EXAMINING THE ACHIEVEMENT GAP: THE EFFECTIVENESS OF AFRICAN AMERICAN TEACHERS INSTRUCTING AFRICAN AMERICAN STUDENTS IN KANSAS CITY PUBLIC SCHOOLS

A Dissertation

Presented to

The Faculty of the Graduate School

at the University of Missouri

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

By

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July 2013
The undersigned, appointed by the Dean of the Graduate School, have examined a
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EXAMINING THE ACHIEVEMENT GAP: THE EFFECTIVENESS OF AFRICAN
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“All things, whatsoever ye shall ask in prayer, believing, ye shall receive.”

~Matthew 21:22

To my invaluable network of support:

My parents, Thomas and Judith Jordan, instilled in me that hard work and perseverance is the key to great success. Thank you for pushing and believing in me. I want to also thank you for your words of wisdom, encouragement, and love.

My sister, Kimberly, and brothers, Tommy, Freddie, and Anthony, who have consistently reminded me of what family means. We were taught to always to be there for each other. You all consistently went above and beyond the call of duty.

My children, Jordan and Gabriella, are the reasons that I do, what I do. The passion that I have for children deepened upon your birth. Every child to me is a precious, authentic jewel waiting to be presented in a world in which opportunities are endless. I am grateful for the blessings provided for me to not only be your mother, but also your teacher helping you spread your wings, soaring above and beyond.

Finally, I must say thank you to my husband, Clifton Campbell. You have been my rock, strength, coach, friend, voice of reason, and greatest support. You believed in me when no one did, including myself. I am forever grateful and thankful for such an awesome person. You are my inspiration and motivation. Thank you for enduring all of the long days and hours with me.

We can now close this chapter in our book, as I dedicate this work to all of you!
ACKNOWLEDGMENTS

“For with God nothing shall be impossible.”
~Luke 1:37

The printed pages of this dissertation not only hold the culmination of this study, but it reflects a community of educators and friends that inspired my work as a student. My journey to complete my doctoral degree in education began well over three years ago and the impact this has had on my life will never be forgotten.

I would like to first like to thank my advisor, Dr. Peggy Placier, for her support, patients, and guidance during this entire process. She embraced my work and never doubted the mission I set forth to complete.

The members of my dissertation committee, Dr. Carol Maher, Dr. Mary Laffey, Dr. Juanita Simmons, and Dr. James Sebastian, modeled what it means to be an exemplar team. They directed me through this process with fidelity, even when I believed at times the vision of my work had diminishing and that the light at the end of the tunnel had burned out. They provided support that allowed me to design a study around an area of focus that was not only near and dear to my heart, but also personal to me as an urban school administrator.

I want to send a personal thank you and express my deepest gratitude to Dr. Carol Maher, Dr. Mary Laffey, and Dr. Juanita Simmons for being inspirational leaders. I am forever grateful to such a unique group of ladies who are committed to the work of their students. They kept me grounded and focused, while continuing to challenge my thinking around urban education and the impact this may have on my study. This could not have been done without them.
Additionally, thank you to Dr. Sebastian who truly taught me the meaning of a “multiple regression” study, while also branding me with the skills needed to create, interpret, and effectively articulate a statistical study.

Thank you to Dr. John W. Covington for his vision for the Kansas City cohort. I would not be here today if it were not for his relentless pursuit and commitment to building leaders who are dedicated to their work, moving towards the trajectory of an excellent educational system for all children.

Many thanks to my colleagues for sharing their enthusiasm, hard work, determination, and support throughout this program: Philomina Harshaw, Anthony Lewis, Dennis Walker, Marquis Stewart, Bob Wilcox, Steve Scraggs, and Jose Verduzco.

Lastly, I want to thank the Curriculum and Data Department in KCPS for assisting me with the assessment data necessary for completing my doctoral program: Michael Reynolds, Lewis Gowin, and their team.
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Chapter One

Introduction to the Study

Over several years the American public educational system has failed to address one of the most infuriating problems faced by our nation, narrowing the achievement gap in urban districts with urban learners. Historically, minority students have not paralleled the academic performance of their White counterparts. This holds true with standardized assessments in addition to high school graduation and college admission rates (U. S. Department of Education, 2006). With continuous reflection upon the school system, policy makers, researchers, building administrators, and teachers have worked tirelessly to determine what the next steps are with the entrenched problem we face (Hale-Benson, 1982; Kozol, 1991; Lomotey, 1978). Nationally there have been repeated attempts and continuous research to solve the vexing problem and inadequacies of this gap; however, the solution is still very complicated.

The majority of urban school populations today are students of color, but urban schools are staffed by predominately White teachers and administrators. In 1954, approximately 82,000 African American teachers had the responsibility of educating 2 million African American public school students in the nation. This changed after the ruling in the Supreme Court’s decision in Brown vs. Board of Education of Topeka, Kansas (Hawkins, 1994). Lewis (2006) states that today, more often than not, minority students are being educating by individuals who are not of their racial, cultural, and gender background. Research now states that almost 87% of elementary and secondary teachers are White in the United States, while only 8% are African American (Lewis, 2006; U.S. Department of Education, 2004). Minority students, who were to benefit from Brown, are now the most underachieving group of students in our schools. Many
discussions have taken place on how one must look beyond the test scores when it comes to educating children; however, as a nation, test scores are still the leading determinant of our students success and their ability to compete locally, nationally, and globally. What factors contribute to the test performance of urban students? Might the cultural gap between teachers and students be important to consider?

