\eta^2 = .06$, moderate effect size (Cohen, 1988). Concerning the 2017-2018 school year, a statistically significant difference was revealed, $F(1, 8211) = 470.43$, $p < .001$, partial $\eta^2 = .05$, small effect size (Cohen, 1988). With respect to the 2018-2019 school year, a statistically significant difference was yielded, $F(1, 8394) = 487.15$, $p < .001$, partial $\eta^2 = .06$, moderate effect size (Cohen, 1988). Two of the effect sizes were moderate and one effect size was small (Cohen, 1988).

Regarding the Reading Reporting Category I scores, the reading performance of Black girls who were economically disadvantaged was 12.80% lower than the average reading performance of Black girls who were not poor in the 2016-2017 school year; 15.46% lower in the 2017-2018 school year; and 14.40% lower in the 2018-2019 school year. In the 2016-2017 school year, Black girls who were not poor responded correctly on 60.50% of questions whereas Black girls who were poor only responded correctly to 47.70% of questions. In the 2017-2018 school year, Black girls who were not poor responded correctly on 76.06% of the questions whereas Black girls who were poor only responded correctly to 60.60% of the questions. Finally, in the 2018-2019 school year, Black girls who were not poor responded correctly to 77.70% of the questions whereas Black girls who were poor answered 63.31% of the questions correctly. Black girls who were not poor consistently answered more test items correctly than Black girls in poverty

on the Reading Reporting Category I in all three school years. Table 4.1 contains the descriptive statistics for all three school years.

Insert Table 4.1 about here

Reading Reporting Category II Results Across All Three School Years

With respect to the 2016-2017 school year, a statistically significant difference was yielded by the economic status of Black girls in their Reading Reporting Category II performance, $F(1, 10127) = 671.69$, $p < .001$, partial $\eta^2 = .06$, moderate effect size (Cohen, 1988). Regarding the 2017-2018 school year, a statistically significant difference was revealed, $F(1, 8211) = 564.86$, $p < .001$, partial $\eta^2 = .06$, moderate effect size. Concerning the 2018-2019 school year, a statistically significant result was present, $F(1, 8394) = 533.83$, $p < .001$, partial $\eta^2 = .06$, moderate effect size. All three effect sizes were moderate (Cohen, 1988).

With respect to the Reading Reporting Category II scores, the reading performance of Black girls who were economically disadvantaged was 11.63% lower than the average reading performance of Black girls who were not poor in the 2016-2017 school year; 14.79% lower in the 2017-2018 school year; and 13.37% lower in the 2018-2019 school year. In the 2016-2017 school year, Black girls who were not poor responded correctly on 60.28% of questions whereas Black girls who were poor only responded correctly to 48.65% of questions. In the 2017-2018 school year, Black girls who were not poor responded correctly on 74.18% of the questions whereas Black girls who were poor only responded correctly to 59.39% of the questions. Finally, in the 2018-2019 school year, Black girls who were not poor responded correctly to 72.57% of the

questions whereas Black girls who were poor answered 59.20% of the questions

correctly. Black girls who were not poor consistently answered more test items correctly

than Black girls who were in poverty on then Reading Reporting Category II in all three

school years. Delineated in Table 4.2 are the descriptive statistics for all three school

years.

Insert Table 4.2 about here

Reading Reporting Category III Results Across All Three School Years

Regarding the 2016-2017 school year, a statistically significant difference was

yielded by the economic status of Black girls in their Reading Reporting Category III

performance, $F(1, 10127) = 777.34$, $p < .001$, partial $\eta^2 = .07$, moderate effect size

(Cohen, 1988). Concerning the 2017-2018 school year, a statistically significant result

was present, $F(1, 8211) = 600.74$, $p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen,

1988). With respect to the 2018-2019 school year, a statistically significant difference

was revealed, $F(1, 8394) = 554.03$, $p < .001$, partial $\eta^2 = .06$, moderate effect size. Effect

sizes were moderate in all three school years (Cohen, 1988).

Concerning Reading Reporting Category III scores, the reading performance of

Black girls who were economically disadvantaged was 13.86% lower than the average

reading performance of Black girls who were not poor in the 2016-2017 school year;

16.64% lower in the 2017-2018 school year; and 14.22% lower in the 2018-2019 school

year. In the 2016-2017 school year, Black girls who were not poor responded correctly on

54.18% of questions whereas Black girls who were poor only responded correctly to

40.32% of questions. In the 2017-2018 school year, Black girls who were not poor responded correctly on 74.51% of the questions whereas Black girls who were poor only responded correctly to 57.87% of the questions. Finally, in the 2018-2019 school year, Black girls who were not poor responded correctly to 70.50% of the questions whereas Black girls who were poor answered 56.28% of the questions correctly. Black girls who were not poor consistently answered more test items correctly than Black girls in poverty on the Reading Reporting Category III in all three school years. Revealed in Table 4.3 are the descriptive statistics for all three school years.

Insert Table 4.3 about here

Approaches Grade Level Standard Results Across Three School Years

Student performance on the three STAAR Reading grade level standards was examined through the use of Pearson chi-square procedures. This statistical procedure was appropriate to use because dichotomous data were present for all three grade level standards (i.e., Met, Not Met) and for student economic status (i.e., economically disadvantaged, not economically disadvantaged). Accordingly, the chi-square is the preferred statistical procedure when variables are categorical in nature (Field, 2013). Because a large sample size was present, the assumptions for utilizing a chi-square were met.

Concerning the 2016-2017 school year, a statistically significant difference was present by student economic status on the Approaches Grade Level standard, $\chi^2(1) = 541.86$, $p < .001$. The effect size for this finding, Cramer's V, was small, .23 (Cohen, 1988). A statistically significantly higher percentages of Black girls who were not poor, 27.8% more, met the Approaches Grade Level standard than Black girls who were economically

disadvantaged. Almost 80% of Black girls who were not poor met the standard compared to about half of Black girls who were economically disadvantaged. Revealed in Table 4.4 are the descriptive statistics for this school year.

Insert Table 4.4 about here

With respect to the 2017-2018 school year, the result was statistically significant, $\chi^2(1) = 398.37$, $p < .001$, Cramer's V of .21, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls who were not poor, 27.1% more, met the Approaches Grade Level standard than Black girls who were poor. Nearly 90% of Black girls who were not poor met the Approaches Grade Level standard compared to less than 60% of Black girls who were poor met this grade level standard. Table 4.4 contains the descriptive statistics for this analysis.

Regarding the 2018-2019 school year, a statistically significant difference was yielded, $\chi^2(1) = 363.30$, $p < .001$, Cramer's V of .21, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls who were not poor, 23.7% more, met the Approaches Grade Level standard than Black girls who were economically disadvantaged. As revealed in Table 4.4, more than 80% of Black girls who were not poor met the Approaches Grade Level standard compared to about 60% of Black girls who were poor who met this grade level standard.

