IMPACT OF TEACHER AND STUDENT ETHNICITY ON STUDENT ASSESSMENTS

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Dissertation Prepared for the Degree of DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

May 2016

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Barnes, Barbara. *Impact of Teacher and Student Ethnicity on Student*Assessments. Doctor of Philosophy (Education Leadership), May 2016, 232 pp., 38 tables, 108 figures, references, 82 titles.

The purpose of this study was to answer the questions: Do students show greater academic success in English language arts/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Minority students' success on the TAKS™ test was compared to the assessment scores of White students from the 2010-2011, 2011-2012, and 2012-2013 school years in three suburban school districts. This topic has been a subject of discussion since the late 1970s when Cardenas and Cardenas (1977) studied the achievement among minority students and their White peers. The conversation continued through authors such as Takei and Shouse (2008), Hays (2011), Ladson-Billings (2006), Dee (2003; 2005), and Brown (2006).

To answer these research questions, a hierarchical multiple regression analysis was conducted on the data collected. Although the study verified the achievement gap between minority students and White students, the study indicated no consistent pattern corroborating that minority students were more successful when taught by teachers of the same ethnicity. In many cases, students learned better with teachers of a different ethnicity. Black students were successful with Hispanic or White teachers, Hispanic students were successful with Black or White teachers, and White students were

successful with Black or Hispanic students. The TAKS™ assessment scores were the only data used to support this analysis.

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by

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ACKNOWLEDGMENTS

First of all, I give thanks and honor to my Lord and Savior Jesus Christ, who has carried me throughout this journey.

I also wish to give my deepest gratitude and appreciation to my husband and daughter for supporting me during the many years of working to complete this journey. Your love and support have truly carried me throughout this process. I love you more than words could ever describe.

I acknowledge and am sincerely grateful to my major professor, Dr. Bill Camp. You continuously encouraged me to keep working toward my goal of finishing this dissertation. I would also like to give a special thanks to Dr. Staley for going the extra mile to help me accomplish this goal and challenging me to consider different points of view throughout my research. A special thanks to Dr. Linda Stromberg for holding me accountable for her class and being so easy to talk with. Dr. George, I would like to thank you for stepping in after I lost one of my original committee members. I thank you all for your dedication and support throughout this journey.

I would like to show my appreciation to my friends and colleagues for their support and encouragement. With your encouragement and guidance, I have successfully completed this journey.

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CHAPTER 1

INTRODUCTION

One of the most significant discussions in modern education has been identifying the cause of the achievement gap between minority students and their White peers, a discussion that has been persistent for decades. The National Center for Education Statistics (NCES) reported that in 1971, Black and White students accounted for 98% of all United States public school students, but over the last 40 years Hispanic students have become the largest and fastest growing population in the United States (Hemphill & Vanneman, 2011). The number of minority students has increased and the number of White students has decreased by 15% (Pew Research Center, 2014). In 2010, Hispanics made up 16% of the nation's population, a 43% increase compared to the 12.5% Hispanic population in 2000 (Hemphill & Vanneman, 2011). Recently, the national student population dropped from 59% White in 2002 to 51% in 2012; however, the Hispanic population increased from 18% to 29% (NCES, 2015). Public schools are becoming more diverse, but minority students continue to lag behind White students.

In 2005, Black students had a 26-point gap in fourth grade math compared to their White peers and a 23-point gap in eighth grade math (Landson-Billings, 2006). In addition, Hispanic students lagged behind White students in fourth grade math by 25 points and in eighth grade math by 24 points (Hemphill & Vanneman, 2011). The National Assessment of Educational Progress (NAEP) reported that the national math and reading assessment results of 2009 showed statistically significant gaps existed in almost every state for fourth and eighth graders (Hemphill & Vanneman, 2011). Specifically, in New Mexico, California, and Texas, Hispanic fourth grade students

accounted for over 50% of the student population. Only 16% of Black and 23% of Hispanic 12th graders scored at a proficient level on a national reading assessment compared to 47% White students, in which 11 states volunteered to participate. They also conducted a 12th grade math assessment, in which only 7% of Black and 12% of Hispanic students score at the proficient level, compared to 33% of White students (U.S. Department of Education [USDOE], 2013). According to the White House report *Giving Every Child a Fair Shot*, nationally Black and Hispanic students were half as likely as White students to learn math on their correct grade level (Executive Office of the President [EOP], 2015). To continue to be a successful and prosperous country, we must successfully educate all students.

Statement of the Problem

Over the last several decades, academic concerns for minorities were addressed by many researchers with a number of opinions. Dee (2003) argued the achievement gap was due to a lack of minority teachers. Ladson-Billing (2006) stated the problem was inequality in funding. Bromberg and Theokes (2013) claimed schools must change their focus.

Lack of understanding the achievement gap is hurting our students. NCES (2015) reported that in 2012-2013, 12% of Hispanic students, 7% of Black students, and 5% of White students dropped out of school. While graduation rates improved, only 68% of Black students and 76% of Hispanic students graduated in 2011-2012, compared to 85% of White students who graduated.

In 2006, Brown detailed the findings of a multilevel-model analysis completed by the National Education Longitudinal Study. Minority students on average achieved less academically when compared to White students. They were also more likely to come from a low socioeconomic status (SES), live in homes with divorced parents, live in underprivileged neighborhoods, and attend substandard schools (Goldsmith, 2007).

However, the NAEP (as cited in EOP, 2015) reported that public schools were making improvements. The national graduation rates increased by 81%, and ELA/reading and math scores for students in grades 4 and 8 for all minorities increased. Both minority and White students made improvements in education. Since 2008, college enrollment increased by more than 1 million minorities. However, despite the improvements made in teaching students, the achievement gap remained. The Center for American Progress reported the following:

Nationally, minority students make up 40.7 percent of the public school population. Although many schools (both urban and rural) are increasingly made up of a majority of [B]lack and Latino students, [B]lack and Latino teachers represent only about 14.6 percent of the teaching workforce. The scarcity of minority teachers is not limited to any one type of school—in over 40 percent of public schools there is not a single teacher of color. And in urban and high-poverty schools where minority teachers are disproportionately employed, teaching staffs are still predominately composed of [W]hite teachers. (Bireda & Chait, 2011, p. 1)

Educators across the nation continue to question and explore the underlying reason for the achievement gap. This study sought to eliminate ethnicity as a reason for the achievement gap by answering the questions: Do students show greater academic success in ELA/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity?

Purpose of the Study

The purpose of this study is to answer the questions: Do students show greater academic success in ELA/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? It was believed data collected from 2010-2011 to 2012-2013 for three suburban school districts (broken down by campus) would not exhibit statistically significant results when analyzing variables among minority and White students while controlling for the students' grade level, the campus students attended, and students who were economically disadvantaged (ED), were in the special education program (SPED), or were in the gifted and talented (GT) program. Correlations were analyzed between Black students and teachers and Hispanic students and teachers, and compared to minority students' academic achievement on the state TAKS™ assessments.

Research Questions

This study addressed two questions: Do students show greater academic success in ELA/reading as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity?

As the demographics changed in public schools, a question raised in education was whether teachers who do not share the same cultural demographics as their

students could successfully foster a relationship with them and teach them the curriculum. According to the NCES (2013), in 2011-2012, White teachers represented 81% of the teacher national workforce (Black teachers represented 6.8% and Hispanic teachers represented 7.7%). This study sought to determine if ethnicity could be a cause of the achievement gap. It was believed teachers and students of the same ethnicity could build a better rapport and create a more positive relationship in general (Holmes 1995; Takei & Shouse, 2008). The relationship between students and teachers is critical. Many times students rate themselves according to how their teachers perceive them. This study sought to eliminate ethnicity as a cause of the achievement gap by analyzing minority students' success on TAKS™ compared to White students when the student-teacher ethnicity was the same.

Assumptions

In Texas, the achievement gap between Black, Hispanic, and White students was static for several decades (National Education Association [NEA], 2011; Schneider, Martinez, & Owens, 2006). As of the 2013-2014 school year, the student population in Texas consisted of 12.7% Black, 51.8% Hispanic, and 29.5% White students, while the teaching population in Texas was 9.34% Black, 24.81% Hispanic, and 63.53% White teachers (Ramsay, 2014; Texas Education Agency [TEA], 2014b). The enrollment of Black and Hispanic students attending public schools continued to increase, while White student enrollment decreased. The Hispanic population had the largest enrollment increase in 2011-2012 (TEA, 2012). Murdock, Zey, Cline, & Klineberg (2010) stated that by 2040, minority students will account for 76.2% of all children living in poverty.

According to their findings, 85.2% of the students living in poverty will live in a household with a parent who has less than a high school education.

According to Murdock et al.'s (2010) projections, Texas will become a more impoverished and less educated state with fewer opportunities for its people if the education system continues to fail minority students. Education directly correlates to the earning success in the labor force. To keep our economy and way of life equivalent or abundantly productive, teachers must be compatible with all students regardless of their ethnicity, or they need further professional development to address these issues.

Rationales

The achievement gap between minority students and White students prevailed for several decades. Educators across the nation continued to question and explore the underlying reason for the achievement gap. Researchers proposed many reasons for the achievement gap between minorities and White students. According to Brown (2006), researchers advocated the achievement gap may be due to minority students' IQ, differences in socioeconomic status, differences in schools, a lack of student-teacher relationships, or diverse family backgrounds. The current study examined the student-teacher relationship among secondary students of the same ethnicity. A growing body of research indicated minority students may perform better academically when their teachers are of similar ethnicity. Studies showed that a symmetrical relationship between a teacher and student typically yielded positive consequences (Takei & Shouse, 2008).

Society benefits when all students are academically successful, so much so that specialized organizations and national and regional leaders come together to address the academic gap between minority and White students.

During the civil rights era of the 1960s Latino political activists pushed for legislation to require schools to provide some form of bilingual education for LEP students. The Elementary and Secondary Act (ESEA) was passed in 1965, as part of President Johnson's Great Society. (Faltis, 2011, p. 82).

In 2002, Congress established the No Child Left Behind Act (NCLB). During this time, diversity continued to increase. NCLB mandated that school districts assess minority students' knowledge annually in math, science, English, and social studies (Jorgenson & Hoffman, 2003). It required each campus to meet adequate yearly progress (AYP) within the total student population, subgroups, special education, and limited English proficient (LEP) students or the school would lose federal funding. NCLB consisted of two parts, Title I and Title II (Jorgensen & Hoffman, 2003). NCLB Title I mandated that states improve minority students' academic performance, including Black, Hispanic, Asian, LEP, and ED students. School districts that failed to meet standards for improving student performance were subject to intervention, such as allowing parents to send their child to another campus, providing student outside intervention, closing the school, and providing after-school intervention.

Title II of NCLB mandated and provided funds for schools to improve English proficiency assessment and to write curriculum to help accurately measure LEP students' performance in reading and mathematics (USDOE, 2009). These students were held accountable for the same content as regular students. To help students successfully meet this goal, NCLB required states to enroll more LEP students in pre-

kindergarten (Head Start Programs) and required school districts to communicate with parents in their native language (Capps et al., 2005).

Many LEP and ED students' parents had less than a ninth grade education (Capps et al., 2005). NCLB required schools to increase parental involvement, a difficult task when there was a language barrier and parents had a substandard education. The deficiency of education also inhibited Hispanic parents from helping students with homework and understanding their child's performance. To help overcome these cultural barriers, Congress implemented NCLB to help resolve these national issues contributing to the achievement gap (Jorgenson & Hoffman, 2003).

In addition to government interventions, other researchers developed arguments on how to close the achievement gap among minority students and White students. Cardenas and Cardenas' (1977) theory of incompatibilities was one of the first research studies conducted on teaching minority students and their success in learning, which addressed the failure of minority children to be successful in a typical classroom due to incompatibilities five areas: poverty, culture, language, mobility, and societal perceptions. Hays (2011) based his research on two of Cardenas and Cardenas' (1977) theories, the social capital theory and the theory of incompatibility. According to Hays (2011), teachers and students functioned in a unique social relationship in which teachers brought their intellectual resources to share with students. Students depended on teachers' personalities and teaching methods to feel socially comfortable in the student-teacher relationship, which was vital for students to successfully process information being taught.

Carter and Welner (2013), authors of Closing the Opportunity Gap, resolved to identify markers required to close the achievement gap among middle class, affluent, minority, and ED students. The authors stated that federal and local governments should devote as much time and resources to preschools, healthcare, good teachers, and rich curriculum as they devoted to graduation rates. Darling-Hammond (2013) provided evidence-based critiques in Closing the Opportunity Gap. Jackson, the president of the Cambridge Massachusetts-based Schott Foundation, Darling-Hammond, and Welner (as cited in Maxwell, 2013) argued that states should embrace and invest in individual students, even if it meant creating new funding formulas. Jackson and Darling-Hammond (as cited in Maxell, 2013) campaigned around the country to promote the strategies discussed in Closing the Opportunity Gap, advocating that the United States would be more successful if the nation implemented strategies similar to those of Finland, South Korea, and Singapore. These countries applied more resources to early childhood education, better healthcare, and higher quality teachers to achieve student success.

Jackson and Darling-Hammond (as cited in Maxwell, 2013) campaigned to promote the following strategies, developed by a federally appointed commission of 27 members:

- 1. Provide healthcare for children and other services such as vision, dental, and nutritional needs, expanding access to quality early-childhood education.
- 2. Provide equitable and adequate funding for all public schools.
- 3. Develop curriculum that is challenging, engaging, and rigorous, with extended learning time and reduced out-of-school disciplinary actions.
- 4. Increase teachers' compensation and create an environment in which teachers foster strong peer relationships and mentorships.

- 5. Recruit and train more bilingual teachers to provide instruction for English Language Learners (ELL) students.
- 6. Change housing policies to allow diverse communities.
- 7. Support school choice options in areas that fail to meet state standards.
- 8. Expand or create student access to libraries and the Internet.

Their premise was to research solutions to help close the achievement gap between affluent, minority, and the 22% of ED students in the United States. Although the Jackson and Darling-Hammond campaign focused on closing the achievement gap between affluent and minority students, their discussion highlighted the continued concern within our society to resolve the achievement gap between minority students and their peers.

On March 23, 2010, Congress passed The Patient Protection and Affordable Care Act to help provide healthcare for younger children with special needs. However, the implementation of the program was too recent to correlate any significant improvement in student scores. Carter and Welner (2013) strongly suggested the federal government of the United States must do more to encourage these strategies nationally.

Cardenas and Cardenas' (1977) theory of incompatibilities was one of the first research studies conducted on teaching minority students and their success in learning, which was generally considered a central issue underlying the problems in closing the learning gap between minority students and White students. It addressed the failure of minority children to be successful in a typical classroom due to 40 characteristics of incompatibilities that were summarized in five areas: poverty, culture, language,

mobility, and societal perceptions. Essential to their theory was that all five areas must be addressed for schools to meet the needs of minority students successfully for the following reasons.

- Students raised in poverty demonstrated a developmental pattern different from that of middle class students (Cardenas & Cardenas, 1977); therefore, it was necessary to recognize and resolve incompatible characteristics through additional teacher training and resources.
- 2. Culture incompatibilities increased the achievement gap between minority students and White students because staff members were unaccustomed to the cultural characteristics of the minority school population.
- 3. Language continued as an essential element of culture that affected learning (Cardenas & Cardenas, 1977). Language barriers not only affected Spanishspeaking students, but they also affected minorities living in poverty. Students could not be taught successfully if they did not understand or speak the teacher's language.
- 4. Minority students tended to be more mobile than White students, which caused social problems and gaps in their learning the curriculum.
- 5. Minorities tended to perceive themselves negatively because schools have reinforced this perception by failing to provide support and resources necessary to overcome minority students' lack of self-confidence (Cardenas & Cardenas, 1977).

Cardenas and Cardenas (1977) concluded that there were two parts to the principles of incompatibility. Interrelatedness consisted of five areas of incompatibility that were interdependent; it did not help to address only some of the areas and not all of the incompatible characteristics. The combination of poverty, culture, language, mobility, and societal perceptions accounted for the poor performance of minority children. Therefore, educational programs that developed strategies to solve fewer than all these incompatibilities would fail.

The second principle of incompatibility concluded that either the child must be changed or the instructional program must be designed to meet the needs of the child.

Often school districts have adapted schools to fit the needs of students, such as blind or physically disabled students (Cardenas & Cardenas, 1977). However, school districts had a difficult time adapting to the needs of minority students. Cardenas and Cardenas stated that "Schools have acted in a racist manner in the application of this double standard for adaptability" (p.11). Although this study was conducted in the late 1970s, the fight to close the achievement gap and achieve equality for minority students continued.

Hays' (2011) study analyzed the impact student-teacher ethnic ratios had on students' achievement. He acknowledged research validated that good teachers made an impact on student achievement, but he also stated that very little was understood about the impact of ethnicity on closing the achievement gap between minority students and White students. Hays noted the lack of minority teachers in an increasingly diverse population in schools and communities. Between 1999 and 2008, more than two out of three teachers in Texas were White (74% in 1999 and 66% in 2008), while the minority student population continued to grow. Thus, educational leaders speculated that the shortage of minority teachers contributed to the achievement gap.

Hays (2011) based his research on two of Cardenas and Cardenas' (1977) theories, the social capital theory and the theory of incompatibility. According to Hays (2011), social capital theory was defined as the networking of social connections for the benefits of all and the elevating of the unfortunate. The theory of incompatibilities addressed the compatibilities of minority students with White teachers in the area of student academic achievement. Teachers and students functioned in a unique social relationship in which teachers brought their intellectual resources to share with students.

Unfortunately, students did not have that same choice. They did not have the ability to choose their community or teachers. Students depended on teachers' personalities and teaching methods to feel socially comfortable in the student-teacher relationship, which was vital for students to successfully process the information being taught. According to TEA (2013b), in 2012-2013 the student populations across Texas were increasingly diverse, with Black students representing 12.7% and Hispanic students accounting for 51.3% of the student population while teacher populations remained at 70% White. In today's society, student populations across Texas are increasingly diverse, with minority students accounting for more than 50% of the student population, while teacher populations remain at 70% White.

Other studies suggested that with additional training, teachers related to minority students. Dalton (2011) analyzed the experiences of four successful White teachers who taught in a minority school district in Macon, GA. Dalton grew up in east Tennessee where the population was mostly White, and White people only came across a Black person when visiting Knoxville, TN. Racial tensions in Macon developed over the years, and the students were suffering. Manis (as cited by Dalton, 2011) stated,

The racial inequities were portrayed in the status of the schools for each race. Georgia had 473 White high schools and only 54 Black schools. In these White schools, ninety percent of the teachers were certified while less than fifty-five percent of the Black teachers held state teacher certification. (p. 24)

The four teachers in Macon were successful by learning to build meaningful relationships with students, establishing a feeling of belonging, relinquishing their place in their social class and becoming part of the students' culture, maintaining high expectations in regards to behavior and academic success, and developing a trust relationship with the students' parents.

Takei and Shouse (2008) identified relationships among minority students and their teachers. Asymmetry occurred when a teacher and a student were of different ethnicities; symmetry existed in a uniform relationship. Takei and Shouse suggested a symmetrical relationship among teachers and students typically yielded positive and successful outcomes.

Dee (2003) believed teachers were more oriented towards students who shared the same ethnicity. White teachers who were told that some students were Black provided less coaching and positive feedback. Thus, Black students received less attention and praise from White teachers.

The National Collaborative on Diversity in the Teaching Force (2004) discussed four advantages to increasing the number of minority educators and administrators. Their presence produced more mentors and role models for students; created more occasions for students to increase their knowledge of ethnic identity; established better relationships with students of color because of shared racial, ethnic, and cultural identities; and guided students through a system that by design was counterproductive to their academic success.

A study completed on segregation in North Carolina suggested a negative effect on minority students (Uhlenberg & Brown, 2002). Middle-class minority students (minority students who did not qualify for free or reduced lunches) who attended integrated schools performed better academically. In several North Carolina counties, Black students scored 16 points higher in integrated schools than Black students in segregated schools.

This study aimed to eliminate the argument teachers must be of the same ethnicity as the students to successfully address the questions: Do students show greater academic success in ELA/reading as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Data from three North Texas school districts were collected and analyzed. This study examined the data for correlations and statistical significance of ethnicity compatibility among students and teachers regarding academic success in ELA/reading and in math as measured by TAKS™. Several variables were considered. Each district was sent a letter asking for data on student ethnicity, the students' ELA/reading and math teachers' ethnicity (linking the student's ethnicity to the teacher's ethnicity), the students' economic status, students' learning disabilities if any, students' grade level, and the school campus each student attended. The demographic groupings included Black, Hispanic, and White students, and Black, Hispanic, and White teachers. The three ethnic groups were chosen based on their group size and public concerns about the achievement gap between ethnicity.

A two-model hierarchical multiple regression analysis was conducted to evaluate student performance on the TAKS™ for the three school districts for 2010-2011, 2011-2012, and 2012-2013 school years. The TAKS™ assessments were standardized tests designed to measure how well Texas students learned specific expectations within a school year. The data collected from the three school districts that participated in this study were analyzed to determine if minority and White students successfully learned

TAKS™ expectations regardless of their teachers' ethnicity demographics when their teachers were of the same ethnical culture. The regression equation varied depending on the district, year, and subject.

Research Methods

This study examined the correlation of ethnicity compatibility among students and teachers in the areas of ELA/reading and math from three school districts to answer the questions, Do students show greater academic success in ELA/reading as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity?" The school districts were located in the North Texas area. Each district agreed to provide data linking their student demographics with the demographics of the ELA/reading and math teachers for the tested school year (from 2011-2013). The research for this study modeled the research performed by Hays in 2011.

Quantitative descriptive data used for this study included student assessments from three North Texas school districts (District A, District B, and District C). Districts A, B, and C each provided the assessment scores of each student and their teacher, which was linked to student and teacher demographics. The demographic groupings included Black, Hispanic, and White students and Black, Hispanic, and White teachers. The three ethnic groups were chosen based on their group size and public concerns about the achievement gap between them.

A two-model hierarchical multiple regression analysis was conducted to evaluate how well students performed on TAKS™ when their teachers were of the same ethnical

culture. Model 1 analysis predictors included students' campus, grade level, participation in SPED, and ED status. Model 2 included all of the above predictors with the addition of ethnic relationship between the teacher and students. The regression equation varied depending on the predictor, district, year, and subject.

Operational Definitions

Achievement: Students who successfully meet state passing standards on standardized assessment.

Achievement Gap: The persistent disparity in academic performance (regarding grades, standardized test scores, course selection, dropout rates, and college completion rates) among minority students and their White peers (Editorial Projects in Education Research Center, 2011).

Minority: Black and Hispanic students. In Texas, minority does not refer to any other subpopulation.

Ethnicity: A group of people with similar cultural backgrounds, languages, and common beliefs.

SAT: The most widely used college admission exam in the United States. High school students who plan to attend a four-year university are expected to take the SAT and score at or above a score defined by each college or university to prove the student has an adequate academic foundation to successfully complete a college degree.

Compatible: Teachers and students with similar ethnic demographic backgrounds.

Incompatible: Teachers and students with different ethnic backgrounds.

Economically disadvantaged: Students who receive free or reduced priced lunches at school and whose parents' income is below the poverty line.

Limitations

This study contained several limitations. Results were only taken from three school districts in North Texas school districts, which was only a small sample size of Texas. This study did not consider all grade levels in secondary education, such as grades 8, 10, and 11. It did not consider the relationships of individual students to individual teachers. Additionally, ELL students were not identified. The demographics and academic gaps at the elementary level were not analyzed. Furthermore, data collected for students and teachers were only based on TEA Academic Excellence Indicator System (AEIS) reports from 2010 to 2013. Finally, this study only considered the achievement gaps of Black and Hispanic minorities compared to White students; other minorities were not considered in this study.

Summary

The achievement gap between minority students and their White peers is a discussion that has persisted for decades. For several decades, minority students lagged behind Whites students. The NAEP reported that the national math and reading assessment results of 2009 showed statistically significant gaps existed in almost every state for fourth and eighth graders (Hemphill & Vanneman, 2011).

National demographics changed, especially in New Mexico, California, and

Texas where Hispanic children accounted for over 50% of the student population

(National Education Association, n.d.). Over the last several decades, many

researchers addressed academic concerns for minorities with a number of opinions and

solutions. However, the problem remains. In 2012-2013, 12% of Hispanic students and 7% of Black students dropped out of school. Only 68% of Black students and 76% of Hispanic graduated in 2011-2012, compared to 85% of White students who graduated (NCES, 2015). The NAEP (as cited in EOP, 2015) reported that public schools made improvements, and both minority and White students made improvements in education. Nevertheless, the achievement gap remained.

A question raised in education was whether teachers who do not share the same cultural demographics as their students can successfully foster a relationship with them and teach them the curriculum. In some cases it was believed teachers and students of the same race could build a better rapport and create a more positive relationship in general (Holmes 1995; Takei & Shouse, 2008).

At a time when White teachers represented 81% of the teacher national workforce while Black teachers represented 6.8% and Hispanic teachers represented 7.7% of the workforce, it was important to eliminate any doubt about White teachers being able to successfully teach minority students (NCES, 2015). Therefore, this study proposed to eliminate the argument that teachers must be the same ethnicity as the students to be successful.

CHAPTER 2

RELATED LITERATURE

Introduction

The goal of this study was to answer the questions: Do students show greater academic success in English Language Arts (ELA)/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Studies have shown that many variables contributed to the success or failure of a student. Over the last several decades, academic concerns of minorities were addressed by many researchers, including Cardenas and Cardenas (1977), Takei and Shouse (2008), Hays (2011), Ladson-Billings (2006), Dee (2005), and Brown (2006). However, the concerns continued to exist because countless variables played into students' academic success. This chapter concentrated on several research studies that addressed reasons for the achievement gap. Throughout this chapter the needs of four special populations were highlighted: economically disadvantaged (ED) students, gifted and talented (GT) students, special education (SPED) students, and English language learners (ELL). Each group required specific needs and accommodations, which could affect students' assessment scores.

Historical Background

Throughout the history of education, there have been perplexing ethnical challenges for the educational system. The ratification of the 13th, 14th, and 15th

Amendments to the U.S. Constitution in the late 1800s laid the foundation for Thurgood Marshall and Charles Hamilton Houston, lawyers for the National Association for the Advancement of Colored People (NAACP), to successfully litigate several racial discrimination cases in the field of education (*Brown v. Board of Education*, 1954). They fought to improve the education system on the grounds of the Equal Protection Clause of the 14th Amendment and against the idea that *separate but equal* should not exist in public schools as decided previously in *Plessy v. Ferguson* (1896).

The first case Marshall and Houston fought was *University of Maryland v. Murray* in 1936. The University of Maryland rejected the admission of Black students solely on the color of their skin. Marshall was a student at Howard University, a historically Black university, at the time. Marshall and Houston challenged this practice in a Baltimore city court. Marshall argued that Donald Gaines Murray was well qualified and sending him to a Black law school that was not equal to the University of Maryland violated the principle of separate but equal. The Maryland Court of Appeals ruled in favor of Murray and ordered the University of Maryland to admit him.

In 1938, Marshall and the NAACP Legal Defense and Educational Fund won the Supreme Court case *Missouri ex rel Gaines v. Canada* (1938). The University of Missouri offered to build a Black law school for Lloyd Gaines to attend, but he rejected that offer and employed Marshall and NAACP Legal Defense to represent him in court. The U.S. Supreme Court ruled in his favor and stated that since a "Black" law school did not already exist in the State of Missouri, the "Equal Protection Clause" required the state to provide the same education for Black students as White students.

Marshall and the NAACP Legal Defense and Educational Fund continued to confront racial discrimination, and in 1950 they fought and won the *Sweatt v. Painter* (1950) case. Administrators at the University of Texas believed they would not have to admit Heman Sweatt if a Black law school was located in the state. His lawyers argued, however, that the Black law school was underfunded and not the same caliber of education as the White school. The Supreme Court unanimously agreed that there were inequalities between the two schools, and the only remedy was to allow Heman Sweatt to attend the University of Texas School of Law.

Subsequently, in 1950, George McLaurin employed Marshall and the NAACP Legal Defense and Educational Fund to sue the University of Oklahoma for requiring him to sit apart from other students and also eat at separate tables from his White associates. McLaurin claimed that he suffered adverse effects, and the U.S. Supreme Court agreed in its decision *McLaurin v. Oklahoma State Regents for Higher Education* (1950). These cases ended the separate but equal practice in higher education, paving the way for the ultimate challenge for the NAACP, ending the practice in K-12 schools.

Brown et al. v. Board of Education of Topeka (1955) consisted of five different cases concerning segregation in public schools: Brown v. Board of Education of Topeka (1951), Briggs v. Elliott (1951), Davis v. Board of Education of Prince Edward County (1952), Bolling v. Sharpe (1952), and Belton v. Gebhart (1952). Marshall and the NAACP Legal Defense and Educational Fund defended these cases all the way to the U.S. Supreme Court. In 1952, the U.S. Supreme Court consolidated the five cases, and they became known as the Brown et al. v. Board of Education (1955). Marshall debated many issues, but the most powerful one was against the doctrine of separate

but equal. He argued that separate but equal violated the Equal Protection Clause of the 14th Amendment of the U.S. Constitution. He also argued that segregated schools tended to treat Black children in such a way that they felt inferior to White children; therefore, segregated schools should be illegal. At first, the Supreme Court was divided. Several justices wanted to reverse *Plessy v. Ferguson* (1896) and declare separate but equal unconstitutional, while others did not agree. Therefore, the court was not able to come to a conclusion (*Brown et al. v. Board of Education of Topeka*, 1955).

The Supreme Court decided to rehear the case in 1953. By then, Chief Justice Fred Vinson had died, and Governor Earl Warren of California had taken his place on the court. Chief Justice Warren, a skilled politician and former Attorney General of California, was able to convince the other justices to unanimously vote to declare segregation in public schools unconstitutional (*Brown et al. v. Board of Education of Topeka*, 1955). On May 14, 1954, he delivered the opinion of the Court, stating, "We conclude that in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal" (*Brown et al. v. Board of Education of Topeka*, p. 495, 1955).

In 1982, the Supreme Court ruled in *Plyler v. Doe* (1982) that public schools were prohibited from denying immigrant students' free public education. The court stated school districts could not ask immigrant students for papers proving they were citizens of the United States, and schools could not adopt policies that would prevent immigrant students access to education. School districts could only ask students for proof that they lived within the school's attendance zone.

These cases were turning points in American education. Because of these rulings by the U.S. Supreme Court, our society began to understand the significance of an unbiased and resourceful education for all children. However, this was only the start of the fight. During the 1970s and 1980s, there was widespread public concern that the U.S. was falling behind other countries in producing high quality products. Many believed this was due to the insufficiencies in our education system, which inadequately prepared our students to meet the goals of the future (Editorial Projects in Education Research Center, 2004). This school of thought provoked the federal government to examine the quality of education in the U.S. On August 26, 1981, Secretary of Education Bell created the National Commission of Excellence in Education to investigate this public concern. Gardner (1983), Chairman of the Commission, assisted in publishing A Nation at Risk. The Commission reported that the general condition of American public curriculum had been diluted, students were spending less time on homework and class work, and there was a critical shortage of science and math teachers. In response to the findings, the Commission recommended that graduation requirements as well as English, mathematics, science, social studies, and computer science requirements in high school be strengthened. The curriculum for Grades 1 through 8 should be revised, and universities should "adopt more rigorous and measurable standards" (The National Commission on Excellence in Education, 1983, p. 3). These laws, policies, and procedures were implemented to improve the quality of education and to help close the achievement gap among minority students and White students.

The Achievement Gap

The achievement gap became a familiar term among educators; it was the difference in academic achievement among minority students and White students. Over the years, scientists believed the achievement gap persisted because of genetics.

Jensen's study in 1969 (Rushton & Jensen, 2005) presented findings that demonstrated individuals and ethnic groups may differ in cognitive ability. Jensen concluded:

- 1. IQ tests measured general ability.
- 2. IQ results were linked to heritability in the White population.
- 3. Compensatory education programs were ineffective in raising IQ scores.
- 4. Social mobility was linked to ability; therefore, class differences in IQ had a genetic factor.
- 5. Black and White IQ difference was due to a genetic component.

These findings were printed in *Time, Life, U.S. News & World Report*, and the *New York Times*, and this debate has continued since 1969 (Rushton & Jensen, 2005). The result of the study became known as *Jensenism*, and an increased number of scientists agreed with one or more of Jensen's findings. *The Bell Curve*, a research journal, provided readers an update of Jensen's research, citing a 12-year study conducted on 11,878 youth, including 3,022 Blacks students. The study found that 17-year-old students with high achieving Armed Forces Qualification Test scores went on to a successful occupation, whereas those with low achieving scores became dependent on welfare. The study concluded that Blacks students scored the lowest on IQ tests compared to Latino, White, Asian, and Jewish students. According to Rushton and Jensen, this same theory was true for college and university assessments, including the Scholastic Assessment Test (SAT) and the Graduate Record Examination (GRE).

The editors of *The Bell Curve* formed an 11-member task force to determine the cause for IQ score differences among different ethnic groups of students (Rushton & Jensen, 2005). Was the cause social, economic, cultural, or genetic? The task force agreed with Jensen that the White population had a heritability IQ of 0.75, but they did not support Jensen's genetic interpretation.

In 2001, specialists from multiple disciplines formed a panel to further discuss research practices to help resolve the achievement gap (Banks et al., 2001). Together they wrote Diversity Within Unity which included contributions from a panel of scholars working over four years to summarize what was known about education and diversity. The panel was sponsored by the Center of Multicultural Education at the University of Washington, the Common Destiny Alliance at the University of Maryland, and the Carnegie Corporation of New York. Panel members included psychologists, a political scientist, a sociologist, and four multicultural education specialists. The 2001 analysis demonstrated that 14% of the nation's school-aged youth lived in families who spoke a language other than English. Nationwide, poverty increased from 16% in 1979 to 19% in 1998, indicating that the gap between rich and poor students had continued to grow; the number of minority students had also consistently increased. While the ethnic diversity of students increased, the teacher population remained predominantly White and middle class, creating not only a cultural and ethnic gap, but also an economic gap. Banks et al. believed that in order for educators to forge a common destiny in school environments with such diverse cultures, ethnic background, and languages, educators needed to respect and build upon the strengths and characteristics that students brought with them. The panel identified 12 essential principles, which were organized

into five categories: teacher learning; student learning; intergroup relations; school governance, organization, and equity; and assessment.

1. Teacher Learning

Principle 1: Professional development programs should help teachers understand the complex characteristics of ethnic groups within U.S. society and the ways in which race, ethnicity, language, and social class interact to influence student behavior.