Kansas City Public Schools (KCPS) has made repeated attempts to implement effective methods to improve teaching and learning. During the 1980’s under the desegregation order, as much as $11,700 per pupil was spent in Kansas City to support student achievement. This amount provided was more money per pupil, on a cost of living adjusted basis, than any of the other 280 largest districts in the country. Resources that were brought to the district due to the funds were new schools, higher teachers’ salaries, and amenities such as an Olympic-sized swimming pool with an underwater viewing room, televisions, and animation studios. The funds assisted with the student-teacher ratio which averaged 12 to 1, which during that time was the lowest of any major urban school district in the country. The end results were dismal, leaving test scores stagnant and with less racial integration, which was the supposed motivation for the plan. The end results were also demoralizing, due to the negative public attention brought to the district’s failure (Wesson, 2011). This experiment revealed that the educational problems in this district would not be solved by throwing money at students or schools, but by directly facing the dilemma of low student achievement (Hanushek, 1981).

Statement of the Problem

The National Center for Education Statistics (NCES) data reveals that on average African American students in the 4th, 8th, and 12th grades did not reach grade level proficiency in the core subject areas of reading, math, social studies, and science (NCES, 1998, 2000, 2002). Studies
have been conducted over years to determine what main factors relate to student achievement. These studies identified teacher skills, administrative support, district support, school culture, climate, and so forth. Student achievement objectives were supported financially as a solution to improve teaching and learning. This support was provided by purchasing instructional resources and programs that promised, if used in totality, to sustenance the learning of children at all instructional levels. Although the intent was good, no one program, person, or practice has been the cure-all for the decline in student achievement.

Two years ago, the district began its transformation to revolutionize the instructional delivery methods in public education. Yet the latest Missouri Assessment Program (MAP) scores reveal that only 29% of the student population is proficient in Communication Arts and only 28% of the student population is proficient in Math. The lack of full accreditation and insufficient improvement in achievement scores created an accelerated decline in enrollment. The district began with over 31,000 students in 2000, but today the district educates only 16,900 children and employs nearly 2,300 teachers and administrators. Moreover, because the transformation did not yield achievement results quick enough, the state of Missouri has proposed intervening to take over the district. There is a sense of urgency to implement reforms that will increase student achievement and graduation rates in KCPS. Many African American students in the district have failed End of Course (EOC) exams while graduating at the top of their class or becoming part of the 16.6% dropout system rate (KCPS, 2011).

The mission of KCPS was to produce fully-equipped global citizens through a relevant dynamic and rigorous curriculum, facilitated by culturally sensitive, highly skilled, effective, and committed educators who provide a safe, nurturing environment for each student to learn every day, in every subject without exception, as a transformational, multicultural education system.
However, students were leaving their schooling experiences without proper skills and training for high-paying jobs or the ability to be admitted into a four-year college or university.

Considering what has been missing in prior efforts, the factor that revealed itself so vividly to me was the relationship between teachers and students. During my tenure at the district, I observed a continuous decline in student achievement. As this decline transpired, I also observed how disconnected teachers and students became, whether intentional or not. Research states that having more African American teachers in the teaching force could potentially improve a wide range of developmental and academic needs for African American students (Milner, 2006). While evidence for this type of student/teacher relationship has been shown in several studies throughout our nation, no such relationship had been investigated in KCPS.

School districts nationwide are emphasizing their recruitment practices to bring minority teachers into the teaching profession (Williams, 2001). The key to improving student achievement consists of multiple factors in the urban core; however, exploring how African American teachers working with African American students impact academic achievement in the KCPS may create a different path to addressing the achievement disparities.

**Purpose of the Study**

The purpose of this study was to compare the achievement of African American students with African American teachers with the achievement of African American students with other teachers in the KCPS. Gursky, Rose, and Moss (2004) reported that African American students of today may possibly go 12 years in the educational system without ever being taught by or seeing an African American teacher. It has been determined that many African American students thirst for this type of interaction, longing for a relationship with their teacher to extend beyond academic learning. For many of these students, African American teachers play the roles
of counselors, role models, disciplinarians, parent-figures, and advocates for their overall academic, cultural, and social development.

Many effective educators and school leaders come from all backgrounds, but when teachers and students share similar backgrounds, especially in the urban core, the potential of having an additional impact on student performance is profound. Much has been written about African American teachers, their experiences, their curriculum development, and their teaching in public classrooms (Foster, 1997; Milner & Howard, 2004). Many authors argue that African American teachers are likely to be more effective with African American students by meeting their developmental and academic needs (Milner, 2006); however, there were few statistical studies that substantiated this claim. This study focused on the academic effectiveness of African American teachers with African American students in KCPS.