Meets Grade Level Standard Results Over Three School Years

Concerning the 2016-2017 school year, a statistically significant difference was yielded by student economic status on the Meets Grade Level standard, $\chi^2(1) = 731.32$, $p < .001$, Cramer's V of .27, small effect size (Cohen, 1988). A statistically significantly higher

percentage of Black girls who were not poor, 30.1% more, met the Meets Grade Level standard than Black girls who were economically disadvantaged. Over half of Black girls who were not poor met the standard whereas only one-fourth of Black girls who were poor met this standard. Delineated in Table 4.5 are the descriptive statistics for this school year.

Insert Table 4.5 about here

With respect to the 2017-2018 school year, the result was statistically significant, $\chi^2(1) = 612.48$, $p < .001$, Cramer's V of .27, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls who were not poor, 33.7% more, met the Meets Grade Level standard than Black girls who were poor. Over 60% of Black girls who were not poor met the Meets Grade Level standard compared to slightly less than 30% of Black girls who were poor met this grade level standard. Table 4.5 contains the descriptive statistics for this school year.

Regarding the 2018-2019 school year, a statistically significant difference was revealed, $\chi^2(1) = 521.94$, $p < .001$, Cramer's V of .25, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls who were not poor, 29.1% more, met the Meets Grade Level standard than Black girls who were poor. As revealed in Table 4.5, more than half of Black girls who were not poor met the Meets Grade Level compared to less than 30% of Black girls who were poor met this standard.

Masters Grade Level Standard Results Across Three School Years

Concerning the 2016-2017 school year, a statistically significant difference was revealed by student economic status on the Masters Grade Level standard, $\chi^2(1) = 559.82$, $p < .001$, Cramer's V of .24, small effect size (Cohen, 1988). A statistically significantly higher

percentage of Black girls who were not poor, 20.5% more, met the Masters Grade Level standard than Black girls who were economically disadvantaged. Almost a third of Black girls who were not poor met the standard whereas only about a tenth of Black girls who were poor met this standard. Delineated in Table 4.6 are the descriptive statistics for this school year.

Insert Table 4.6 about here

With respect to the 2017-2018 school year, the result was statistically significant, $\chi^2(1) = 406.24$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls who were not poor, 21.6% more, met the Masters Grade Level standard than Black girls who were poor. About one-third of Black girls who were not poor met the Masters Grade Level standard compared to about one-tenth of Black girls who were poor met this standard. Table 4.6 contains the descriptive statistics for this school year.

Regarding the 2018-2019 school year, a statistically significant difference was revealed, $\chi^2(1) = 409.77$, $p < .001$, Cramer's V of .22, small effect size (Cohen, 1988). A statistically significantly higher percentage of Black girls who were not poor, 19.2% more, met the Masters Grade Level standard than Black girls who were economically disadvantaged. Almost one-third of Black girls who were not poor met the Masters standard compared to about one-tenth of Black girls who were poor met this grade level standard. Delineated in Table 4.6 are the descriptive statistics for this analysis.

Trends in Reading Performance by Economic Status

In analyzing the reading achievement of Grade 4 Black girls in Texas across the three years of data that were examined, trends were present by economic status. In each STAAR Reading Reporting Category and in all three years of data analyzed, Black girls who were not poor outperformed Black girls who were poor. In regard to the Reading Reporting Category I scores, the reading performance of Black girls who were poor was 12.8% lower than the average reading performance of Black girls who were not poor in the 2016-2017 school year; 15.46% lower in the 2017-2018 school year; and 14.40% lower in the 2018-2019 school year. Black girls who were not poor consistently answered more test items correctly than Black girls in poverty on the Reading Reporting Category I in all three school years analyzed.

Concerning the Reading Reporting Category II scores, the reading performance of Black girls who were poor was 11.63% lower than the average reading performance of Black girls who were not poor in the 2016-2017 school year; 14.79% lower in the 2017-2018 school year; and 13.37% lower in the 2018-2019 school year. Black girls who were not poor consistently answered more test items correctly than Black girls in poverty on the Reading Reporting Category II in all three school years.

With respect to the Reading Reporting Category III scores, the reading performance of Black girls who were poor was 13.86% lower than the average reading performance of Black girls who were not poor in the 2016-2017 school year; 16.64% lower in the 2017-2018 school year; and 14.22% lower in the 2018-2019 school year. Black girls who were not poor consistently answered more test items correctly than Black girls in poverty on the Reading Reporting Category III in all three school years.

Pertaining to the STAAR Reading grade level standards, higher percentages of Black girls who were not poor met these three grade level standards than Black girls who were economically disadvantaged who met these three grade level standards. Across all three years, statistically significantly higher percentages of Black girls who were not poor met the Approaches Grade Level standard, 27.8% more in the 2016-2017 school year; 27.1% more in the 2017-2018 school year; and 23.7% more in the 2018-2019 school year than Black girls in poverty. Statistically higher percentages of Black girls who were not poor met the Meets Grade Level standard, 30.1% more in the 2016-2017 school year; 33.7% more in the 2017-2018 school year; and 29.1% more in 2018-2019 school year, than Black girls who were in poverty. Statistically significantly higher percentages of Black girls who were not poor met the Masters Grade Level standard, 20.5% more in the 2016-2017 school year; 21.6% more in the 2017-2018 school year; and 19.2% more in the 2018-2019 school year, than Black girls who were in poverty. Depicted in Figures 4.1 through 4.6 are the average performances of these two groups of Black girls on the STAAR Reading assessment.

Insert Figures 4.1 to 4.6 about here

Discussion

Analyzed in this investigation was the extent to which differences were present in the reading performance of Texas Grade 4 Black girls by their economic status. Three years of statewide data on the three Grade 4 STAAR Reading Reporting Categories were examined between Black girls who were economically disadvantaged and Black girls who were not in poverty. Statistically significant results were present in all three school years. Following these statistical analyses, the Grade Level Standards were examined by

the economic status of Grade 4 Black girls and yielded statistically significant results in all three school years.

In each of the three STAAR Reading Reporting Category results in all three years were analyzed. Black girls who were poor had statistically lower reading test scores than Black girls who were not poor. In each reporting category, the gap between the two student groups was at least 11% with Black girls who were poor scoring lower. The largest gaps were in the 2017-18 school year, ranging from 14.22% to 15.46% differences in performance.

Similarly, in each of the three Grade Level Standards in all three years investigated, statistically significantly lower percentages of Black girls who were poor met these three standards than Black girls who were not poor. Differences in the percentages of students who met the Approaches Grade Level standard ranged from 23.7% to 27.8% across the three years; 29.1 to 33.7% at the Meets Grade Level standard, and 19.2% to 21.6% at the Masters Grade Level standard. In two of the Grade Level standards analyzed, the largest differences existed in the 2017-2018 school year with 33.7% at the Meets Grade Level standard and 21.6% at the Masters Grade Level standard. The largest difference at the Approaches Grade Level standard was in the 2016-2017 school year with a difference of 27.8%.