2. Student Learning

- Principle 2: Schools should ensure that all students have equitable opportunities to learn and to meet high standards.
- Principle 3: The curriculum should help students understand that knowledge is socially constructed and reflects researchers' personal experiences as well as the social, political, and economic contexts in which they live and work.
- Principle 4: Schools should provide all students with opportunities to participate in extra- and co-curricular activities that develop knowledge, skills, and attitudes that increase academic achievement and foster positive interracial relationships.

3. Intergroup Relations

- Principle 5: Schools should create or make salient superordinate crosscutting group memberships in order to improve intergroup relations.
- Principle 6: Students should learn about stereotyping and other related biases that have negative effects on racial and ethnic relations.
- Principle 7: Students should learn about the values shared by virtually all cultural groups (e.g., justice, equality, freedom, peace, compassion, and charity).
- Principle 8: Teachers should help students acquire the social skills needed to interact effectively with students from other racial, ethnic, cultural, and language groups.
- Principle 9: Schools should provide opportunities for students from different racial, ethnic, cultural, and language groups to interact socially under conditions designed to reduce fear and anxiety.

4. School Governance, Organization, and Equity

- Principle 10: A school's organizational strategies should ensure that decision-making is widely shared and that members of the school community learn collaborative skills and dispositions in order to create a caring environment for students.
- Principle 11: Leaders should develop strategies that ensure that all public schools, regardless of their locations, are funded equitably.

Assessment
 Principle 12: Teachers should use multiple culturally sensitive techniques to assess complex cognitive and social skills. (pp. 198-202)

The 12 principles developed by Banks et al. (2001) centered on essential strategies that must be implemented by school leaders and teachers to create a campus environment where minority students can be successful. However, some educators did not believe an achievement gap existed. Ladson-Billings (2006) stated that, ". . . this all-out focus on the 'Achievement Gap' moves us toward short-term solutions that are unlikely to address the long-term underlying problem" (p. 4). As she analyzed the educational history of minority students compared to White students, she found that as far back as 1816, Black students and White students were not treated equally. Black and Hispanic students endured many inequalities and practices that hindered their educational abilities. These barriers ranged from being forbidden to receive an education during the period of slavery to fighting a lack of resources and the financial disparities in minority schools (receiving only cast-off materials from White students). Anderson stated (as cited in Ladson-Billings, 2006), "Black students in the South did not receive universal secondary education until 1968" (p. 5).

Ladson-Billings (2006) argued that the historical, economic, sociopolitical, and moral decisions and policies generated against minorities created an educational debt, not merely an achievement gap. According to Haveman (as cited in Ladson-Billings, 2006),

The education debt is the foregone schooling resources that could have (should have) been invested in (primarily) low income kids, and the deficit leads to a variety of social problems (e.g., crime, low productivity, low wages, low labor force participation) that require on-going public investment. This required investment drains away resources that could go to reducing the achievement gap. Without the education debt we could narrow the achievement debt. (p. 5)

Ladson-Billings discussed how minority students were discriminated against and denied educational services that excluded them from equitable and high-quality education both pre and post *Brown v. Board of Education*. She described how Congress made it illegal for Native Americans to be taught in their native languages. After the Civil War, Blacks worked with the Republicans to rewrite state constitutions to guarantee a free public education to all students. However, their efforts benefited White students more than Black students. Through the case *Plessy v. Ferguson* (1896), the federal government made it legal for the South to practice segregation.

According to Ladson-Billings (2006), the education debt must be addressed because it impacted educational progress and there was value in understanding the debt when considering past education research findings. Ladson-Billings concluded that with so many educational disparities against minority students, the United States created an educational debt that would take an enormous amount of time and money to erase. The achievement gap would only be closed once the education debt was been addressed.

Ladson-Billings (2006) discussed the lack of funds invested in the education of minority families and communities. Due to insufficient funds in the community, crime increased, productivity decreased, and wages were low, decreasing the number of labor force participants within the community. In public schools, the students from these families were labeled ED. Burnett and Lampert (2011) asserted that additional teacher training was needed to meet the needs of these students, such as academic strategies, building background knowledge, and building relationships.

Takei and Shouse (2008) described the relationship between teachers and students as asymmetric and symmetric. Asymmetry occurred when a teacher and a student were of different ethnicities; symmetry existed in a uniform relationship. Takei and Shouse's research showed that White English and social studies teachers rated their Black students about 9% of a standard deviation lower in student citizenship than their White students. However, they also determined that "Black math and science teachers rated their Black students substantially lower" (p. 379). Symmetrical relationships between a teacher and student typically yielded positive consequences. Takei and Shouse concluded that "the greater the percentage of Black students attending a school, the lower the rating a Black student is likely to receive from a White English or social studies teacher" (p.380). They believed teachers had a more negative impression of Black students as the percentage of Black students in the school increased.

In 2003, Dee stated, "the conventional wisdom among educators is that minority students are more likely to excel educationally when matched with teachers who share their race or ethnicity" (p. 2). According to Dee's study, teachers shared stronger orientation towards students who shared the same racial ethnicity. For example, when White teachers were told that some students were Black, they provided less coaching and positive feedback. Thus, Black students received less attention and praise from White teachers.

The Tennessee Student Teacher Achievement Ratio (STAR) project was an experiment involving about 6000 students to determine if class size affected student achievement (Dee, 2003). The students were placed randomly in small classes, regular

classes, and regular classes with teacher aids without considering the ethnicity of the teacher or student. However, once the data were released to the public, Dee used this study to analyze how successful students were with the same ethnic teacher. His analysis indicated that work assigned by teachers to students of the same ethnicity was associated with substantive gains in math and reading.

Hays (2011) proposed:

The theory of incompatibilities is based on Cardenas and Cardenas' (1977) belief that failures by African American, Hispanic, and economically disadvantage students can be attributed to lack of compatibility with and social capital investiture in some of the students at whom the curriculum is directed." (p.10)

Educational leaders agreed that it was important for students and teachers to have a social and emotional connection, but Hays reported little research supported these findings. Therefore, Hays studied the relationships among student teacher racial ratios (STRRs) between minority students, White students, and White teachers to determine if there was a meaningful relationship in academic achievement.

Hays (2011) noted that between the years of 1999-2008, African-American students maintained an academic gap of about 12 points and Hispanic students maintained an achievement gap of 13 points compared to White students in 10 school districts. Hays hypothesized that in the North Texas area, changes in student-teacher racial ratios for African-American, Hispanic, and White students would not exhibit a relationship in ELA/reading and math scores on the Texas State Assessment (TSA). However, his research demonstrated a negative correlation between African-American and Hispanic students' assessment performance; White students demonstrated a positive correlation throughout the 10-year period.

Current Practice

The latest conversation on the achievement gap was initiated by Bowen (Gardner, 2013). Gardner stated that Bowen's private company was being funded by the Chinese government to decipher about 2,200 DNA samples from America's brightest people to compare to the general population. In the mid-1880s, Sir Francis Galton (Charles Darwin's cousin) set out to prove that high intelligence was inherited through genetics. However, Galton found that children of geniuses may be smarter than the average student but tended to be less intelligent than their parents. Nisbet (as cited in Gardner, 2013) believed success in the real world was much more complex than just the level of one's intelligence. H. Gardner (as cited in Garner, 2013) believed that in addition to verbal and mathematical intelligences, there were other areas of intelligence including musical, bodily, and interpersonal abilities. Some of the most successful people did not have a high IQ, but rose to the top of their professions through perseverance and resilience.

Bromberg and Theokas (2013) argued that schools will never close the achievement gap if they only focus on bringing the bottom performing students up to a higher level of academic success. One must bring the middle-achieving, lower socially economic and minority students to a higher level of academic achievement and bring high-achieving students even higher. The focus should be on all students. In past decades, schools have served to help White students move toward advanced achievement levels, but were not successful in helping minority students close the achievement gap. Bromberg and Theokas examined the fourth and eighth grade achievement scores in reading and math. They also analyzed achievement among ED

students compared to higher income students, and evaluated minority students compared to White students. Their study examined the following:

- 1. percent of students in the lower spectrum and advanced performance,
- 2. achievement for lower and higher 10% of students in each ethnic and income group, and
- 3. trends in minorities and Caucasians separately for both low-performing and high-achieving students.

Bromberg and Theokas (2013) analyzed student data at the low end of educational achievement in fourth grade math and found that in 2003, 46% of Black students and 38% of Hispanic students performed below the basic academic level on the National Assessment of Educational Progress (NAEP). Eight years later, only 34% of Black students and 28% of Hispanic students performed below basic academic levels, an improvement over 10% for each group. Thirteen percent of White students were below the basic educational level in 2003; by 2011, only 9% of White students performed below the basic academic level, an improvement of 4%. During this time, the Black and Hispanic students showed more improvement than the White students. However, Bromberg and Theokas stated that although Black and Hispanic students made more progress over time, they still were more likely to perform in the lowest achievement category compared to White students. In eighth grade reading, results were similar.

Bromberg and Theokas (2013) then analyzed the high end of the student achievement spectrum and found that 5% of the higher income White students scored at an advanced level in fourth grade in 2003. By 2011, 9% of the higher income White students scored in the advanced level. Most years, only 1% of Black and Hispanic

students achieved advanced levels. In 2011, Hispanic students jumped to 2% in the advanced achievement level. Bromberg and Theokas' data showed that percentage of Black and Hispanic students at the high level of achievement failed to increase at the same rate as the White students. In eighth grade, the achievement gaps widened significantly between Black and Hispanic students and White students. In the fourth grade, the same results occurred in lower and higher income students at the advanced levels of academic success.

Bromberg and Theokas (2013) found that over time, the gap widened between low income students and higher income students. Low income students' academic achievements increased only by 1% or 2%, while higher income students' educational achievements improved by 5%. Black and Hispanic students were more likely to come from low income families. However, Bromberg and Theokas found that the achievement gap between low income Black and Hispanic students and White students decreased by 7%; the same results were found among high income Black and Hispanic students compared with White students. Though this was a benefit, they noted that higher income Black and Hispanic students were more likely to fall below the basic achievement level.

Bromberg and Theokas (2013) concluded that great leaders believe every child counts, low achievers as well as high achievers. The achievement gap will close when educators start to address all students' needs along the academic learning spectrum. Data achievement gaps do not exist because of ethnic or economic demographics; gaps exist all along the continuum. Bromberg and Theokas' records indicated that small amounts of progress were being made toward moving Black and Hispanic

students up the continuum from the below academic achievement level, but the progress was not nearly enough. Educators must also pay more attention to students who fell in the middle of the learning spectrum and were not below achievement level or in the advanced level. Lastly, Bromberg and Theokas stated:

In order to disrupt long-entrenched patterns of underachievement and inequity, we must understand those patterns. Our data show that we're not very good at getting students of color and low-income students to reach advanced performance levels. Even so, gaps at the low end remain larger than gaps at the high end in elementary and middle grades. This pattern affirms that in too many places we still have a lot of work to do to ensure students are being given the opportunity to learn, not to mention excel. (p.13)

Educators must meet students where they are and raise the bar higher, moving students to be more proficient and to advance. Gap-closing programs focus on gaps at every academic level, supporting low performing student and challenging advance students. Many schools were doing this, but more schools needed to adopt this philosophy.

Policymakers discussed the links between secondary and college education for low income and minority students. Research showed that low income and minority students are least likely to enroll in college due to lack of financial and academic preparedness. However, studies also demonstrated that secondary schools could have a profound effect on students' decision to attend college. Information and attitudes about college conveyed by secondary school to students could in fact encourage students to attend college. The National Student Clearinghouse (NSC) conducted a descriptive study on how schools with higher percentages of low income and minority students performed in terms of attending college, compared to schools with a lower percentage of low income and minority students (Torres, 2013). The study analyzed the school-to-college transition tracks of 2.3 million students for three years nationwide.

The report divided the students into the following six categories according to demographic and geographic characteristics:

- 1. low income, high minority, urban
- 2. low income, low minority, urban
- 3. low income, rural
- 4. higher income, high minority, urban
- 5. higher income, low minority, urban
- 6. higher income, rural.

The data were drawn from public high schools that participated in NSC, which tracked students' postsecondary access and success outcomes (Torres, 2013). The data showed that college enrollment rates for high schools with low income students were lower than schools with higher income students, regardless of ethnicity or location. Schools with higher income students, with low numbers of minorities, and that were located in the urban area had the highest college enrollment rate at 70%. High schools with higher income students and that were located in rural areas had a college enrollment rate of 65%. In comparison, schools with higher income students, with a high minority count, and located in an urban setting had a 62% enroll rate in postsecondary education. Low income schools had the lowest college entrance rate at 50%, and low income schools located in urban areas which also had few minority students had a 55% rate of college enrollment.

Special Student Populations

Economically Disadvantaged Students

Burnett and Lampert (2011) discussed the importance of meeting the needs of low-income students, also known as ED students by many public educators. The link between ED students and their educational outcomes has been well documented (Burnett & Lampert, 2011). ED students were students who lived in poverty. Poverty

tended to have a negative influence on student achievement (Levin, 1995). Most students that live in poverty must work to overcome several equity disparities, such as living in single parent homes, living in underprivileged neighborhoods, and overcoming issues related to social injustice (Brown, 2006). The Australian government believed in developing projects to train highly qualified teachers who could help schools with large numbers of ED students close the achievement gap (Burnett & Lampert, 2011). The Australian government altered domains of their policies to reform their school systems. The influences were seen through the allocation of funds that were being poured into low socio-economic school communities. These schools had increasing numbers of disadvantaged students who tended to struggle academically and received less qualified teachers.

The Exceptional Teachers for Disadvantage Schools (ETDS) project was developed by the Australian government in partnership with several universities to combat the "links between the low socio-economic status and poor educational outcomes of the communities which these schools service" (Burnett & Lampert, 2011, p. 447). The project was started in Brisbane, Australia, in 2010, to address the shortage of high quality teachers in schools with large numbers of ED students. The project's goal was to equip teachers with a new set of skills and understanding about the special needs of ED students who tended to have varying underlying reasons for learning gaps. These teachers were then placed in schools with large populations of ED students. At the time of publication, the project had just placed the first cohort of highly qualified teachers in the classroom; therefore, it was unknown if the project was successful.

Jennings (as cited in Garrett, 2008) stated that ED students "start out with a disadvantage over students from affluent families because they come to school less well prepared" (para. 5). The Educational Testing Service (ETS) conducted a study that identified four strong correlations between ED students and school performance:

- 1. the percentage of children living with only one parent,
- the percentage of eighth graders absent from school at least three times a month,
- the percentage of children age 5 or younger whose parents read to them daily, and
- 4. the percentage of eight graders who watch five or more hours of television daily (Garrett, 2008, para. 3).

According to Jennings (as cited in Garrett, 2008), "Studies have shown that students from different economic backgrounds advance at the same rate during schooling, but poorer students as a group never overcome their initial disadvantage" (para. 5).

Special Education (SPED) and English Language Learners (ELL)

Jung and Guskey (2010) asserted that students with learning disabilities and ELL students learned differently from students in the general population. Most SPED and ELL students had individual education plans (IEP) which identified specific education standards that should be within the students' ability to complete successfully. However, the students continued to struggle in the regular classroom. Teachers often struggled with assigning a fair grade to these students. Some students with disabilities failed even though they turned in assignments, worked hard, and completed everything the teacher asked them to do. There was very little guidance on how to assign fair grades to these students. Thus, teachers often adapted their own grading systems by "assigning extra"

points for effort or improvement, basing grades solely on an individual's goals, giving different weight to assignments, or using an altered grading scale" (para. 3).

Determining students' grades was of critical importance because grades represented what a student had learned and therefore should reflect how the student will perform on an assessment (Jung & Guskey, 2010). If a teacher reported passing grades indicating the student learned the material when the student did not adequately master the information, the student would not be prepared to pass local or state assessments. Jung and Guskey made two recommendations to help guide teachers in determining grades. The first recommendation was to develop a grading system based on clearly articulated standards. This would help identify specifically what the student learned and in what areas the student continued to struggle. Although this type of grading was more challenging, it provided teachers and parents "more meaningful information to use in recognizing accomplishments and targeting remediation when needed" (para. 7). The second recommendation included three types of learning criteria related to standards:

- 1. *Product* criteria address what students know and are able to do at a particular point in time. They relate to students' specific achievements or level of proficiency as demonstrated by final examinations; final reports, projects, exhibits, or portfolios; or other overall assessments of learning.
- 2. Process criteria relate to students' behaviors in reaching their current level of achievement and proficiency. They include elements such as effort, behavior, class participation, punctuality in turning in assignments, and work habits. They also might include evidence from daily work, regular classroom quizzes, and homework.
- 3. *Progress* criteria consider how much students improve or gain from their learning experiences. These criteria focus on how far students have advanced, rather than where they are. Other names for progress criteria include *learning gain*, *value-added learning*, and *educational growth*. (Guskey, 2006, as cited in Jung & Guskey, 2010, para. 8)

Establishing a grading system with clear standards and progress criteria may help teachers, parents, and students in communicating the areas of remediation. Either of these two grading practices may provide a more realistic classroom grade for students.

It was important when researching the achievement gap that studies account for SPED students because throughout history, some minority students have been missed identified. Although they experienced challenges in learning, they may not have needed SPED services (Jung & Guskey, 2010). This often counterbalanced or offset the minority numbers in SPED. In 1975, Congress passed the Education for All Handicapped Children Act, and in 2004, they passed the Individuals with Disabilities Education Improvement Act (IDEA), ensuring "that schools could no longer turn away students on the basis of perceived developmental, sensory, physical, or cognitive limitations" (Harry & Klingner, 2007, p.16). Harry and Klinger examined the special education placement process for minority students in a large urban school district located in the southeastern United States. The student population included a range of ethnicities and ED students. Based on the data they collected through observations, conferences, interviews, behavioral referrals, and evaluation reports, they determined that several students who were placed in the SPED program did not have adequate classroom instruction. There were inconsistencies in policies and procedures, and haphazard referrals and assessment conclusions. They also noted that ED students were more at risk of failing and being referred to the SPED program.

Haynes and Zacarian (2010) defined ELL students as those students who spoke one or more languages other than English at home and during their preschool years but were now learning English. Studies demonstrated that as a student learned a

language, a major function of the brain made connections between new and old information. If ELL students failed to have prior knowledge of information, it affected their understanding and learning of new knowledge. Therefore, teachers must learn to build background information that was related to the content. To ensure teachers addressed the needs of ELL students, Haynes and Zacarian suggested the following steps:

- 1. Learn what you want students to learn.
- 2. Determine how students' learning will be assessed.
- 3. Be prepared to address specific challenges that may hinder an ELL student's learning within a lesson.
- 4. Stimulate prior knowledge and build background knowledge as needed.
- 5. Guide ELL learners as they rehearse using new language and content.

Haynes and Zacarian stated that teachers must address the limited comprehension skills of ELL learners. Even though an ELL student may be able to pronounce a word, the student may not be able to comprehend the meaning. Literature is full of cultural phrases, and some ELL students may not come with the background to be able to interpret or understand the readings. ELL learners struggled with idioms and figurative expressions, and teachers must prepare strategies to help these students overcome these barriers.

Gifted and Talented Students

GT students tended to perform exceptionally well on standardized assessments. However, GT students still had specialized learning needs (Williams, 2013). These students performed at complex high learning levels, and schools must provide GT students opportunities to move ahead and faster through curriculum in areas of interest.

These students must have an enriched curriculum. The National Research Center on the Gifted and Talented created the following national standards to help school serve GT students more efficiently:

- 1. Varied levels of curriculum within each grade, going all the way from K-12.
- 2. Adaptations to the regular curriculum if appropriate.
- 3. Flexibility with timing, so the gifted kids can move faster when they're ready (even skip grades or levels if appropriate).
- 4. A continuum of options, ranging from staying in a regular class to being in a special one. (para. 3)

In Fairfax, VA, schools altered their curriculum to meet the needs of GT students. The teachers worked closely with specialists to differentiate curriculum by using modifications, flexible grouping, practical applications, using real life examples, and guest speakers.

According to Gallagher (2015), educational infrastructure at the national, state, and local government was insufficient and not built to support students with gifted learning abilities. "Since the American public education system has grown from the bottom, or local community, up to state and federal levels the necessary infrastructure has to be provided through special efforts" (p.81). One example he gave accomplished this task in the area of special education. IDEA provided supportive infrastructure for students with special needs through major investments in research, personnel preparation, technical assistance, and evaluation.

The local government consisted of the school board, superintendents of schools, teachers, and parents. These parties designed and differentiated curriculum for special courses or programs (Gallagher, 2015). At this level, parents and parent groups

influenced policies through debates about resources, budget expenses, and special programs for the needs of GT students.

The state government led by the governor played a significant role in establishing programs, funding existing programs, developing rules and policies, providing program guidelines, setting standards, and creating requirements for teacher certification for gifted students (Gallagher, 2015). To help enrich the learning of the gifted students, several states implemented summer programs and programs designed around science and math. This encouraged school districts to plan for gifted students.

The federal government historically provided funding for research, model programs, and leadership training for gifted students (Gallagher, 2015). Congress funded the Jacob K. Javits Gifted & Talented Students Education Act of 1988 (Javits), the National Research Center on the Gifted and Talented, and science, technology, engineering, and mathematics (STEM) programs in public education today. Currently, the federal government works in collaboration with major universities to conduct research for gifted students and other major educational issues surrounding student needs. However, the support for GT students at the federal level paled compared the student support that special education students received at the federal level.

Another important player in creating a supportive infrastructure for GT students included universities, which could help by providing more research and training for teachers (Gallagher, 2015). Under IDEA, federal government funds supported universities in research and teacher training for students with disabilities. However, Javits did not provide as much funding for GT students, and universities failed to sufficiently provide the needed support for these students.

Lack of strong rules and regulations governing who can or should teach gifted and talented students, and the lack of financial support (at the local, state, and federal levels) provided to teachers' training programs for teachers of gifted students mean that a university unit or part of an education department devoted to preparing teachers of the gifted and talented would be relatively small". (p. 84)

Until Congress provides the funds necessary to build the supportive infrastructure at the local, state, and federal levels, GT students continue to lack the curriculum and programs needed to enrich their learning experience.

Lawmakers refused to consider GT students as at risk. Peterson and Colango (1996) examined 153 gifted secondary students and found that most failed to achieve in all subject areas. Of those GT students who attended college, only 52% graduated, compared to an 83% graduation rate among students a prior study identified as achievers. Ritchotte, Matthews, and Flowers (2014) studied the Achievement-Orientation Model (AOM) created by Siegle and McCoach (2009). Ritchotte et al. (2014) theorized that gifted students underachieve because they lack one of three factors: a perceived supportive environment, self-efficacy, or goal valuation. According to Ritchotte et al.'s theory, gifted students must perceive their environment as being supportive. Underachieving gifted students will fail in an environment they perceive as being less supportive. "Students perceptions may not be accurate; however, student performance may be affected negatively nonetheless. Students have a need to believe that those around them, whether at home or school, want them to succeed" (p.185).

The second factor involved in motivating underachieving gifted students was self-efficacy, which referred to an individual's conviction that they could complete or accomplish a given task (Ritchotte et al., 2014). Specifically for students, additional requirements were needed that resulted in the student being successful. For example,

if the student struggled in math and needed to attend math tutorials but doubted a successful outcome, then a student who lacked self-efficacy may decide not to go to tutorials for the fear of looking stupid in front of the teacher.

The third factor was goal valuation. Students must value the goals of school before they become motivated to complete assignments (McCoach & Siegle, 2003). McCoach and Siegle found a strong correlation between student's goal valuation and their motivation. Low goal valuation was a strong predictor of underachievement among 178 gifted high school students (Ritchotte et al., 2014).

Together these three factors of the AOM must be present for students to be motivated to be successful in school. In addition to these three factors, if students' attitudes were positive regarding all three factors, they self-regulated and achieved on high levels (McCoach and Seigle, 2003). Rubenstein, Siegle, Reis, McCoach, and Burton (2012) tested the AOM theory on middle school underachievers and found that on average these students increased their math and reading scores by a full letter grade over the course of the study.

According to Wayne Camara, Vice President of Research for The College Board, "the quality of schools affects testing, too. Success on test in schools is highly related to the quality of education that kids get" (Garrett, 2014, p.1). The Urban Academy in New York created a school environment in which students were tested by different methods, including drawing, collaborating, and experimenting. The uniquely structured high school was designed so students were assessed on what they could create, do, and know. The student body was comprised mostly of minorities and at-risk students;

however, 97% of the students graduated and attended a four-year college or universities.

Summary

Researchers acknowledged the different types of students and their special needs that public schools must accommodate for these special populations to be successful. Bromberg and Theokas' (2013) research focused on meeting the needs of all students as well as acknowledging the different types of students within public schools. Ladson-Billings (2006) discussed the ED populations and their needs.

Gardner (2013) spoke to the needs of gifted students.

This study considered and accounted for the specific variables that each special population may bring to each campus, since students' test scores may be affected by these variables. Students' economic status, their learning disabilities, their grade level, and the campus they attended all played a crucial role in determining their success on state assessments.

Students must be taught in an environment that supports their educational needs. Throughout this chapter the needs of special populations such as ED, GT, SPED, and ELL were highlighted because each required specific needs and accommodations. This study accounted for each of these populations because these students' assessment scores depended on how well their needs were met throughout the school year.

For schools to meet the needs of all 21st century learners, families, communities, and schools must collaborate effectively. Student-parent-teacher relationships were the crucial element in developing these connections in the community. The relationship

between students and teachers became critical because many times students rated themselves according to how their teachers perceived them (Takei & Shouse, 2008).

The combination of poverty, culture, language, mobility, and societal perceptions contributed to the poor performance of minority children. Therefore, educational programs that develop strategies to solve one of these incompatibilities and ignore the others will fail. For students to be compatible with traditional education, it was necessary that incompatibilities be recognized and the problem resolved through additional training and resources (Cardenas & Cardenas, 1977). The problem was often falsely identified as a learning disability, which could lead to more learning gaps. However, school districts had a difficult time adapting to the needs of minority students. Cardenas and Cardenas stated, "Schools have acted in a racist manner in the application of this double standard for adaptability" (p.11).

With the increasing change in demographics and the lagging achievement gap between White students and Black and Hispanic students, the student-teacher-parent relationship became critical to closing the achievement gap. Schools districts must work to break down barriers between minority families and school. According to Murdock et al.'s (2010) projections, Texas will become a more impoverished and less educated state with less opportunity for its people if the education system continues to fail minority students.

Ladson-Billings (2006) analyzed the educational history of minority students compared to their White peers and found that as early as 1816 Black students and White students were not treated equally. She argued that the historical, economic,

sociopolitical, and moral decisions and policies generated against minorities created an educational debt, not an achievement gap.

While Texas students improved over the years with success on all levels, the achievement gap remained. Are schools doing enough to build programs that address the incompatibilities of minority students in the 21st century? According to Cardenas and Cardenas' (1977) theory of incompatibilities, educational programs that develop strategies to solve one of these incompatibilities and ignore the others will fail.

CHAPTER 3

METHOD

Three North Texas school districts participated in this study. Each district provided data linking their student demographics with the demographics of the English language arts (ELA)/reading and math teachers for school years 2010-2011, 2011-2012, and 2012-2013. Chapter 3 discusses participants' demographics, background information, and the research design and methods. The questions that guided this study were: Do students show greater academic success in ELA/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity?

This study is unique in the fact that it links student data directly to the student's teacher for the calendar school year. The three districts were asked to provide the students' ELA/reading and math teachers for each year. In a spread sheet, the school districts assigned a specific number to the students and teachers, so all students would be matched to his or her teacher by that number.

In this study, a two-model hierarchical multiple regression analysis was performed that directly tied students, teachers, ethnicity, and assessment data to the students' academic achievement in ELA/reading and math. This study also included an analysis of correlations of the academic performance on TAKS™ between minority students and White students.

TAKS™ was the only state assessment represented in this study. The assessment instruments were applied equally throughout all secondary schools in Texas. The TAKS™ was designed to measure Texas Essential Knowledge and Skills (TEKS), which was a measurement of student academic success in the state of Texas (Texas Project FIRST, n.d).

Participants

The data in this study were a convenience sample of three North Texas school districts who met the research criteria and agreed to participate in the study. Each school district was sent an email followed by a phone call to the superintendent to answer any questions (see Appendix). The districts were located in North Texas. They provided data for the 2010-2011, 2011-2012, and 2012-2013 school years.

During these years, the State of Texas assigned each school, campus, and district an accountability rating (Texas Education Agency [TEA], 2013a). The ratings were in order as follows: exemplary, recognized, academically acceptable, and academically unacceptable. The exemplary rating was highest, and academically unacceptable was the lowest rating. To be considered for this study, the school district must have reported their assessment scores to TEA, and they had to be located in the North Texas area. It was affirmed that all districts and campuses included in the study had a diverse population, including Blacks, Hispanics, and Whites because they represented a large percentage of the districts' student population.

District A

According to TEA Academic Excellence Indicator System (AEIS) reports for 2012, District A included three high schools, seven middle schools, 21 elementary

schools, two early childhood centers, and an alternative high school. The student population size of District A was 24,738. The demographic composition consisted of 11.7% Black students, 31.3% Hispanic students, 51.9% White students, 43.2% economically disadvantaged (ED) students, and 14.4% ELL students. The overall percent composition of students (10th and 11th graders) who passed all TAKS™ assessments in 2011-2012 was 65% Black, 68% Hispanic, and 85% White. The combined percentage of Blacks and Hispanics who received a commended score on the TAKS™ was 4%, while 11% of White students achieved a commended score. District A teacher demographics consisted of 6.8% Black teachers, 11.9% Hispanic teachers, and 78.0% White teachers.

District B

According to TEA data from the 2011-2012 school year, District B included four high schools, 11 middle schools, 22 elementary schools, one early childhood centers, and one alternative school. The student population size of District B was 33,017. The demographic composition consisted of 7.7% Black students, 18.7% Hispanic students, 62.4% White students, 21.7% ED students, and 5.7% English language learner (ELL) students. The overall percent composition of students (10th and 11th) who passed all parts of the TAKS™ in 2012 was 73% Black, 79% Hispanic, and 89% White. Six percent of Black students received a commended score on the TAKS™, 9% of the Hispanic students were commended, and 16% of the White students achieved a commended score. District B teacher demographics consisted of 2.0% Black teachers, 7.2% Hispanic teachers, and 88.4% White teachers.

District C

According to TEA AEIS data from 2012, District C included four high schools, 11 middle schools, 22 elementary schools, one early childhood center, and one alternative school. The student population size of District C was 51,779. The demographic composition consisted of 8.8% Black students, 26.0% Hispanic students, 51.3% White students, 27.9% ED students, and 13.1% ELL students. The overall percent composition of students (10th and 11th graders) who passed all parts of the TAKS™ assessment in 2012 was 71% Black, 73% Hispanic, and 90% White. The percentage of Blacks and Hispanics who received a commended score on the TAKS™ was 5% and 7%, respectively, while 18% of the White students received a commended score. The teacher demographics of District C consisted of 3.8% Black, 6.4% Hispanic, and 88.1% White.

The three school districts were similar in demographic and academic compositions. Although each district maintained an achievement gap between minority students and White students, their percentage of students passing remained above the state averages in most cases. These data were collected in 2012.

Texas Assessment of Knowledge and Skills

TAKS™ was designed to measure the extent to which a student learned and could apply the defined knowledge and skills at each tested grade level. (TEA, n.d.c). It was first implemented in 2003 (TEA, n.d.a). The TAKS™ assessment covers many TEKS, which students may have covered in prior grades. The current teacher is expected to review their students for all TEKS covered on the TAKS™ assessment for that school year (TEA, n.d.c). For example, for physics students taking the TAKS™

assessment their 11th grade year, their physics teacher must review them on physics, chemistry, and biology. For this study, demographic information was collected for the physics student and teacher because the physics teacher was responsible for preparing the student for the TAKS[™] assessment that school year. TEA (n.d.c) also provided TAKS[™] information booklets that helped teachers by making available sample items and connecting the TEKS to the statewide curriculum. The booklets included the following for math, ELA/reading, science and social studies:

- 1. an overview of the subject within the context of TAKS™,
- 2. a blueprint of the test the number of items under each objective and the number of items on the test as a whole,
- 3. information that clarifies how to read the TEKS
- 4. the reasons each objective and its TEKS student expectations are critical to student learning and success,
- additional information about each objective that helps educators understand how TEA assesses the objective on TAKS™, and
- 6. sample items that show some of the ways TEA assesses objectives. (TEA, 2015)

TAKS™ assessments for each campus and district were retrieved from three different North Texas school districts. TEA (2010a) collected students TAKS™ assessment scores for each student. After the assessment data were collected for math, science, social studies, reading and writing, TEA created a summary report to share with the public in an AEIS report. This study examined secondary schools in North Texas, grades 8, 10, and 11. The state assessment scores were retrieved for grades 8, 10, and 11 for each district that participated in the study. These grade levels were selected to represent students in middle and high school. Grade 8 was selected

because it was identified as a critical grade in Texas (TEAa, 2014). By law, students may be retained if they fail to pass their eighth grade assessment. This law was instituted in 1999 under the Student Success Initiative (SSI) by the 76th Texas Legislature (TEA, 2011). The 10th grade represented the grade level that the state required school districts to meet Adequate Yearly Progress (AYP). A specific percentage of all students and subpopulations (Black, White, Hispanic, economically disadvantaged [ED], special education [SPED], and limited English proficient [LEP] students) must pass TAKS™ to meet AYP expectations (USDOE, 2012). The 11th grade assessment was selected because the state of Texas mandated that 11th grade students pass TAKS™ to achieve a high school diploma.

The state mandated annual assessments were used to assess each student's academic success. The TAKS™ assessments were standardized tests designed to measure how well Texas students learned specific expectations within a school year. The data collected from the three school districts that participated in this study were analyzed to determine if minority and White students successfully learned TEKS expectations regardless of their teachers' ethnicity demographics. This study was controlled for ED students, SPED students, gifted and talented (GT) students, campuses, and grade levels. Correlations were analyzed among Black students, Hispanic students, White students, and their teachers.

In 2009, the Texas State Legislature passed the State of Texas Assessments of Academic Readiness (STAAR), which was designed to assess students' knowledge of the TEKS in specific course subjects, including algebra, biology, and English (TEA, 2010b). TEA first partially implemented in the new tests in the 2011-2012 school year

for grades 3 through 8 in math and reading. Writing was implemented for grades 4 and 7, and science was introduced to grades 5 and 8. When the assessments were inaugurated, high school students were required to take 12 assessments to graduate; however, in 2013, the Texas state legislature revised the required number of assessments due to parental frustrations (Stutz, 2013). Beginning in 2012-2013 school year, students were only mandated to take and pass exams in English I and II, algebra I, biology and United States history (TEA, 2013a).