Research Questions

The research questions guiding this study were:

1. In Kansas City Public Schools for 3<sup>rd</sup>-6<sup>th</sup> grade students, what proportion of African American students are enrolled with African American teachers? How do schools vary in the extent to which African American students are matched to African American teachers?

2. What is the effect on achievement of having African American teachers instruct African American students, as measured by Acuity scores?

Design and Methods

The design and methods of the study that addressed the research questions are described in detail in Chapter 3. Briefly the design of the study combined descriptive and multiple
regression analyses. The questions above were based on descriptive statistics and an OLS regression.

Conceptual Underpinnings for the Study

The second largest minority groups in the United States comprising of around 16% of the total population (about 41 million) are African Americans. Many of these children live below the poverty level which typically places them in an urban educational setting (NCES, 1998). Because socioeconomic status (SES), as well as parent education, have been shown to be associated with school achievement (Barton & Coley, 2009), it has been difficult for researchers to distinguish the effects of SES and race.

As the United States progresses into the 21st century, student populations will be made up of increasing proportions of African American students (Lewis, 2006). These students are for the most part being educated by individuals who do not represent their cultural or racial background. The National Center for Education Statistics reports that Caucasian students excel over African American students with respect to educational access, achievement, and attainment (NCES, 2004), but that Caucasian teachers make up around 85% of the workforce, giving white educators more opportunities to influence African American students academic livelihoods. Research continues to explore the causes of different outcomes of education for African American students in comparison to Caucasian students; however, my premise is that the black-white achievement gap will continue if teacher-student relationships in the classroom are of poor quality (Martin & Baxter, 2001). There is a pressing need to know more about the impact that African American teachers have on African American students’ school outcomes (Landsman and Lewis, 2006). Researchers state that African American teachers demonstrate unique teaching styles that more directly relate to African American students’ achievement and school success.
It has been noted that African American teachers have significantly higher expectations for their students than Caucasian teachers in both high and low-achieving urban schools (Beady & Hansell, 1981). Therefore, these expectations may also have had an influence on the student outcomes in KCPS.

One of the least considered potential sources of the decline in KCPS was the shortage of culturally similar teacher role models. “One common hypothesis is that all children learned more when their home and school environments are well matched” and that same-race teachers are better able to provide African American students with “cultural congruence” between home and school (Ferguson, 2002b: 345). As the African American student population has continued to increase, the teaching force has been moving in the opposite direction. The minority teacher shortage is a major reason for the minority achievement gap, unequal life, and occupational outcomes for disadvantage students (Ingersoll & May, 2011).

Children are organically predisposed to be critical thinkers (Hooks, 2010). One issue in urban education is the lack of engaged pedagogy that allows students to embrace critical thinking. Engaged pedagogy begins with the assumption that good learning takes place when there is an interactive relationship between students and teachers (Hooks, 2010). Research evidence suggests that this opportunity is lost when teachers and students do not share the same racial or ethnic backgrounds. Thompson (2004) reported that Caucasian teachers, whether based on their own biases or pressures from building administrators, believe that African American students and other students of color should not be held to the same academic standards. If we continue to move along this trajectory in which teachers grant students “permission to fail” (Ladson-Billings, 2002), as a society we will face a population of uneducated adults living in poverty and higher levels of crime.
Limitations

On the national spectrum, around 7% of classroom teachers are African American with the figures ranking much lower in certain states with a triple decline when race and gender are considered. One of the potential limitations was having the capacity to accurately gather enough data from African American teachers to determine academic effectiveness of students with the same ethnicity.

Another limitation was that this study was based on one school district that does not represent all African American teachers in the district due to grades 3rd -6th only being used. Therefore this study should not be generalized, but it may be used as an example to guide studies in other districts.

KCPS has undergone “rightsizing” (closure of underutilized school buildings) and is currently in the process of transformational change. Through this period district administration, building administration, instructional staff, and positions have changed tremendously over a 6 month period. This instability was considered to present limitations in matching students and teachers, as well as determining who currently has access to the data and how much can be obtained.

Due to KCPS being a very transient and mobile district, households may have changed school placements numerous times throughout a school year, which presented the limitation of consistent classroom student rosters for teachers. The thought was that there may be limitations with teachers and students having the same race and cultural backgrounds due to data only being gathered by specific grade levels and content areas. Another limitation was not having data that determines student’s instructional experience with all prior year teachers of a specific race.
An additional limitation was that there may be school based effects that limit information on school level factors such as administrators having the autonomy to decide which students are placed in what teacher’s classrooms, teacher attitudes, culture, and climate of building. “Hierarchical” methods enter variables into the model in a specified order (Brace, Kemp, & Snelgar, 2000, pg. 210); however this study did not use a hierarchy linear model which may also have been a limitation.

Assumptions

Unquestionably, there is a need for more Latino, Native, Asian, and African American teachers in U. S. schools (Gay, 2000). This however led to a dangerous assumption that student achievement in urban school districts could only take place when students were instructed by individuals of their own ethnic group. Similar ethnicity between teachers and students was potentially beneficial, but it was not a guarantee of pedagogical effectiveness (Milner, 2006).