Connections to Existing Literature

For the past several decades, increased focus has been placed on the relationships of poverty and reading (e.g., Conradi et al., 2016; Reardon, 2013). As student poverty increases, reading performance becomes increasingly poorer. Sharkins et al. (2017) established that students living in poverty have poorer academic performance than their

more affluent peers. Students in poverty underperform more privileged students on standardized assessments (Lee & Slate, 2014). The results of this study on Black girls were congruent with that of other researchers who have addressed the relationship between poverty and reading (Harris & Slate, 2017; McGown, 2016; Paschel et al., 2018).

Implications for Policy and for Practice

Regarding policy implications, one of the most important ways for schools and districts to address the differences that are currently reflected in STAAR Reading scores related to Black girls and economic status is to be deliberate in monitoring gender as a subgroup. Currently data are analyzed, and districts are held accountable for the success of students who are poor, but no subgroups are addressed within that group. In the world of education, what gets measured gets done. In other words, when the state begins to change policies that require the measurement, or monitoring, of gender and economic status as a subgroup, they will have taken the first step to addressing the problem by no longer missing the problem. In short, they will begin to identify the performance differences and begin to investigate reading performance as a function of economic status. A better analysis of subgroups would allow all stakeholders, including school leaders, teachers, content specialists, curriculum writers and district-level administrators to better meet the specific needs of subgroups when planning for campus improvement. Until policies shift, changes will only happen through informal and well-intended practices, not policies.

Concerning practice implications, one of the most important first steps to addressing the gap in reading achievement with Black girls who are poor, is to no longer

accept some long-practiced, yet ineffective solutions. Because of the volume of issues and challenges facing educators, it is, unfortunately, common to attempt a "one size fits all solution" to problems that require a more tailored approach. With a strong understanding of the problems, often identified with accurate and specific data, practices can be refined to specifically address the fact that Black girls and students who were poor are not achieving at the same rate as Asian and White students in relation to reading. With a clear picture of the reality, all stakeholders can combine their efforts to focus on solutions specific to this subgroup by differentiating support based on gender and economic status. Once the solutions are identified, they must be put into campus improvement plans, the blueprints for change. Literacy can be a stumbling block for many students and the realities of those struggles have lifelong impact in college readiness, career readiness, future earnings, and the ability to build generational wealth thus impacting the entire Black community. Therefore, high school principals, district level administrators, and teachers must strengthen their curriculum in the younger grades and target students who are struggling.

Recommendations for Future Research

Several recommendations for future research can be offered based on the results of this statewide, multiyear investigation. First, researchers should determine if similar gaps exist in other grade levels such as Grade 8 and Algebra One, and within other ethnic groups such as Hispanics and or White students. Second, researchers should examine how economic status may affect the reading achievement of Black boys and determine any socio-economic differences that may be a function of the differences. Third, researchers should conduct this study in other states using other assessments to determine

if similar trends exist, findings presented herein would be generalizable to other states. Last, researchers should include qualitative and mixed studies to obtain a better understanding regarding the relationship to academic achievement within ethnic/racial groups based on gender and economic status. Family structure, parents educational background, and experiences with trauma would all be good topics for investigation within ethnic groups.

Conclusion

The purpose of this research study was to determine the extent to which differences were present in the reading achievement of Texas Grade 4 Black girls as a function of their economic status. Analysis of three school years of Texas statewide data yielded statistically significant differences between Black girls in poverty and Black girls who were not in poverty in their reading achievement. In all three school years and in all three reporting categories, Black girls who were poor scored lower than Black girls who were not poor. With respect to the three grade level standards, statistically significantly lower percentages of Black girls in poverty met these three standards than Black girls who were not poor. As such, these findings are quite consistent with the findings of prior researchers (e.g., Harris, 2018; Lee & Slate, 2014; McGown, 2016; Sharkins et al., 2017) in that poverty clearly has negative effects on student achievement.

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Table 4.1

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category I Scores by

the Economic Status of Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School

Years

School Year and Economic Status	*n*	*M%*	*SD%*
2016-2017			
Not Poor	2,179	60.50	18.57
Poor	7,948	47.70	20.66
2017-2018			
Not Poor	1,529	76.06	21.86
Poor	6,682	60.60	25.85
2018-2019			
Not Poor	1,766	77.70	21.97
Poor	6,628	63.31	24.95

Table 4.2

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category II Scores by

the Economic Status of Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School

Years

School Year and Economic Status	*n*	*M%*	*SD%*
2016-2017			
Not Poor	2,179	60.28	17.40
Poor	7,948	48.65	18.85
2017-2018			
Not Poor	1,529	74.18	19.06
Poor	6,682	59.39	22.56
2018-2019			
Not Poor	1,766	72.57	19.77
Poor	6,628	59.20	22.07

Table 4.3

Descriptive Statistics for the Grade 4 STAAR Reading Reporting Category III Scores by

the Economic Status of Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School

Years

School Year and Economic Status	*n*	*M%*	*SD%*
2016-2017			
Not Poor	2,179	54.18	20.40
Poor	7,948	40.32	20.59
2017-2018			
Not Poor	1,529	74.51	21.20
Poor	6,682	57.87	24.53
2018-2019			
Not Poor	1,766	70.50	21.70
Poor	6,628	56.28	22.77

Table 4.4

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the

Approaches Grade Level Standard by the Economic Status of Black Girls for the 2016-

2017, 2017-2018, and 2018-2019 School Years

School Year and Economic Status	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Not Poor	(*n* = 446) 20.5%	(*n* = 1,733) 79.5%
Poor	(*n* = 3,837) 48.3%	(*n* = 4,111) 51.7%
2017-2018		
Not Poor	(*n* = 208) 13.6%	(*n* = 1,321) 86.4%
Poor	(*n* = 2,720) 40.7%	(*n* = 3,962) 59.3%
2018-2019		
Not Poor	(*n* = 226) 12.8%	(*n* = 1,540) 87.2%
Poor	(*n* = 2,420) 36.5%	(*n* = 4,208) 63.5%

Table 4.5

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the Meets

Grade Level Standard by the Economic Status of Black Girls for the 2016-2017, 2017-

2018, and 2018-2019 School Years

School Year and Economic Status	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Not Poor	(*n* = 995) 45.7%	(*n* = 1,184) 54.3%
Poor	(*n* = 6,026) 75.8%	(*n* = 1,922) 24.2%
2017-2018		
Not Poor	(*n* = 558) 36.5%	(*n* = 9712) 63.5%
Poor	(*n* = 4,690) 70.2%	(*n* = 1,992) 29.8%
2018-2019		
Not Poor	(*n* = 748) 42.4%	(*n* = 1,018) 57.6%
Poor	(*n* = 4,737) 71.5%	(*n* = 1,891) 28.5%

Table 4.6

Frequencies and Percentages of Grade 4 STAAR Reading Performance at the Masters

Grade Level Standard by the Economic Status of Black Girls for the 2016-2017, 2017-

2018, and 2018-2019 School Years

School Year and Economic Status	Did Not Meet	Met
	n and %age of Total	*n* and %age of Total
2016-2017		
Not Poor	($n = 1,500$) 68.8%	($n = 679$) 31.2%
Poor	($n = 7,099$) 89.3%	($n = 849$) 10.7%
2017-2018		
Not Poor	($n = 997$) 65.2%	($n = 532$) 34.8%
Poor	($n = 5,799$) 88.8%	($n = 883$) 13.2%
2018-2019		
Not Poor	($n = 1,236$) 70.0%	($n = 530$) 30.0%
Poor	($n = 5,915$) 89.2%	($n = 713$) 10.8%

Figure 4.1.