Research Design

Quantitative descriptive data used for this study included student and teacher populations in three North Texas school districts (District A, District B, and District C). The data for each district were summarized on TEA's public database. Each district was required to report all students, teachers, campus demographics, and other data variables annually. This information was then collected in the AEIS report to share with the public. In addition, Districts A, B, and C all provided specific student and teacher data that linked student ethnicity to their math and English language arts teachers' ethnicity. These data were crucial if this study was going to answer the questions: Do students show greater academic success in ELA/reading as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity?

The dependent variable in this study was students' state assessments collected from three school districts in North Texas from the 2010-2011, 2011-2012, and 2012-2013 school years. The demographic categories included Black, Hispanic, and White

students and Black, Hispanic, and White teachers. These three ethnic categories were chosen based on their size and public concerns about the achievement gap between these populations.

The independent variables were analyzed to determine the strength and direction of the relationship among the variables. The districts were asked to put the following independent variables in an Excel spread sheet: student ID; grade level; campus attended; gender; ED; SPED; GT; TAKS™ scores in reading and math for grades 8, 10, and 11; teacher-student link by subject; teacher ethnicity; and teachers' years of experience (see Appendix). The data were transferred to SPSS, and a two-model hierarchical multiple regression analysis was run, which included calculating the Pearson's *r* correlation, running an ANOVA test, analyzing the model summary, and creating a coefficient table for each district, subject, and year.

All data were entered into an Excel spread sheet and evaluated for missing data and alignment, then transferred to SPSS for hierarchical multiple regression analysis.

The independent variables included in this analysis were:

- Black students
- 2. Hispanic students
- 3. White students
- 4. Black teachers
- 5. Hispanic teachers
- 6. White teachers
- 7. Black students' ELA/reading and math TAKS™ scores
- 8. Hispanic students' ELA/reading and math TAKS™ scores
- 9. White students' ELA/reading and math TAKS™ scores
- 10. Black students' grade level and campus
- 11. Hispanic students' grade level and campus
- 12. White students' grade level and campus
- 13. ED Black students' TAKS™ scores
- 14. ED Hispanic students' TAKS™ scores
- 15. ED White students' TAKS™ scores
- 16. SPED Black students' TAKS™ scores

- 17. SPED Hispanic students' TAKS™ scores
- 18. SPED White students' TAKS™ scores
- 19. ELL Black students' TAKS™ scores
- 20. ELL Hispanic students' TAKS™ scores
- 21. ELL White students' TAKS™ scores

All data were entered into an Excel spread sheet (see Appendix), checked, transferred to SPSS, and a hierarchical regression analysis was performed in SPSS. Students in each ethnicity category were linked to the corresponding math or English language arts teacher of that school year. A two-model hierarchical regression analysis was performed for the three school years from 2010-2011, 2011-2012, and 2012-2013 to study and determine trends within the descriptive statistics, Pearson's *r* correlation coefficient, ANOVA analysis, and regression coefficients within assessment scores.

Data Analysis

A two-model hierarchical multiple regression analysis was conducted to evaluate how well students performed on state assessments when their teacher was of the same ethnicity. Model 1 included predictors of campus, grade level, SPED, GT, ED, and teachers' years of experience. Model 2 included all the above predictors, plus the ethnic link relationship between the teachers and students. The regression equation varied depending on the predictor, district, school year, and classroom subject. Each school district entered the data into an Excel spread sheet, which was transferred to SPSS once received. A two-model hierarchical multiple regression was conducted for each of the three school districts, over each of the three school years, for a total of nine regression analyses. Consequential sections of the multiple regressions included descriptive statistics, Pearson's *r*, ANOVA and coefficient tables.

Descriptive Statistics

The descriptive statistics SPSS output provided a summary of the data characteristics and probability distribution, including the mean, variance, and standard deviation for each variable. The descriptive statistics showed the number of each variable and determined if the data were within a normal range.

Pearson's *r* Correlation Calculating Student

A Pearson's *r* correlation (also known as the bivariate or zero-order correlation coefficient) was calculated between all predictor variables to measure the strength of the relationship. The numerical values identified the strength and direction of the relationship between and among Black, Hispanic, and White students on math and reading state assessments.

The correlation coefficient did not validate the cause and effect of the relationship. However, it gave a value that lay between -1 and 1; a zero value indicated there was no linear relationship. Positive correlations suggested that high valued variables were associated with each other. A negative value indicated an inverse relationship in which one variable increased and the other decreased. A high correlation coefficient suggested a strong association between the variables. The correlation coefficients in this study varied depending on the predictor, district, school year, and classroom subject.

ANOVA was performed to insure the data were entered correctly. ANOVA analysis was conducted for all data sets to determine if student assessment data were within a normal distribution during the given time interval and to determine if the independent variables were significantly associated with the assessment. The effect

size and degrees of freedom were determined and analyzed for significance. The significance of the overall relationship between the dependent and independent variables was determined and discussed for each subject and school year.

Regression Coefficients

Regression coefficients were examined to determine if the independent variables made an impact or a significant contribution to the model. When considering the coefficient equation, the assessment was the dependent variable y. The independent variables of the multiple regression were represented by x_1 , x_2 , x_3 , and so on. The regression output represented coefficient values for each independent variable, which were represented by b_1 , b_2 , b_3 , and so on. The a value represented the intercept. Below is the regression coefficient equation:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + ... + b_nx_n$$

The coefficient of each independent variable described the relationship that each variable had to the assessment, which was *y* in the equation. Therefore, if the value was positive or negative, then the *y* value reflected this change. The beta weights were also analyzed to determine which independent variable had a greater effect on the assessment.

Limitations

The participants in this study included suburban school districts located in North Texas. The results may be different in other parts of the state of Texas. Each school district provided data for students in grade 8, 10, and 11. The majority of the eighth grade test scores were reported in 2011. Texas started to give eighth grade students the STAAR test in 2012. This study did not consider grades 6, 7, 9, and 12. It also did

not account for personal relationships that may have developed between students and teachers.

The demographic and academic gaps in elementary schools were not analyzed in this study. Furthermore, the only assessment considered in this study was TAKS™. The study evaluated the school years of 2010-2011, 2011-2012, and 2012-2013 for three North Texas school districts. Moreover, this study only considered the achievement gaps of Black and Hispanic students compared to White students; other minorities were not considered in this study. In a few instances, data for minority teachers failed to yield statically significant output because of limited representation.

Summary

Do students show greater academic success in ELA/reading as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? To answer this question, a two-model hierarchical regression analysis was performed on TAKS™ data received from three school districts for school years 2010-2011, 2011-2012, and 2012-2013. The data included secondary assessments from grades 8, 10, and 11. The dependent variable in this study was students' state assessments collected from three school districts in North Texas from the 2010-2011, 2011-2012, and 2012-2013 school years. The independent variables included in this analysis were student ID, campus, grade, gender, ED, SPED, GT, student ethnicity, teacher ethnicity, and teachers' years of experience. The data analyses included

descriptive statistics, Pearson's *r* correlation coefficient, ANOVA analysis, and regression coefficients of the assessment scores.

The three school districts were similar in demographic and academic compositions, were all located in North Texas, reported TAKS™ results to TEA, and maintained a diverse population for all three years. Demographic information was then collected in the AEIS report to share with the public. Although each district maintained an achievement gap between minority students compared to White students, the percentage of minority students passing the TAKS™ test remained above the state averages. The major interest of this study was to determine if students were more academically successful if their teachers were of the same ethnicity. Could this be a cause of the achievement gap among minority students and their White peers? Educators must understand these relationships to help improve the learning of all students.

CHAPTER 4

RESULTS

The academic achievement gap among minority students compared to White students has been pressing for decades. As the Texas student population became more diverse, the teacher population remained at 75% White. Could an incompatible relationship between minority students and White teachers be the cause of the achievement gap, as discussed in Chapters 1 and 2? To answer this question, a hierarchical regression analysis was used analyze how minority students performed on the TAKS™ test when they had a teacher of the same ethnic culture or when the teacher was of a different ethnicity.

Restatement of the Research Question

Do students show greater academic success in English Language Arts (ELA)/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers are the same ethnicity? This chapter presents the descriptive statistics, Pearson's *r* correlations, statistical significance, and coefficients in the data analysis. Additionally, trends, statistically, and non-statistically significant relationships between students' and teachers' ethnicity, and students' assessment are discussed. The data illustrate the same academic achievement gap exists between minorities and White student that is known nationally. This study directly links student and teacher ethnicity to the

performance of students' assessment scores. The data do not reveal the district, campus, teacher, or student identities.

ELA/Reading Descriptive Statistics

Descriptive analyses (number of subjects [*N*], mean [*M*], and standard deviation [*SD*]) were recorded for the data from each district, which contained diverse student and teacher populations. *M* illustrated the average central tendency of the distribution. *SD* represented the relationship of the scores to the mean of the sample. Each variable for the ELA/reading assessments is represented in Table 1.

Table 1

Descriptive Statistics for ELA/Reading Assessment

Variables	School Year	N	М	SD
District A	2010-2011			
Assessment Score		1168	2185.39	454.13
Grade Level		1168	10.71	0.86
Campus Attended		1168	4.36	1.87
Female		1168	0.49	0.50
ED		1168	0.28	0.45
SPED		1168	0.09	0.29
GT		1168	0.12	0.32
TYS		1168	11.69	5.88
Black Students		1168	0.14	0.35
Hispanic Students		1168	0.34	0.48
Black Teachers		1168	0.00	0.00
Hispanic Teachers		1168	0.18	0.38
District A	2011-2012			
Assessment Score		1260	2301.65	126.28
Grade Level		1260	10.98	0.13
Campus Attended		1260	4.27	1.71
Female		1260	0.50	0.50
ED		1260	0.33	0.47
SPED		1260	0.08	0.28
				(table continues)

Table 1 (continued)

(continued)				
Variables	School Year	Ν	М	SD
GT		1260	0.11	0.31
TYS		1260	10.28	5.21
Black Students		1260	0.13	0.33
Hispanic Students		1260	0.34	0.47
Black Teachers		1260	0.12	0.32
Hispanic Teachers		1260	0.10	0.30
Black Teachers		1260	0.12	0.32
Hispanic Teachers		1260	0.10	0.30
District A	2012-2013			
Assessment Score		1016	2225.77	277.92
Grade Level		1016	10.57	1.05
Campus Attended		1016	3.72	2.05
Female		1016	0.50	0.50
ED		1016	0.10	0.29
SPED		1016	0.08	0.28
GT		1016	0.12	0.33
TYS		1016	13.50	5.78
Black Students		1016	0.14	0.35
Hispanic Students		1016	0.35	0.48
Black Teachers		1016	0.07	0.25
Hispanic Teachers		1016	0.02	0.13
District B	2010-2011			
Assessment Score	2010-2011	3800	2328.71	115.27
Grade		3800	10.43	0.56
Campus		3800	4.48	2.60
Female		3800	0.49	0.50
ED		3800	0.49	0.40
SPED		3800	0.20	0.40
GT				
TYS		3800	0.12	0.32
		3800	16.83	8.03
Black Students		3800	0.08	0.27
Hispanic Students		3800	0.20	0.40
Black Teachers		3800	0.00	0.05
Hispanic Teachers		3800	0.02	0.14
District B	2011-2012	4.5.		
Assessment Score		4049	2336.14	139.29
Grade Level		4049	10.47	0.50
Campus Attended		4049	0.28	1.46
Female		4049	1.50	0.50
ED		4049	1.21	0.41

Table 1
Continued

Variables	School Year	Ν	М	SD
GT		4049	1.10	0.30
TYS		4049	16.40	8.57
Black Students		4049	0.09	0.29
Black Teachers		4049	0.00	0.02
Hispanic Teachers		4049	0.02	0.15
District B	2012-2013			
Assessment Score		2019	2354.00	142.71
Grade Level		2019	11.00	0.05
Campus Attended		2019	2.80	1.49
Female		2019	0.49	0.50
ED		2019	0.21	0.41
SPED		2019	0.06	0.24
GT		2019	0.09	0.28
TYS		2019	18.37	8.83
Black Students		2019	0.09	0.29
Hispanic Students		2019	0.24	0.42
Black Teachers		2019	0.00	0.02
Hispanic Teachers		2019	0.00	0.02
District C	2010-2011			
Assessment Score		8222	1828.45	707.05
Grade Level		8222	9.63	1.24
Campus Attended		8222	14.55	5.62
Female		8222	0.49	0.50
ED		8222	0.09	0.32
SPED		8222	0.00	0.03
GT		8222	0.05	0.22
TYS		8222	14.17	9.17
Black Students		8222	0.10	0.30
Hispanic Students		8222	0.22	0.41
Black Teachers		8222	0.04	0.19
Hispanic Teachers		8222	0.02	0.14
District C	2011-2012			
Assessment Score		8015	2141.34	304.46
Grade Level		8015	9.72	1.23
Campus Attended		8015	15.07	5.31
Female		8015	0.49	0.50
ED		8015	0.11	0.35
SPED		8015	0.01	0.12
GT		8015	0.09	0.28

TYS		8015	13.80	9.15
Black Students		8015	0.24	0.43
Hispanic Students		8015	0.24	0.43
Black Teachers		8015	0.06	0.24
Hispanic Teachers		8015	0.02	0.13
District C	2012-2013			
Assessment Score		4758	2058.07	326.13
Grade Level		4758	9.72	1.48
Campus Attended		4758	13.82	5.62
Female		4758	0.50	0.50
ED		4758	0.15	0.40
SPED		4758	0.02	0.15
GT		4758	0.09	0.28
TYS		4758	14.50	9.88
Black Students		4758	0.11	0.31
Hispanic Students		4758	0.25	0.43
Black Teachers		4758	0.02	0.14
Hispanic Teachers		4758	0.06	0.23

Note: Created in SPSS. ED = economically disadvantaged. SPED = special education. GT = gifted and talented. TYS = teachers' years of service. *N* represents the number of students and teachers that had all required variables.

ELA/Reading Descriptive Statistics, District A

The average assessment scores for each of the three years were passing (above 2100). The strongest assessment score was in 2011-2012 school year with a 2301.65. In the 2010-2011 school year the *SD* was large; the assessment scores were relatively diverse compared to the mean (large range of assessment scores), which could be caused by a number of reasons. The sample size decreased in 2012-2013 because the state of Texas started fading out the TAKS[™] test, and most eighth grade students did not take the assessment. In each school, the average years of teaching experience ranged from 10 to 13.50.

ELA/Reading Descriptive Statistics, District B

The average assessment scores for each of the three years were passing (above 2100). The average assessment scores stayed within the 2300 range. The sample

size decreased in 2012-2013 because the state of Texas started fading out the TAKS™ test, and most eighth grade students did not take the assessment. In each school, the average years of teaching experience ranged from 13.80 to 16.83.

ELA/Reading Descriptive Statistics District C

Unlike the other school districts, District C had an average assessment score of 1828, almost 200 points below the passing score of 2100, in the 2010-2011 school year and right below passing in the 2012-2013 school year at 2058. However, during the 2011-2012 school year, the average assessment score was 2158. In 2010-2011 school year, the *SD* was very large; the assessment scores were relatively diverse compared to the mean (large range of assessment scores), which could be caused by a number of reasons. The sample size decreased in 2012-2013 because the state of Texas was fading out the TAKS™ test, and most eighth grade students did not take the assessment. The average years of teaching experience ranged from 13.80 to 14.50 during the three school years.

Math Descriptive Statistics

Descriptive analyses for math were the same as ELA/reading (*N*, *M*, and *SD*). Each of the three school districts contained diverse student and teacher populations. *M* illustrated the average central tendency of the distribution. *SD* represented the relationship of the scores to the mean of the sample. Each variable for the math assessments is represented in Table 2.

Table 2

Descriptive Statistics for Math Assessment Variables School Ν Μ SD Year District A 2010-2011 2223 2044.00 520.45 Assessment Score 2223 Grade Level 10.15 0.95 Campus Attended 2223 4.28 2.00 Female 2223 0.49 0.50 ED 2223 0.29 0.47 **SPED** 2223 0.11 0.32 GT 2223 0.11 0.31 TYS 2223 15.72 8.48 **Black Students** 2223 0.14 0.35 **Hispanic Students** 2223 0.33 0.47 **Black Teachers** 0.05 0.22 2223 Hispanic 0.05 2223 0.21 **Teachers** 2011-2012 District A Assessment 2289 2243.83 173.32 Score Grade Level 2289 10.45 0.50 Campus Attended 2289 4.35 1.73 Female 2289 0.51 0.50 ED 2289 0.15 0.36 **SPED** 2289 0.09 0.29 GT 0.13 0.34 2289 TYS 2289 15.52 8.49 **Black Students** 2289 0.13 0.33 **Hispanic Students** 2289 0.32 0.47 **Black Teachers** 2289 0.0013 0.04 Hispanic 2289 0.03 0.17 Teachers District A 2012-2013 Assessment 1191 2216.32 278.78 Score Grade Level 1191 10.59 1.03 Campus Attended 1191 4.39 1.81 Female 1191 0.50 0.50 ED 1191 0.08 0.28 **SPED** 1191 0.09 0.28 GT 1191 0.13 0.34

TYS Black Students Hispanic Students Black Teachers Hispanic Teachers		1191 2223 2223 2223 2223	14.61 0.14 0.31 0.06 0.06	7.47 0.35 0.46 0.23 0.23
District B	2010-2011	0==0	2225	400.40
Assessment Score		3773	2305.62	180.46
Grade Level		3773	10.42	0.58
Campus Attended		3773	4.48	2.60
Female		3773	0.50	0.50
ED		3773	0.20	0.40
SPED		3773	0.06	0.24
GT		3773	0.12	0.32
TYS		3773	13.82	9.55
Black Students		3773	0.08	0.27
Hispanic Students		3773	0.20	0.40
Black Teachers		3773	0.04	0.21
Hispanic		3773	0.02	0.15
Teachers				
District B	2011-2012			
Assessment		3992	2299.42	184.03
Score Grade Level		3992	10.47	0.50
Campus Attended		3992	2.82	0.50 1.46
Female		3992	1.50	0.50
ED		3992	1.21	0.30
SPED		3992	1.06	0.41
GT		3992	1.10	0.24
TYS		3992	15.20	9.32
Black Students		3992	0.09	0.29
Hispanic Students		3992	0.21	0.41
Black Teachers		3992	0.02	0.13
Hispanic		3992	0.00	0.03
Teachers				
District B	2012-2013			
Assessment	2012 2010	1945	2333.16	173.615
Score			_555.15	0.010
Grade Level		1945	11.00	0.05
Campus Attended		1945	2.88	1.47
Female		1945	0.49	0.50
ED		1945	0.21	0.41
				Continues

Table 2 (Continues) **SPED** 1945 0.07 0.25 GT 1945 0.09 0.29 **TYS** 1945 15.54 8.21 Hispanic Students 1945 0.23 0.42 **Black Teachers** 1945 0.03 0.17 Hispanic 1945 --**Teachers** District C 2010-2011 Assessment 8220 1778.93 736.66 Score Grade Level 8220 1.25 9.58 Campus Attended 8220 14.48 5.55 8220 0.50 Female 0.49 ED 8220 0.09 0.33 **SPED** 8220 0.00 0.03 GT 8220 0.05 0.21 **TYS** 8220 12.09 8.62 **Black Students** 8220 0.10 0.30 Hispanic Students 0.22 8220 0.41 **Black Teachers** 8220 0.00 0.03 Hispanic 8220 0.03 0.16 Teachers 2011-2012 District C 2117.22 Assessment 8945 323.91 Score Grade Level 8945 9.61 1.25 Campus Attended 14.44 5.51 8945 Female 8945 0.50 0.50 ED 8945 0.12 0.37 **SPED** 8945 0.02 0.12 GT 8945 80.0 0.27 TYS 8945 12.77 8.67 **Black Students** 8945 0.24 0.43 0.24 **Hispanic Students** 8945 0.43 **Black Teachers** 8945 0.00 0.03

8945

0.16

Continues

0.03

Hispanic

Teachers

Table 2 (Continues)

District C	2012-2013			
Assessment Score		4888	2054.60	353.49
Grade Level		4888	9.71	1.49
Campus Attended		4888	13.94	5.42
Female		4888	0.50	0.50
ED		4888	0.15	0.41
SPED		4888	0.02	0.16C
GT		4888	0.08	0.27
TYS		4888	12.85	9.18
Black Students		4888	0.12	0.32
Hispanic Students		4888	0.26	0.44
Black Teachers		4888	0.00	0.02
Hispanic		4888	0.03	0.16
Teachers				

Note: Created in SPSS. ED = economically disadvantaged. SPED = special education. GT = gifted and talented. TYS = teachers' years of service. *N* represents the number of students and teachers that had all required variables.

Math Descriptive Statistics, District A

The average assessment score of 2044 for the 2010-2011 school year was below the passing score of 2100; however, for the 2011-2012 and 2012-2013 school years, the average assessment scores were above the passing score of 2100. The strongest assessment score was in the 2011-2012 school year with a score of 2243.83. In the 2010-2011 school year, the *SD* was large; the assessment scores were relatively diverse compared to the mean (large range of assessment scores), which could be caused by a number of reasons. The sample size decreased in the 2012-2013 school year because the state of Texas was fading out the TAKS™ test, and most eighth grade students did not take the assessment. In each school, the average years of teaching experience ranged from 14.61 to 15.72.

Math Descriptive Statistics, District B

The average assessment scores for each of the three years were passing (above 2100). The scores stayed well above 2200. The strongest assessment score was in the 2012-2013 school year with a score of 2243.83. The sample size decreased in 2012-2013 because the state of Texas was fading out the TAKS™ test, and most eighth grade students did not take the assessment. In each school the average years of teaching experience ranged from 13.82 to 15.74.

Math Descriptive Statistics, District C

The average assessment score of 1778 was over 300 points below the passing score of 2100 in the 2010-2011 school year and right below passing in the 2012-2013 school year at 2054. However, during 2011-2012 average assessment score had a mean of 2117. In 2010-2011 school year, the *SD* was very large at 736.66; the assessment scores were relatively diverse compared to the mean (large range of assessment scores), which could be caused by a number of reasons. The sample size decreased in the 2012-2013 school year because the state of Texas was fading out the TAKS[™] test, and most eighth grade students did not take the assessment. The average years of teaching experience was a little over 12 years during the three school years.

District A ELA/Reading Assessment

ELA/Reading Assessment for 2010-2011

Table 3

In District A, the Pearson's r correlation with the strongest relationship for ELA/reading assessment was grade level, r = 0.92, p < .001 (Table 3). The effect size of grade level $r^2 = .85$ explained 85% of the variance. The data analysis illustrated a small correlation for campus, r = -.21, p < .001, $r^2 = .04$. All other correlations were diminutive, including those between the ethnicity of teachers and students and the assessment.

Pearson's r (r) for ELA/Reading Assessment, District A, 2010-2011

	, ,
Dependent	r
Variable	
Assessment Score	1
Grade Level	.92
Campus Attended	.01
Female	.14
ED	14
SPED	15
GT	.18
TYS	12
Black Students	02
Hispanic Students	21
Black Teachers	
Hispanic Teachers	07

Note: Correlation was significant at p < .001 level (1-tailed). ED = economically disadvantaged. SPED = special education. GT = gifted and talented. TYS = teachers' years of service. N represents the number of students and teachers that had all required variables.

During 2010-2011, Model 1 variables for ELA/reading scores included grade level, campus attended, gender, economically disadvantaged (ED), special education (SPED), gifted and talented (GT), and teachers' years of service (TYS), which accounted for 85.9% of the variances, R^2 = .859. These variables were significant predictors of ELA/reading scores, F(7, 1160) = 1009.72, p < .001. The inclusion of

teacher and student ethnicity slightly increased the variances explained in the ELA/reading scores, $\Delta R^2 = .005$, $\Delta F(3, 1157) = 15.26$, p < .001. Model 2 with all predictors was also statistically significant in predicting the ELA/reading scores with 86.4% of the variances being explained, $R^2 = .864$, F(10, 1157) = 737.44, p < .001.

In Model 2, grade level, campus students attended, gender, SPED, and GT had positive coefficients for ELA/reading scores in 2010-2011. The coefficients for predictor variables were interpreted in terms of a single unit change. For example, ED students (as per dummy codes) with coefficient scores of 43.82 on average had test results 43.82 points higher than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included TYS (-1.14), students taught by Hispanic teachers (-22.20), Black students (-27.21), and Hispanic students (-75.89). The negative or positive coefficients illustrated the point difference each variable will change based on the average assessment score (Table 4).

Regression Coefficient for ELA/Reading Assessment. District A. 2010-2011

Table 4

Regression Coefficient for ELA/Reading Assessment, District A, 2010-2011					
Variable	В	SE	В	Τ	Sig.
Assessment Score	2907.5	69.83		-41.64	0.00
	8				
Grade Level	476.59	5.98	0.90	79.70	0.00
Campus Attended	1.79	2.79	0.01	0.64	0.52
Female	36.46	9.93	0.04	3.67	0.00
ED	-13.62	11.99	-0.01	-1.14	0.26
SPED	43.82	17.53	0.03	2.50	0.01
GT	87.66	15.98	0.06	5.49	0.00
TYS	-1.14	0.97	-0.02	-1.18	0.24
Black Students	-27.21	15.23	-0.02	-1.79	0.07
Hispanic Students	-75.89	11.81	-0.08	-6.43	0.00
Black Teachers					
Hispanic Teachers	-22.20	14.83	-0.02	-1.50	0.14

ELA/reading assessment scores were compared for all students who were not ED (non-ED). The students were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 1). Black students taught by Black teachers scored the highest of the non-ED Black students. Black students taught by White teachers performed higher than Black students who were taught by Hispanic teachers. Hispanic students taught by Hispanic teachers achieved the highest scores of the non-ED Hispanic students.

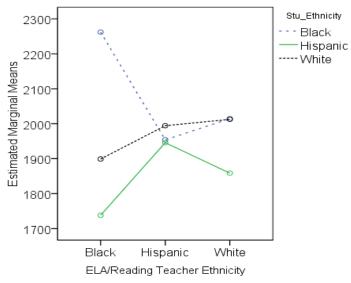


Figure 1. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011.

Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students taught by White teachers scored marginally higher than White students taught by Hispanic teachers. White students taught by Black teachers scored the lowest of the White students.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 2). Black students who were taught by Hispanic teachers achieved the highest scores of Black students. Black students taught by White teachers performed higher than Black students taught by

Black teachers. Hispanic students taught by Hispanic teachers score slightly higher than Hispanic students taught by White teachers. Hispanic students taught by Black teachers scored the lowest. White students taught by Black teachers scored slightly higher than White students taught by White teachers. White students taught by Hispanic teachers scored the lowest compared to other ED White students.

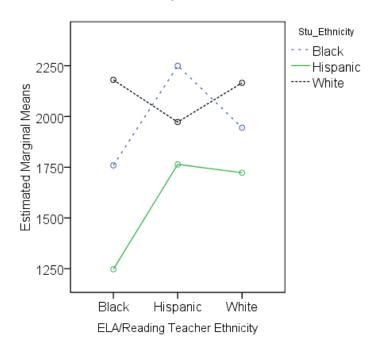


Figure 2. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for all students who were not in the SPED program (non-SPED students). The students were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 3). Black students who were taught by Black teachers achieved marginally higher scores compared with Black students who were taught by Hispanic teachers. Black students taught by White teachers scored the lowest of the Black non-SPED students. Hispanic students taught by White teachers performed the highest of the Hispanic students. Hispanic students who were taught by Hispanic teachers outperformed Hispanic students taught by Black teachers. White

students taught by Black teachers scored the highest of the White students. White students taught by White teachers achieved higher scores than White students taught by Hispanic teachers.

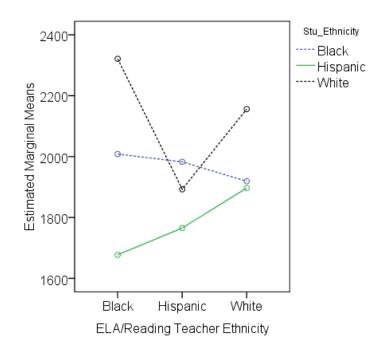


Figure 3. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 4). Black students taught by Black teachers achieved about the same scores as Black students who were taught by Hispanic teachers. Black students who were taught by White teachers achieved the lowest scores of the Black students. Both Hispanic students and White students taught by Hispanic teachers scored higher than the other Hispanic students and White students. Both Hispanic students and White students achieved higher scores when taught by White teachers than the Hispanic students and White students who were taught by Black teachers.

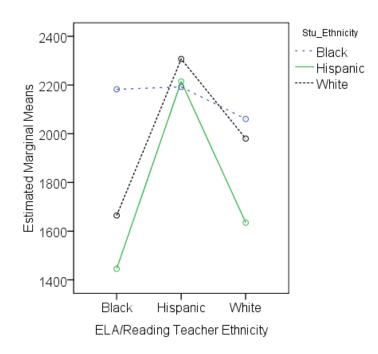


Figure 4. ELA/reading assessment scores among SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for all students who were not in the GT program (non-GT students). The students were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 5). Black students taught by Black teachers scored the highest of the Black non-GT students. Black students taught by Hispanic teachers achieved higher scores than Black student taught by White teachers. Hispanic students taught by Hispanic teachers scored higher than the other Hispanic students. Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students taught by White teachers scored the highest of White students, while White students taught by Black teachers scored higher than White students taught by Hispanic teachers.

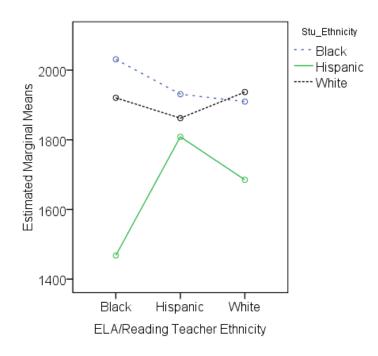


Figure 5. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 6). Black students taught by Hispanic teachers scored the highest of the Black students. Black students taught by White teachers scored slightly higher than Black students taught by Black teachers. The Hispanic students who achieved the highest scores were taught by the Black teachers. Hispanic students taught by White teachers performed higher than Hispanic students taught by Hispanic teachers. White students who were taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers scored higher than the White students taught by Black teachers.

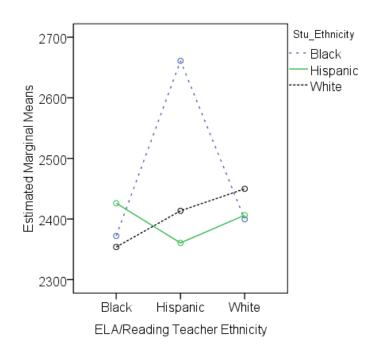


Figure 6. ELA/reading assessment scores for GT students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/Reading Assessment for 2011-2012

The 2011-2012 data confirmed that the predictor variables with the strongest Pearson's r correlation with ELA/reading assessment were GT students, r = .34, p < .001, and SPED, r = -.29, p < .001 (Table 5). The effect size for GT students was r = .12, and r = .08 for SPED, accounting for 1.44% and .64% of the variance, respectively. All other predictor variables revealed a correlation less than r = -.29. There were no highly strong correlations between the ethnicity of teachers and students and the assessment.

Table 5

Pearson's r (r) for ELA/Reading Assessment, District A, 2011-2012

7 7
r
1
07
.06
.13

ED	16
SPED	29
GT	.34
TYS	01
Black Students	12
Hispanic Students	20
Black Teachers	10
Hispanic Teachers	03

Note: Correlation was significant at p < .001 level (1-tailed).

ELA/reading variables included grade, campus, gender, ED, SPED, GT, and TYS. These variables accounted for 20.6% of the variance in Model 1. These variables were significant predictors for ELA/reading scores in 2011-2012, F(7, 1252) = 46.46, p < .001. Inclusion of teacher and student ethnicity slightly increased the variances explained in ELA/reading scores, $\Delta R^2 = .04$, $\Delta F(4, 1248) = 16.12$, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading scores with 24.3% of the variances being explained, $R^2 = .243$, F(11, 1248) = 36.85, p < .001.

In Model 2, positive coefficient predictors were grade level, campus attended, gender, GT, TYS, and Hispanic teacher (Table 6). The coefficients for the predictor variables were interpreted in terms of a single unit. For example, SPED students (as per dummy codes) with coefficient scores of 117.61 on average had a test result 117.61 points higher than non-SPED students, holding all other variables constant (controlling for the other variables in the model). However, there was a negative relationship for ED students (-6.04), SPED students (-2.98), Black students (-45.77), and Hispanic students (-53.67) as well as Black teachers (-7.78).

Regression Coefficient for ELA/Reading Assessment. District A. 2011-2012

Table 6

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Variables	В	SE	В	t	Sig.
Assessment Score	1801.38	257.73		6.99	0.00
Grade Level	43.31	23.35	0.05	1.86	0.06
Campus Attended	6.09	2.06	0.08	2.95	0.00
Female	27.06	6.28	0.11	4.31	0.00
ED	-6.04	7.44	-0.02	-0.81	0.42
SPED	-102.98	11.59	-0.23	-8.88	0.00
GT	117.61	10.21	0.29	11.51	0.00
TYS	.44	.71	0.02	0.62	0.54
Black Students	-45.77	10.19	-0.12	-4.49	0.00
Hispanic Students	-53.67	7.55	-0.2	-7.11	0.00
Black Teachers	-7.78	10.95	-0.02	-0.71	0.48
Hispanic Teachers	34.41	12.93	0.08	2.66	0.01

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 7). Black students taught by White teachers scored the highest of the Black students. Black students taught by Hispanic teachers scored higher than Black students who were taught by Black teachers. Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students taught by Hispanic teachers achieved the highest scores of the White students. White students taught by Black teachers performed slightly higher than White students taught by White teachers.

ELA/reading assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers for 2011-2012 (Fig. 8). Black students taught by White teachers outperformed all other Black students. Black students taught by Hispanic teachers achieved higher scores than Black students taught by Black teachers. Hispanic students taught by Hispanic teachers attained the highest scores of the Hispanic students. Hispanic students taught by White teachers scored higher than

Hispanic students taught by Black teachers. White students taught by Hispanic teachers achieved minimally higher scores than White students taught by White teachers. White students taught by Black teachers scored the lowest of the White students.

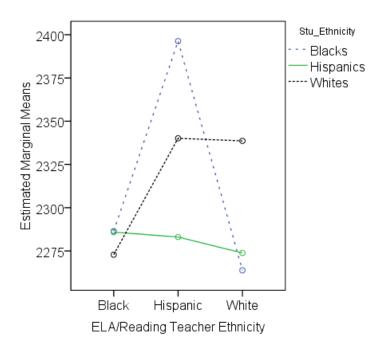


Figure 7. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2011-2012.