Another fallacious assumption that was a part of the argument for more African American teachers is the belief they all share the knowledge, skills, and commitments needed to successfully teach African American students (Milner, 2006). Individual and within-group differences beyond the scope of this study had the potential to make some teachers more effective than others.

Definition of Key Terms

This study was conducted on an urban district model; therefore, the incorporation and use of terms may be unfamiliar. Below is a general guide of definitions for the purpose of this study. MAP. Missouri Assessment Program is an assessment that is based on the Missouri state standards. This assessment defines what students should be learning each year and in each subject. This assessment is administered to students from 3rd to 8th grade (DESE, 2012).
Acuity. The purpose of the Acuity assessments is to provide diagnostic measures for grade 3-8 students in English/Language Arts (ELA), Mathematics, Science, and Social Studies, as well as for students in Algebra I. Assessment reports provide standards-aligned performance data, which support an educator's ability to inform instruction at the student, class, school, and district level. For grades 3-8, there are three types of assessments available: Predictive, Standard Diagnostic, and Curriculum MAP-Aligned (DESE, 2011).

SES. Socioeconomic status is a sociological and economic combined total of a person’s work experience and of family or individual economic and social position in relation to others based on income, education, and occupation as defined by Wikipedia.

IEP. Individual Education Program is a written document developed by a team of individuals for all public school children who are eligible for special education as defined by Wikipedia.

AYP. Adequately yearly progress is targets that were established by the Missouri Department of Elementary and Secondary Education based on a MAP data, attendance rate data and graduation rate data from prior years. AYP is met when all targets above are met (DESE, 2011).

EOC. End-of-Course is a type of assessment/exam given to high school students from 9th-12th grade. This assessment defines what students should learn in each subject during the year (DESE, 2011).

Reform system. To improve by alteration, correction of error, or removal of defects; meaning to put into a better form or condition.

Rightsizing. During the administration of Superintendent John Covington, this term was used to describe the process of closing school buildings and consolidating students and teachers in fewer facilities.
Critical Thinking. Critical thinking is the ability to apply reasoning and logic to unfamiliar ideas, opinions, and situations (Hooks, 2010).

Transformation. In an organizational context, a process of profound and radical change that orients an organization in a new direction and takes it to an entirely different level of effectiveness. Transformation implies a basic change of character and little or no resemblance with the past configuration or structure.

Pedagogy. The Instructional Theory of Wikipedia defines pedagogy literally means "to lead the child" where a teacher develops conceptual knowledge and manages the content of learning activities.

Multiple Regressions. Multiple regressions is a statistical technique that allows one to predict a score on one variable on the basis of the scores on other variables (Brace, Kemp, & Snelgar, 2000).

Descriptive Statistics. Descriptive statistics summarizes large volumes of data (Brace, Kemp, & Snelgar, 2003).

OLS (Ordinary Least Square) Regression. OLS (ordinary least square) is a method used for estimating the unknown parameters in a linear regression model. This method minimizes the sum of squared vertical distances between the observed responses in the dataset and the responses predicted by the linear approximation.

Signature Schools. Signature Schools are defined by KCPS as schools with a specific educational theme that have been created so that students can develop specific talents and/or skills that enhance understanding in particular subjects (KCPS, 2011).

NCLB. The No Child Left Behind Act of 2001 is a reauthorization of the Elementary and Secondary Education Act, which included Title I, the government's flagship aid program for
disadvantaged students. The Act requires states to develop assessments in basic skills. NCLB supports standards-based education reform based on the premise that setting high standards and establishing measurable goals can improve individual outcomes in education (United States Department of Education, 2006).

Significance of the Study

Historically, African American teachers have succeeded in fostering optimal learning opportunities for students, especially students of their same race. This study aimed at understanding the impact that African American teachers may have on academic achievement with African American students who are performing at or below district and state levels. This study was significant to KCPS because of the urgent state the district is in, searching for an explanation of why student achievement is continuously stagnant and/or declining. It was my desire to determine if the impact of African American teachers showing academic gains for African American students reflects what researchers such as Ladson-Billings (2002) claim.
Chapter Two

Literature Review

This literature review began by reviewing the history of African American teachers educating African American students. The history of the achievement gap was then reviewed, connecting it to our current state of education and African American children today. Studies were synthesized, examining the causes of the achievement gap and providing evidence for factors associated with the achievement of African American students that have attempted to distinguish the effects of race and SES. This literature review examined the complexity of studies conducted on the achievement gap and some pertinent reasons it continues to be a critical concern for our educational system.

Some theorists and qualitative researchers proposed that African American teachers’ cultural knowledge is more congruent with that of African American students. Culturally relevant pedagogy built upon the conceptual framework of critical race theory in this regard. This framework was outlined to provide a perspective on why African American teachers may have a greater academic impact with African American students. Other literature examined engaged pedagogy linked to the child’s identity, teaching the whole child, and student-teacher relationships, although measurable and comprehensible data of this evidence was still a work in progress.