Average Performance on the Grade 4 STAAR Reading Reporting Category I by the

Economic Status of Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School
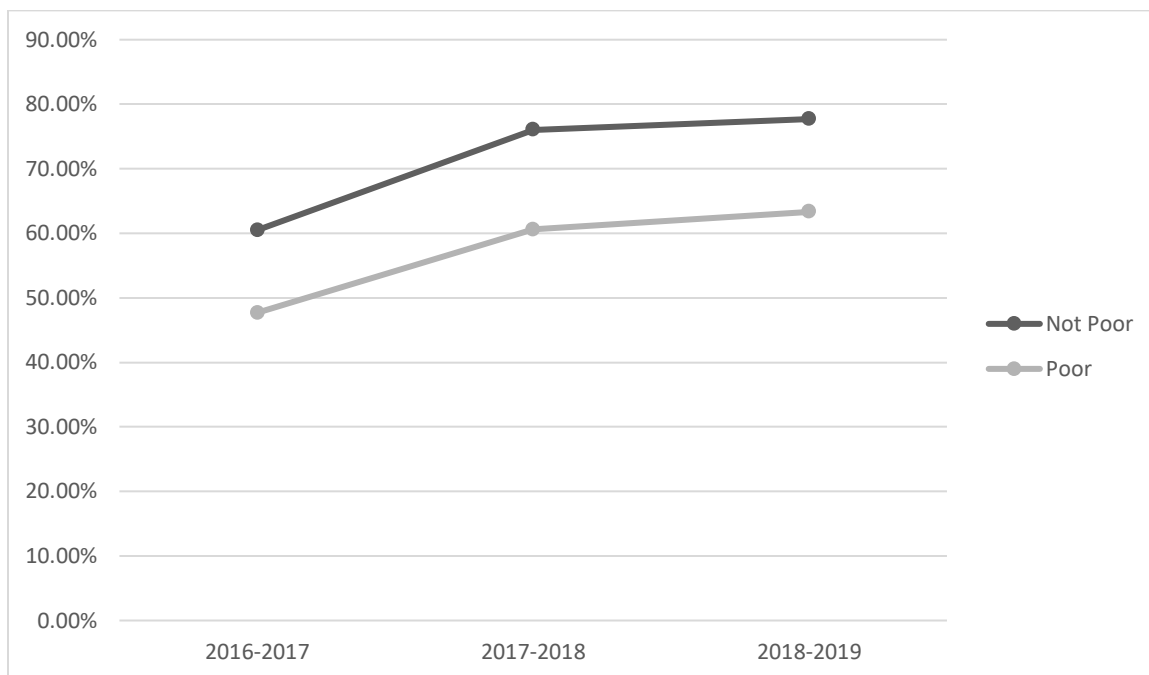
Years

Figure 4.2.

Average Performance on the Grade 4 STAAR Reading Reporting Category II by the

Economic Status of Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School
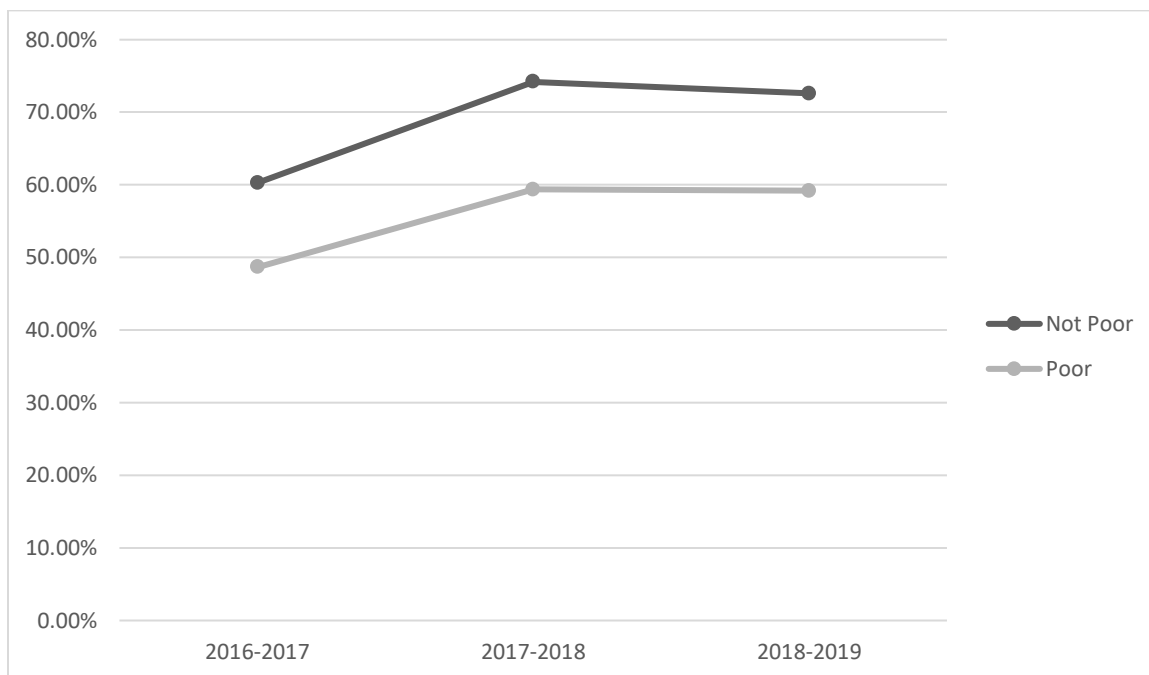
Years

Figure 4.3.