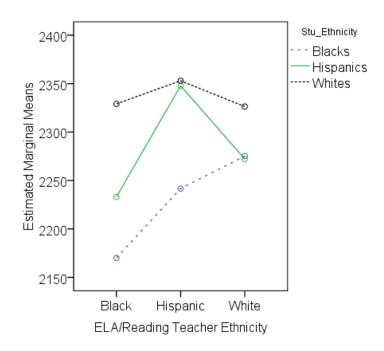


Figure 8. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 9). Black students taught by Hispanic teachers scored the highest of the Black students. Black students taught by White teachers achieved higher scores than Black students taught by Black teachers. Hispanic students who scored the highest were taught by White teachers. Hispanic students taught by Hispanic teachers performed higher than Hispanic students taught by Black teachers. White students taught by Black teachers scored the highest of the White students. White students taught by White teachers achieved higher scores than the White students who were taught by Hispanic teachers.

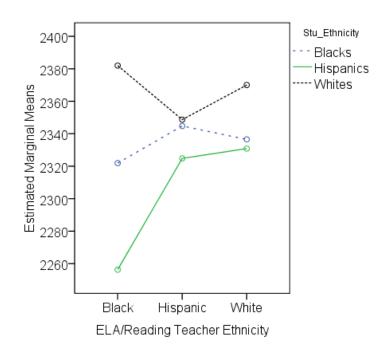


Figure 9. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 10). Black students taught by White teachers scored higher than Black students taught by Black teachers. No Black students were taught by Hispanic teachers. Hispanic students taught by Black teachers achieved the highest scores of the Hispanic students. Hispanic students taught by Hispanic teachers performed higher than Hispanic students taught by White teachers. White students who were taught by White teachers scored higher than White students who were taught by Black. Hispanic teachers did not teach any White students.

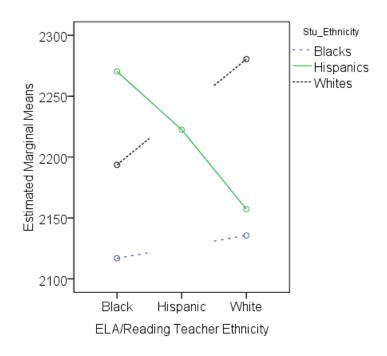


Figure 10. ELA/reading assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 11). Black students, Hispanic students, and White students who were taught by Hispanic teachers performed the highest. Black students taught by White teachers scored slightly higher than Black students taught by Black teachers. Hispanic students taught by Black teachers achieved slightly higher scores than Hispanic students taught by White teachers. White students taught by White teachers performed better than White students taught by Black teachers.

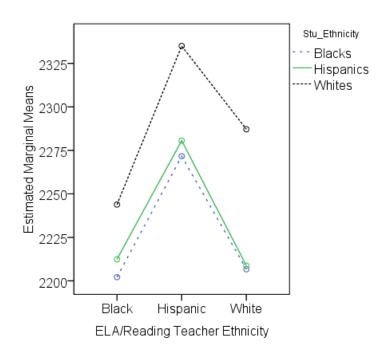


Figure 11. ELA/reading assessment scores for non-GT students taught Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for GT students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 12). Black students taught by Hispanic teachers scored the highest of the Black students. Black students taught by White teachers achieved minimally higher scores than Black students who were taught by Black teachers. Hispanic students taught by Black teachers scored higher than all other Hispanic GT students. Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students taught by Black teachers achieved the highest scores of the White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

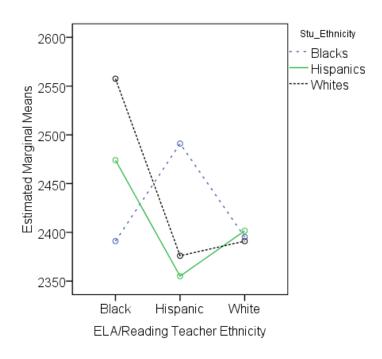


Figure 12. ELA/reading assessment scores for GT students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/Reading Assessment for 2012-2013

The 2012-2013 Pearson's r correlation with the strongest relationship with ELA/reading assessment included grade level, r = .740, p < .001 and ED students r = -.52, p < .001. Grade level had an effect size of r^2 = .55, and ED had an effect size of r^2 = .27. These variables accounted for 55% and 27% of the variance within assessment scores, respectively. All other variables fell below Hispanic teachers, which had a correlation of r = -.312 (Table 7). There were no strong correlations between the ethnicity of teachers and students and the assessment.

Table 7

Pearson's r (r) for ELA/Reading Assessment, District A, 2012-2013			
Dependent	r		
Variable			
Assessment Score	1		
Grade Level	74		
Campus Attended	04 (Continues)		

Table 7
Continues

Continues	
Female	.17
ED	52
SPED	17
GT	.25
TYS	11
Black Students	09
Hispanic Students	15
Black Teachers	06
Hispanic Teachers	31

Note: Correlation was significant at p < .001 level (1-tailed).

There was a statistically significant effect for grade level, campus attended, gender, ED, SPED, GT, and TYS, which accounted for 59.4% of the variances, R^2 = .594. These variables were significant predictors of ELA/reading scores, F(7, 1008) = 210.54, p < .001. The inclusion of teacher and student ethnicity exhibited a slight increase in variances explained in ELA/reading scores, ΔR^2 = .010, ΔF (4, 1004) = 6.02, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading scores with 60.3% of the variances being explained for the model, R^2 = .63, F(11, 1004) = 138.84, p < .001.

Model 2 positive coefficients were grade level, campus attended, SPED, GT, gender, and TYS (Table 8). The coefficients for predictor variables were interpreted in terms of a single unit. For example, SPED students (as per dummy codes) with coefficient scores of 99.54 resulted in an average test score 99.54 points higher than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included ED (-17.79), Black (-44.41) and Hispanic (-38.96) students, as well as students taught by Black teachers (-59.69) or Hispanic teachers (-105.34). The negative or positive coefficients illustrated the point difference each variable changed based on the average assessment score.

ELA/reading assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 13). Black students taught by White teachers scored higher than Black students taught by Black teachers.

Regression Coefficient for ELA/Reading Assessment, District A, 2012-2013

Table 8

Variables	В	SE	В	t	Sig.
Assessment Score	102.17	101.70		1.01	0.31
Grade Level	191.76	8.11	0.72	23.63	0.00
Campus Attended	9.01	3.41	0.07	2.65	0.01
Female	56.20	11.71	0.10	5.03	0.00
ED	-17.79	25.79	-0.02	-0.69	0.49
SPED	99.54	21.91	0.10	4.54	0.00
GT	113.39	17.40	0.14	6.52	0.00
TYS	2.96	1.26	0.06	2.35	0.02
Black Students	-42.83	16.90	-0.05	-2.54	0.02
Hispanic Students	-38.96	12.66	-0.07	-3.10	0.00
Black Teachers	-59.69	23.63	-0.05	-2.53	0.00
Hispanic Teachers	-105.34	46.24	-0.05	-2.58	0.00
Thispanic reachers	-105.54	40.24	-0.03	-2.50	0.00

No Hispanic teachers taught non-ED Black students in this study in District A for 2012-2013. Hispanic students taught by White teachers achieved the highest scores of the Hispanic students. Hispanic students taught by Black teachers scored higher than Hispanic students taught by Hispanic teachers. White students taught by Black teachers performed the highest of the White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

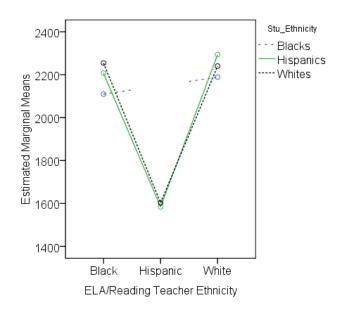


Figure 13. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 14). Black students taught by White teachers outperformed all other Black ED students. Black students taught by Black teachers scored higher than Black students taught by Hispanic teachers. Hispanic students taught by White teachers achieved the highest scores of the Hispanic students. Hispanic students taught by Black teachers scored higher than Hispanic students taught by Hispanic teachers. White students taught by Black teachers attained the highest scores of the White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

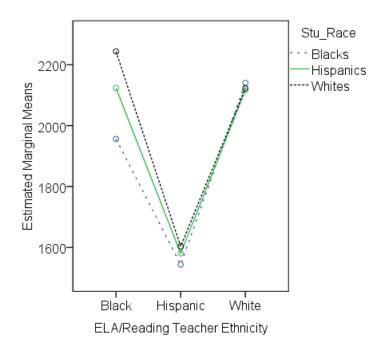


Figure 14. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 15). Black students taught by White teachers scored higher than the other non-SPED Black students. Black students taught by Black teachers performed higher than Black students who were taught by Hispanic teachers. White students taught by Black teachers scored the highest of the White non-SPED students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

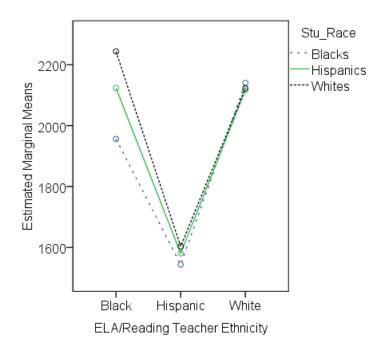


Figure 15. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for SPED students taught by Black teachers or White teachers in 2012-2013 (Fig. 16). There were no Hispanic teachers for this group of SPED students. Black students taught by Black teachers scored higher than Black students taught by White teachers. Hispanic students taught by White teachers performed higher than Hispanic students taught by Black teachers. White students taught by White teachers scored higher than White students taught by Black teachers.

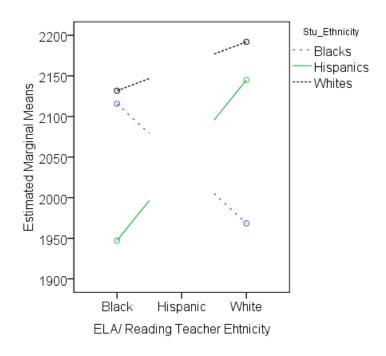


Figure 16. ELA/reading assessment scores for SPED students taught by Black teachers or White teachers in 2012-2013.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 17). Black students taught by Black teachers scored the highest of all non-GT Black students. Black students taught by White teachers achieved higher scores than Black students taught by Hispanic teachers. Hispanic students taught by White teachers outperformed the other non-GT Hispanic students. Hispanic students taught by Black teachers scored higher than Hispanic students taught by Hispanic teachers. White students taught by Black teachers scored the highest of the White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

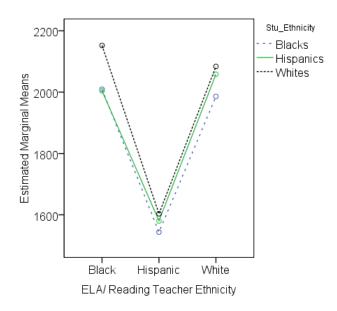


Figure 17. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for GT students taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 18). All Black GT students were taught by White teachers. All Hispanic and White students taught by White teachers scored higher than the Hispanic and White students taught by Hispanic teachers.

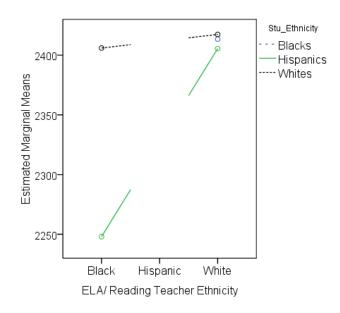


Figure 18. ELA/reading assessment scores for GT students taught by Black, Hispanic, or White teachers in 2012-2013.

District A Math Assessment

A two-model multiple hierarchical regression analysis was conducted for math scores for the 2010-2011, 2011-2012, and 2012-2013 school years. Model 1 included the independent variables of grades, campus, gender, ED, SPED, GT, and TYS. Model 2 included the ethnicity of teachers and students in addition to the variables in Model 1. Math Assessment for 2010-2011

The Pearson's r data indicated that grade level had the strongest correlation, r = .84, p < .001 with assessment, and the next strongest correlation was Black teachers, r = -.44, p < .001. Grade level had an effect size of r^2 = .71, and Black teachers had an effect size of r^2 = .19. These variables accounted for 71% and 19% of the variance within the assessment scores, respectively. All other variables had a correlation less than GT, r = .26, p < .001, r^2 = .07. The correlation between the assessment scores and the ethnicity of students or teachers was diminutive (Table 9).

Pearson's r (r) for Math Assassment District A 2010-2011

Table 9

Pearson's r (r) for Math Assessment, District A, 2010-2011			
Dependent	r		
Variable			
Assessment Score	1		
Grade Level	84		
Campus Attended	14		
Female	.22		
ED	09		
SPED	14		
GT	.26		
TYS	.27		
Black Students	11		
Hispanic Students	12		
Black Teachers	.44		
Hispanic Teachers	.07		

Note: Correlation was significant at p < .001 level (1-tailed).

Model 1 for the math assessment in 2010-2011 illustrated that grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 73.2% of the variances, R^2 = .732. These variables were significant predictors of math scores, F(7, 2215) = 863.93, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in math scores, ΔR^2 = .021, $\Delta F(4, 2211)$ = 48.16, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 75.3% of the variances being explained, R^2 = .753, F(11, 2211) = 614.10, p < .0001.

In Model 2, there were positive coefficients for grade level, ED, GT, and TYS. The coefficients for predictor variables were interpreted in terms of a single unit. For example, SPED (as per dummy codes) with coefficient scores of 219.73 on average had a test result 219.73 points higher than non-SPED students, holding all other variables constant (controlling for the other variables in the model). There were negative coefficients for campus (-9.44), SPED (-43.32), female (-18.51), Black students (-116.30) and Hispanic students (-84.26), as well as Black teachers (-305.82) and Hispanic teachers (-120.95). The negative or positive coefficients illustrated the point difference each variable changed based on the average assessment score (Table 10).

Regression Coefficient for Math, District A, 2010-2011

Table 10

Variables	В	SE	В	t	Sig.
Assessment Score	-2079.12	73.51		-28.29	0.00
Grade Level	413.52	6.75	0.76	61.27	0.00
Campus Attended	-9.44	3.01	-0.04	-3.14	0.00
Female	-18.51	11.10	-0.02	-1.67	0.10
					Continues

Table 10 Continues						
TYS	1.27	0.71	0.02	1.77	0.08	
Black Students	-116.30	16.93	-0.08	-6.87	0.00	
Hispanic Students	-84.26	13.22	-0.08	-6.37	0.00	
Black Teachers	-305.82	28.65	-0.13	-10.68	0.00	
Hispanic Teachers	-120.95	27.32	-0.05	-4.43	0.00	

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 19). The Black students who scored the highest were those taught by Hispanic teachers. Black students taught by White teachers achieved slightly lower scores. Black students who were taught by Black teachers scored the lowest of the Black students. Hispanic students who were taught by Black teachers and Hispanic students who were taught by Hispanic teachers achieved approximately the same scores. White students taught by Hispanic teachers scored slightly higher than White students who were taught by White teachers. White students who were taught by Black teachers achieved the lowest scores of the White students.

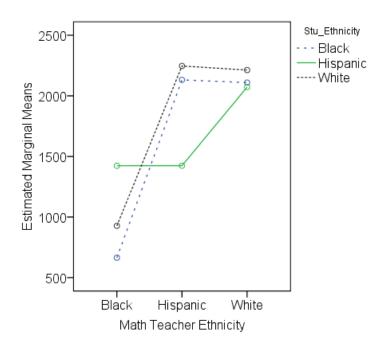


Figure 19. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 20). Black students who were taught by Hispanic teachers had the highest scores of the Black students. Black students taught by White teachers scored higher than Black students taught by Black teachers. Of the Hispanic students, those who were taught by White teachers achieved the highest scores. Hispanic student taught by Hispanic teachers performed better than Hispanic teachers taught by Black teachers. White students taught by Hispanic teachers outperformed the other White students. White students taught by White teachers scored higher than White students taught by Black teachers.

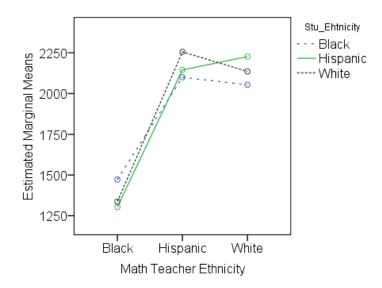


Figure 20. Math assessment scores for ED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 21). Black students taught by White teachers scored higher than Black students taught by Hispanic teachers. Black students taught by Black teachers attained the lowest scores of the Black non-SPED students. Hispanic students taught by White teachers outperformed the other Hispanic students. Hispanic students taught by Hispanic teachers scored higher than Hispanic students taught by Black teachers. White students taught by White teachers and White students taught by Hispanic teachers achieved approximately the same scores. White students taught by Black teachers scored the lowest of the White students.

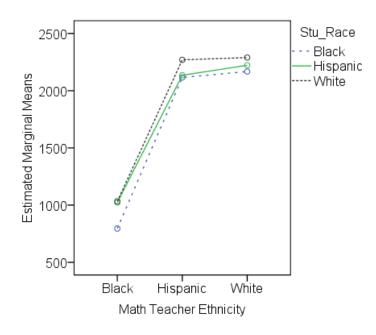


Figure 21. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 22). Black students taught by White teachers outperformed Black students taught by Black teachers. No Hispanic teachers taught Black SPED students in District A for 2010-2011. Hispanic students taught by White teachers scored the highest of the Hispanic students. Hispanic students taught by Black teachers scored higher than Hispanic students taught by Hispanic teachers. White students who were taught by Hispanic teachers scored the highest of the White students. White students taught by White teachers achieved higher scores than White students taught by Black teachers.

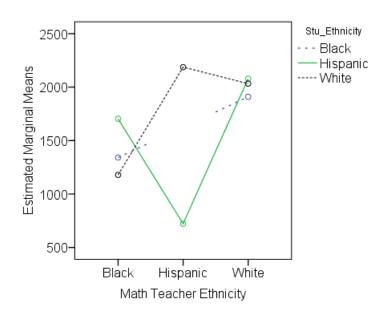


Figure 22. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 23). Black students taught by Hispanic teachers scored the highest of the Black students. Black students taught by White teachers scored higher than Black students taught by Black teachers. Hispanic students taught by White teachers scored higher than Hispanic students taught by Hispanic teachers or Black teachers. Hispanic students taught by Black teachers attained the lowest scores for Hispanic students. White students taught by Hispanic teachers performed better than White students taught by White teachers. White students taught by Black teachers scored the lowest of the White students. All of the students who were taught by Black teachers performed far below passing expectations of 2100.

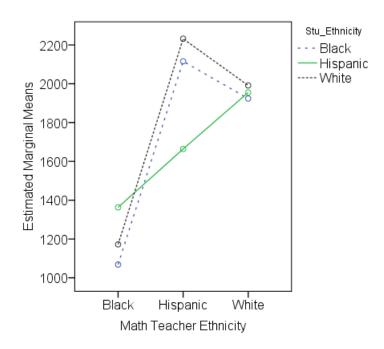


Figure 23. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers for 2010-2011.

Math assessment scores were compared for GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 24). There were no Hispanic GT math students in District A in 2010-2011. White students who were taught by White teachers performed best. White students taught by Hispanic teachers scored higher than White students taught by Black teachers. All Black students were taught by White teachers. Therefore, no comparison could be made between the assessment scores and the ethnicity of teachers and students in this group of GT students.

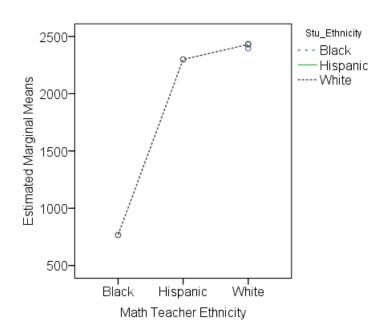


Figure 24. Math assessment scores for GT students taught by Black, Hispanic, or White teachers in 2010-2011.

Math Assessment for 2011-2012

The strongest Pearson's r correlations for math were GT students, r = .39, p < .001 and grade level, r = .30, p < .001. GT had an effect size of r^2 = .15, and grade level had an effect size of r^2 = .09. These variables accounted for 15% and 9% of the variance within the assessment scores, respectively. All other variables illustrated a correlation less than non-ED students, r = -.28, p < .001, r^2 = .08. There were very small correlations between the assessment scores and the ethnicity of teachers and students (Table 11).

Table 11

Pearson's r (r) for Math Assessment, District A, 2011-2012

- Carcon C / (1) 101 matrix location	11, 2101110111, 2011 2012
Dependent	r
Variable	
Assessment Score	1
Grade Level	30
Campus Attended	.02
Female	01 (Continued)

Tables 11 Continues		
Continues		
SPED	28	
GT	.34	
TYS	.08	
Black Students	13	
Hispanic Students	16	
Black Teachers	05	
Hispanic Teachers	.04	

Note: Correlation was significant at p < .001 level (1-tailed).

For math scores, Model 1 variables of grade, campus, gender, ED, SPED, GT, and TYS accounted for 31.1% of the variance, R^2 = .313. Model 2 included the ethnicity of teachers and students and was slightly increased to 33.9%. These variables were significant predictors of math scores, F(7, 2281) = 148.40, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in the math scores, $\Delta R^2 = .026$, $\Delta F(4, 2277) = 22.35$, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 33.9% of the variances being explained, $R^2 = .339$, F(11, 2277) = 106.10, p < .001.

In Model 2, there were positive coefficients for grade level, campus students attended, GT students, and TYS (Table 12). The coefficients for predictor variables were interpreted in terms of a single unit. For example, SPED students (as per dummy codes) with coefficient scores of 170.81 on average had a test result 170.81 points higher than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Negative coefficients included SPED (-144.74), gender (-14.44), Black students (-65.49), and Hispanic students (-56.00), as well as Black teachers (-103.52) and Hispanic teachers (-.19). The negative or positive coefficients

showed the point difference each variable changed based on the average assessment score (Table 12).

Regression Coefficient for Math, District A, 2011-2012

Table 12

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Variables	В	SE	В	t	Sig.
Assessment Score	1094.45	70.06		15.62	0.00
Grade Level	109.88	6.67	0.32	16.48	0.00
Campus Attended	2.37	1.78	0.02	1.33	0.18
Female	-14.44	5.96	-0.04	-2.42	0.02
ED	-3.35	9.62	-0.01	-0.35	0.73
SPED	-144.74	10.63	-0.24	-13.62	0.00
GT	170.81	8.84	0.34	19.32	0.00
TYS	0.95	0.36	0.05	2.64	0.01
Black Students	-65.49	9.34	-0.13	-7.01	0.00
Hispanic Students	-56.00	6.94	-0.15	-8.07	0.00
Black Teachers	-103.52	82.33	-0.02	-1.26	0.21
Hispanic Teachers	-1.19	17.86	0.00	-0.07	0.95

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 25). No Black or Hispanic students were taught by Black teachers. Black students taught by Hispanic teachers performed better than Black students taught by White teachers. Hispanic students taught by Hispanic teachers scored higher than Hispanic students taught by White teachers. White students taught by Hispanic teachers also scored higher than White students instructed by White teachers.

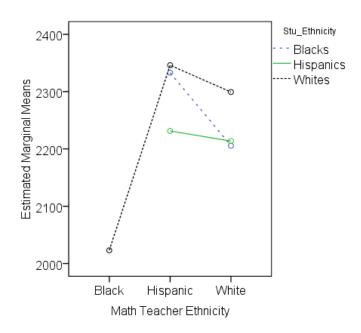


Figure 25. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 26). No ED Hispanic students or White students were taught by Black teachers in District A for 2011-2012. Black students taught by White teachers scored the highest of the Black students. Black students taught by Hispanic teachers achieved higher scores than Black students taught by Black teachers. Hispanic students taught by Hispanic teachers scored higher than Hispanic students instructed by White teachers. White students taught by White teachers attained higher scores than White students taught by Hispanic teachers.

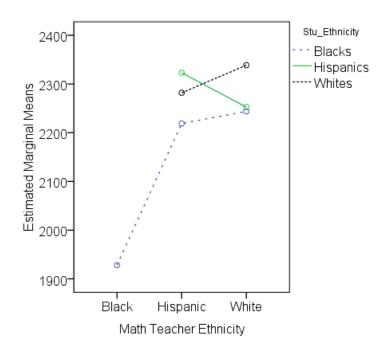


Figure 26. Math assessment scores for ED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for non-SPED students who were taught by Hispanic teachers or White teachers in 2011-2012 (Fig. 27). There were no Black teachers for non-SPED students. All Black, Hispanic, and White students taught by White teachers scored higher than the Black, Hispanic, and White students taught by Hispanic teachers.

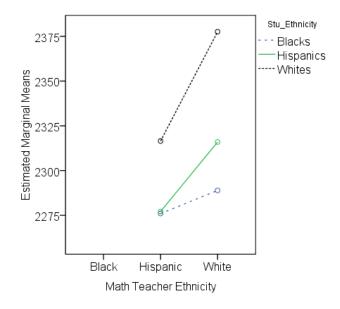


Figure 27. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 28). No Hispanic teachers taught Black SPED students in District A for 2011-2012. Black students taught by White teachers achieved higher scores than Black students instructed by Black teachers. All Hispanic students were taught by White teachers. White students taught by Hispanic teachers scored the highest of the White students. White students taught by White teachers scored higher than White students taught by Black teachers.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers (Fig. 29). All non-GT Black students, Hispanic students, and White students achieved higher scores when taught by Hispanic teachers than the Black, Hispanic, and White students who were taught by Black teachers or White teachers. Black students taught by White teachers scored higher than Black students taught by Black teachers. No non-GT Hispanic students in this study were taught by Black teachers in District A for 2011-2012. White students taught by White teachers scored higher than White students taught by Black teachers.

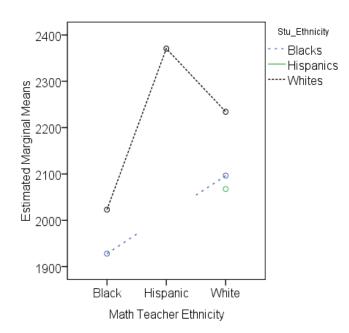


Figure 28. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

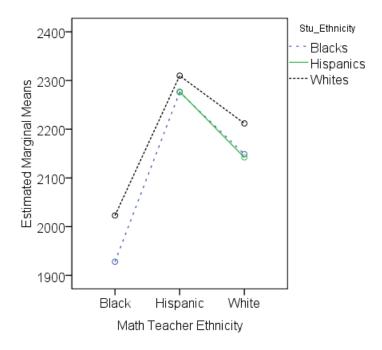


Figure 29. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for GT students who were taught by Hispanic teachers or White teachers in 2011-2012 (Fig. 30). There were no Black teachers of GT students in this group. All Black GT students and all Hispanic GT

students were taught by White teachers. White students taught by White teachers scored higher than the White students who were taught by Hispanic teachers.

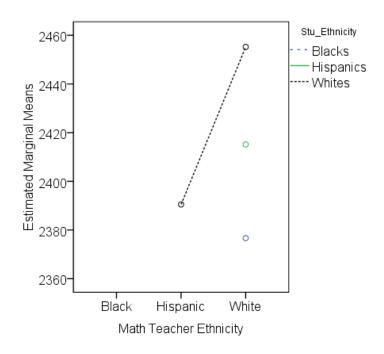


Figure 30. Math assessment scores for GT students taught by Hispanic teachers or White teachers in 2011-2012.

Math Assessment for 2012-2013

The Pearson's r correlations for math indicated that grade level had the strongest correlation, r = .60, p = <.001, with assessments, and the second strongest correlation was ED students, r = -.44, p = <.001 (Table 13). Grade level had an effect size of r^2 = .36, and ED had an effect size of r^2 = .19. These variables accounted for 36% and 19% of the variance explained in the assessment scores, respectively. Students with Black teachers had a correlation of r = -.38, p = <.001, and an effect size of r^2 = .14, accounting for 14% of the variance explained by the dependent variable. Other variables had a correlation of less than GT students r = .31 p = <.001, r^2 = .09. Table 13

Pearson's r (r) for Math Assessment, District A, 2012-2013

Dependent	r
Variable	
Assessment Score	1
Grade Level	.60
Campus Attended	.08
Female	.01
ED	44
SPED	.00
GT	.31
TYS	23
Black Students	13
Hispanic Students	18
Black Teachers	38
Hispanic Teachers	06

Note: Correlation was significant at p < .001 level (1-tailed).

Model 1 variables of grade level, campus attended, gender, ED students, SPED students, GT students, and TYS accounted for 44.2% of the variances, R^2 = .442 (Table 14). These variables were significant predictors of math scores, F(7, 1183) = 133.86, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in math scores, ΔR^2 = .019, $\Delta F(4, 1179)$ = 10.30, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 46.1% of the variances being explained, R^2 = .461, F(11, 1179) = 91.61, p < .001.

In Model 2, there were positive coefficients for grade level, SPED students, GT students, TYS, and Hispanic teachers. The coefficients for predictor variables were interpreted in terms of a single unit. For example, SPED students (as per dummy codes) with coefficient scores of 172.55 on average had test results 172.55 points higher than non-SPED students, holding all other variables constant (controlling for the other variables in the model). There were negative coefficients for campus attended (-1.93), female (-8.78), ED students (-70.59), Black students (-80.98), and Hispanic students (-77.46), as well as students who had Black teachers (-23.57). The negative

or positive coefficients illustrated the point difference that each variable changed based on the average assessment score (Table 14).

Regression Coefficient for Math. District A. 2012-2013

Table 14

В	SE	В	t	Sig.
706.66	100.69		7.02	0.00
142.97	9.20	0.53	15.55	0.00
-1.93	3.41	-0.01	-0.57	0.57
-8.78	12.01	-0.02	-0.73	0.47
-70.59	27.93	-0.07	-2.53	0.01
172.55	22.03	0.18	7.83	0.00
177.02	18.12	0.21	9.77	0.00
0.88	0.87	0.02	1.01	0.31
-80.98	18.13	-0.10	-4.47	0.00
-77.46	13.79	-0.13	-5.62	0.00
-23.57	33.95	-0.02	-0.69	0.49
22.21	26.96	0.02	0.82	0.41
	706.66 142.97 -1.93 -8.78 -70.59 172.55 177.02 0.88 -80.98 -77.46 -23.57	706.66 100.69 142.97 9.20 -1.93 3.41 -8.78 12.01 -70.59 27.93 172.55 22.03 177.02 18.12 0.88 0.87 -80.98 18.13 -77.46 13.79 -23.57 33.95	706.66 100.69 142.97 9.20 0.53 -1.93 3.41 -0.01 -8.78 12.01 -0.02 -70.59 27.93 -0.07 172.55 22.03 0.18 177.02 18.12 0.21 0.88 0.87 0.02 -80.98 18.13 -0.10 -77.46 13.79 -0.13 -23.57 33.95 -0.02	706.66 100.69 7.02 142.97 9.20 0.53 15.55 -1.93 3.41 -0.01 -0.57 -8.78 12.01 -0.02 -0.73 -70.59 27.93 -0.07 -2.53 172.55 22.03 0.18 7.83 177.02 18.12 0.21 9.77 0.88 0.87 0.02 1.01 -80.98 18.13 -0.10 -4.47 -77.46 13.79 -0.13 -5.62 -23.57 33.95 -0.02 -0.69

Math assessment scores were compared for non-ED taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 31). Black students taught by White teachers scored highest of the Black students. Black students taught by Hispanic students scored higher than Black students taught by Black teachers. Hispanic students taught by Hispanic teachers achieved the highest scores of all non-ED Hispanic students. Hispanic students taught by White teachers achieved higher scores than Hispanic students taught by Black teachers. White students taught by White teachers scored the highest of the White non-ED students. White students taught by Hispanic teachers outperformed White students taught by Black teachers.

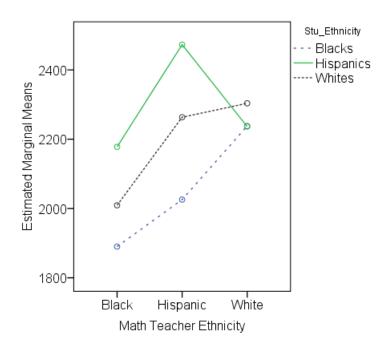


Figure 31. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 32). Black students taught by Hispanic teachers outperformed the other Black ED students. Black students instructed by White teachers achieved higher scores than Black students taught by Black teachers. Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White teachers performed higher than Hispanic students taught by Black teachers. White students who were taught by Black teachers had the highest scores of the White students. White students taught by White teachers achieved higher scores than White students taught by Hispanic teachers.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 33). All non-SPED Black students, Hispanic students, and White students who were taught by White teachers achieved the highest scores compared to the non-SPED students taught by

either Black teachers or White teachers. All non-SPED students taught by Hispanic teachers scored higher than all of the non-SPED students taught by Black teachers.

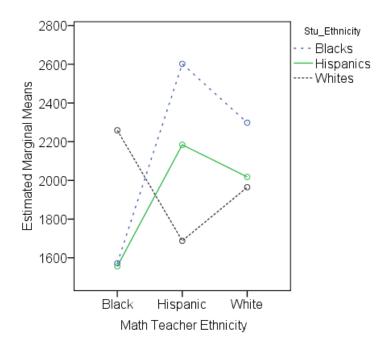


Figure 32. Math assessment scores for ED students taught by Black, Hispanic, or White teachers in 2012-2013.

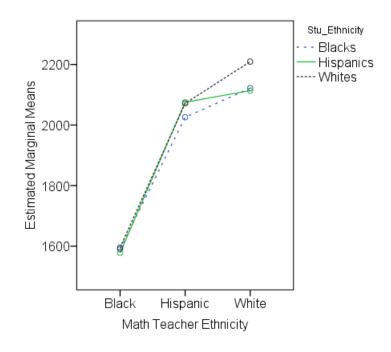


Figure 33. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers (Fig. 34). Black students who were taught by Hispanic teachers scored the highest of the Black students. Black students taught by White teachers scored higher than Black students taught by Hispanic students. Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White teachers scored slightly higher than Hispanic students taught by Black teachers. White students taught by Black teachers achieved higher scores than White students taught by White teachers. No White students were taught by Hispanic teachers.