*History of African American Teachers*

As a prominent factor in promoting social change and improving life circumstances, African Americans strongly affirmed the role of education (JCPS, 1989). Historically, as noted by Franklin (1990), leadership was provided to the African American communities by educators who were the largest group of African American professionals. During segregation, African
American students were taught by skilled, dedicated, experienced, and concerned African American educators. While often maintaining better credentials than their White counterparts, African American administrators and teachers were familiar and had experience with the culture context (Southern Education Reporting, 1959). African American educators that worked in private and public schools were accountable for the educational achievement of children and adults that attended their school during the 19th and 20th century, valuing education as a method used to achieve social progress in addition to individual enrichment (Neverdon-Morton, 1989; Weiler, 1990). These educators expected every child to succeed and become an asset to society as opposed to a liability (Posey & Sullivan, 1990). Despite racial discrimination, poverty, and a host of other social inequities African Americans faced, moral and political support was provided by African American teachers. These educators determined that not only were basic skills necessary for the success of African American students, but also exposure to knowledge consisting of moral preparedness and a commitment to social and political responsibility (JCPS, 1989).

The 20th century led to a rise in African American teachers to around 70,000, suggesting that between 1932 and 1948 the number of African American teachers doubled, as populations of black students grew in the North, South, and Midwest. However, beginning in 1954, desegregation led to massive demotions and layoffs in 17 states for approximately 38,000 African American teachers and administrators (Holmes, 1990; King, 1993). Close to a third of these teachers lost their jobs, marking the beginning of a detrimental cycle for African American students with a direct link to the achievement gap (Foster, 1997).
Achievement Gap

Since first entering desegregated U.S. schools, African American children have experienced major difficulties (Anderson, 1988). These children are being placed between a rock and a hard place. The poor academic performance of such a large number of children is disgraceful. Even if a child begins to perform better in our current system, the insidious part is that they would only be performing better in a system that at best miseducates them (Akoto, 1992). However, African American children who are performing well in U.S. public schools are being trained away from the needs and interests of their own community. Closing the achievement gap among students by race and socioeconomic status remains a persistent theme even through funding increases, expansion of programs, and legislative amendments, despite the long-running national focus (Barton, Coley, 2009). At the end of the day, this continues to reflect an expansion of what is now called the “student achievement gap.”

For many schools and districts in the United States throughout American history, an education gap has been a challenge. The term “education gap” has had many different names going back as far as the 1800’s, according to the work of Margo (1990) and Anderson (2007). The first education gap was referred to as the “literacy gap.” This existed because 90% of Caucasian children during this time were able to read, while 90% of African enslaved children were unable to read. The Emancipation Proclamation and the end of Civil War minimized the “literacy gap.” Next, the education gap was recognized as the “elementary school attendance gap” (Anderson, 2007; Margo, 1990). The schools in existence during this time were predominantly for Caucasian students or schools who were unable to support all students that needed to attend, leaving African American students with no place to go (Anderson, 2007; Margo, 1990). Other names for the achievement gap were “high school completion gap.”
“college graduation gap,” and the “degree gap.” These gaps were minimized until 1989. Then the “education gap” became known as the “black-white achievement gap.” African American students were not demonstrating achievement as compared to Caucasian students, based on increasingly available standardized assessment data (Anderson, 2007; Margo, 1990; Haycock, 2001). The education gap is now referred to as the “student achievement gap” that has persisted despite recent reforms.

Lewis, James, Hancock, and Hill-Jackson (2008) discussed the concept of the black-white dichotomy, identifying black students as scoring far below the national achievement average on standardized assessments. Although over the years African American students made significant gains in both literacy and attendance in school, the struggle was apparent when performance on standardized test in reading and math was reviewed. The 2001 No Child Left Behind Act has left little room for alternative educational methods for public schools. Close attention has to be paid to the structural inequalities and myths about failure.

Factors Associated with the Lower Achievement of African American Students

Specific factors were identified as contributors to the achievement gaps in schools and districts in many urban communities. Due to multiple, complexly interrelated causes of this gap, the correlates were categorized into three main clusters: school related, socioeconomic status (before and beyond school), and life experience/parent factors in various studies as determined by the research outlined in the policy information report in Parsing the Achievement Gap II (Barton & Coley, 2009).

School Related

Many schools had a difficult time recruiting diverse and effective teachers and implementing effective instructional practices. Research was conducted on school related factors
consisting of, but not limited to, learning environments, curriculum, teacher training, instructional practices, and class size. School improvement continued to be studied as one of many areas that may have a dramatic affect of narrowing this gap.

Research evidence shows that a rigorous curriculum closely relates to students’ academic achievement. The use of longitudinal data from the High School and Beyond study by John Chubb and Terry Moe (2000), determined that academic program participation promotes academic achievement. Typically, there are no methods to measure a rigorous curriculum. This posed a problem of not being able to measure statistical differences of population groups and school rigor at the elementary and high school level, in addition to teacher preparedness. However, data representing the percentage of high school graduating seniors who took AP examinations showed substantial gaps in exam scores, with 29% of Black students and 63% of white students scoring 3.0 or better (NCES, 2008).