Average Performance on the STAAR Grade 4 Reading Reporting Category III by the

Economic Status of Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School
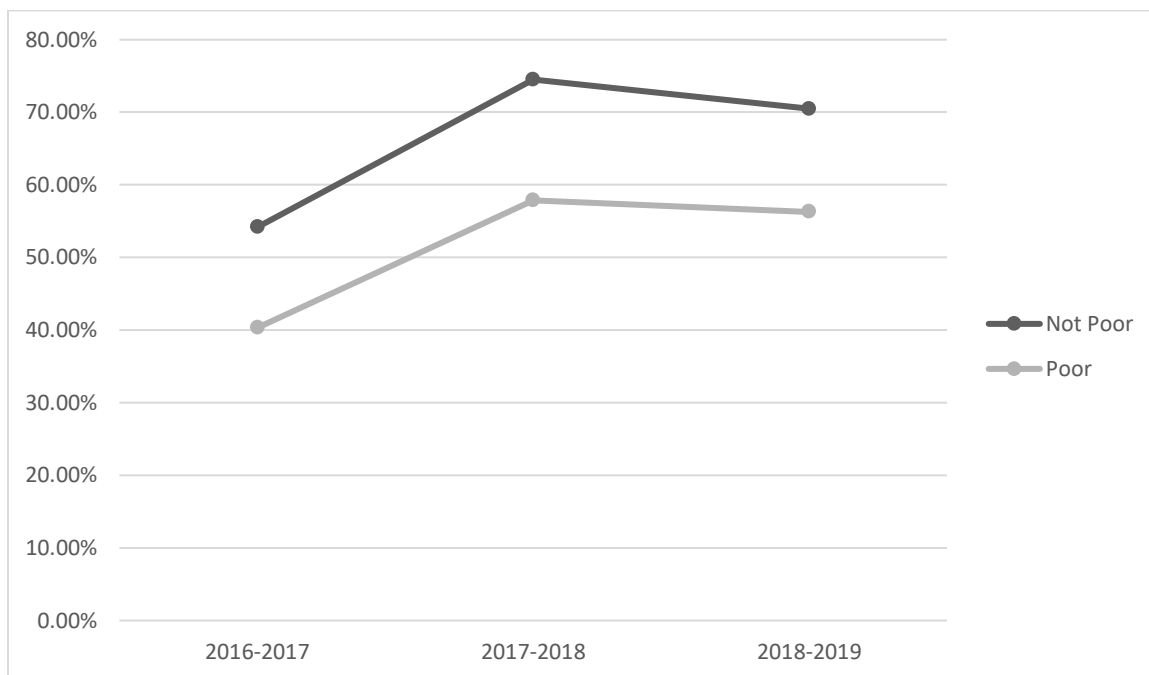
Years

Figure 4.4.

Percentages of Black Girls by their Economic Status Who Met the Grade 4 STAAR

Reading Approaches Grade Level Standard in the 2016-2017, 2017-2018, and 2018-2019
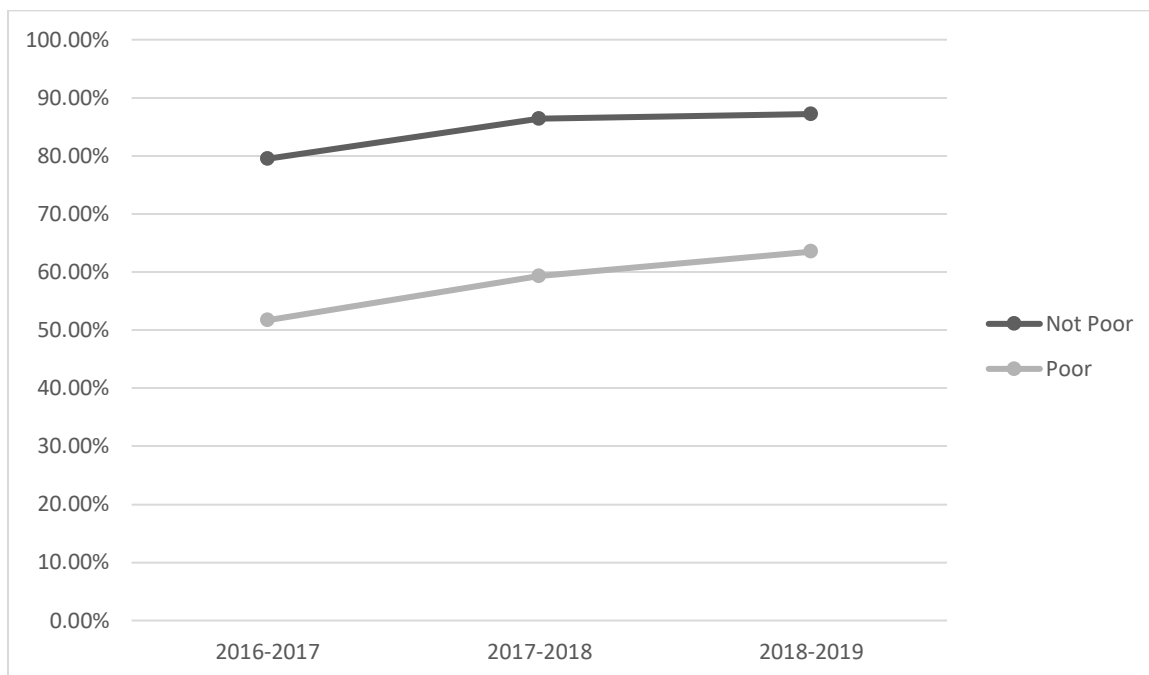
School Years

Figure 4.5.

Percentages of Black Girls by their Economic Status Who Met the Grade 4 STAAR

Reading Meets Grade Level Standard in the 2016-2017, 2017-2018, and 2018-2019
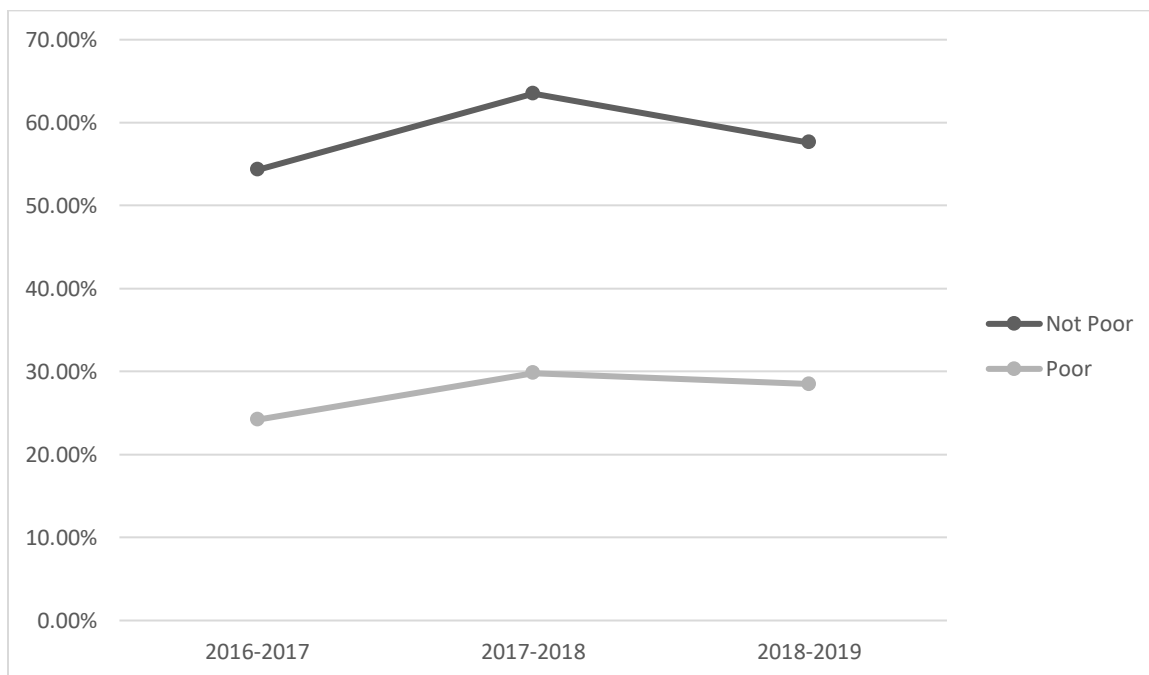
School Years

Figure 4.6.