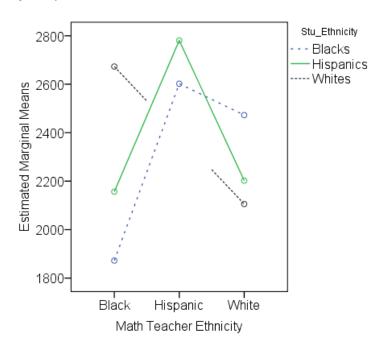


Figure 34. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers (Fig. 35). Black students taught by Hispanic teachers outperformed the other Black students. Black students taught by White teachers scored higher than Black students taught by Black teachers. Hispanic

students taught by Hispanic teachers also scored the highest of the Hispanic students. Hispanic students taught by White teachers performed better than Hispanic students taught by Black teachers. White students taught by Black teachers outperformed the other White students. White students instructed by White teachers scored higher than the White students who were taught by Hispanic teachers.

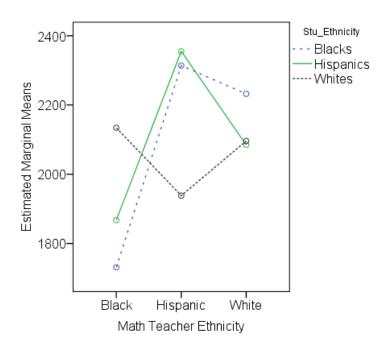


Figure 35. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for GT students who were taught by Hispanic teachers or White teachers in 2012-2013 (Fig. 36). There were no Black teachers for the GT students. All Black GT students were taught by White teachers. Hispanic students and White students performed best with White teachers.

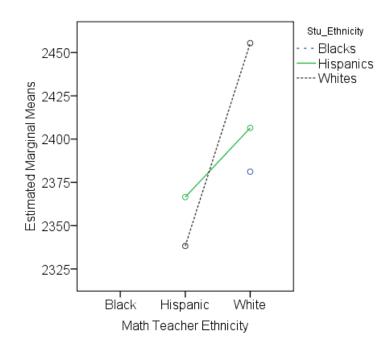


Figure 36. Math assessment scores for GT students taught by Hispanic teachers or White teachers in 2012-2013.

District B ELA/Reading Assessment

ELA/Reading Assessment for 2010-2011

The two-model hierarchical multiple regression analysis conducted for District B demonstrated that in 2010-2011, the strongest Pearson's r correlation with ELA/reading variables was GT students, r = .30, p = <.001 (Table 15). GT had an effect size of r = .09, which represented 9% of the variance explained in the assessment scores. All other correlations were equal to or less than female, r = .18, p < .001, r = .03. The correlations between the assessment scores and the student and teacher ethnicity were diminutive.

Table 15

Pearson's r (r) for ELA/Reading Assessment, District B, 2010-2011

Dependent	r
Variable	
Assessment Score	1
Grade Level	.08
Campus Attended	03
Female	.18
ED	16
SPED	18
GT	.30
TYS	07
Black Students	.05
Hispanic Students	11
Black Teachers	07
Hispanic Teachers	.07
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Note: Correlation was significant at p < .001 level (1-tailed).

Model 1 variables for ELA/reading assessment scores included grade level, campus attended, gender, ED, SPED, GT, and TYS which account for 16.5% of the variance, R^2 = .165. These variables were significant predictors of ELA/reading assessment scores, F(7, 3792) = 107.32, p < .001. The inclusion of teacher and student ethnicity in Model 2 slightly increased the variances explained in ELA/reading assessment scores, ΔR^2 = .009, $\Delta F(4, 3788)$ = 10.10, p < .001. Model 2 with all predictors was statistically significant in predicting the assessment scores with 17.4% of the variances being explained, R^2 = .173, F(11, 3788) = 72.62, p < .001.

In Model 2, there are positive coefficients for grade level, gender, GT, TYS, Black students, and Hispanic teachers. These coefficients were interpreted in terms of a single unit change. For example, GT students (as per dummy codes) with a coefficient score of 100.18 increased their scores by 100.18 points on average compared to non-GT students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included campus attended (-1.30), ED students (-31.81), SPED (-56.58), Hispanic students (-12.14), and students taught by

Black teachers (-97.60). The negative or positive coefficients illustrated the point difference each variable changed based on the average assessment score (Table 16).

Regression Coefficient for ELA/Reading Assessment, District B, 2010-2011

Table 16

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Variables	В	SE	В	t	Sig.
Assessment Score	2214.13	33.98		65.17	0.00
Grade Level	8.37	3.28	0.04	2.55	0.01
Campus Attended	-1.30	0.69	-0.03	-1.87	0.06
Female	37.97	3.43	0.17	11.07	0.00
ED	-31.81	4.56	-0.11	-6.97	0.00
SPED	-56.58	7.30	-0.12	-7.76	0.00
GT	100.18	5.38	0.28	18.67	0.00
TYS	0.76	0.23	0.05	3.28	0.00
Black Students	19.11	6.49	0.05	2.94	0.00
Hispanic Students	-12.14	4.59	-0.04	-2.64	0.00
Black Teachers	-97.60	35.40	-0.04	-2.76	0.00
Hispanic Teachers	44.71	12.10	0.06	3.69	0.00

ELA/reading assessment scores were compared for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 37). Black students who were taught by Hispanic teachers scored the highest of the Black students. Black students who were instructed by White teachers scored higher than Black students taught by Black teachers. No Black teachers taught Hispanic students. Hispanic students taught by Hispanic teachers achieved higher scores than Hispanic students taught by White teachers. White students taught by Black teachers outperformed the other White students. White students taught by Hispanic teachers scored higher than White students taught by White teachers.

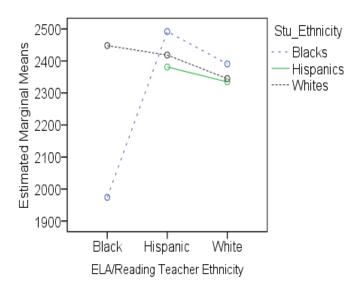


Figure 37. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 38). All Black students, Hispanic students, and White students who were taught by Hispanic teachers outperformed their peers who were taught by either Black teachers or White teachers. Black students taught by White teachers achieved higher scores than Black students taught by Black teachers. Hispanic students instructed by White teachers performed higher than Hispanic students instructed by Black teachers. White students taught by White teachers scored slightly higher than White students who were taught by Black teachers.

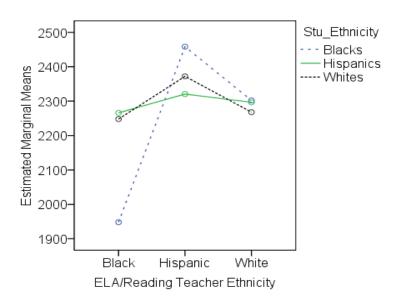


Figure 38. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 39). Black non-SPED students taught by Hispanic teachers had the highest scores of the Black students. Black students taught by White teachers outperformed Black students taught by Black teachers. No Black teachers taught Hispanic students or White students. Hispanic students who were taught by Hispanic teachers achieved slightly higher scores than Hispanic students instructed by White teachers. White students taught by Hispanic teachers scored higher than White students taught by White teachers.

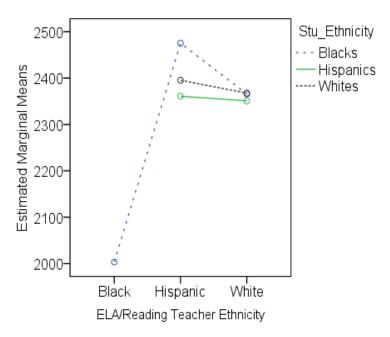


Figure 39. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for SPED students who were taught by Black teachers or White teachers in 2010-2011 (Fig. 40). There were no Hispanic teachers for this group of SPED students. Black students who were taught by White teachers achieved higher scores than Black students taught by Black teachers. Hispanic students taught by Black teachers scored slightly higher than Hispanic students taught by White teachers. White students taught by Black teachers also achieved higher scores than White students taught by White teachers.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 41). All non-GT students who were taught by Hispanic teachers scored higher than all of the non-GT students who were taught by either Black teachers or White teachers. Black students taught by White teachers scored higher than Black students who were taught by Black teachers. Hispanic students taught by Black teachers and Hispanic students taught by White teachers achieved approximately the same scores. White students taught by Black teachers scored only slightly lower than White students taught by Hispanic non-

GT students. White students taught by White teachers scored the lowest of all of the White students.

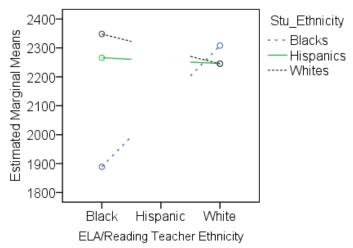


Figure 40. ELA/reading assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 41). All non-GT students who were taught by Hispanic teachers scored higher than all of the non-GT students who were taught by either Black teachers or White teachers. Black students taught by White teachers scored higher than Black students who were taught by Black teachers. Hispanic students taught by Black teachers and Hispanic students taught by White teachers achieved approximately the same scores. White students taught by Black teachers scored only slightly lower than White students taught by Hispanic non-GT students. White students taught by White teachers scored the lowest of all of the White students.

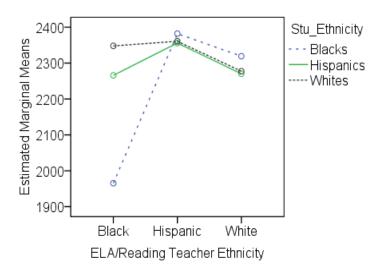


Figure 41. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for GT students who were taught by Hispanic or White teachers in 2010-2011 (Fig. 42). No GT students were taught by Black teachers. Black students and White students taught by Hispanic teachers scored higher than Black students and White students instructed by White teachers. Hispanic students instructed by White teachers achieved higher scores than Hispanic students taught by Hispanic teachers.

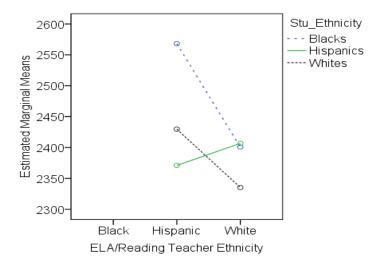


Figure 42. ELA/reading assessment scores for GT students who were taught by Hispanic or White teachers in 2010-2011.

ELA/Reading Assessment for 2011-2012

Table 17

During 2011-2012, the predictor variable with the strongest Pearson's r correlation with the ELA/reading assessment was GT students, r = .29, p < .001 (Table 17). The next strongest correlation was SPED students, r = -.22, p < .001. GT had an effect size of r^2 = .08, and SPED had an effect size of r^2 = .05. All other correlations were less than the campus students attended. The correlations between the assessment scores and the student and teacher ethnicity were diminutive.

Pearson's r (r) for ELA/Reading Assessment, District B, 2011-2012

Dependent	r
Variable	
Assessment Score	1
Grade Level	.15
Campus Attended	.00
Female	19
ED	19
SPED	22
GT	.29
TYS	.02
Black Students	11
Hispanic Students	10
Black Teachers	.00
Hispanic Teachers	06

Note: Correlation was significant at p < .001 level (1-tailed).

Model 1 variables for ELA/reading assessment scores included grade level, campus attended, gender, ED, SPED, GT, and TYS, which accounted for 18.9% of the variances, $R^2 = .189$ (Table 18). These variables were significant predictors of ELA/reading assessment scores, F(7, 4041) = 134.18, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in ELA/reading

assessment scores, ΔR^2 = .010, ΔF (4, 4037) = 12.77, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading assessment scores with 19.9% of the variances being explained, R^2 = .199, F(11, 4037) = 91.03, p < .001.

In Model 2 positive coefficients were grade level, campus attended, GT students, and students taught by Hispanic teachers for the ELA/reading assessment scores. The coefficients of the predictor variables were interpreted in terms of a single unit change. For example, GT students (as per dummy codes) with a coefficient score of 115.50 points on average produced a score that was 115.50 points higher than non-GT students, holding all other variables constant (controlling for the other variables in the model). Negative coefficients included female students (-46.99), ED students (-8.09), SPED students (-97.35), Black students (-32.12), Hispanic students (-17.33), and students with Black teachers (-22.63). The negative or positive coefficients illustrated the point difference each variable changed based on the average assessment score (Table 18).

Regression Coefficient for ELA/Reading Assessment, District B, 2011-2012

Table 18

Regression Coefficient for ELA/Reading Assessment, District B, 2011-2012							
Variables	В	SE	В	t	Sig.		
Assessment Score	2003.14	45.00		44.52	0.00		
Grade	40.96	4.11	0.15	9.98	0.00		
Campus	1.54	1.36	0.02	1.13	0.26		
Female	-46.99	3.94	-0.17	-11.92	0.00		
ED	-38.09	5.27	-0.11	-7.23	0.00		
SPED	-97.35	8.36	-0.17	-11.65	0.00		
GT	115.50	6.72	0.25	17.20	0.00		
TYS	-0.13	0.24	-0.01	-0.52	0.60		
Black Students	-32.12	7.05	-0.07	-4.55	0.00		
Hispanic Students	-17.33	5.20	-0.05	-3.34	0.00		
Black Teachers	-22.63	125.00	0.00	-0.18	0.86		
Hispanic Teachers	67.45	13.37	0.07	5.04	0.00		

ELA/reading assessment scores were compared for ED students who were taught by Hispanic teachers or White teachers in 2011-2012 (Fig. 43). There were no Black teachers who taught ED students. All ED students taught by Hispanic teachers scored higher than all of the ED students who were taught by the White teachers.

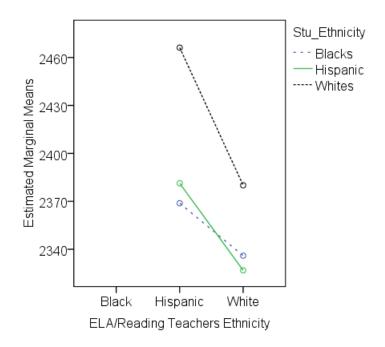


Figure 43. ELA/reading assessment scores for ED students taught by Hispanic teachers or White teachers in 2011-2012.

ELA/reading assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers (Fig. 44). Black students were taught only by Hispanic teachers or White teachers. The Black students who were taught by Hispanic teachers performed better than the Black students who were taught by White teachers. Hispanic students who were taught by Black teachers scored the highest of the Hispanic students. Hispanic students taught by Hispanic teachers achieved higher scores than Hispanic students who were taught by White teachers. White students were taught by either Hispanic teachers or White teachers. White students taught by

Hispanic teachers performed better than White students who were taught by White teachers.

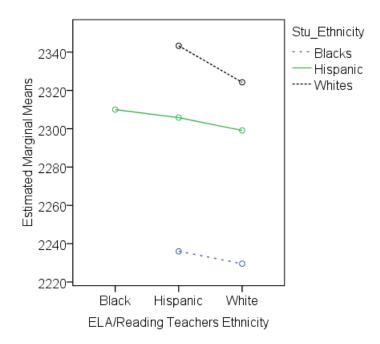


Figure 44. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 45). No Black SPED students were taught by Black teachers. Black students taught by Hispanic teachers performed better than Black students taught by White teachers. Hispanic students taught by Hispanic teachers scored highest. Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students taught by White teachers scored higher than White students who were taught by Hispanic teachers.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 46). No Black teachers taught non-SPED students. Black non-SPED students were taught only by

White teachers. Hispanic students taught by White teachers scored minimally better than Hispanic students taught by Hispanic teachers. White non-SPED students were taught only by White teachers.

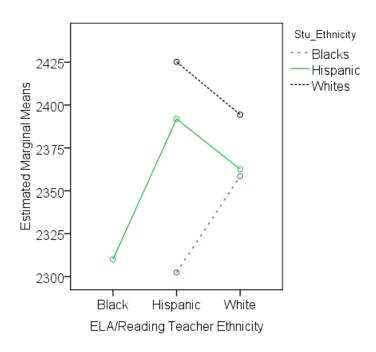


Figure 45. ELA/reading assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

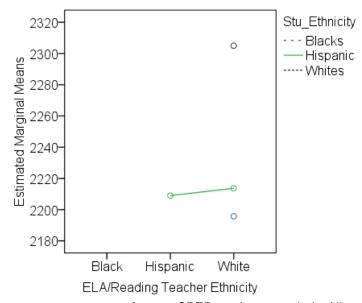


Figure 46. ELA/reading assessment scores for non-SPED students taught by Hispanic or White teachers in 2011-2012.

ELA/reading assessment scores were compared for GT students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 47). No Black students were taught by Black teachers. Black students taught by Hispanic teachers performed better than Black students taught by White teachers. Black teachers only taught Hispanic students. Hispanic students who performed best were taught by Hispanic teachers. Hispanic students taught by Black teachers performed better than Hispanic students taught by White teachers. No White students were taught by Black teachers. White students who were taught by Hispanic teachers scored better than White students who had White teachers.

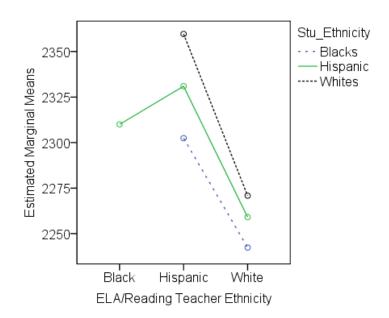


Figure 47. ELA/reading assessment scores for GT students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared non-GT students who were taught by Hispanic or White teachers in 2011-2012 (Fig. 48). No Black teachers taught GT students. Black GT students and Hispanic GT students were only taught by White teachers. Therefore, no comparison could be made regarding their assessment scores.

White students were taught by Hispanic teachers and White teachers. White GT students taught by Hispanic teachers scored higher than White GT students taught by White teachers.

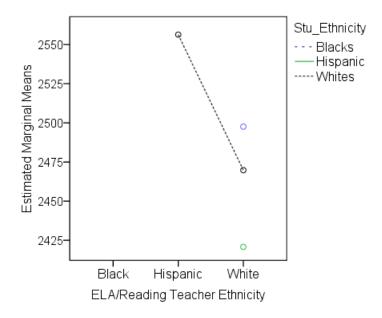


Figure 48. ELA/reading assessment scores for non-GT students taught by Hispanic teachers or White teachers in 2011-2012.

ELA/Reading Assessment for 2012-2013

The 2012-2013 variables with the strongest Pearson's r correlation with ELA/reading assessment included GT, r = .25, p = < .001 (r² = .06) and SPED students, r = .24, p < .001, r² = .06 (Table 19). All other variables fell below ED students, which had a correlation of r = -.21, p = < .001, r² = .04. The correlations between the assessment scores and the student and teacher ethnicity were diminutive.

Table 19

Pearson's r (r) for ELA/Reading	Assessment, District B, 2012-2013
Dependent	r
Variable	
Assessment Score	1
Grade Level	.05
Campus Attended	01 (Continues)

Table 19 Continues		
Female	.01	
ED	21	
SPED	24	
GT	.25	
TYS	.14	
Black Students	13	
Hispanic Students	11	
Black Teachers	02	
Hispanic Teachers	03	

Note: Correlation was significant at p < .001 level (1-tailed).

Table 20

Predictor variables for ELA/reading scores included grade level, campus attended, gender, ED, SPED, GT, and TYS, which accounted for 16.8% of the variances, R^2 = .168 (Table 20). These variables were significant predictors of ELA/reading scores, R^2 = .168, F(7, 2011) = 58.17, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in the ELA/reading scores, ΔR^2 = .007, $\Delta F(4, 2007)$ = 4.13, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading scores with 17.5% of the variances being explained, R^2 = .175, F(11, 2007) = 38.75, p < .001.

Regression Coefficient for ELA/Reading Assessment, District B, 2012-2013

SE Variables В В t Sig. **Assessment Score** 2.24 1438.06 642.01 0.03 81.19 Grade Level 58.39 0.03 1.39 0.16 Campus Attended -3.41 1.97 -0.04 -1.73 80.0 Female 38.14 5.81 0.13 6.56 0.00 ED 7.73 -5.42 -41.85 -0.12 0.00 **SPED** -110.55 12.08 -0.19 -9.15 0.00 GT 103.83 10.40 0.21 9.99 0.00 **TYS** 1.55 0.34 0.10 4.62 0.00 Black Students -35.09 10.50 -0.07 -3.34 0.00 -2.68 Hispanic Students -19.87 7.42 -0.06 0.00 **Black Teachers** -84.38 130.22 -0.01 -0.65 0.52 Hispanic Teachers -123.62 130.44 -0.02 -0.95 -0.34 In Model 2, there were positive coefficients for grade level, gender, GT students, and TYS. The coefficients for the predictor variables were interpreted in terms of a single unit change. For example, GT students (as per dummy codes) with a coefficient score of 103.83 points produced a score that was 103.83 points higher than non-GT students, holding all other variables constant (controlling for the other variables in the model). The variables with a negative coefficient included ED (-41.85), SPED students (-110.55), Black students (-35.09), and Hispanic students (-19.87). The negative or positive coefficients illustrated the point difference each variable will change based on the average assessment score.

ELA/reading assessment scores were recorded for non-ED students in 2012-2013 (Fig. 49). Only White teachers taught the non-ED students. Therefore, no comparison of scores could be made between students and teachers in regards to ethnicity.

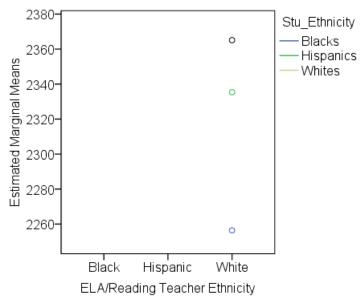


Figure 49. ELA/reading assessment scores for non-ED students taught by White teachers in 2012-2013.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 50). Black students

were taught by only Hispanic teachers or White teachers. Black students taught by White teachers scored higher than Black students taught by Hispanic teachers. Hispanic students were taught only by Black teachers or White teachers. Hispanic students taught by White teachers performed better than Hispanic students taught by Black teachers. All White ED students were taught by White teachers. Therefore, White ED students' scores could not be compared to Black ED students' and Hispanic ED students' scores.

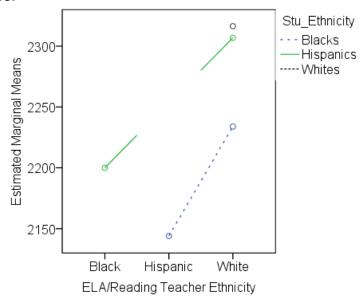


Figure 50. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 51). Black students were taught by either Hispanic teachers or White teachers. Black students who were taught by White teachers scored higher than Black students who were taught by Hispanic teachers. Hispanic students were taught by either Black teachers or White teachers. Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students were only taught by White teachers

and thus their scores could not be compared to non-SPED Black students or non-SPED Hispanic students.

ELA/reading assessment scores were recorded for SPED students in 2012-2013.

All SPED students were taught by White teachers (Fig. 52). Therefore, no comparison of scores could be made with regards to teacher ethnicity and student ethnicity.

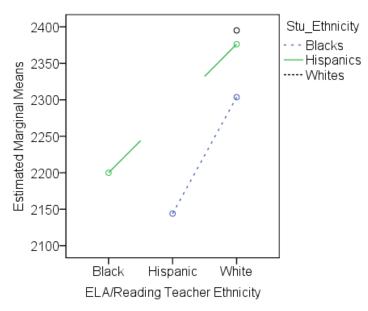


Figure 51. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

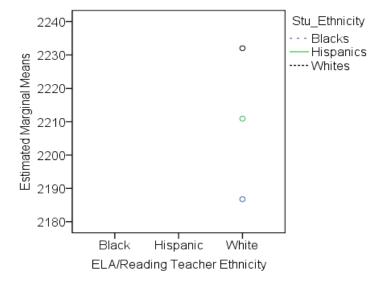


Figure 52. ELA/reading assessment scores for SPED students taught by White teachers in 2012-2013.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 53). No Black students were taught by Black teachers. Black students taught by White teachers scored higher than Black students taught by Hispanic teachers. No Hispanic non-GT students included in this study were taught by Hispanic teachers in District B for 2012-2013. Hispanic students taught by White teachers performed better than Hispanic students taught by Black teachers. White students were only taught by White teachers. Therefore, non-GT White students' scores could not be compared to non-GT Black students' or non-GT Hispanic students' scores in regards to teacher and student ethnicity.

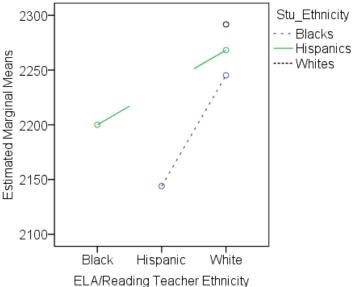


Figure 53. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were recorded for GT students who were taught by White teachers in 2012-2013 (Fig. 54). No Black teachers or Hispanic teachers

taught GT students included in this study for District A in 2012-2013. Additionally, there were no Black GT students. Therefore, no comparison of scores could be made regarding GT teacher and student ethnicity.

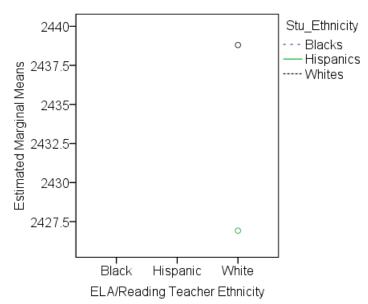


Figure 54. ELA/reading assessment scores for GT students taught by White teachers in 2012-2013.

District B Math Assessment

The two-model multiple hierarchical regression analysis for the math assessment in District B for the 2010-2011, 2011-2012, and 2012-2013 school years included Model 1 independent variables of grade level, campus attended, gender, ED students, SPED students, GT students, and TYS. Model 2 included teacher and student ethnicity in addition to the variables in Model 1.

Math Assessment for 2010-2011

The strongest Pearson's r correlation with the math assessment was GT, r = .42, p < .001, which meant it had an effect size of r^2 = .18 (Table 21). GT accounted for 18% of the variance explained in the assessment scores. All other variables had a correlation less than SPED, r = .20, p < .001, r^2 = .04. Correlations between the assessment and the ethnicity of teachers and students were diminutive.

Pearson's r (r) for Math Assessment. District B. 2010-2011

Table 21

T dardon o T (T) for Matil 7 todoodine	int, Didition B, 2010 2011
Dependent	r
Variable	
Assessment Score	1
Grade Level	.20
Campus Attended	.02
Female	03
ED	14
SPED	20
GT	.42
TYS	.08
Black Students	.13
Hispanic Students	13
Black Teachers	10
Hispanic Teachers	07

Note: Correlation was significant at p < .001 level (1-tailed).

Model 1 for 2010-2011 math assessment scores indicated that grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 24.2% of the variances, R^2 = .242. These variables were significant predictors of math scores, F(7, 3765) = 171.24, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in the math scores, $\Delta R^2 = .261$, F(11, 3761) = 120.90, p < .001.

In Model 2, there were positive coefficients for grade level, campus attended, GT, TYS, Black students, and students with a Hispanic teacher for the math scores for 2010- 2011. These coefficients were interpreted in terms of a single unit change. For example, GT students (as per dummy codes) with a coefficient score of 218.26 points produced a score that was 218.26 points higher than non-GT students, holding all other variables constant (controlling for the other variables in the model). However, there was a negative relationship for female students (-9.12), ED students (-37.09), SPED students (-90.56), Hispanic students (-20.75), and students who were taught by Black

teachers (-59.35). The negative or positive coefficients illustrated the point difference each variable will changed based on the average assessment score (Table 22).

Regression Coefficient for Math Assessment, District B, 2010-2011

Table 22

	,				
Variables	В	SE	В	t	Sig.
Assessment Score	1750.55	48.42		36.15	0.00
Grade Level	50.07	4.55	0.16	11.00	0.00
Campus Attended	4.35	1.00	0.06	4.34	0.00
Female	-9.12	5.09	-0.03	-1.79	0.07
ED	-37.09	6.80	-0.08	-5.46	0.00
SPED	-90.56	11.08	-0.12	-8.17	0.00
GT	218.26	7.98	0.39	27.37	0.00
TYS	0.48	0.27	0.03	1.75	0.08
Black Students	71.28	9.62	0.11	7.41	0.00
Hispanic Students	-20.75	6.79	-0.05	-3.06	0.00
Black Teachers	-59.35	12.81	-0.07	-4.63	0.00
Hispanic Teachers	1.72	17.45	0.00	0.10	0.92

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 55). Black students who were taught by White teachers performed the best of the Black students. Black students taught by Hispanic teachers scored higher than Black students taught by Black teachers. Hispanic students taught by White teachers scored the highest of the Hispanic students. Hispanic students taught by Black teachers scored higher than Hispanic students taught by Hispanic teachers. White students taught by White teachers performed the best of the White students, while White students taught by Hispanic teachers.

Math assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 56). No Black students were taught by Black teachers. Black students taught by White teachers performed better than Black students taught by Hispanic teachers. Hispanic students taught by White

teachers scored the highest compared to Hispanic students taught by Black teachers or Hispanic teachers. Hispanic students taught by Black teachers and Hispanic students taught by Hispanic teachers scored about the same. White students who were taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers scored higher than White students who were taught by Black teachers.

Figure 55. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011.

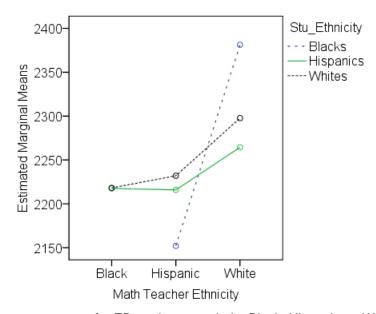


Figure 56. Math assessment scores for ED students taught by Black, Hispanic, or White in 2010-2011.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 57). Black students taught by White teachers achieved the highest scores of Black students. Black students taught by Hispanic teachers scored higher than Black students taught by Black teachers. Hispanic students taught by White teachers also scored the highest of the Hispanic students. Hispanic students taught by Black teachers achieved higher scores than Hispanic students taught by Hispanic teachers. White students taught by White

teachers scored the highest of the White students. White students taught by Hispanic teachers achieved higher scores than White students taught by Black teachers.

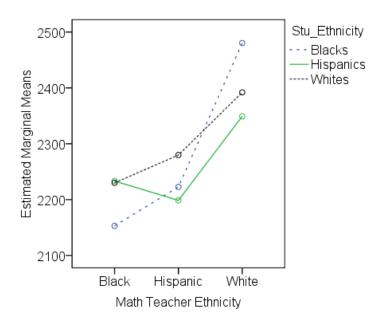


Figure 57. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were compared for SPED students taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 58). Black students were taught by Whites teachers only and therefore could not be compared with Hispanic students' or White students' scores. No Hispanic SPED students included in this study were taught by Black teachers for District B in 2010-2011. Hispanic students taught by Hispanic teachers scored higher than Hispanic students taught by White teachers. White students who were taught by White teachers scored higher than White students taught by Black teachers and White students taught by Hispanic teachers. White students taught by Hispanic teachers by Black teachers performed higher than White students taught by Black teachers.

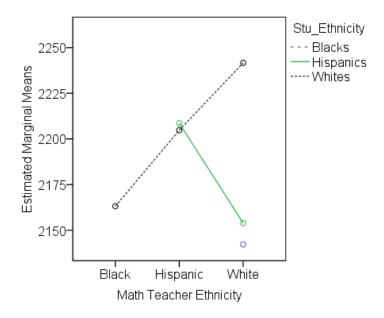


Figure 58. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 59). Black students taught by White teachers scored the highest compared to other Black non-GT students. Black students taught by Hispanic teachers achieved higher scores than Black students taught by Black teachers. Hispanic students taught by Black teachers scored higher than Hispanic students taught by either Hispanic teachers or White teachers. Hispanic students taught by Hispanic teachers scored slightly better than Hispanic students taught by White teachers. White students taught by Hispanic teachers scored the highest of White students. White students who were taught by White teachers achieved higher scores compared to White students who were taught by Black teachers.

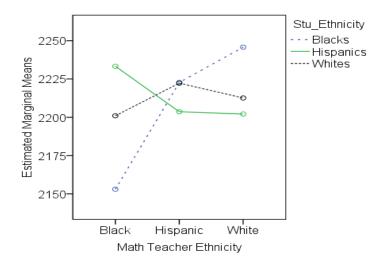


Figure 59. Math assessment scores for non-GT population taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were recorded for GT students who were taught by Black teachers or White teachers in 2010-2011 (Fig. 60). All Black non-GT students and all Hispanic non-GT students were taught by White teachers. White non-GT students taught by White teachers scored the highest of the White non-GT students. White students taught by Hispanic teachers achieved higher scores than White students taught by Black teachers. Because all Black students and Hispanic students were taught by White teachers, no comparison of assessment scores could be made for this group of students.

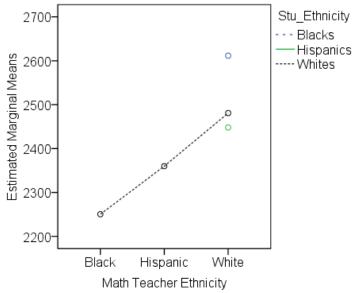


Figure 60. Math assessment scores for GT students taught by Black, Hispanic, or White teachers in 2010-2011.

Math Assessment for 2011-2012

Table 23

The variable with the strongest correlations with the math assessment was GT students, r = .39, p < .001 (Table 23). GT had an effect size of $r^2 = .15$. All other variables revealed a weak correlation less than the students' grade level, r = .28, p < .001, $r^2 = .08$. Correlations between the assessment and the ethnicity of teachers and students were diminutive.

Poorson's r (r) for Moth Association District P. 2011 2012

Pearson's r (r) for Math Assessment, District B, 2011-2012					
r					
1					
.28					
05					
.01					
19					
24					
.39					
.02					
14					
10					
09					
04					

Note: Correlation was significant at p < .001 level (1-tailed).

Grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 28.2% of the variances, R^2 = .282. These variables were significant predictors of math scores, F(7, 3984) = 223.99, p < .001. The inclusion of teacher ethnicity and student ethnicity slightly increased the variances explained in math scores, ΔR^2 = .013, $\Delta F(4, 3980)$ = 18.71, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 29.6% of the variances being explained, R^2 = .296, F(11, 3980) = 151.88, p < .001.

In Model 2, there were positive coefficients for grade level, female students, and GT students. The coefficients for predictor variables were interpreted in terms of a single unit change. For example, GT students (as per dummy codes) with a coefficient score of 211.04 points produced a score that was 211.04 higher than non-GT students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included the campus a student attended (-2.29), ED students (-40.61), SPED students (-146.37), TYS (-.218), Black students (-55.75), and Hispanic students (-18.45), as well as students with Black teachers (-105.42) or Hispanic teachers (-109.35). The negative or positive coefficients illustrated the point difference each variable changed based on the average assessment score (Table 24).