Teacher training has been studied as another cause of our current achievement gap. This prompted the requirement in NCLB that students received instruction from “highly qualified” teachers. Research showed that for teacher quality as defined by NCLB (most often, state certification for one’s teaching assignment) teachers who were not highly qualified were more likely than not to be teaching in high minority and high poverty schools. One study concluded that African American, free and reduced lunch students were less likely to be instructed by a certified teacher than White, non free and reduced lunch students (NAEP, 2007).

Teachers were more likely to have larger class sizes in schools with a larger minority population. A meta-analysis of 77 studies conducted years ago by Marshall Smith and Gene Glass (1978) determined that higher achievement took place in smaller classes compared to
larger classes (Glass & Smith, 1978). Additionally, the only large-scale class-size study, Project Star (1985), reached an identical conclusion confirmed by every school subject tested.

Socio Economic Status

Low household incomes contributed to low learning resources at home. Broken family structures and an unstable environment directly influenced academic achievement according to Maslow’s Hierarchy of Needs which supersedes the “Need to Know” stage (Maslow, 1943). This supported the claim that the socio economic status of a family has a tendency to directly impact nutrition and health, which are critical factors in school achievement. One statistical analysis attributed about 25% of the black-white achievement gap to health (Rothstein, 2004).

Experimental studies determined that students had higher test score gains when provided with vitamin and mineral supplements (Rothstein, 2004). When poor students were provided with a free breakfast at school, attendance improved and they gained an average of three percentile points on standardized test (Meyers, 1989). The recent synthesis of research revealed that food insecurity was associated with higher levels of behavioral and cognitive problems for pre-school and primary children. This study worked to confirm a direct correlation to a child’s developmental outcomes when economic factors such as poverty and income are considered (Zaslow, 2008). Although other socioeconomically differences and inequalities contribute to school quality, the gap remains as 29% of Black children continue to be food insecure compared to 12% of White children (Coley, 2009).

Parenting Gap

Schools have been charged with the primary responsibility of educating students and ensuring their academic and developmental success. Conversely, studies showed that parent involvement has a critical impact on student learning, motivations, and aspirations (Coley, 2009).
Patrick Welsh (2009) took it a step further by stating that African American children’s education is being undermined due to the lack of fathers in their lives. The explanation for the achievement gap is not related to race, schools, and resources, but it is a result of their parents not being around for their children (Welsh, 2009). The Chicago Longitudinal Study database was used to conduct research and document the contributions of family involvement. This research involved 1,539 low-income children in which 93% were African American, over a period of 17 years. This study concluded that parent involvement leads to higher levels of student performance, serving as a mechanism in which long-term effects of interventions can be achieved (Reynolds & Clements, 2005).

Social class patterns have also been researched in correlation to the achievement gap between White and African American students. Parents from different social classes tend to have different methods of communicating, disciplinary philosophies, and child rearing habits (Rothenstein, 2004). Research determined that professional parents speak an average of 2,000 words per hour to a child compared to working-class parents that averaged 1,300 words and welfare mothers that averaged 600 words per hour (Hart & Risley, 1995). Researchers tracked the frequency of verbal encouragement and reprimands to children, concluding that children of professionals averaged 6 verbal encouragements per reprimand as compared to one for every two scoldings for welfare parents and two for working-class parents (Rothenstein, 2004).

Statistical studies, therefore, have identified school, parent, and SES as having the strongest associations with lower African American student achievement. No study has explained this entire phenomenon. Numerous qualitative studies have suggested that other factors may be involved, and some of these factors may be related to the practices of African
American and White teachers with African American students. These include culturally relevant pedagogy and critical race theory.

**Culturally Relevant Pedagogy**

Educational structures and processes can make a difference in student achievement, especially those related to teaching and pedagogy. Culturally relevant pedagogy recognizes diverse cultural characteristics of students from different ethnic backgrounds and adjusts teaching methods to account for such diversity. Historically the term specifically deals with the instruction of African American students. This form of pedagogy has also been effective for students of all racial and ethnic backgrounds.

During the 1990’s the term culturally relevant pedagogy became popular and is defined as a teaching practice “that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impact knowledge, skill, and attitudes” (Ladson-Billings, 1994, pp. 17-18). It is a way for schools to acknowledge the home-community culture of the students and integrate cultural experiences, values, and understandings into the teaching learning environment through sensitivity to cultural nuances. The idea of culturally relevant pedagogy has also been identified as culturally relevant teaching, which demands that “students experience academic success, students develop and/or maintain cultural competence, and students develop a critical consciousness through which they challenge the status quo of the current social order” (Ladson-Billings, 1995, p. 160).

Ladson-Billings (1995) outlined three criteria for cultural relevant pedagogy:

1. An ability to develop students academically. This means to effectively help students read, write, speak, compute, pose, and solve higher order problems, and engage in peer review of problem solutions.
2. A willingness to nurture and support cultural competence in both home and school cultures. The key is for teachers to value and build on skills that students bring from their own culture.

3. The development of a sociopolitical or critical consciousness. Teachers should help students recognize, critique, and change social inequities.