Percentages of Black Girls by their Economic Status Who Met the Grade 4 STAAR

Reading Masters Grade Level Standard in the 2016-2017, 2017-2018, and 2018-2019

School Years
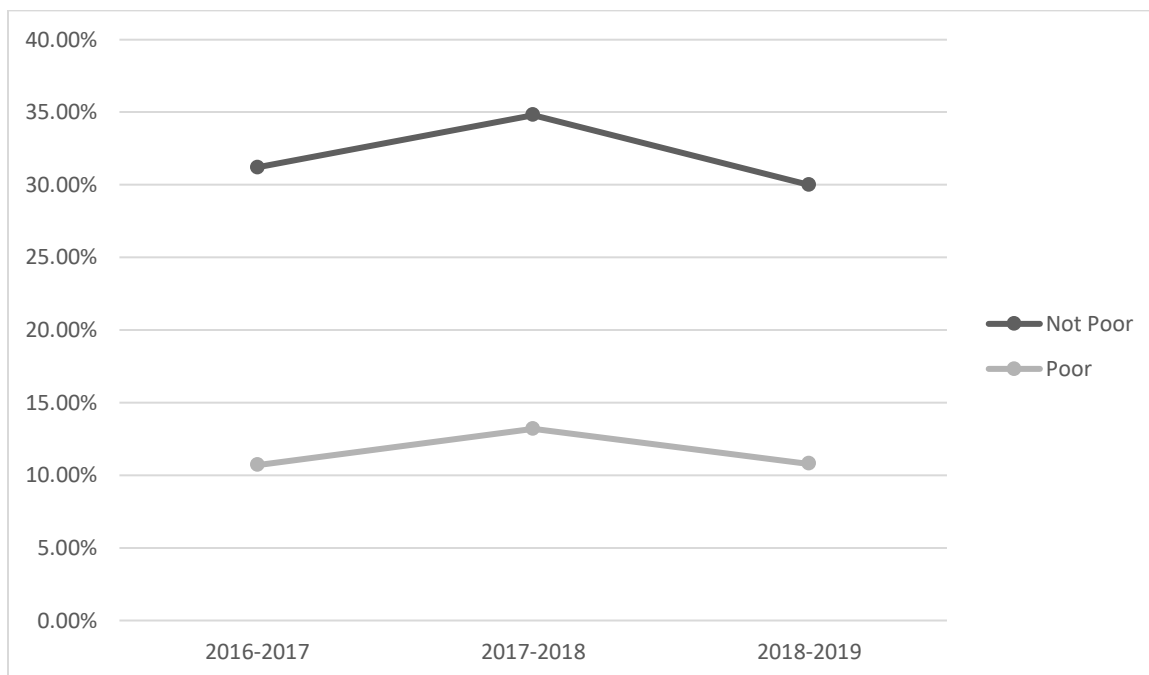
CHAPTER V

DISCUSSION

The overarching purpose of this journal-ready dissertation was to determine the extent to which Grade 4 Black students differed in their reading performance on the Texas state-mandated assessment by their gender and by their economic status. In the first article, the degree to which gender differences were present in reading achievement of Texas Grade 4 Black students was examined. In the second article, the degree to which economic status (i.e., Poor and Not Poor) differences were present in the reading achievement of Texas Grade 4 Black boys was examined. In the third article, the degree to which economic status (i.e., Poor and Not Poor) differences were present in the reading achievement of Texas Grade 4 Black girls was examined. For each of these studies, archival data were analyzed. An analysis of academic performance for the 2016-2017, 2017-2018, and 2018-2019 school years was conducted to determine the degree to which trends are present.

In this chapter, all findings are discussed and summarized for all three studies in this journal-ready dissertation. Additionally, implications of these findings for policy and practice are discussed. Finally, recommendations for future research were provided. A summary will conclude this chapter.

Discussion of Results for the First Article on Gender

Summarized in Table 5.1 are three years of statewide data on the three Grade 4 STAAR Reading Reporting Categories examined for Black boys and Black girls. Statistically significant results were present in all three school years. In each of the three STAAR Reading Reporting Categories results in all three years analyzed, Black boys

answered a statistically significant lower number of test questions correctly than Black

girls. Effect sizes were nine below small effect sizes.

Table 5.1

Summary of Results for the Grade 4 STAAR Reading Reporting Categories by

*Gender of Grade 4 Black Students for the 2016-2017, 2017-2018, and 2018-2019*

School Years

School Year and Reporting Category	Statistically Significant	Effect Size	Lowest Performing Group
2016-2017			
Reporting Category 1	Yes	Below Small	Boys
Reporting Category 2	Yes	Below Small	Boys
Reporting Category 3	Yes	Below Small	Boys
2017-2018			
Reporting Category 1	Yes	Below Small	Boys
Reporting Category 2	Yes	Below Small	Boys
Reporting Category 3	Yes	Below Small	Boys
2018-2019			
Reporting Category 1	Yes	Below Small	Boys
Reporting Category 2	Yes	Below Small	Boys
Reporting Category 3	Yes	Below Small	Boys

Delineated in Table 5.2 is a summary of the results of the statistical analyses of

Texas Grade 4 Black boys and Black girls who took the STAAR Reading assessment

during the 2016-2017, 2017-2018, and 2018-2019 school years. In all three school years

and across all three grade level standards, statistically significantly higher percentages of

Black girls met these three grade level standards than did Black boys. Effect sizes were

seven below small effect sizes and two small effect sizes.

Table 5.2

Summary of Results for the Grade 4 STAAR Reading Grade Level Standards by

Gender of Grade 4 Black Students for the 2016-2017, 2017-2018, and 2018-2019

School Years

School Year and Grade Level Standard	Statistically Significant	Effect Size	Lowest Performing Group
2016-2017			
Approaches Grade Level	Yes	Small	Boys
Meets Grade Level	Yes	Below Small	Boys
Masters Grade Level	Yes	Below Small	Boys
2017-2018			
Approaches Grade Level	Yes	Below Small	Boys
Meets Grade Level	Yes	Below Small	Boys
Masters Grade Level	Yes	Below Small	Boys
2018-2019			
Approaches Grade Level	Yes	Small	Boys
Meets Grade Level	Yes	Below Small	Boys
Masters Grade Level	Yes	Below Small	Boys

Discussion of Results Based on the Economic Status of Black Boys

Summarized in Table 5.3 are the results of the statistical analyses of Texas Grade

4 Black boys who took the STAAR Reading assessment during the 2016-2017, 2017-

2018, and 2018-2019 school years. In all three school years, statistically significant

differences were present in reading achievement by their economic status. For the

STAAR Reading Reporting Categories 2 and 3, moderate effect sizes were present. For

the STAAR Reading Reporting Category 1, the effect size was small for the 2016-2017

and 2018-2019 school years and moderate for the 2017-2018 school year. In each of the

STAAR Reading Reporting Categories and in all three school years examined, Black

boys who were economically disadvantaged answered statistically significant fewer

number of test questions correctly than Black boys who were Not Poor.