Regression Coefficient for Math Assessment, District B, 2011-2012

Table 24

,				
В	SE	В	t	Sig.
1219.81	55.45		22.00	0.00
100.88	4.97	0.27	20.32	0.00
-2.29	1.71	-0.02	-1.34	0.18
10.82	4.92	0.03	2.20	0.03
-40.61	6.61	-0.09	-6.15	0.00
-146.37	10.43	-0.19	-14.04	0.00
211.04	8.34	0.34	25.31	0.00
8.08	0.26	-0.01	-0.83	0.41
-55.75	8.81	-0.09	-6.33	0.00
-18.45	6.49	-0.04	-2.84	0.00
-105.42	19.82	-0.07	-5.32	0.00
-109.35	89.56	-0.02	-1.22	0.22
	1219.81 100.88 -2.29 10.82 -40.61 -146.37 211.04 8.08 -55.75 -18.45 -105.42	1219.81 55.45 100.88 4.97 -2.29 1.71 10.82 4.92 -40.61 6.61 -146.37 10.43 211.04 8.34 8.08 0.26 -55.75 8.81 -18.45 6.49 -105.42 19.82	1219.81 55.45 100.88 4.97 0.27 -2.29 1.71 -0.02 10.82 4.92 0.03 -40.61 6.61 -0.09 -146.37 10.43 -0.19 211.04 8.34 0.34 8.08 0.26 -0.01 -55.75 8.81 -0.09 -18.45 6.49 -0.04 -105.42 19.82 -0.07	1219.81 55.45 22.00 100.88 4.97 0.27 20.32 -2.29 1.71 -0.02 -1.34 10.82 4.92 0.03 2.20 -40.61 6.61 -0.09 -6.15 -146.37 10.43 -0.19 -14.04 211.04 8.34 0.34 25.31 8.08 0.26 -0.01 -0.83 -55.75 8.81 -0.09 -6.33 -18.45 6.49 -0.04 -2.84 -105.42 19.82 -0.07 -5.32

Math assessment scores were compared for ED students who were taught by Black teachers or White teachers in 2011-2012 (Fig. 61). There were no Hispanic teachers for these ED students. All ED students who were taught by White teachers scored higher than all of the ED students who were taught by Black teachers.

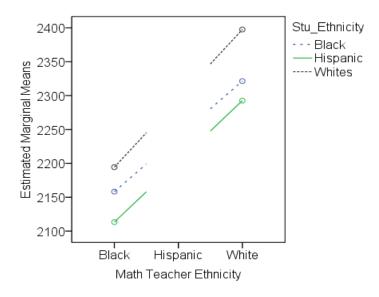


Figure 61. Math assessment scores for ED students taught by Black teachers or White teachers in 2011-2012.

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers for 2011-2012 (Fig. 62). Black students were taught either by Black teachers or White teachers. The Black students who were taught by White teachers scored higher than the Black students who were taught by Black teachers. Hispanic students who achieved the highest scores were those who were taught by White teachers. Hispanic students taught by Black teachers scored higher than the Hispanic students who were taught by Hispanic teachers. White students taught by White teachers performed the highest of the White students. White students taught by Hispanic teachers acquired higher scores than the White students who were taught by the Black teachers.

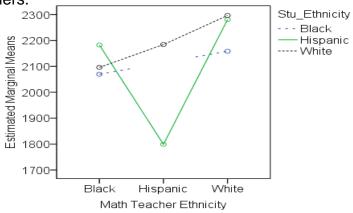


Figure 62. Math assessment scores for non-ED students who were taught by Black, Hispanic, or White in 2011-2012.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 63). Black students and Hispanic students were taught by either Black teachers or White teachers. Black students taught by White teachers achieved higher scores than Black students taught by Black teachers. Hispanic students who were taught by Black teachers scored marginally better than Hispanic students who were taught by White teachers. White students taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers scored higher than White students taught by Black teachers.

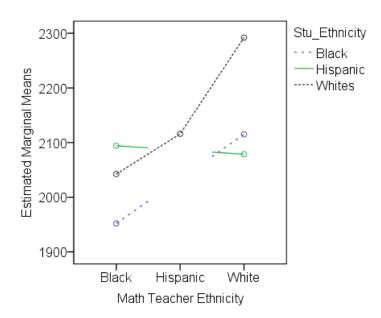


Figure 63. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 64). Black students were taught by either Black teachers or White teachers. Black students taught by White teachers

scored higher than Black students taught by Black teachers. Hispanic students who scored the highest were those taught by White teachers. Hispanic students taught by Black teachers scored higher than Hispanic students taught by Hispanic teachers. White students who were taught by White teachers performed the best compared to White students taught by Black teachers or Hispanic teachers. White students taught by Black teachers achieved approximately the same scores as White students taught by Hispanic teachers.

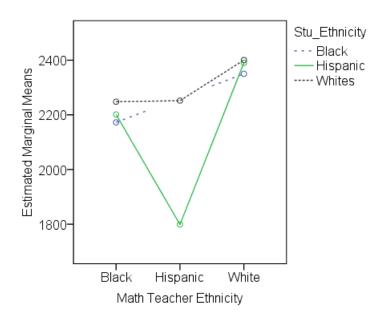


Figure 64. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for GT students who taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 65). Black students taught by White teachers scored marginally better than Black students taught by Black teachers. No Black students took math from Hispanic teachers. Hispanic students taught by Black teachers and Hispanic students taught by White teachers achieved approximately the

same scores. Hispanic students taught by Hispanic teachers scored below the Hispanic students who were taught by Black teachers or White teachers. White students taught by White teachers scored marginally better than White students who were taught by either Black teachers or Hispanic teachers. White students taught by Hispanic teachers scored slightly higher than White students taught by Black teachers.

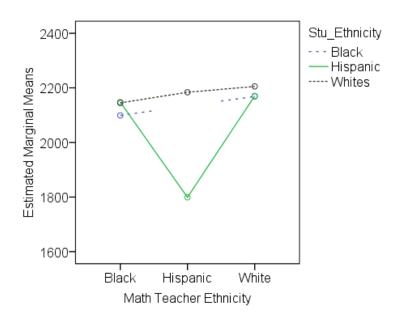


Figure 65. Math assessment scores for GT students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were recorded for non-GT students in 2011-2012. All non-GT students were taught by White teachers. Therefore, no comparison could be made regarding students' performances with different ethnical teachers.

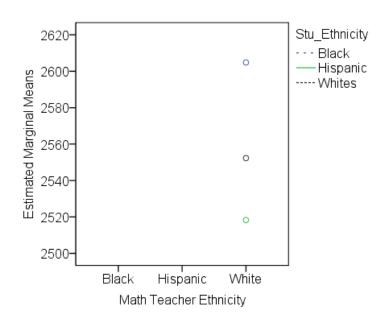


Figure 66. Math assessment scores for non-GT students taught by White teachers in 2011-2012. Math Assessment for 2012-2013

The math assessment data for 2012-2013 revealed that variables with the strongest Pearson's r correlation included GT students, r = .37, p < .001 (Table 25). The effect size for GT was r^2 = .14, which explained 14% of the variance in the assessment scores. The data analysis illustrated that all other correlations were small, including those between the assessment and teachers and students ethnicity.

Pearson's r (r) for Math Assessment District B 2012-2013

Table 25

rearson's r (r) for Main Assessine	FIII, DISITICI D, 2012-2013
Dependent	r
Variable	
Assessment Score	1
Grade Level	.04
Campus Attended	05
Female	03
ED	20
SPED	26
GT	.37 (Continues)

Table 25	
Continues	
TYS	01
Black Students	16
Hispanic Students	11
Black Teachers	15
Hispanic Teachers	

Note: Correlation was significant at p < .001 level (1-tailed).

Grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 21.0% of the variances, R^2 = .210. These variables were significant predictors of math scores, F(7, 1937) = 73.53, p < .001. The inclusion of teacher ethnicity and student ethnicity slightly increased the variances explained in math scores, ΔR^2 = .019, $\Delta F(3, 1937) = 16.01$, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 22.9% of the variances being explained, R^2 = .229, F(10, 1934) = 57.47, p < .001.

In Model 2, there were positive coefficients for grade level and GT students. The coefficients were interpreted in terms of a single unit change. For example, GT students (as per dummy codes) with a coefficient score of 193.69 points produced a score that is 193.69 more than non-GT students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included campus attended (-4.08), female students (-20.55), ED students (-42.53), SPED (-142.34), TYS (-.185), whether a student was Black (-64.53) or Hispanic (-29.38), as well as students who had Black teachers (-86.10). The negative or positive coefficients illustrated the point difference each variable changed based on the average assessment score (Table 26).

Table 26

Regression Coefficient for Math Assessment, District B, 2012-2013

Variables	В	SE	β	t	Sig.
Assessment Score	1229.24	755.71		1.63	0.10
Grade	104.09	68.69	0.03	1.52	0.13
Campus	-4.08	2.45	-0.04	-1.66	0.10
Female	-20.55	6.97	-0.06	-2.95	0.00
ED	-42.53	9.34	-0.10	-4.56	0.00
SPED	-142.34	14.32	-0.20	-9.94	0.00
GT	193.69	12.38	0.32	15.64	0.00
TYS	-0.19	0.43	-0.01	-0.44	0.66
Black Students	-64.53	12.59	-0.11	-5.13	0.00
Hispanic Students	-29.38	8.90	-0.07	-3.30	0.00
Black Teachers	-86.10	21.81	-0.08	-3.95	0.00
Hispanic Teachers					

Math assessment scores were compared for District B students in 2012-2013.

Only Black teachers and White teachers taught these students. There were no

Hispanic teachers in the 2012-2013 school year for the groups of students who participated in the study.

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 67). Black students taught by White teachers outperformed the other Black students. Black students taught by Hispanic teachers achieved higher scores than Black students taught by Black teachers. Hispanic students taught by Hispanic teachers attained higher scores than the other Hispanic students. Hispanic students taught by White teachers scored slightly higher than Hispanic students taught by Black teachers. White students taught by White teachers outscored their White peers. White students taught by Hispanic teachers scored higher than the White students taught by Black teachers.

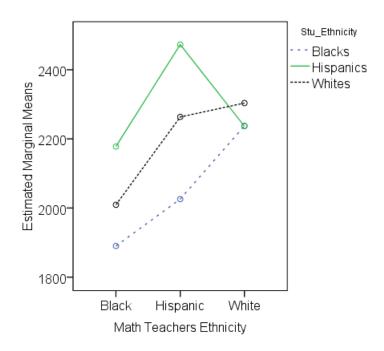


Figure 67. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 68). Black students taught by Hispanic teachers achieved higher scores than their Black peers. Black students taught by White teachers outperformed Black students taught by Black teachers. Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White teachers achieved higher scores than Hispanic students taught by Black teachers. White students taught by Black teachers performed the best of the White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

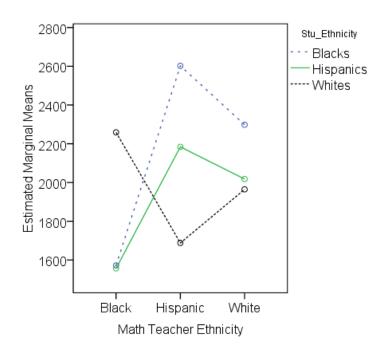


Figure 68. Math assessment scores for ED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 69). All students taught by White teachers scored the highest. All students taught by Hispanic teachers achieved higher scores than all students who were taught by Black teachers.

Math assessment scores were compared for SPED students who were taught by Black or White teachers in 2012-2013 (Fig. 70). Black students taught by Black teachers achieved higher scores than Black students taught by White teachers. No Black students were taught by Hispanic teachers. Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White teachers slightly outscored the Hispanic students who were taught by Black teachers. White students taught by Black teachers scored higher than White students taught by White teachers. No White students were taught by Hispanic teachers.

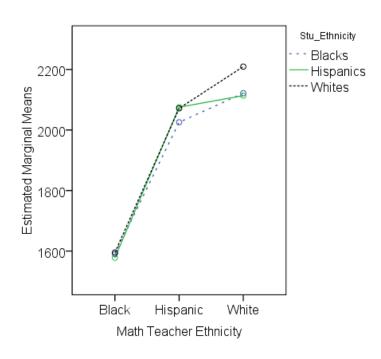


Figure 69. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

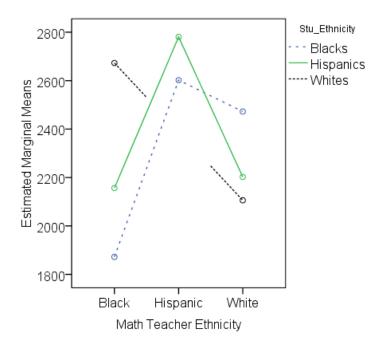


Figure 70. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 71). Black students and

Hispanic students taught by Hispanic teachers achieved the highest scores of the Black students and the Hispanic students. Black students and Hispanic students taught by White teachers outperformed Black students and Hispanic students taught by Black teachers. White students taught by Black teachers scored marginally higher than the White students taught by White teachers. White student taught by Hispanic teachers scored the lowest of the White students.

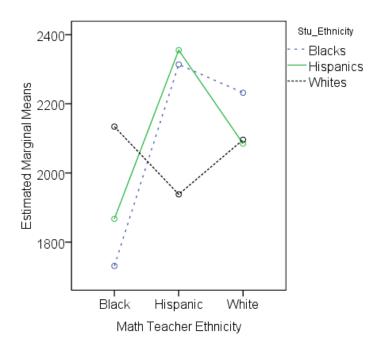


Figure 71. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were recorded for GT students who were taught by Hispanic teachers or White teachers in 2012-2013. There were no Black teachers of GT students in 2012-2013. All Black GT students were taught by White teachers. Both Hispanic students and White students taught by White teachers outperformed the Hispanic students and White students taught by Hispanic teachers.

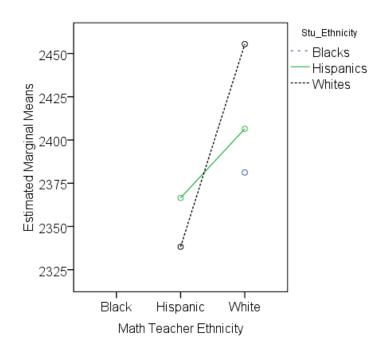


Figure 72. Math assessment scores for GT students taught by Hispanic teachers or White teachers in 2012-2013.

District C ELA/Reading Assessment

ELA/Reading Assessment for 2010-2011

The variables with the strongest correlation with ELA/reading were grade level, r = .94, p = < .001, and campus, r = .72, p = < .001 (Table 27). Grade level had an effect size of $r^2 = .88$, and campus had an effect size of $r^2 = .52$, which explained 88% and 52% of the variance, respectively. All other variables produced a correlation less than the GT students, r = -.29, p = < .001, $r^2 = .08$. The assessment scores and teacher and student ethnicity produced very diminutive correlations.

Pearson's r (r) for ELA/Reading Assessment, District C, 2010-2011

Dependent	r
Variable	
Assessment Score	1
Grade Level	.94
Campus Attended	.72
Female	.03
ED	25
SPED	02
GT	29
TYS	.00
Black Students	02
Hispanic Students	06
Black Teachers	.08
Hispanic Teachers	.11

Note: Correlation was significant at p < .001 level (1-tailed).

Table 27

ELA/reading assessment score variables of grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 89.9% of the variance, R^2 = .899 (Table 28). These variables were significant predictors of ELA/reading assessment scores, F(7, 8214) = 10425.34, p < .001. The inclusion of teacher ethnicity and student ethnicity slightly increased the variances explained in ELA/reading scores, ΔR^2 = .005, $\Delta F(4, 8210)$, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading scores with 90.2% of the variances being explained, R^2 = .902, F(11, 8210) = 6864.15, p < .001.

In Model 2, grade level, campus attended, female, TYS, GT students, and students taught by Black teachers had positive coefficients for ELA/reading scores. The coefficients for the predictor variables were interpreted in terms of a single unit change. For example, SPED students (as per dummy codes) with coefficients of -94.18 points had decreased test scores on average by -94.18 points lower than non-SPED students, holding all other variables constant (controlling for the other variables in the model).

Variables with negative coefficients included Black students (-52.12), Hispanic students (-133.46), SPED students (94.18), GT students (-51.35), and ED students (-73.88) (Table 28).

Regression Coefficient for ELA/Reading Assessment. District C. 2010-2011

Table 28

Variables	В	SE	В	t	Sig.
Assessment Score	-3029.40	23.17		-	.00
				130.77	
Grade Level	472.18	2.88	.83	163.87	.00
Campus Attended	18.43	0.62	.15	29.62	.00
Female	31.50	4.90	.02	6.43	.00
ED	-73.88	8.23	03	-8.97	.00
SPED	-94.18	90.57	.00	-1.04	.30
GT	-51.35	11.96	02	-4.29	.00
TYS	2.99	0.28	.04	10.66	.00
Black Students	-52.12	8.53	02	-6.11	.00
Hispanic Students	-20.59	6.25	01	-3.30	.00
Black Teachers	168.97	13.19	.05	12.81	.00
Hispanic Teachers	-133.46	17.92	03	-7.45	.00

ELA/reading assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 73). All Black students, Hispanic students, and White students who were taught by Hispanic teachers achieved the highest scores for non-ED students. Black students who were taught by Black teachers scored higher than Black students taught by White teachers. Hispanic students taught by White teachers scored higher than Hispanic students taught by Black teachers. White students taught by Black teachers scored higher than White students who were taught by White teachers.

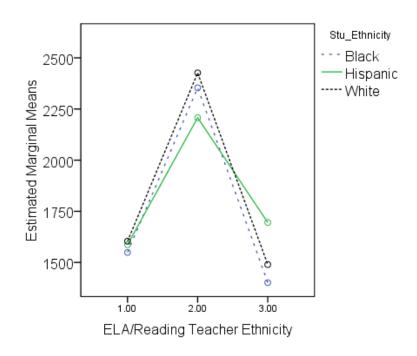


Figure 73. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 74). Black students taught by Black teachers' slightly outscored Black students taught by Hispanic teachers. Black students taught by White teachers scored the lowest of the Black students. Hispanic students taught by Hispanic teachers scored slightly higher than Hispanic students taught by Black teachers. Hispanic students taught by White teachers scored the lowest of the Hispanic students. White students taught by Hispanic teachers achieved the highest scores of the White students. White students taught by Black teachers outperformed White students taught by White teachers.

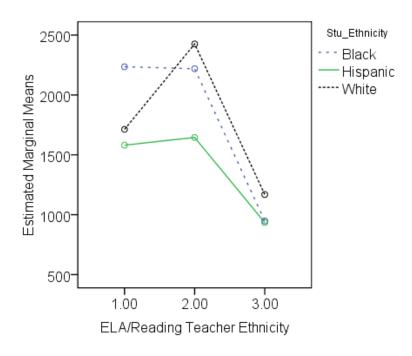


Figure 74. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 75). All Black students, Hispanic students, and White students who were taught by Hispanic teachers achieved the highest scores for non-SPED students. All Black students, Hispanic students, and White students who were taught by Black teachers scored higher than all Black students, Hispanic students, and White students who were taught by White teachers.

ELA/reading assessment scores were recorded for SPED students who were taught by White teachers in 2010-2011 (Fig. 76). All SPED students in District C for 2010-2011 were taught by White teachers. Therefore, no comparison could be made regarding teacher ethnicity and student ethnicity.

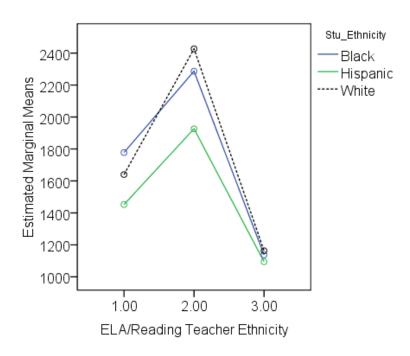


Figure 75. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

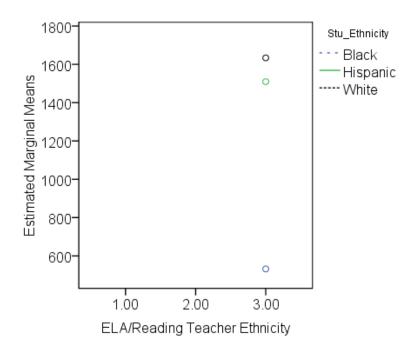


Figure 76. ELA/reading assessment scores for SPED students taught by White teachers in 2010-2011.

ELA/reading assessment scores were recorded for non-GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 77). Black students

taught by Hispanic teachers scored higher than the rest of the Black students. Black students taught by Black teachers' outperformed Black students taught by White teachers. Hispanic students taught by Black teachers achieved the highest scores of the Hispanic students. Hispanic students instructed by Hispanic teachers scored higher than Hispanic students taught by White teachers. White students taught by Hispanic teachers scored the highest of the White students. White students taught by Black teachers scored higher than White students who were taught by White teachers.

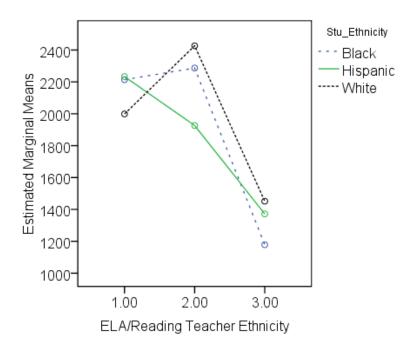


Figure 77. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2010-2011.

ELA/reading assessment scores were compared for GT students who were taught by Black teachers or White teachers in 2010-2011 (Fig. 78). No Hispanic teachers taught the GT students in this study in District C for 2010-2011. All Black students and all Hispanic students who were taught by Black teachers scored higher than the Black students and Hispanic students who were taught by White teachers.

White GT students taught by White teachers achieved higher scores than White GT students taught by Black teachers.

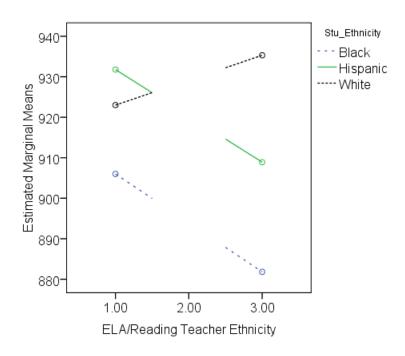


Figure 78. ELA/reading assessment scores for GT students taught by Black teachers or White teachers in 2010-2011.

ELA/Reading Assessment for 2011-2012

The variables with the strongest Pearson's r correlation for ELA/reading were grade level, r = 0.87, p < .001, and campus, r = 0.60, p < .001 (Table 29). The effect size of grade level is $r^2 = .76$ and campus is $r^2 = .36$, which explains 76% and 36% of the variance. All other variables produced a correlation less than the ED students (r = -.32, p = < .001, $r^2 = .10$). Correlations with assessment scores and teacher and student ethnicity produced very diminutive correlations.

Pearson's r (r) for ELA/Reading Assessment, District C, 2011-2012

Dependent	r
Variable	
Assessment Score	1
Grade Level	.87
Campus Attended	.60
Female	.06
ED	32
SPED	20
GT	02
TYS	.10
Black Students	13
Hispanic Students	13
Black Teachers	03
Hispanic Teachers	.08

Note: Correlation was significant at p < .001 level (1-tailed).

Table 29

ELA/reading assessment score variables of grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 79.6 of the variance, R^2 = .796 (Table 30). These variables were significant predictors of ELA/reading scores, F(7, 8007) = 4457.12, p < .001). The inclusion of teacher and student ethnicity slightly increased the variances explained in ELA/reading scores, ΔR^2 = .005, $\Delta F(3, 8004)$, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading Reading scores with 80.1% of the variances being explained, R^2 = .801, F(10, 8004) = 3212.14, p < .001.

Model 2 illustrated that grade level, female, TYS, GT students, and students who are taught by Black and Hispanic teachers had positive coefficients with ELA/reading scores in 2011-2012 (Table 30). The coefficients for the predictor variables were interpreted in terms of a single unit change. For example, SPED students (as per dummy codes) with coefficients of -112.53 points will decrease their test scores on average by -112.53 points compared to non-SPED students, holding all other variables

constant (controlling for the other variables in the model). Variables with negative coefficients included Hispanic students (-40.41), SPED students (-112.53), and ED students (-61.08).

Regression Coefficient for ELA/Reading Assessment, District C, 2011-2012

Table 30

SE Variables β Sig. t Assessment Score 73.93 14.22 --5.20 .00 1.69 117.20 Grade Level 198.41 .79 .00 Campus Attended 6.32 0.37 17.20 .11 .00 Female 34.83 3.06 .06 11.40 .00 4.71 -.07 -12.97 ED -61.08 .00 **SPED** -112.53 13.35 -.04 8.43 .00 GT 147.01 26.34 5.58 .14 .00 **TYS** 2.06 0.17 .06 12.06 .00 Black Students **Hispanic Students** -40.41 3.72 -.06 -10.87 .00 **Black Teachers** 57.31 6.44 .05 8.90 .00 Hispanic Teachers .93 1.08 12.21 .00 0.09

ELA/reading assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 79). Black students and Hispanic students taught by Hispanic teachers outperformed the other Black students and Hispanic students taught by Black teachers scored higher than the Black students and Hispanic students who were taught by White teachers. White students taught by White teachers scored slightly higher than White students taught by Hispanic teachers. White students taught by Black teachers scored the lowest of the White students, although only marginally less than the rest of the White students.

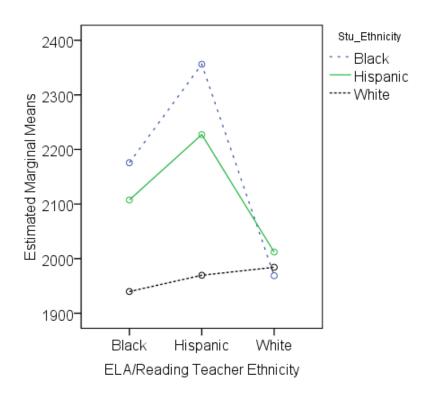


Figure 79. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 80). Black students taught by Hispanic teachers scored the highest of the Black students. Black students taught by Black teachers scored slightly higher than Black students who were taught by White teachers. Hispanic students taught by Black teachers attained the highest scores for Hispanic students. Hispanic students taught by Hispanic teachers' outperformed Hispanic students taught by White teachers. White students taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers scored slightly lower than the White students taught by White teachers and slightly higher than White students taught by Black teachers.

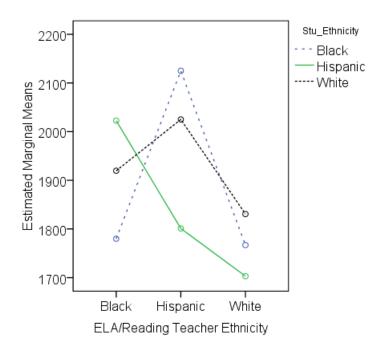


Figure 80. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 81). Black students taught by Hispanic teachers outperformed the other Black students. Black students taught by Black teachers achieved higher scores than the Black students taught by White teachers. Hispanic students taught by Black teachers performed the best of the Hispanic students. Hispanic students taught by Black teachers scored higher than the Hispanic students taught by White teachers. White students taught by Hispanic teachers scored the highest of the White students. White students taught by Black teachers attained higher scores than the White students taught by White teachers.

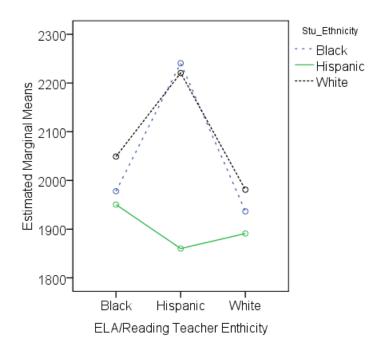


Figure 81. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 82). Black students taught by White teachers scored higher than the Black students taught by Black teachers. No Hispanic teachers taught Black SPED students. Hispanic students taught by Black teachers far outperformed the Hispanic students taught by White teachers. No Hispanic teachers taught any of the SPED Hispanic students. White students taught by White teachers performed the highest of the White students. The White students taught by Black teachers achieved higher scores than the White students taught by the Hispanic teachers.

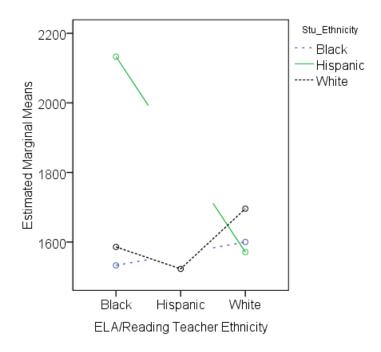


Figure 82. ELA/reading assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 83). Black students taught by Hispanic teachers attained the highest scores of the Black students. Black students taught by Black teachers scored slightly higher than Black students taught by White teachers. Hispanic students who scored the highest were taught by Black teachers. Hispanic students taught by Hispanic teachers outscored the Hispanic students taught by White teachers. White students taught by Black teachers scored slightly higher than White students taught by Hispanic teachers. White students taught by White teachers achieved the lowest scores of the White students.

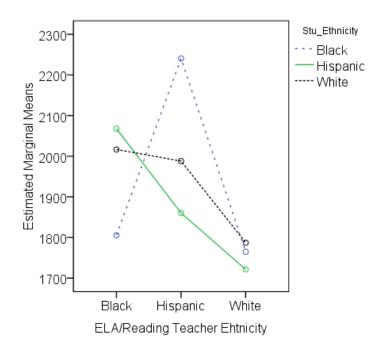


Figure 83. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2011-2012.

ELA/reading assessment scores were compared for GT students who were taught by Black teachers or White teachers in 2011-2012 (Fig. 84). No GT students were taught by Hispanic students. Black students taught by Black teachers outperformed the Black students taught by White teachers. Both Hispanic students and White students who were taught by White teachers achieved higher scores than the Hispanic students and White students who were taught by Black teachers.

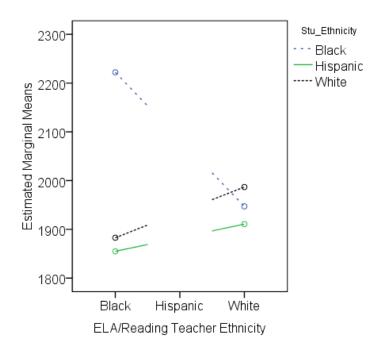


Figure 84. ELA/reading assessment scores for GT students taught by Black teachers or White teachers in 2011-2012.

ELA/Reading Assessment for 2012-2013

The variables with the strongest correlation for ELA/reading were grade level, r = 0.93, p < .001, and campus, r = 0.66, p < .001 (Table 31). Grade level had an effect size of $r^2 = .86$, and campus had an effect size of $r^2 = .44$. All other variables revealed a correlation less than the ED students (r = 0.34, p = < .001, $r^2 = .12$). The relationship between the assessment scores and teacher and student ethnicity produced very diminutive correlations.

Table 31

Pearson's r (r) for ELA/Reading As	ssessment, District C, 2012-2013
Dependent	r
Variable	
Assessment Score	1
Grade Level	.93
Campus Attended	.66
Female	.05 (Continues)
	·

Tables 31		
Continues		
SPED	20	
GT	.23	
TYS	.12	
Black Students	06	
Hispanic Students	11	
Black Teachers	17	
Hispanic Teachers	05	

Note: Correlation was significant at p < .001 level (1-tailed).

ELA/reading assessment score variables of grade level, campus attended, gender, ED, SPED, FT, and TYS accounted for 89.1% of the variance, R^2 = .891. These variables were significant predictors of ELA/reading scores, F(7, 4750) = 5566.77, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in ELA reading scores, ΔR^2 = .004, $\Delta F(4, 4746)$, p < .001. Model 2 with all predictors was statistically significant in predicting the ELA/reading scores with 89.6% of the variances being explained, R^2 = .896, F(11, 4746) = 3704.47, p < .001.

In Model 2, grade level, campus attended, female, TYS, GT students, and students taught by Black teacher or Hispanic teachers had positive coefficients (Table 32). The coefficients for the predictor variables were interpreted in terms of a single unit change. For example, SPED students (as per dummy codes) with coefficients of -71.53 points decreased their test scores on average by -71.53 points lower than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included Black students (-45.69), Hispanic students (-41.59), and students taught by Black teachers (-38.99).

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Table 32

Regression Coefficient for ELA/Reading Assessment, District C, 2012-2013

<u> </u>	<u> </u>	, -		,	
Variables	В	SE	β	t	Sig.
Assessment Score	146.85	12.26		11.98	.00
Grade Level	190.25	1.58	.87	120.21	.00
Campus Attended	2.60	0.41	.05	6.33	.00
Female	28.33	3.07	.04	9.24	.00
ED	-29.16	4.24	04	-6.88	.00
SPED	-71.54	10.23	03	-6.99	.00
GT	90.70	5.56	.08	16.30	.00
TYS	1.66	0.17	.05	9.87	.00
Black Students	-45.69	5.13	04	-8.91	.00
Hispanic Students	-41.59	3.82	06	-10.90	.00
Black Teachers	-38.99	11.15	02	-3.50	.00
Hispanic Teachers	24.19	6.75	.02	3.59	.00

ELA/reading assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 85). All non-ED students in this study who were taught by Hispanic teachers outperformed all other non-ED students for District C in 2012-2013, respectively. All students taught by White teachers scored higher than all of the students taught by Black teachers, respectively.

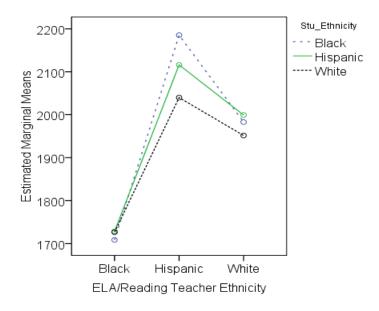


Figure 85. ELA/reading assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 86). Black students and Hispanic students taught by Hispanic teachers scored the highest of the respective Black students and the Hispanic students. Black students and Hispanic students taught by White teachers scored higher than Black students and Hispanic students who were taught by Black teachers. White students taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers achieved higher scores than the White students taught by Black teachers.

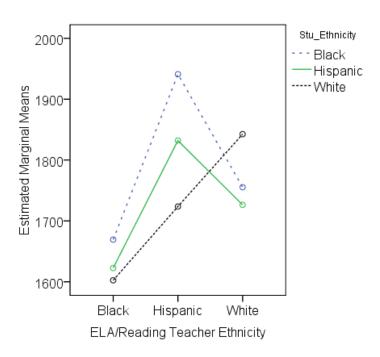


Figure 86. ELA/reading assessment scores for ED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 87). All non-SPED student taught by Hispanic teachers scored higher than their respective peers

taught by Black teachers or White teachers. All students taught by White teachers outperformed the students taught by Black teachers, respectively.