Many studies have been conducted on how students respond to a teacher who exhibits the above characteristics by incorporating the principles and use of these strategies within the classroom. Research conducted by Young, Wright, and Laster (2005) and Haynes (2008) supports culturally relevant pedagogy. The instructional strategy used by teachers that foster curriculum that is culturally congruent with the backgrounds of African American students was the main focus of these studies. These culturally informed relationships allow African American teachers to develop meaningful, relevant (Ladson-Billings, 1994) and responsive (Gay and Kirkland, 2003) curricula and pedagogy in classrooms for African American students. Howard (2001) looked at “perceptions and interpretations” of students who experienced this kind of learning environment. The data that included student responses provided evidence that cultural relevance was an effective form of pedagogy. In the 1980’s, Erickson and Mohatt (1982) studied the cultural organization of social classrooms in which the teacher was of the same or similar race/ethnicity of their students. This study revealed that the learning environment in the class where the teacher and students were of the same culture benefited the student more as the teacher developed “adaptive ways of teaching.” Vogt, Jordan, and Tharp (1987) further noted that one explanation of school failure is cultural incompatibility. Race must be considered in how culturally relevant pedagogy is enacted. Using this framework of aiming to develop critical
thinking students who can achieve academically becomes more attainable, regardless of race, ethnicity, or background.

In developing the conceptual framework of culturally responsive pedagogy teaching behaviors, Gay (1994, 2000), Ladson-Billings’ (1994), and Nieto’s (1999) principles helped me to identify three areas. These areas are the child’s identity, teaching the whole child, and student-teacher relationships.

*Identity of a Child.* Identity has been defined as cultural construct. Teachers should realize that students who are ethnic or racial minorities see, view, and perceive themselves differently than those who are the majority group. Teachers who have the same ethnicity typically embrace this lens in a reflective manner, not ignoring the picture of identity development. Teachers can lay the groundwork for students to reclaim their history and voice “by reconnecting with their own backgrounds, sufferings, and triumphs of their own families” (Nieto, 1999, p. 167). This theory lets students know that individually and collectively their voice, presence, and contributions are valued. Identifying a variety of cultures within the classroom is the key to becoming a culturally relevant teacher. It creates a space of understanding that non-whites hold as much value as whites and that all races are significant in society. Culturally responsive teachers realize not only the importance of academic achievement, but also the importance of maintaining cultural identity and heritage (Gay, 2000).

*Teaching the Whole Child.* It is important for teachers to remember the needs of the total child. Culturally responsive teachers make the connection that culture resides in the individual. The interaction with students takes place individually and collectively recognizing, understanding, and acknowledging cultural group behaviors as well as individual uniqueness.
Stereotypical beliefs will become nonexistent when the whole child is viewed beyond their cultural group.

Student-Teacher Relationships. Teachers can have a meaningful impact on students’ academic and social success when they can relate to their situations and needs. Mitchell (1998) explained that in order for teachers to establish and maintain student motivation and engagement, they must be aware of each student’s feelings and social needs. The nature and the extent of the relationship between teachers and their students are critical in promoting student learning (Nieto, 1999). Pupils may trust and respect someone with whom they share salient characteristics, making learning come across as easier (Dee, 2004).

Ladson-Billings (1994) defines student-teacher relationships as fluid and equitable, extending beyond the classroom. Understanding the synergistic linkages between culture, cognition, and communication is crucial to the success of a student-teacher relationship (Ladson-Billings, 1994). Providing those caring interpersonal relationships is the hallmark of the culturally responsive teacher (Gay, 2000). In order to form better and authentic relationships with students, teachers must consider and value their student’s counter stories, for their perceived realities of lived experiences can unveil the historic and continuing presence of racism and the effects it has on students and families lives (Brown-Jeffy & Cooper, 2011).

Critical Race Theory

Critical Race Theory (CRT) first emerged as a framework developed by legal scholars as a law movement that began with the notion that racism is normal in American society. During the 1970’s, Critical Race Theory addressed forms of racism in society and also worked towards transformation as a method to understand how society aligns itself racially (Delgado & Stefancic, 2001). This theory provided a framework that can be used to theorize, examine, and challenge
the ways race and racism implicitly and explicitly impact social structures, practices and discourses. While culturally relevant pedagogy focuses on positive effects of teacher practices, critical race theory centers on the negative or oppressive effects of school and teacher practices and how they must be transformed.

Critical Race Theory has become increasingly popular in the field of education as race and racism play a critical role in the education of students of color. This theory provided a means of understanding institutional and structural racism in schools and society. In many instances, black students bring a set of experiences that have been grounded in racism, inequity, and misunderstanding (Milner, 2002). This type of racial discourse is important to unpack: “Whether we refer to them as monovocals, master narratives, standard stories, or majoritarian stories, it is important to recognize the power of white privilege in constructing stories about race” (Solórzano & Yosso, 2002, p. 28).