Table 5.3

Summary of Results for the STAAR Reading Reporting Categories by the Economic Status of Grade 4 Black Boys for the 2016-2017, 2017-2018, and 2018-2019 School Years

School Year and Performance Level Standard	Statistically Significant	Effect Size	Lowest Performing Group
2016-2017			
Reporting Category 1	Yes	Small	Poor
Reporting Category 2	Yes	Moderate	Poor
Reporting Category 3	Yes	Moderate	Poor
2017-2018			
Reporting Category 1	Yes	Moderate	Poor
Reporting Category 2	Yes	Moderate	Poor
Reporting Category 3	Yes	Moderate	Poor
2018-2019			
Reporting Category 1	Yes	Small	Poor
Reporting Category 2	Yes	Moderate	Poor
Reporting Category 3	Yes	Moderate	Poor

Presented in Table 5.4 is a summary of the results of the statistical analyses of Texas Grade 4 Black boys who took the STAAR Reading assessment during the 2016-2017, 2017-2018, and 2018-2019 school years. In all three school years and across all three grade level standards, statistically significantly lower percentages of Black boys who were economically disadvantaged met each grade level standard than Black boys who were not in poverty.

Table 5.4

Summary of Results for the Grade 4 STAAR Reading Grade Level Standards by the

Economic Status of Grade 4 Black Boys for the 2016-2017, 2017-2018, and 2018-

2019 School Years

School Year and Grade Level Standard	Statistically Significant	Effect Size	Lowest Performing Group
2016-2017			
Approaches Grade Level	Yes	Small	Poor
Meets Grade Level	Yes	Small	Poor
Masters Grade Level	Yes	Small	Poor
2017-2018			
Approaches Grade Level	Yes	Small	Poor
Meets Grade Level	Yes	Small	Poor
Masters Grade Level	Yes	Small	Poor
2018-2019			
Approaches Grade Level	Yes	Small	Poor
Meets Grade Level	Yes	Small	Poor
Masters Grade Level	Yes	Small	Poor

Discussion of Results Based on the Economic Status of Black Girls

Delineated in Table 5.5 are the results of the statistical analyses of Texas Grade 4

Black girls who took the STAAR Reading assessment during the 2016-2017, 2017-2018,

and 2018-2019 school years. In all three school years, statistically significant differences

were present in the reading achievement by economic status. For all three STAAR

Reading Reporting Categories, moderate effect sizes were present in all three school

years, except Reporting Category I in 2017-2018 with a small effect size present. In each

of the STAAR Reading Reporting Categories and in all three school years examined,

Black girls who were Poor answered a statistically significantly lower number of

questions correctly than did Black girls who were Not Poor.

Table 5.5

Summary of Results for the STAAR Reading Reporting Categories by the Economic

Status of Grade 4 Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School

*Year*s

School Year and Performance Level Standard	Statistically Significant	Effect Size	Lowest Performing Group
2016-2017			
Reporting Category 1	Yes	Moderate	Poor
Reporting Category 2	Yes	Moderate	Poor
Reporting Category 3	Yes	Moderate	Poor
2017-2018			
Reporting Category 1	Yes	Small	Poor
Reporting Category 2	Yes	Moderate	Poor
Reporting Category 3	Yes	Moderate	Poor
2018-2019			
Reporting Category 1	Yes	Moderate	Poor
Reporting Category 2	Yes	Moderate	Poor
Reporting Category 3	Yes	Moderate	Poor

Presented in Table 5.6 is a summary of the results of the statistical analyses of

Texas Grade 4 Black girls who took the STAAR Reading assessment during the 2016-

2017, 2017-2018, and 2018-2019 school years. In all three school years and across all

three STAAR Grade Level standards, statistically significantly lower percentages of

Black girls who were economically disadvantaged met the three grade level standards

than Black girls who were not in poverty. Effect sizes were small.

Table 5.6

Summary of Results for the STAAR Reading Grade Level Standards by the Economic

Status of Grade 4 Black Girls for the 2016-2017, 2017-2018, and 2018-2019 School

*Year*s

School Year and Grade Level Standard	Statistically Significant	Effect Size	Lowest Performing Group
2016-2017			
Approaches Grade Level	Yes	Small	Poor
Meets Grade Level	Yes	Small	Poor
Masters Grade Level	Yes	Small	Poor
2017-2018			
Approaches Grade Level	Yes	Small	Poor
Meets Grade Level	Yes	Small	Poor
Masters Grade Level	Yes	Small	Poor
2018-2019			
Approaches Grade Level	Yes	Small	Poor
Meets Grade Level	Yes	Small	Poor
Masters Grade Level	Yes	Small	Poor

Connections with Existing Literature

In this multiyear, statewide journal-ready dissertation, gender differences were

identified in the reading achievement of Texas Grade 4 Black students. Black girls

outperformed Black boys in each STAAR Reading Reporting Category and STAAR

Reading Grade Level Standards. Results were consistent for all three school years and

were congruent with the existing literature (e.g., Harris, 2018; McGown, 2016; Schleeter

et al., 2019) in which gender differences were established to be present in the academic

achievement of students in Texas.

With respect to economic status, Black boys and girls who were economically

disadvantaged had statistically significantly poorer reading performance than Black girls

and boys who were not in poverty. Students from low-income families are at risk for

many academic and social disadvantages (Conradi et al., 2016; Reardon,

2013). Academic gaps for students in poverty are evident at school entry and continue to widen as students progress through school (Reardon, 2011). Results from this journal-ready dissertation are consistent with the results of previous researchers (e.g., Harris & Slate, 2017; McGown, 2016; Paschel et al., 2018) who have clearly established that poverty is adversely related to student academic achievement.

Implications for Policy and Practice

Based upon the results of this journal-ready dissertation, several implications for policy and practice can be recommended. With respect to policy, funds and resources should be allocated to communities who serve high populations of Black students in poverty. These funds should be used to provide families with the necessary social, emotional, and mental support to help students when they enter school. Second, teacher preparation programs must include curricula to help aspiring teachers understand the complexities of educating students based on gender and from different economic backgrounds. Finally, school district leadership should mandate professional development to keep teachers current on strategies demonstrated to help Black boys and students in poverty in the area of reading.

Concerning practice implications, districts and schools must begin to employ early identification strategies to identify students who enter school with academic gaps in reading. With these data, district and campus leaders must provide students with the necessary interventions to minimize the disparities seen in reading achievement for Black students, specifically Black boys and students who are economically disadvantaged. Third, all interventions should be progress monitored to ensure they are effective in helping students from historically low-performing backgrounds. Finally, data

from the Grade 4 STAAR Reading assessments should be used by school leaders when making future education decisions on curriculum, interventions, and remediations.