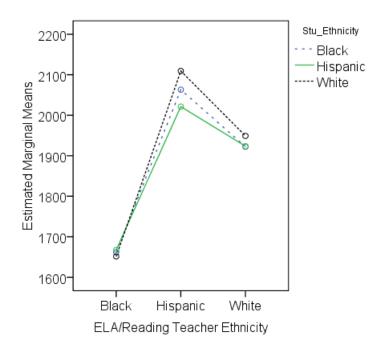


Figure 87. ELA/reading assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 88). In this group, all Black SPED students were taught by White teachers. Hispanic students taught by Black teachers outperformed Hispanic students taught by White teachers. No Hispanic teachers taught Hispanic SPED students in this study for District C in 2012-2013. White students taught by White teachers scored higher than White students taught by Hispanic teachers. In this group, no Black teachers taught White SPED students.

ELA/reading assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 89). In this group of students and teachers, all non-GT students taught by Hispanic teachers scored the

highest of their respective peers. All of the White teachers' students scored higher than all of the Black teachers' students.

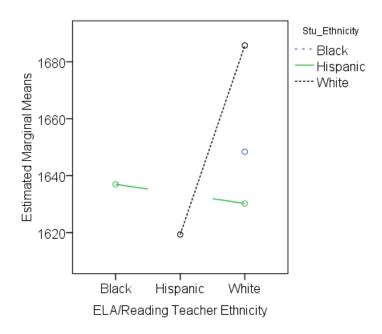


Figure 88. ELA/reading assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

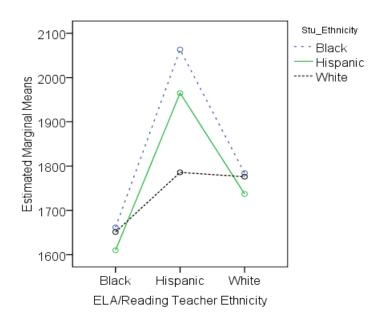


Figure 89. ELA/reading assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2012-2013.

ELA/reading assessment scores were compared for GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 90). Black GT students were taught only by White teachers. Hispanic students taught by Hispanic teachers outperformed their Hispanic peers. Hispanic students taught by White teachers scored higher than Hispanic teachers taught by Black teachers. No GT White students were taught by Black teachers. White students taught by Hispanic teachers achieved higher scores than White students taught by White teachers.

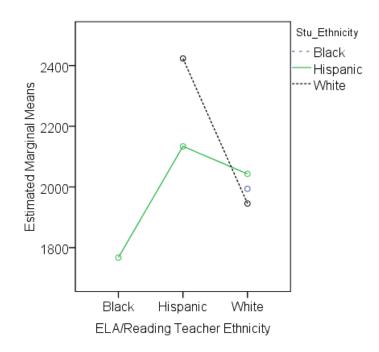


Figure 90. ELA/reading assessment scores for GT students taught by Black, Hispanic, or White teachers in 2012-2013.

District C Math Assessment

Math Assessment for 2010-2011

The Pearson's r correlation with the strongest relationship for the math assessment was grade level, r = 0.94, p < .001, which had an effect size of r = .88 (Table 33). The next strongest correlation was campus, $r^2 = 0.69$, p < .001, which had

an effect size of r^2 = .48. All other variables produced a correlation less than the ED students, r = 0.27, p < .001, r^2 = .07. The relationship between the assessment scores and teacher and student ethnicity produced very diminutive correlation.

Table 33

Pearson's r (r) for Math Assessment, District C, 2010-2011

Dependent	r
Variable	
Assessment Score	1
Grade Level	.94
Campus Attended	.69
Female	.00
ED	27
SPED	02
GT	26
TYS	.13
Black Students	04
Hispanic Students	09
Black Teachers	.01
Hispanic Teachers	10
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Note: Correlation was significant at p < .001 level (1-tailed).

Math assessment score variable of grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 89.5% of the variances, R^2 = .895. These variables were significant predictors of math scores, F(7, 8212) = 10010.40, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in math scores, ΔR^2 = .001, $\Delta F(4, 8208)$ = 28.02, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 89.7% of the variances being explained, R^2 = .897, F (11, 8208) = 6464.28, p < .001.

In Model 2, grade level, campus attended, GT students, TYS, and students taught by Hispanic teachers had positive coefficients (Table 34). The coefficients for the predictor variables were interpreted in terms of a single unit change. For example, SPED students (as per dummy codes) with coefficients of -113.21 points decreased

their test scores on average by -113.21 points lower than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included Black students (-85.61), Hispanic students (-42.31), and students taught by Black teachers (-109.55).

Regression Coefficient for Math Assessment, District C. 2010-2011

Table 34

regression occinent for Math Assessment, District 6, 2010 2011					
Variables	В	SE	В	t	Sig.
Assessment Score	-3247.63	23.74		-136.81	0.00
Grade Level	501.13	2.92	0.85	171.53	0.00
Campus Attended	14.89	0.66	0.11	22.54	0.00
Female	-9.20	5.26	-0.01	-1.76	0.08
ED	-77.66	8.66	-0.03	-8.97	0.00
SPED	-113.21	106.16	0.00	-1.07	0.29
GT	-9.50	13.09	0.00	-0.73	0.47
TYS	3.16	0.31	0.04	10.30	0.00
Black Students	-85.61	8.97	-0.04	-9.55	0.00
Hispanic Students	-42.31	6.69	-0.02	-6.32	0.00
Black Teachers	-109.55	89.78	0.00	-1.22	0.22
Hispanic Teachers	2.76	17.48	0.00	0.16	0.88

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2010-2012 (Fig. 91). No Black students were taught by Black teachers. Black students taught Hispanic teachers outperformed Black students taught by White teachers. Hispanic students taught by Black teachers achieved the highest scores of the Hispanic students. Hispanic students taught by Hispanic teachers scored higher than Hispanic students taught by White teachers. White students taught by Black teachers outperformed the other White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

Math assessment scores were compared for ED students who were taught by Hispanic teachers or White teachers in 2010-2011 (Fig. 92). No Black teachers taught

any of the ED students for 2010-2011. All of the Black students and Hispanic students who were taught by Hispanic teachers outperformed the Black students and Hispanic students taught by White teachers. White students taught by White teachers achieved higher scores than White students taught by Hispanic teachers.

Figure 91. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2010-2011.

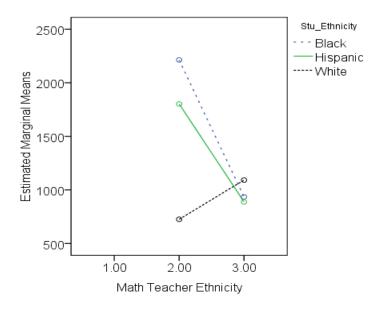


Figure 92. Math assessment scores for ED students taught by Hispanic teachers or White teachers in 2010-2011.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 93). The Black teachers did not teach any of the Black students. The Black students taught by Hispanic teachers scored higher than the Black students who were taught by the White teachers. Hispanic students taught by Black teachers outperformed the other Hispanic students. Hispanic students taught by Hispanic teachers scored higher than the Hispanic teachers taught by White teachers. White students taught by Black teachers

attained higher scores than the rest of the White students. White students taught by White teachers performed better than White students taught by Hispanic teachers.

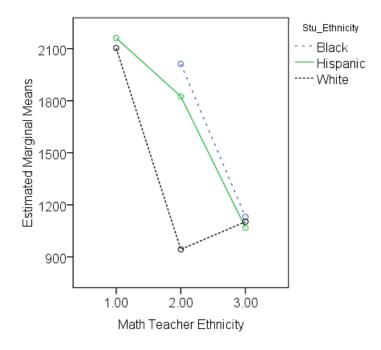


Figure 93. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2010-2011.

Math assessment scores were recorded for SPED students who were taught by White teachers in 2010-2011 (Fig. 94). Only White teachers taught SPED students in District C for the year 2010-2011. Therefore, no comparison could be made regarding teacher ethnicity and student ethnicity for this group of students.

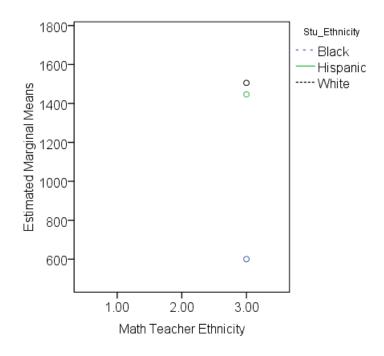


Figure 94. Math assessment scores for SPED students taught by White teachers in 2010-2011.

Math assessment scores were recorded for non-GT students who were taught by Black, Hispanic, or White teachers in 2010-2011 (Fig. 95). Black students taught by Hispanic teachers outperformed Black students taught by White teachers. No Black teachers taught any Black students. Hispanic teachers taught by Black teachers scored the highest of the Hispanic students. Hispanic students taught by Hispanic teachers achieved higher scores than Hispanic students taught by White teachers. White students taught by Black teachers scored the highest of the White students. White students taught by White teachers scored higher than White students taught by Hispanic teachers.

Math assessment scores were compared for GT students who were taught by Hispanic teachers or White teachers in 2010-2011 (Fig. 96). All Black students and Hispanic students were taught by White teachers. White students taught by Hispanic teachers outscored the White students taught by the White teachers.

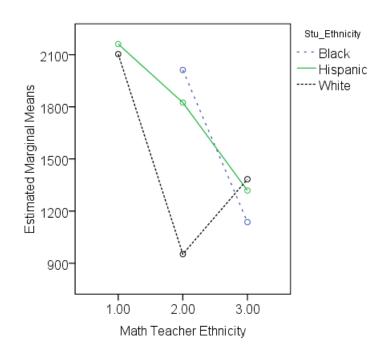


Figure 95. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2010-2011.

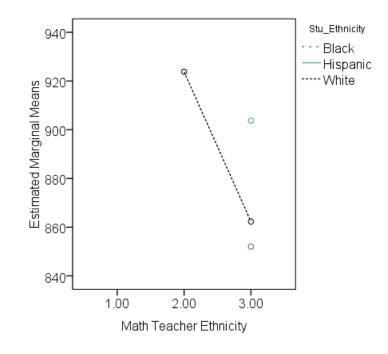


Figure 96. Math assessment scores for GT students taught by Hispanic teachers or White teachers in 2010-2011.

Math Assessment for 2011-2012

The Pearson's r correlation with the strongest relationship for the math assessment was grade level, r = 0.85, p = <.001, which had an effect size of r = .77 (Table 35). The next strongest correlation was campus, $r^2 = 0.69$, p <.001, which had an effect size of $r^2 = .48$. All other variables revealed a correlation less than the ED students, r = 0.29, p <.001, $r^2 =.08$. The relationship between the assessment scores and teacher and student ethnicity produced a very diminutive correlation.

Table 35

Pearson's r (r) for Math Assessment, District C, 2011-2012

Dependent	r	
Variable		
Assessment Score	1	
Grade Level	.85	
Campus Attended	.59	
Female	.00	
ED	30	
SPED	18	
GT	05	
TYS	.17	
Black Students	02	
Hispanic Students	21	
Black Teachers		
Hispanic Teachers	07	
	U1	

Note: Correlation was significant at p < .001 level (1-tailed).

Math assessment predictor variables of grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 76.8% of the variances, R^2 = .768. These variables were significant predictors of math scores, F(7, 8937) = 4221.31, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in math scores, ΔR^2 = .005, $\Delta F(3, 8934)$ = 8.38, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 80.1% of the variances being explained, R^2 = .801, F(10, 8934) = 3042.27, p < .001.

In Model 2, grade level, campus attended, TYS, and GT students had positive coefficients for math scores in 2011-2012 (Table 36). These coefficients were interpreted in terms of a single unit change. For example, SPED students (as per dummy codes) with coefficients of -108.56 points decreased their test scores on average by -108.56 points lower than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included Hispanic students (-54.50), ED students (-48.04), and students taught by Black teachers (-175.01) or Hispanic teachers (-24.57).

Regression Coefficient for Math Assessment District C 2011-2012

Table 36

Regression Coefficient for Matri Assessment, District C, 2011-2012					
Variables	В	SE	В	t	Sig.
Assessment Score	43.75	14.62		2.99	.00
Grade Level	207.22	1.76	.80	117.71	.00
Campus Attended	3.76	0.40	.06	9.35	.00
Female	-6.33	3.27	01	-1.93	.05
ED	-48.04	4.81	05	-10.00	.00
SPED	-108.56	13.51	04	-8.04	.00
GT	192.44	6.20	.16	31.04	.00
TYS	2.94	0.19	.08	15.35	.00
Black Students					
Hispanic Students	-54.50	3.98	07	-13.71	.00
Black Teachers	-175.01	51.55	02	-3.40	.00
Hispanic Teachers	-24.57	10.31	01	-2.38	.02

Math assessment scores were compared for non-ED students who were taught by Black teachers or White teachers in 2011-2012 (Fig. 97). No Hispanic teachers taught this group of students. All Black, Hispanic, and White students taught by White teachers outperformed the Black, Hispanic, and White students taught by Black teachers, respectively.

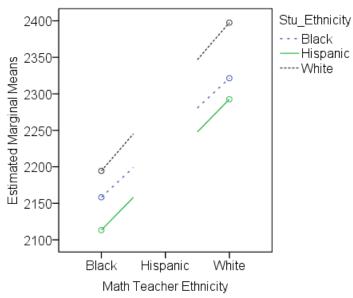


Figure 97. Math assessment scores for non-ED students taught by Black teachers or White teachers in 2011-2012.

Math assessment scores were compared for ED students who were taught by Hispanic teachers or White teachers in 2011-2012 (Fig. 98). Black students taught by White teachers achieved higher scores than Black students taught by Black teachers. None of the Black students in this group were taught by Hispanic teachers. Hispanic students taught by White teachers outperformed the other Hispanic students. Hispanic students taught by Black teachers attained higher scores than Hispanic students taught by White Hispanic teachers. White students taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers achieved higher scores than White students taught by Black teachers.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 99). All Black students, Hispanic students, and White students who were taught by White teachers achieved the highest scores, respectively. No Black students were taught by Hispanic teachers. Hispanic students taught by Black teachers scored higher than the Hispanic students

taught by Hispanic teachers. White students taught by Black teachers scored approximately the same as the White students taught by Hispanic students.

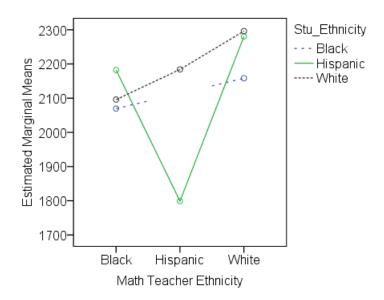


Figure 98. Math assessment scores for ED students taught by Black, Hispanic, or White teachers in 2011-2012.

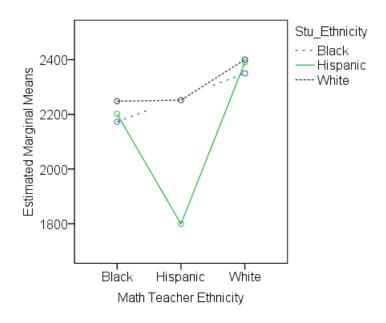


Figure 99. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for SPED students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 100). Black students taught by White teachers scored higher than Black students taught by Black teachers. Hispanic students taught by Black teachers scored marginally higher than Hispanic students taught by Hispanic teachers. None of the Black students or Hispanic students were taught by Hispanic teachers. White students taught by White teachers outperformed the other White students. White students taught by Hispanic teachers achieved higher scores than White students who were taught by Black teachers.

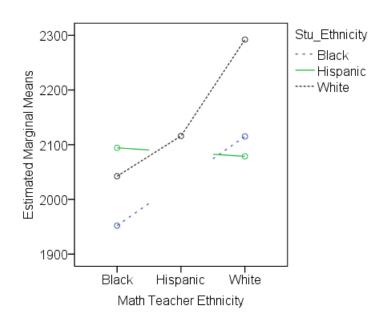


Figure 100. Math assessment scores for SPED students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2011-2012 (Fig. 101). Black students taught by White teachers scored higher than Black students taught by Black teachers. No Black students in this group were taught by Hispanic teachers. Hispanic students taught by Black teachers and those taught by White teachers achieved approximately

the same scores. Hispanic students taught by Hispanic teachers scored the lowest of the Hispanic students. White students taught by White teachers scored slightly higher than the White students taught by Hispanic teachers. White students taught by Black teachers attained only slightly lower scores than the rest of the White students.

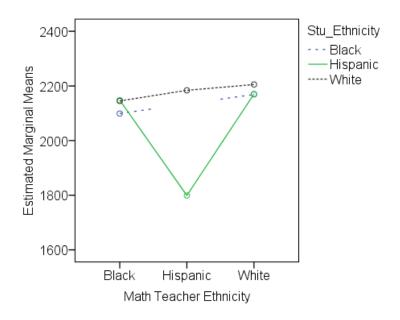


Figure 101. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2011-2012.

Math assessment scores were recorded for GT students in District C for 2011-2012 (Fig. 102). All GT students were taught by White teachers. Therefore, no comparison could be made regarding teacher ethnicity and student ethnicity.

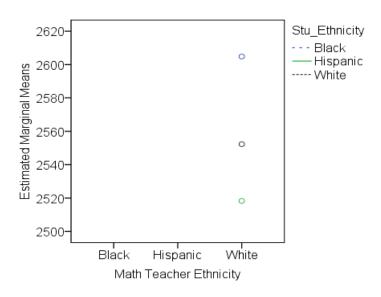


Figure 102. Math assessment scores for GT students taught by White teachers in 2011-2012.

Math Assessment for 2012-2013

Table 37

The Pearson's r correlation with the strongest relationship for the math assessment was grade level, r = 0.91, p < .001, which had an effect size of $r^2 = .83$ (Table 37). The next variable with a strong relationship was campus, r = 0.61, p < .001, $r^2 = .37$. All other variables produced a correlation less than the ED students, r = -.33, p < .001, $r^2 = 11$. The relationship between the assessment scores and teacher and student ethnicity produced very a diminutive correlation.

Pearson's r (r) for Math Assessment District C. 2012-2013

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r				
1				
.92				
.01				
.14				
14				
15				
.18				
12				
02				
21				
07				

Note: Correlation was significant at p < .001 level (1-tailed).

Math assessment predictor variables of grade level, campus attended, gender, ED, SPED, GT, and TYS accounted for 85.8% of the variances, $R^2 = .858$. These

variables were significant predictors of math scores, F(7, 4880) = 4219.38, p < .001. The inclusion of teacher and student ethnicity slightly increased the variances explained in math scores, $\Delta R^2 = .007$, $\Delta F(4, 4867) = 61.66$, p < .001. Model 2 with all predictors was statistically significant in predicting the math scores with 86.5% of the variances

In Model 2, grade level, campus attended, TYS, and GT students had positive coefficients (Table 38). The coefficients for the predictor variables were interpreted in terms of a single unit change. For example, SPED students (as per dummy codes) with coefficients of -59.36 points decreased their test scores on average by -59.36 points lower than non-SPED students, holding all other variables constant (controlling for the other variables in the model). Variables with negative coefficients included Black students (-78.56), Hispanic students (-53.60), students taught by Black teachers (-112.72) or Hispanic teachers (-23.73).

Regression Coefficient for Math Assessment District C 2012-2013

Table 38

being explained, $R^2 = .865$, F(11, 4876) = 2840.98, p < .001.

Regression Coefficient for Math Assessment, District C, 2012-2015					
Variables	В	SE	β	T	Sig.
Constant	58.89	14.39		4.09	0.00
Grade Level	201.11	1.82	0.85	110.47	0.00
Campus Attended	1.35	0.48	0.02	2.80	0.00
Female	-6.79	3.73	-0.01	-1.82	0.07
ED	-25.51	5.05	-0.03	-5.05	0.00
SPED	-59.36	12.24	-0.03	-4.85	0.00
GT	163.59	7.01	0.13	23.34	0.00
TYS	3.42	0.21	0.09	16.30	0.00
Black Students	-78.56	6.07	-0.07	-12.95	0.00
Hispanic Students	-53.60	4.60	-0.07	-11.66	0.00
Black Teachers	-112.72	75.22	-0.01	-1.50	0.00
Hispanic Teachers	-23.73	12.06	-0.01	-1.97	0.05

Math assessment scores were compared for non-ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 103). Black students taught by

Hispanic teachers achieved the highest scores of the Black students. Black students taught by White teachers' outperformed Black students taught by Black teachers.

Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White teachers achieved higher scores than the Hispanic students taught by Black teachers. White students taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers attained higher scores than White students taught by Black teachers.

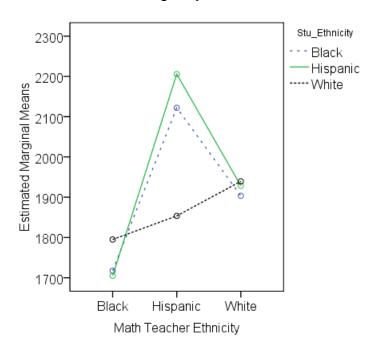


Figure 103. Math assessment scores for non-ED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for ED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 104). Black students taught by Hispanic teachers outperformed the Black students taught by White teachers. No Black students were taught by Black teachers. Hispanic students taught by Hispanic teachers scored the highest of the Hispanic students. Hispanic students taught by White

teachers scored marginally higher than the Hispanic students taught by Black teachers.

All White students were taught by White teachers.

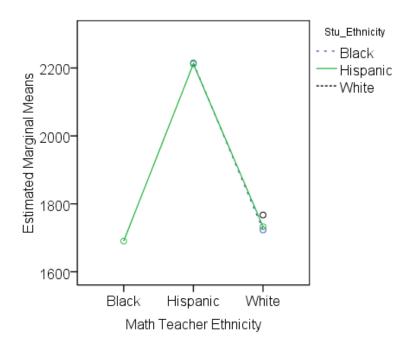


Figure 104. Math assessment scores for ED students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for non-SPED students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 105). Black students and Hispanic students taught by Hispanic teachers outperformed their peers, respectively. Black students and Hispanic students taught by White teachers achieved higher scores than their peers who were taught by Black teachers, respectively. White students taught by White teachers scored the highest of the White students. White students taught by Hispanic teachers scored marginally higher than White students taught by Black teachers.

Math assessment scores were compared for SPED students who were taught by Hispanic teachers or White teachers in 2012-2013 (Fig. 106). There were no Black teachers for this group of students. All Black students and all Hispanic students were

taught by White teachers. White students taught by White teachers outperformed the White students taught by Hispanic teachers.

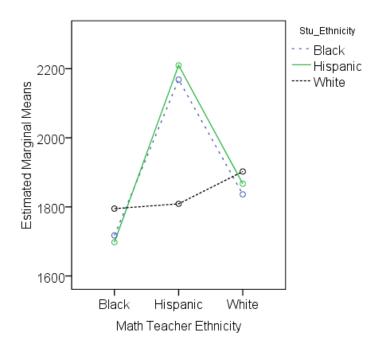


Figure 105. Math assessment scores for non-SPED students taught by Black, Hispanic, or White teachers in 2012-2013.

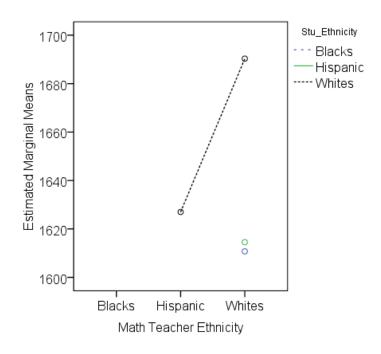


Figure 106. Math assessment scores for SPED students taught by Hispanic teachers or White teachers in 2012-2013.

Math assessment scores were compared for non-GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 107). Black students taught by Hispanic teachers achieved the highest scores of the Black students. Black students taught by White teachers scored approximately the same as the Black students taught by Black teachers. Hispanic students taught by White teachers also attained approximately the same score as the Hispanic students who were taught by Black teachers. White students taught by Black teachers performed marginally better than White students taught by White teachers. White students taught by Hispanic teachers scored the lowest of the White students.

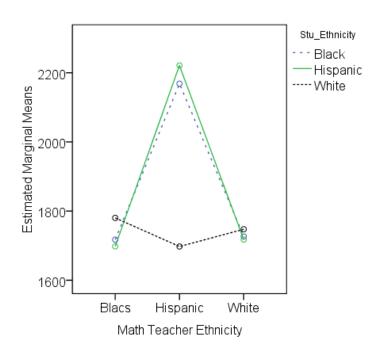


Figure 107. Math assessment scores for non-GT students taught by Black, Hispanic, or White teachers in 2012-2013.

Math assessment scores were compared for GT students who were taught by Black, Hispanic, or White teachers in 2012-2013 (Fig. 108). Black students taught by Hispanic teachers achieved the highest scores of the Black students. Black students

taught by White teachers scored approximately the same as the Black students taught by Black teachers. Hispanic students taught by White teachers also attained approximately the same score as the Hispanic students who were taught by Black teachers. White students taught by Black teachers performed marginally better than White students taught by White teachers. White students taught by Hispanic teachers scored the lowest of the White students.

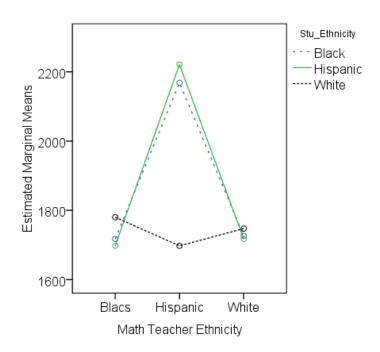


Figure 108. Math assessment scores for GT students taught by Black, Hispanic, or White teachers in 2012-2013.

Comparison of ELA/Reading Figures, 2010-2011

After visually comparing the 2010-2011 ED figures across the three school districts, no trends were identified in most cases when the students were taught by teachers of the same ethnicity. Black ED students taught by Black teachers were successful only in District C; Black ED students performed below passing in Districts A and B. When comparing Black ED students to how they performed when taught by Black, Hispanic, and White teachers, Black students in Districts A and B performed best

with Hispanic teachers. Hispanic ED students were successful only in District B when taught by Hispanic teachers, but in each district they performed the best when taught by Hispanic teachers. White students were successful in Districts A and B when taught by White teachers, but they performed better when taught by a Black teacher in District A and a Hispanic teacher in Districts B and C.

After visually comparing the 2010-2011 SPED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black SPED students taught by Black teachers were only successful in District A; Black SPED students performed below passing in District B, and in District C there were no Black or Hispanic teachers who taught SPED students. Comparison of Black students' performance when taught by Black, Hispanic, and White teachers demonstrated that Black students in District A performed better with Black teachers. However, they performed better with White teachers in District B. Hispanic SPED students were successful only in District A when taught by Hispanic teachers. When comparing Hispanic students' performance when taught by Black, Hispanic, and White teachers, they demonstrated better success with Hispanic teachers in District A. No Hispanic students were taught by Hispanic teachers in Districts B and C. White students were only successful in District B when taught by White teachers. White students were more successful when taught by Hispanic teachers in District A and by Black teachers in Districts B.

After visually comparing the 2010-2011 GT figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black GT students taught by Black teachers were only successful in

District A. Black GT students performed below passing in District C. No Black teachers taught Black GT students in District B. Black students in District A performed better with Hispanic teachers, and in District C they performed better with Black teachers. The Hispanic GT students were successful in Districts A and B when taught by Hispanic teachers. No Hispanic students were taught by Hispanic teachers in District C. White students were successful in Districts A and B when taught by White teachers. The White students were more successful when taught by Hispanic teachers in District B, but they performed better when taught by White teachers in Districts A and C.

Comparison of ELA/Reading Figures, 2011-2012

After visually comparing the 2011-2012 ED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black ED students taught by Black teachers were only successful in District A. Black ED student performed below passing in District C, and in District B Black teachers taught ED students. Black students in District A performed better with White teachers; in Districts B and C they performed better with Hispanic teachers. The Hispanic ED students were successful in Districts A and B when taught by Hispanic teachers, but they performed below passing in District C when taught by Hispanic teachers. White students were successful in Districts A and B when taught by White teachers. They were more successful when taught by Hispanic teachers in all three districts.

After visually comparing the 2011-2012 SPED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black SPED students taught by Black teachers were only successful in

District A. They performed below passing in District C, and in District B no Black teachers taught SPED students. Black students in all the districts performed best with White teachers. Hispanic SPED students were successful in District A and B when taught by Hispanic teachers. No Hispanic teachers taught Hispanic SPED students in District C. Hispanic students performed best when taught by Black teachers in Districts A and C, but in District B they performed best with Hispanic teachers. White students were successful in Districts A and B when taught by White teachers. However, when comparing how they performed with Black, Hispanic, or White teachers they were most successful when taught by Hispanic teachers in District B, and White teachers in Districts A and C.

After visually comparing the 2011-2012 GT figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black GT students taught by Black teachers were successful in Districts A and C; but in District B, no Black teachers taught GT students. Black students in Districts A and B performed best with Hispanic teachers, and in District C they performed best with Black teachers. Hispanic GT students were successful in Districts A and B when taught by Hispanic teachers. No Hispanic teachers taught GT students in District C. A comparison of Hispanic students' performance when taught by Black, Hispanic, and White teachers, demonstrated that Hispanic GT students were most successful when taught by Hispanic teachers in Districts B; however, in District A they performed best when taught by White teachers. White students were successful in Districts A and B when they were taught by White teachers. White students preformed

their best when taught by Black teachers in District A, Hispanic teachers in District B, and White teachers in District C.

Comparison of ELA/Reading Figures, 2012-2013

After visually comparing the 2012-2013 ED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black ED students taught by Black teachers were not successful in Districts A or C. In District B, no Black teachers taught Black ED students. When comparing how Black students performed when taught by Black, Hispanic, and White teachers, Black students performed best with White teachers in Districts A and B. In District C, Black students performed best with Hispanic teachers. Hispanic ED students were not successful in Districts A or C when taught by Hispanic teachers. No Hispanic teachers taught ED students in District B. Comparison of Hispanic students' performance when taught by Black, Hispanic, and White teachers demonstrated equal performance with Black and White teachers in District A. Hispanic students performed best when taught by White teachers in Districts B, but in District C, Hispanic students performed best with Hispanic teachers. White students were successful in Districts A and B when taught by White teachers. White students performed best when taught by Black teachers in District A and by White teachers in Districts B and C.

After visually comparing the 2012-2013 SPED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black SPED students taught by Black teachers were successful only in District A. In Districts B and C, no Black teachers taught SPED students. Comparison of Black students' performance when taught by Black, Hispanic, and White teachers

demonstrated that Black students performed best with Black teachers in District A. However, in District B Black students performed best with White teachers. Only White teachers taught Black SPED students in District C. In Districts B and C, no Hispanic teachers taught Hispanic SPED students. In District A, there were no Hispanic teachers. Comparison of Hispanic students' performance when taught by Black, Hispanic, and White teachers demonstrated that the Hispanic students performed best when taught by White teachers in Districts A and B; however, they performed best when taught by Black teachers in Districts C. White students were successful in Districts A and B when they were taught by White teachers. Comparison of White students' performance when taught by Black, Hispanic, and White teachers demonstrated they were most successful when taught by White teachers in all three school districts.

After visually comparing the 2012-2013 GT figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black GT students in Districts B and C were taught by White teachers, and there were no Black students taught by Black teachers in GT classes in Districts A and B. Therefore, it was not possible to make any comparisons regarding the Black GT students and teacher ethnicity. Hispanic GT students were successful in Districts A and C when taught by Hispanic teachers. No Hispanic teachers taught Hispanic SPED students in District B. Comparison of Hispanic students' performance when taught by Black, Hispanic, and White teachers demonstrated the Hispanic students performed best when taught by White teachers in Districts A and B; they performed best when taught by Hispanic teachers in District C. White students who were successful in Districts A and B were taught by White teachers. White GT students scored below

passing in District C. Comparison of White students' performance when taught by Black, Hispanic, and White teachers demonstrated greatest success when White students were taught by White teachers in Districts A and B, and by Hispanic teachers in District C.

Comparison of Math Figures, 2010-2011

After visually comparing the 2010-2011 ED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black ED students scored below passing in District A. No Black teachers taught Black ED students in Districts B and C. Comparison of Black students' performance when taught by Black, Hispanic, and White teachers demonstrated the Black students performed best when taught by Hispanic teachers in Districts A and C. However, the Black students performed best when taught by White teachers in District B. Hispanic ED students were successful in Districts A and B when taught by Hispanic teachers. In District C, Hispanic ED students scored below the passing rate. Comparison of Hispanic students' performance taught by Black, Hispanic, and White teachers demonstrated best performance when taught by White teachers in Districts A and B; Hispanic students performed best when taught by Hispanic teachers in District C. White students were successful in Districts A and B when they were taught by White teachers. White students scored below passing in District C. Comparison of White students' performance taught by Black, Hispanic, and White teachers demonstrated the White students were most successful when taught by Hispanic teachers in Districts A and White teachers in Districts B and C.

After visually comparing the 2010-2011 SPED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black SPED students taught by Black teachers were successful only in District A. In Districts B and C, no Black teachers taught Black SPED students. Comparison of Black students' performance when taught by Black, Hispanic, and White teachers demonstrated that Black students performed best with White teachers in Districts A and B. However, in District C only White teachers taught Black SPED students. Hispanic SPED students were successful in District B, but no Hispanic teachers taught Hispanic SPED students in Districts C. Comparison of Hispanic students' performance when taught by Black, Hispanic, and White teachers demonstrated the Hispanic students performed best with White teachers in District A; however, they performed best when taught by Black teachers in District B. White students were successful in Districts A and B when they were taught by White teachers. Comparison of White students' performance when taught by Black, Hispanic, and White teachers demonstrated best success when taught by Hispanic teachers in District A; however, District B White students performed best when taught by White teachers.

After visually comparing the 2010-2011 GT figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. No Black teachers taught Black GT students in any of the three school districts. Therefore, no comparison was made regarding Black GT students' success compared to teacher ethnicity. In District A, Black GT students performed best with White teachers. No Hispanic teachers taught Hispanic GT students in any of the three school districts. White students were successful in Districts A and B when they were

taught by White teachers. White students scored below passing in District C.

Comparison of White students' performance when taught by Black, Hispanic, and White teachers demonstrated the White students were most successful when taught by White teachers in Districts A and B, and by Hispanic teachers in District C.

Comparison of Math Figures, 2011-2012

After visually comparing the 2011-2012 ED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black ED students performed below passing in Districts A and C, but the Black ED students taught by Black teachers in District B scored in the passing range. Comparison of Black ED students' performance when taught by Black, Hispanic, or White teachers in the three districts demonstrated the students were most successful when taught by White teachers. Hispanic ED students were successful in District A; in District C, the Hispanic ED students performed below passing when taught by Hispanic teachers. No Hispanic teachers taught Hispanic ED students in District B. Comparison of Hispanic students' performance when taught by Black, Hispanic, or White teachers across the three districts demonstrated the Hispanic ED students performed best when taught by Hispanic teachers in District A, and best when taught by White teachers in Districts B and C. White students were successful across all three school districts when taught by White teachers. Comparison of White students' performance when taught by Black, Hispanic, or White teachers in all three school districts demonstrated the White students were most successful when taught by White teachers.

After visually comparing the 2011-2012 SPED figures across the three school districts, no trends were identified when the students were taught by teachers of the

same ethnicity. Black SPED students taught by Black teachers performed below passing in Districts A and C. However, in District B Black SPED students were successful when taught by Black teachers. Comparison of Black SPED students' performance when taught by Black, Hispanic, or White teachers demonstrated the Black students performed best when taught by White teachers in all three districts. Hispanic SPED students performed below passing in District B. No Hispanic teachers taught Hispanic SPED students in Districts A and C. Comparison of Hispanic SPED students' performance when taught by Black, Hispanic, or White teachers across the three school districts demonstrated that Hispanic students performed best when taught by White teachers in District B and by Black teachers in District C. White students were successful in all three school districts when taught by White teachers. Comparison of White students' performance when taught by Black, Hispanic, or White teachers demonstrated the White students were most successful when taught by Hispanic teachers in District A, and by White teachers in Districts B and C.

After visually comparing the 2011-2012 GT figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black GT students performed successfully when taught by Black teachers in District B. No Black teachers taught Black GT students in District A. White teachers taught all GT students in District C. Comparison of Black GT students' performance when taught by Black, Hispanic, or White teachers demonstrated the Black GT students were most successful when taught by White teachers in all three school districts. Hispanic GT students performed below passing in District B. No Hispanic teachers taught Hispanic GT students in Districts A and C. Comparison of Hispanic

students' performance when taught by Black, Hispanic, or White teachers demonstrated the Hispanic GT students performed best when taught by White teachers in District A; the Hispanic GT students scored equally as well when taught by Black teachers or White teachers in District B. White students were the most successful across all three school districts when they were taught by White teachers.

Comparison of Math Figures, 2012-2013

After visually comparing the 2012-2013 ED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black ED students performed below passing in Districts A and B. No Black teachers taught Black ED students in District C. Comparison of Black ED students' performance when taught by Black, Hispanic, or White teachers demonstrated the Black students performed best when taught by Hispanic teachers in Districts A and B. Hispanic ED students were successful when taught by Hispanic teachers across all three school districts. Comparison of Hispanic students' performance when taught by Black, Hispanic, or White teachers demonstrated they were most successful when taught by Hispanic teachers in all three school districts. White ED students performed below passing across the three school districts when taught by White teachers.

Comparison of White students' performance when taught by Black, Hispanic, or White teachers demonstrated the White students were most successful when taught by Black teachers in Districts A and B, and by Hispanic teachers in District C.

After visually comparing the 2012-2013 SPED figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black SPED students taught by Black teachers performed below

passing in Districts A and C. However, in District B they were successful when taught by Black teachers. Comparison of Black SPED students' performance when taught by Black, Hispanic, or White teachers demonstrated the Black students performed best in all three school districts when taught by White teachers. Hispanic SPED students performed below passing in District B. No Hispanic teachers taught Hispanic SPED students in Districts A and C. Comparison of Hispanic SPED students' performance when taught by Black, Hispanic, or White teachers demonstrated they performed best when taught by White teachers in District B and by Black teachers in District C. White students were successful in all three school districts when they were taught by Black, Hispanic, or White teachers. Comparison of White students' performance when taught by Black, Hispanic, or White teachers demonstrated they were most successful when taught by Hispanic teachers in District A; however, White students were most successful in Districts B and C when taught by White teachers.

After visually comparing the 2012-2013 GT figures across the three school districts, no trends were identified when the students were taught by teachers of the same ethnicity. Black GT students performed below passing in Districts A and C. No Black teachers or Hispanic teachers taught Black GT students in District B. A comparison of Black GT students' performance when taught by Black, Hispanic, or White teachers demonstrated they were most successful when taught by Hispanic teachers in Districts A and C. Hispanic GT students were successful among all three districts when taught by Hispanic teachers. A comparison of Hispanic students' performance when taught by Black, Hispanic, or White teachers demonstrated they performed best when taught by White teachers in District B and by Hispanic teachers in

Districts A and C. White students were successful when taught by White teachers in Districts A and B, but they performed below passing in District C. A comparison of White students' performance when taught by Black, Hispanic, or White teachers demonstrated they performed best when taught by White teachers in District B and by Black teachers in Districts A and C.

CHAPTER 5

DISCUSSION

It is well known that an achievement gap exists among minorities and White students. Educators give various reasons that the achievement gap continues to exist after many decades, including the possibilities of genetics, economics, social, and cultural differences. Authors such as Takei and Shouse (2008), Brown (2006), Hays (2011), Cardenas and Cardenas (1977), and Dee (2003) conducted research studies that focused on the ethnicity or cultural differences among teachers and minority students.

Texas demographics continue to be more diverse. Black and Hispanic student enrollment in public schools continues to increase, while White student enrollment is decreasing. The Hispanic population had the largest enrollment increase in 2011-2012 (TEA, 2012). However, White teachers accounted for 63% of the teachers in Texas, where as Black teachers only accounted for 9% of the teachers in Texas, and Hispanic teachers represented only 24% of the teachers in Texas. As stated in earlier chapters, education directly correlates to the earning success of the labor force (Waller & Hase, 2004). To keep our economy abundantly productive and our standard of living increasing, teachers must be able to connect with all students regardless of their ethnicity, or they need to receive professional development to address these issues.

This study addressed the question: Do students show greater academic success in English Language Arts (ELA)/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers are the same ethnicity? Do students show greater academic success in math as measured by the TAKS™ exam scores in secondary education when their teachers

are the same ethnicity? Chapter 5 opens with a summary that discusses the results and findings of the two-model hierarchical multiple regression. It then discusses results and findings and provides recommendations.

Results and Findings

A two-model hierarchical multiple regression was conducted to evaluate ELA/reading assessment scores and math assessment scores for the 2010-2011, 2011-2012, and 2012-2013 school years to determine if minority students achieved higher scores when taught by teachers of the same ethnicity or a different ethnicity. Model 1 predictors included grade level, campus attended, gender, economically disadvantaged (ED) students, special education (SPED) students, gifted and talented (GT) students and teacher years of service (TYS). Model 2 included all of the above predictors with the addition of teacher ethnicity and student ethnicity. The quantitative data used for this study were collected from three North Texas school districts which provided specific student and teacher data. The data linked the student and teacher demographics with the students' assessment scores. The data for each group included student ethnicity; teacher ethnicity; gender; if the student was in the SPED program; whether the student was ED; if the student was in the GT program; the student's test scores on the TAKS™ and Skills in Math and Reading for grades 8, 10, and 11; grade level; campus attended; and teacher-student link by subject. The demographic groups included Black, Hispanic, and White students and Black, Hispanic, and White teachers. The three ethnic groups were chosen based on their size and public concerns about the achievement gap between these specific groups.

This study revealed a statistically significant difference when considering the TAKS™ assessment scores and the ethnicity of teachers and students. However, the difference in many cases was diminutive. The data for ESL/reading assessment scores and math assessment scores for Districts A, B, and C are summarized for the three school years of 2010-2011, 2011-2012, and 2012-2013.

District Comparisons for ESL/Reading Assessment Scores, 2010-2011

The correlations between assessment scores and ethnicity of students and teachers were diminutive. All models were statistically significant. Model 2 for Districts A and C were significant with all predictor variables accounting for 86.4% and 90.2% of the variances, respectively. However, the predictor variables in Model 2 for District B only accounted for 17.4% of the variances. In 2010-2011, the variables in Districts A and C accounted for a higher percentage of the variances. However, the predictor variables in District B consistently presented a low percentage of accountability. In each case, once teacher and student ethnicity were added, the ΔR^2 increased, but the increase was diminutive (.005, .009, and .005, respectively). The data showed that Hispanic students consistently received negative coefficients. In District A, Hispanic students would most likely receive a score 75.89 points below the average score of 2185.39, which would be in the passing range of 2100 or above. The District B coefficient was -12.14, which means Hispanic students were most likely to score about 12 points below the average score of 2328.71. They would also pass the TAKS™ assessment. In District C, Hispanic students would most likely receive a score 133.46 points below the average score of 1828.45, meaning these Hispanic students would fail the assessment. Black students showed an inconsistent coefficient pattern in all three school districts.

District Comparisons for ESL/Reading Assessment Scores, 2011-2012

The correlations between assessment scores and teacher and student ethnicity were diminutive. All models were statistically significant. Model 2 for Districts A and B were significant with all predictor variables accounting for 24.5% and 19.9% of the variances, respectively. However, Model 2 for District C was significant at 80.1% variance. In the 2011-2012 school year, the variables in District A accounted for a higher percentage of the variances. The predictor variables in District B consistently presented a low percentage of accountability. In each case, once teacher and student ethnicity were added, ΔR^2 change increased, but the increase was diminutive (.04, .010, and .005, respectively). The data showed that Hispanic students consistently received negative coefficients. In District A, Hispanic students would most likely receive a score 53.67 points below the average score of 2301.65, which would put them in the passing range. The District B coefficient of -17.33 would mean that Hispanic students were most likely to receive a score about 17 points below the average score of 2336.14. They would pass the TAKS™ assessment. In District C, Hispanic students would most likely receive a score 112.53 points below the average score of 2141.34, which means these Hispanic students would fail the assessment. Black students showed an inconsistent coefficient pattern in all three school districts.

District Comparisons for ESL/Reading Assessment Scores, 2012-2013

The correlations between assessment scores and teacher and student ethnicity were diminutive. All models were statistically significant. Model 2 in Districts A and C

was significant with all predictor variables accounting for 60.3% and 89.6% of the variances, respectively. The District B model was significant with predictor variables accounting for 17.5% of the variances. Hispanic students had a negative coefficient for all three school districts (-38.96, -19.87, and -41.59, respectively). In each case, when teacher and student ethnicity were added, ΔR^2 change increased, but the increase was diminutive (.019, .007, and .004, respectively). In 2013, the variables in Districts A and C accounted for a higher percentage of the variances. However, the predictor variables in District B consistently presented a low percentage of accountability. The data showed that Hispanic students consistently received negative coefficients. In District A, Hispanic students would most likely receive a score 38.96 points below the average score of 2216.32, which would put the students in the passing range. The District B coefficient was -19.87, which means these Hispanic students would most likely receive a score about 20 points below the average score of 2354.00. These Hispanic students would pass the TAKS™ assessment. In District C, Hispanic students would most likely receive a score 41.59 below the average score of 2058.07, which means they would fail the assessment. Black students showed an inconsistent coefficient pattern in all three school districts.

District Comparisons for Math Assessment Scores, 2010-2011

The correlations between assessment scores and the race of students and teachers were diminutive. All models where statistically significant. Model 2 for Districts A and C were significant with all predictor variables accounting for 75.3% and 89.7%, respectively; however, District B model was only significant at 26.1%. Hispanic students had a negative coefficient (-84.26, -20.75, and -42.31, respectively) for all

three school districts. In each case, once the ethnicity of teachers and students was added, ∆R² change increased, but the increase was diminutive (.021, .020, and .001, respectively). In 2011, the variables in Districts A and C accounted for a higher percentage. However, the predictor variables in District B consistently presented a low percentage of accountability. The data showed that Hispanic students consistently received negative coefficients. In District A, Hispanic students would most likely receive a score 84.26 points below the average score of 2044, which would put students in the failing range. The District B coefficient of -20.75 would most likely put Hispanic students 20 points below the average score of 2305.62. They would still pass the TAKS™ assessment. In District C, Hispanic students would most likely receive a score 42.31 points below the average score of 1778.93, which means they would fail the assessment. Black students did not show a consistent pattern of negative coefficients across all three school districts.

District Comparisons for Math Assessment Scores, 2011-2012

The correlations between assessment scores and the ethnicity of students and teachers were diminutive. All models were statistically significant. Model 2 for Districts A and B were significant with all predictor variables accounting for 33.9% and 29.6%, respectively; however, the variables in District C accounted for 80.1%, a much higher percentage. In each case, once teacher and student ethnicity were added, ΔR^2 change increased, but the increase was diminutive (.026, .013, and .005, respectively). In 2012, the variables in Districts A and B accounted for a much lower percentage. However, the predictor variables in District B consistently presented a low percentage of accountability. The data showed that Hispanic students consistently received negative

coefficients (-56.00, -18.45, and -54.50, respectively) for all three school districts. In District A, Hispanic students would most likely receive a score 56.00 points below the average score of 2243.83, which would put a student in the passing range. The District B coefficient of -18.45 would most likely put Hispanic students about 20 points below the average score of 2299.42. They would still pass the TAKS™ assessment. In District C, Hispanic students would most likely receive a score 54.50 points below the average score of 2117.22, which means they would fail the assessment. Black students did not show a consistent pattern of negative coefficients across all three school districts.

District Comparisons for Math Assessment Scores, 2012-2013

The correlations between assessment scores and the ethnicity of students and teachers were diminutive. All models were statistically significant. Mode 2 for Districts A and B were significant with all predictor variables accounting for 46.1% and 22.9%, respectively; however, the variables in District C accounted for 86.5%, a much higher percentage. In each case, once teacher and student ethnicity were added, ΔR^2 increased, but the increase was diminutive (.019, .019, and .007, respectively). In 2013, the variables in Districts A and B accounted for a much lower percentage. However, the predictor variables in District B consistently presented a low percentage of accountability. The data showed that Hispanic students consistently received negative coefficients (-77.46, -29.38, and -53.60, respectively) for all three school districts. In District A, Hispanic students would most likely receive a score 77.46 points below the average score of 2216.32, which would put a student in the passing range. District B coefficient of -29.38 would most likely put Hispanic students about 30 points below the

average score of 2333.16. They would pass the TAKS™ assessment. In District C, Hispanic students would most likely receive a score 53.60 points below the average score of 2056.60, which means they would fail the assessment.

This is the only school year that showed Black students to have a negative coefficient (-80.98, -64.53, and -78.56, respectively) across all three school districts. In District A, Black students would most likely receive a score 80.98 points below the average score of 2216.32, which would put them below the passing range. District B coefficient of -64.53 would most likely put Black students about 65 points below the average score of 2333.16. They would pass the TAKS™ assessment. In District C, Black, students would most likely receive a score 78.56 points below the average score of 2056.60, which means they would fail the assessment.

Recommendations

This study was conducted to analyze the impact teacher and student ethnicity have on student academic success. The study is important as we consider the future of our state. The Black and Hispanic student populations will continue to increase in Texas schools, and most likely White student populations in urban school districts will continue to decrease. To increase our understanding of how to help students be successful learners, it is recommended that this study be repeated to evaluate suburban and urban school districts and compare the two types of schools districts. There will most likely be more ethnic diversity among teachers and students in suburban schools, and they will consist of larger, more diverse student populations.

Second, it is recommended this study be repeated using the State of Texas

Assessments of Academic Readiness (STAAR) assessment rather than the TAKS™

exam because the STAAR assessment is subject specific and given to students the same school year they study the subject beging tested. Students who take English I will take the STAAR English I assessment. Students taking Algebra I will take the STAAR Algebra I assessment. The same pattern follows for science and social studies.

Third, completing this research study with a mixed method approach would allow many questions to be answered that may not be answered by a quantitative analysis. For example, a mixed method strategy provides more details about the relationship between teachers and students, the culture of the schools, and grading policies which can affect student success and self-esteem. A mixed method approach could also evaluate specific classroom characteristics.

The fourth recommendation is to conduct a longitudinal study. A longitudinal study would help determine student achievement patterns over years.

Summary

The academic achievement gap among minority students and White students has been pressing for decades. Educators give various reasons that the achievement gap continues to exist after many decades, including the possibilities of genetics, economics, social, and cultural differences. Researches such as Cardenas and Cardenas (1977), Dee (2003), Takei and Shouse (2008), and Hays (2011) have conducted research studies that focus on the ethnicity or cultural differences among teachers and minority students. They believe that ethnicity may play a role in the achievement gap.

As, the public schools of Texas are becoming more diverse and the teacher population remained at about 70% White, it is critical for the question to be addressed (TEA, 2013). Therefore, this study sought to eliminate ethnicity as a reason for the achievement gap by answering the questions: Do students show greater academic success in English Language Arts/reading as measured by the Texas Assessment of Knowledge and Skills (TAKS™) exam scores in secondary education when their teachers were the same ethnicity? Do students show greater academic success in math as measured by the TAKS exam scores in secondary education when their teachers were the same ethnicity?

To answer this question, a two-model hierarchical multiple regression analysis was conducted on the assessment scores of three school districts over 2010-2011, 2011-2012, and 2012-2013 to evaluate how well students performed on TAKS™ when their teachers were of the same ethnical culture. Model 1 analysis predictors included students' campus, grade level, gender, teacher years of experience, if the student participated in SPED, and ED status. Model 2 included all of the above predictors with the addition of ethnic relationship between the teacher and students. The regression equation varied depending on the predictor, district, year, and subject. This study directly link student and teacher ethnicity to the performance of students' assessment scores, which was absent from prior studies.

Although all models were statistically significance, and all correlations between student and teacher ethnicity with assessments for ELA and math were diminutive.

There were no strong effect sizes that related the student and teacher ethnicity, and the assessment scores of ELA or math. There were several negative coefficients for

students and teachers ethnicity, however in most cases they did not cause the assessments scores to drop below passing. Furthermore, the figures in most cases illustrated that there were no consistent trends regarding students' success when students were taught by teachers of the same ethnicity across any of the districts for any school year or subject.

APPENDIX

To Whom It May Concern,

I am a graduate student of the University of North Texas working under Dr. Camp (Bill.Camp@unt.edu). Attached to this email you will find a summary of the methodology of my dissertation and an excel spread sheet that identifies the variables for students and teachers that I need to collect. I will need the demographics of the teachers linked with the reading and math scores of the students. Please feel free to make any adjustments that you feel is necessary to protect the identity of your students or teachers

I would like the TAKS[™] data for students in grades 8, 10, and 11 for 2011, 2012, and 2013.

In the same excel spread sheet please include the following variables: Student ID (ghost ID), Grade, Campus, Gender, Ethnicity (race), SES Status, SPED Yes/NO, GT Yes/No, Math Score, Reading Score, and Reading Teacher ID, Math Teacher ID

Also include the following variables for the students' math and ELA/reading teachers-Years of Experience, Gender, Age, and ethnicity (race).

Please put all student and teacher variables on one spread sheet and each year on a separate spread sheet. See headers.

Excel Spread Sheet 1

School Year 2010-2011			
	Grade		
	8	10	11
Student ID Grade Campus Gender Race SES SPED GT Math Score Reading Score			
Math Teacher Race Years of Experience			
Reading Teacher			

Race		
Years of		
Experience		

Table 2
Excel Spread Sheet 2

	School Year	2011-2012	
	Grade		
	8	10	11
Student ID			
Grade			
Campus			
Gender			
Race			
SES			
SPED			
GT			
Math Score			
Reading Score			
Math Teacher			
Race			
Years of			
Experience			
Reading Teacher			
Race			
Years of			
Experience			

Table 3 Excel Spread Sheet 3

Zxoor oprodu orroot o		r 2012-2013	
	Grade		
	8	10	11
Student ID			
Grade			
Campus			
Gender			
Race			
SES			
SPED			
GT			
Math Score			

Reading Score		
Math Teacher Race Years of Experience		
Reading Teacher Race Years of Experience		

REFERENCES

- Banks, J. A., Cookson, P., Gay, G., Hawley, W. D., Irvine, J. J., Nieto, S., . . . Stephan, W. G. (2001). Diversity within unity: Essential principles for teaching and learning in a multicultural society. *Phi Delta Kappa International, 83*(3), 196-198, 200-203. Retrieved from http://www.jstor.org/stable/20440100?seg=1#page scan tab contents
- Belton v. Gebhart, 87 A.2d 862 (Del. Ch. 1952).
- Bireda, S., & Chait. R. (2011). Increasing teacher diversity: Strategies to improve the teacher workforce. *Center for American progress*. Retrieved from https://cdn.americanprogress.org/wp-content/uploads/issues/2011/11/pdf/chait_diversity.pdf
- Bolling v. Sharpe, 347 U.S. 497 (1952).
- Briggs v. Elliott, 98 F. Supp. 529 (E.D. S.C. 1951).
- Bromberg, M., & Theokas, C. (2013, May). Breaking the glass ceiling of achievement for low-income students and students of color. *The Education Trust: Shattering Expectations Series*. Retrieved from http://www.edtrust.org/sites/edtrust.org/files/Glass_Ceiling_0.pdf
- Brown v. Board of Education, 347 U.S. 483 (1954).
- Brown v. Board of Education of Topeka, 98 F. Supp. 797 (D. Kan., 1951).
- Brown et al v. Board of Education of Topeka, 349 U.S. 294 (1955).
- Brown, T. L. (2006). *Measuring the Black-White achievement gap in racially isolated schools*. Santa Barbara, CA: University of California.
- Burnett, B., & Lampert J. (2011). Teacher education and the targeting of disadvantage. *Scientific Research*, *5*(2), 446-451. doi: 10.4236/ce.2011.25064
- Capps, R., Fix, M., Murray, J., Jason, O., Passel, J., & Herwantoro, S. (2000). The new demography of America's schools immigration and the No Child Left Behind Act. http://www.urban.org/UploadedPDF/311230_new_demography.pdf
- Cardenas, B., & Cardenas, J.A. (1977). *The theory of incompatibilities*. San Antonio, TX: Intercultural Development Research Association.
- Carter, P. L., & Welner, K. G. (2013). *Closing the opportunity gap.* New York, NY: Oxford University Press.

- Dalton, A. R. (2011). Speaking the unutterable: White teachers and Black children (Doctoral dissertation, Georgia Southern University). Retrieved from http://digitalcommons.georgiasouthern.edu/cgi/viewcontent.cgi?article=1568&context=etd
- Darling-Hammond, L. (2013). Inequality and school resources: What it will take to close the opportunity gap. In P. L. Carter & K. G. Welner (Eds.), *Closing the opportunity gap* (pp. 77-97). New York, NY: Oxford University Press.
- Davis v. County School Board of Prince Edward County, 103 F. Supp. 337 (E.D. Va. 1952).
- Dee, T. (2005). A teacher like me: Does race, ethnicity or gender matter? *American Economic Review*, *95*(2), 158-165. doi: 10.1257/000282805774670446
- Dee, T. S. (2003). *Teachers, race and student achievement in a randomized experiment* (Unpublished manuscript). Retrieved from http://media.hoover.org/sites/default/files/documents/ednext20042unabridged_dee.pdf
- Editorial Projects in Education Research Center. (2004, August 3). Issues A-Z: A nation at risk. *Education Week*. Retrieved from http://www.edweek.org/ew/issues/a-nation-at-risk/
- Editorial Projects in Education Research Center. (2011, July 7). Issues A-Z: Achievement gap. *Education Week*. Retrieved from http://www.edweek.org/ew/issues/achievement-gap
- Executive Office of the President. (2015, July). Giving every child a fair shot: Ensuring all students have equal opportunity to succeed. Retrieved from https://www.whitehouse.gov/sites/default/files/docs/esea_white_house_report_.p df
- Faltis, K. (2011). Bilingual, ESL, and English immersion: Educational models for limited English proficient students in Texas. *Pepperdine Policy Review, 4*(8). Retrieved from:

 http://digitalcommons.pepperdine.edu/cgi/viewcontent.cgi?article=1007&context=ppr
- Gallagher, J. J. (2015). Political issues in gifted education. *Journal for the Education of the Gifted*, 38(1), 77-89. doi: 10.1177/0162353214565546
- Gardner, D. P. (1983). *A nation at risk: The imperative for educational reform.* Retrieved from: http://www2.ed.gov/pubs/NatAtRisk/index.html

- Gardner, W. (2013, February 25). *The IQ debate*. Retrieved from:

 http://blogs.edweek.org/edweek/walt_gardners_reality_check/2013/02/the_iq_debate.html?qs=the+achievement+gap
- Garrett, R. (2008, March 5). Factoring in the achievement gap. Retrieved from http://www.education.com/magazine/article/Factors_Out_School_Control/
- Garrett, R. (2014, May 14). *Is standardized testing failing our kids?* Retrieved from http://www.education.com/magazine/article/Standardized_Testing/
- Goldsmith, P. A. (2007). Schools' racial mix, students' optimism, and the Black-White and Latino-White achievement gaps. *Sociology of Education*, 77(4), 121-147.
- Harry, B., & Klingner, J. (2007). Discarding the deficit model. *Improving Instruction for Students with Learning Needs*, *64*(5), 16-21.
- Hays, J. M. (2011). Student to teacher racial/ethnic ratios as contributors to regional achievement gaps, 1999-2008 (Doctoral dissertation). Retrieved from http://ditigal.library.unt.edu/ark:/67531/metadc103326/
- Hemphill, F. C., & Vanneman, A. (2011). Achievement gaps: How Hispanic and White students in public schools perform in mathematics and reading on the national assessment of educational progress (NCES 2011-459). Retrieved from http://nces.ed.gov/nationsreportcard/pdf/studies/2011459.pdf
- Jorgensen, M. A., & Hoffman, J. (2003). Assessment report: History of the No Child Left Behind Act of 2001 (NCLB). Retrieved from http://images.pearsonassessments.com/images/tmrs/tmrs_rg/HistoryofNCLB.pdf
- Jung, L. A., & Guskey, T. R. (2010). Grading exceptional learners. *Educational Leadership, 67*(5), 31-35. Retrieved from http://www.ascd.org/publications/educational-leadership/feb10/vol67/num05/Grading-Exceptional-Learners.aspx
- Ladson-Billings, G. (2006). From the achievement gap to the education debt:
 Understanding achievement in U.S. schools. *Education Researcher*, *35*, 3-6. doi: 10.3102/0013189X035007003
- Levin, B. (1995). Educational responses to poverty. *Canadian Journal of Education*, 20(2), 211-224. doi: 10.2307/1495278
- Maxwell, L. (2013). Fixing the 'Opportunity Gap' to close the achievement gap. *Education Week*. Retrieved from: http://blogs.edweek.org/edweek/campaign-k-12/2013/04/fix_the_opportunity_gap_to_clo.html?qs=the+achievement+gap

- McCoach, D. B., & Siegle, D. (2003). The school attitude assessment survey—revised: A new instrument to identify academically able students who underachieve. *Educational and Psychological Measurement, 63*(3), 414-429. doi: 10.1177/0013164402251057
- McLaurin v. Oklahoma State Regents for Higher Education, 339 U.S. 637 (1950).
- Missouri ex rel Gaines v. Canada, 305 U.S. 337 (1938).
- Murdock, S., Zey, M., Cline, M. E., & Klineberg, S. (2010). Poverty, educational attainment and health among America's children: Current and future effects of population diversification and associated socioeconomic change. *Journal of Applied Research on Children: Informing Policy for Children at Risk, 1*(2), 1-33. Retrieved from http://digitalcommons.library.tmc.edu/childrenatrisk/vol1/iss1/2
- National Center for Education Statistics. (2013). *Digest of education statistics*. Retrieved from https://nces.ed.gov/programs/digest/d13/tables/dt13_209.10.asp
- National Center for Education Statistics. (2015). *Racial/ethnic enrollment in public schools*. Retrieved from http://nces.ed.gov/programs/coe/indicator_cge.asp
- National Center for Education Statistics. (2015). *The condition of education 2015.*Retrieved from http://nces.ed.gov/pubs2015/2015144.pdf
- National Collaborative on Diversity in the Teaching Force. (2004). Assessment of diversity in America's teaching force: A call to action. Retrieved from http://www.ate1.org/pubs/uploads/diversityreport.pdf
- National Education Association. (n.d.). *Focus on Hispanics, 2004-2005.* Retrieved from http://www.nea.org/assets/docs/HE/hispanicsfocus05.pdf
- National Education Association. (2011, May). Understanding the gaps: Who are we leaving behind and how far? In L. E. Garcia (President), *Closing the gaps: A policy conversation to advance an opportunity agenda.* Symposium conducted at the meeting of the National Education Association in Washington, DC. Retrieved from https://www.nea.org/assets/docs/18021-Closing-Achve-Gap-backgrndr-7-FINAL.pdf
- No Child Left Behind Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).
- Peterson, J., & Colangelo, N. (1996). Gifted achievers and underachievers: A comparison of patterns found in school files. *Journal of Counseling and Development, 74*, 399-407.
- Pew Research Center. (2014, Aug. 18). *Dept. of Ed. projects public schools will be 'majority-minority' this fall.* Retrieved from http://www.pewresearch.org/fact-

- tank/2014/08/18/u-s-public-schools-expected-to-be-majority-minority-starting-this-fall/
- Plessy v. Ferguson, 163 U.S. 537 (1896).
- Plylor v. Doe, 457 U.S. 202 (1982).
- Ramsay, M. C. (2014). *TEA PEIMS data*. Retrieved from http://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25769818308&IibID=25769818411
- Ritchotte, J. A., Matthews, M. S., & Flowers, C. P. (2014). The validity of the Achievement-Orientation Model for gifted middle school students: An exploratory study. *Gifted Child Quarterly*, *58*(3), 183-198. doi: 10.1177/0016986214534890
- Rubenstein, L. D., Siegle, D., Reis, S. M., McCoach, D. B., & Burton, M. G. (2012). A complex quest: The development and research of underachievement interventions for gifted students. *Psychology in the Schools, 49*(7), 678-694. doi: 10.1002/pits
- Rushton, J. P., & Jensen, A. R. (2005). Thirty years of research on race differences in cognitive ability. *Psychology, Public Policy, and Law, 11*(2), 235-294. doi: 10.1037/1076-8971.11.2.235
- Schneider, B., Martinez, S., & Owens, A. (2006). Barriers to educational opportunities for Hispanics in the United States. In M. Tienda & F. Mitchell (Eds.), *Hispanics and the future of America* (pp. 179-227). Washington, DC: National Academies Press.
- Siegle, D., & McCoach, D. B. (2009). Issues related to the underachievement of gifted students. In B. McFarlane & T. Stambaugh (Eds.), *Leading change in gifted education: The festschrift of Dr. Joyce Vantassel-Baska* (pp. 195-206). Waco, TX: Prufrock Press.
- Stutz, T. (2013, February 6). Senate passes bill to end 15 percent testing rule [Web log post]. Retrieved from http://trailblazersblog.dallasnews.com/2013/02/senate-passes-bill-to-end-15-percent-testing-rule.html/
- Sweatt v. Painter, 339 U.S. 629 (1950).
- Takei, Y., & Shouse, R. (2008). Rating in black and white: Does racial symmetry or asymmetry influence teachers assessment of a pupil's work habits? *Social Psychology Education*, *11*, 367-387. doi 10.1007/s11218-008-9064-0
- Texas Education Agency. (n.d.a). Chapter 8: Transitioning from the Texas assessment of knowledge and skills (TAKS™) to the state of Texas assessments of academic

- readiness (STARR)—Associated changes in scope and cost. Retrieved from http://tea.texas.gov/student.assessment/hb3plan/hb3-sec1ch8.pdf
- Texas Education Agency. (n.d.b). *Highlights of House Bill 3 transition plan*. Retrieved from http://www.esc20.net/users/gendocs/CurriculumForum/CCRS/HB3-Highlights.pdf
- Texas Education Agency. (n.d.c). *TAKS™ resources*. Retrieved from http://tea.texas.gov/student.assessment/taks/
- Texas Education Agency. (2010a). 2009 comprehensive annual report on Texas public schools (Document No. GE10 601 01). Austin, TX: Author. Retrieved from http://tea.texas.gov/acctres/Comp_Annual_2009.pdf
- Texas Education Agency. (2010b, December). *House Bill 3 transition plan*. Retrieved from http://tea.texas.gov/student.assessment/hb3plan/
- Texas Education Agency. (2011). The student success initiative: 2009-2010 biennium evaluation report. Retrieved from http://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=2147495750&libID=2147495747
- Texas Education Agency. (2012, December). Enrollment in Texas public schools 2011-12 (Document No. GE13 601 02). Retrieved from http://tea.texas.gov/acctres/Enroll_2011-12.pdf
- Texas Education Agency. (2013a, July). *Accountability manual*. Retrieved from http://ritter.tea.state.tx.us/perfreport/account/2013/manual/manual.pdf
- Texas Education Agency. (2013b, March). Enrollment in Texas public schools, 2012-13. Retrieved from http://tea.texas.gov/acctres/enroll_index.html
- Texas Education Agency. (2014a, September). *Grade-level retention in Texas public schools, 2012-13.* Retrieved from http://tea.texas.gov/acctres/Retention_2012-13.pdf
- Texas Education Agency. (2014b, November). *Enrollment in Texas public schools* 2013-14 (Document No. GE15 601 03). Retrieved from http://tea.texas.gov/acctres/Enroll 2013-14.pdf
- Texas Education Agency. (2015). *TAKS Resources*. Retrieved from http://ea.texas.gov/student.assessment/taks/
- Texas Project FIRST. (n.d.) *Texas assessment of knowledge* & *skill (TAKS™)*. Retrieved from http://texasprojectfirst.org/TAKS™.html

- The National Commission on Excellence in Education. (1983, April). *A nation at risk:*The imperative for educational reform. Retrieved from

 http://datacenter.spps.org/uploads/sotw_a_nation_at_risk_1983.pdf
- The Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 (2010).
- Uhlenberg, J. Brown, K. M. (2002, August). Race gap in teachers' perceptions of the achievement gap. *Education and Urban Society*, 34(4), 493-530.
- University of Maryland v. Donald G. Murray, 169 Md. 478 (1936).
- U.S. Department of Education. (2009). *LEP partnership*. Retrieved from http://www2.ed.gov/about/inits/ed/lep-partnership/index.html
- U.S. Department of Education, National Center for Educational Statistics, Institute of Education Sciences. (2013). *The nation's report card* (NCES 2014-087). Retrieved from http://www.nationsreportcard.gov/reading_math_g12_2013/#/
- Waller, L. R., & Hase, K. N. (2004). The Texas dilemma the ethnic gaps widen. *The Community College Enterprise*. 10 (2), 79-86.
- Wested. (n.d.) Workbook for improving school climate & closing the achievement gap:
 Using your California healthy kids & California school climate surveys. Retrieved
 from http://chks.wested.org/resources/CTAGWorkbook-ctag.pdf
- Williams, J. (2013, July 5). *Educating the gifted child*. Retrieved from http://www.education.com/magazine/article/Gifted Talented Education/