Recommendations for Future Research

Several recommendations for future research can be offered based on the results of this statewide, multiyear investigation. First, researchers should determine if similar gaps exist in other grade levels such as Grade 8 Reading and English I and II End of Course exams. Second, analyzing data from other content areas such as Mathematics or Science would help to determine if these trends are only identified in Reading. Third, research focused on identifying differences within other ethnic groups such as Hispanic, White, and Asian groups. Fourth, researchers should examine how socio-economic differences such as family structure, parents educational background, and experiences with trauma would all be good topics for investigation within ethnic groups. Fifth, researchers should conduct this study in other states using other assessments to determine if similar trends exist, findings presented herein would be generalizable to other states. Last, researchers should include qualitative and mixed studies to obtain a better understanding regarding the relationship to academic achievement within a racial group based on gender and economic status.

<div align="center">

Conclusion

</div>

In this journal-ready dissertation, the degree to which differences were present in the reading achievement of Texas Grade 4 students as a function of their gender and economic status was addressed. Regarding gender a statistically significant difference was present, with Black girls having higher reading test scores than Black boys. In all three school years and in all three reporting categories, Black boys scored lower than

Black girls. In all three Grade Level Performance Standards, Black girls demonstrated a higher level of mastery of the TEKS. Findings were consistent with prior researchers (e.g., Harris, 2018; McGown, 2016; Mullis et al., 2017; Schleeter et al., 2019; Combs et al., 2010).

Concerning economic status, Black boys who were Poor were outperformed by Black boys who were Not Poor. Similarly, Black girls who were Poor were outperformed by Black girls who were Not Poor. For all three reporting categories and for all three grade level standards, Black boys and Black girls in poverty had lower reading test scores than Black boys and Black girls who were not economically disadvantaged. Moreover, lower percentages of Black boys and Black girls in poverty met the three reading grade level standards than Black boys and Black girls who were not economically disadvantaged. Congruent with the results of other researchers (e.g., Harris, 2018; McGown, 2016; Sharkins et al., 2017; Lee & Slate, 2014), poverty clearly affects student achievement. As such, results from all three investigations were commensurate with the existing literature.

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APPENDIX

Date: Sep 3, 2022 10:29:41 PM CDT

TO: Rhonda Mason Frederick Lunenburg
FROM: SHSU IRB
PROJECT TITLE: Differences in the Reading Performance of Texas Grade 4 Black Students as a Function of Their Gender and Economic Status: A Multiyear, Statewide Investigation
PROTOCOL #: IRB-2022-231
SUBMISSION TYPE: Initial
ACTION: No Human Subjects Research
DECISION DATE: September 3, 2022
OPPORTUNITY TO PROVIDE FEEDBACK: To access the survey, click **here**. It only takes 10 minutes of your time and is voluntary. The results will be used internally to make improvements to the IRB application and/or process. Your feedback will be most appreciated.

Greetings,

In accordance with applicable federal law governing the use of human subjects in research the SHSU Institutional Review Board ("IRB") has reviewed your proposed project entitled "Differences in the Reading Performance of Texas Grade 4 Black Students as a Function of Their Gender and Economic Status: A Multiyear, Statewide Investigation" and determined that this project does not meet the definition of human subjects research as defined in Title 45 Code of Federal Regulations Part 46 et al (also known as the "Common Rule") - specifically, secondary data analysis of a public dataset. Therefore, this project is not subject to further SHSU IRB oversight. Even so, please remember that you are responsible for ensuring that your study is conducted in an ethical manner and in accordance with applicable law and SHSU policies and procedures. You may initiate your project. Please contact the IRB office at irb@shsu.edu or (936)294-4875 if you need any additional information.

Sincerely,
SHSU Institutional Review Board

VITA

Rhonda Dean Mason

Educational History

Doctor of Education – Educational Leadership, December 2022
Sam Houston University, Huntsville, Texas
Dissertation: Differences in the Reading Performance of Texas Grade 4 Black Students as a Function of their Gender and Economic Status: A Multiyear, Statewide Investigation Completion Rates for Dual Credit

Master of Education, School Counseling, May 2014
University of Texas at Arlington, Arlington, Texas

Bachelor of Arts, Criminal Justice, December 1998
Sam Houston State University, Huntsville, Texas

Professional Licensure and Certifications

English as a Second Language Grades (4-8)
Elementary Self-Contained Grades (1-6)
Generalist Grades (4-8)
English as a Second Language Supplemental Grades (1-8)
Principal Grades (1-12)
Superintendent Certification

Professional Experiences

Fort Bend ISD
Executive Director of Elementary and Secondary Schools, Executive Director of Early Childhood and School Improvement, District Coordinator or School Improvement, Campus Principal, 2017-present

Clark Primary School Principal, Spring ISD, 2015-2017

Houston ISD
Assistant Principal at Sherman Elementary School, ESL and Literacy Teacher Development Specialist, and Academic Program Manager for Apollo 20, a bold initiative focused on reforming the lowest 20 schools in HISD, 2010-2015

Institute for Research and Reform in Education funded by the Bill and Melinda Gates Foundation and The US Department of Education
National Educational Consultant and Instructional Specialist, 2007-2010

Barbara Jordan Elementary School, Fort Bend ISD
ESL Specialist, 2005-2007
Bonham Elementary, Houston ISD
2-5 Instructor/Corrective Reading Specialist/ Parent Involvement Coordinator
2000 - 2005

Leadership Roles

President Elect, Houston Area Alliance of Black School Educators
TABSE Demonstration Schools Chairperson
TABSE State Conference Planning Committee
HAABSE Leadership Development Chairperson
HAABSE Executive Board Member
Spring ISD Literacy Plan Committee Member
Spring ISD Leadership Institute Presenter

Professional Organizations

National Association of Elementary School Principals (NAESP)
National Alliance of Black School Educators (NABSE)
Texas Alliance of Black School Educators (TABSE)
Texas Elementary Principals & Supervisors Association (TEPSA)
Association for Supervision and Curriculum Development (ASCD)

Presentations

Mason, R. D. (2019, February 8). *The perceived effects of Texas' accountability system on select elementary school principals who serve a Title I campus*. SERA Southwest Educational Research Association, San Antonio, TX

Mason, R. D. (2019, February 22). *Am I enough? The effects of Texas' accountability system on principal self-efficacy at Title I schools.* Presentation at the Dr. James A. Johnson Research Institute, Galveston, TX

Honors and Awards

Sam Houston State University Distinguished Educator of the Year 2021;
Dr. Patricia Ackerman Outstanding Leader Award, NABSE;
President Elect Houston Area Alliance of Black School Educators;
Recognized by the Texas School Counselors Association with the CREST Award;
2019 TABSE Principal of the Year;
2019 Sam Houston State University Outstanding Doctoral Student of the Year;