The voice of people of color is significant in order to complete the analysis of the educational system (Ladson-Billings & Tate, 1995). Due to the experience and history with oppression, African American people are better able to communicate matters of which Caucasians have no knowledge or experience (Delgado & Stefancic, 2001). An important piece to this educational puzzle is recognizing that behind each person is a story that can be told. Ladson-Billings and Tate (1995) referred to this notion as “naming one’s own reality.” As stated, “The story of one’s condition leads to the realization of how one came to be oppressed and subjugated allowing one to stop inflicting mental voices on oneself” (Ladson-Billings & Tate, 1995, p. 57).
Summary

A multitude of factors have been associated with the achievement of African American students, but no evidence of measurable outcomes determined if African American teacher’s identity had a greater impact on student achievement for African American students. Curriculum, teacher training, instructional practices, and class size deeply affect student achievement, in addition to socio economic status, parent participation, and child nutrition. We want to be careful not to naively assume that not narrowing our focus and digging deeper will lead to the close of this gap. The perspective can be misleading. Although skin pigment and income do not directly relate to low achievement, the characteristics of childrearing associated with social-class differences certainly may influence learning (Rothstein, 2004).

The achievement gap today is comparable to what it was five years ago. Gaps exist in the correlates of achievement. Although some have narrowed and some have widened, more often than not there has been very little change (Barton & Coley, 2009).

With little change made and such dramatic change needed, schools must move to address the methods of making schools work for all students and teachers. Revisiting predominantly African American schooling for African American students does not infer that we begin to simple move African American bodies to different facilities; but it provides the opportunity to think about what made segregated schools work as we outline a different foundation of structuring today’s schools (Milner & Howard, 2004).
Chapter Three
Research Design and Methods

As explained in Chapter 1, the purpose of this study was to compare the achievement of African American students instructed by African American teachers with the achievement of African American students instructed by teachers of other races in the KCPS, as measured by the districts Acuity C math assessment. The relationship between teacher race and student test data was explored. Ordinary Least Squares (OLS) regression was used as the analytical method for conducting the study.

Research Questions

Within the context of this study, the following research questions were addressed:

1. In Kansas City Public Schools for 3rd-6th grade students, what proportion of African American students are enrolled with African American teachers? How do schools vary in the extent to which African American students are matched to African American teachers?

2. What is the effect on achievement of having African American teachers instruct African American students, as measured by Acuity scores?

Research Design

Regression is a statistical technique that attempts to measure the strength of the relationship of a series of independent variables and one dependent variable (Brace, Kemp, & Snelgar, 2003). Specifically, my design of the study was a multiple regression, based on one year of student data in a single school district. I predicted there would be a relationship between African American teachers with African American students and student Acuity achievement, controlling for student, teacher, and school characteristics. The first question above was
addressed in two parts using descriptive statistics and descriptive analogy to describe how African American teachers were matched with African American students in the district. The second question was addressed through the OLS regression. As a generalized linear modeling technique, OLS was used to model a single response variable that has been recorded on at least an interval scale. This technique was useful because it was extended with the use of a dummy variable coding to include grouped explanatory variables (Hutcheson, 2011).

The behavior of humans is inherently noisy; therefore, it was not possible to produce fully accurate predictions. Multiple regression allowed an identified set of predictor variables to provide a useful estimate of participants most likely to score on a criterion variable (Brace, Kemp, & Snelgar, 2000). Students could not be assigned randomly to the two teacher groups (African American and non-African American); therefore, every effort was made to control for variables that previous studies have shown to influence elementary student achievement. These factors included socioeconomic status (SES), students with an IEP, and teacher experience (NEA, 2013). The following section describes the variables in the study.

Data Collection

The Dependent Variable for the study was math scores on the Acuity C assessment. Math was the focus because this content area was one of the accountability standards for the district. Implementing the OLS regression design required district provision of data from the Acuity assessments administered during the first and second semester of the 2012-2013 school year. The independent variables for the study were classified as student, teacher, and school. These variables consisted of gender, race, grade level, SES status, IEP, Acuity A, years of experience, percentage of African American students at schools, and signature schools.
Individuals that were consulted to assist me in gathering Acuity data included the Director of Elementary Education who worked closely with the Curriculum Department, the Data Department, and the Department of Human Capital. These teams of individuals were selected based on the knowledge, skills, ideas, and professional methods they used to collect academic data.

The Curriculum Department lent support by clearly defining what Acuity assessed at the district and state level. The Data Department’s support related to disaggregating the data based on African American teachers and students, while looking at a variety of variables at the student, teacher, and school level. Finally, the Department of Human Capital assisted with gathering data for teachers based on years of experience, race, and gender.

Participants

Kansas City Public Schools was the site in which data for this study was gathered. The reason this urban school setting was chosen is because KCPS is currently an unaccredited district that educates nearly 16,690 children and employing 2,300 teachers and administrators, with an 84.2% free and/or reduced lunch rate. In its last review, the State of Missouri noted that KCPS had not met most of the standards for accreditation, and particularly had not met targets for student achievement. This is an urban district that is another example of education that is not aligned or working towards the success of all students.

The study examined the population of all KCPS 3rd-6th grade students (N=3,468) and teachers from 26 elementary schools. The total of African American students whose data was used to determine the outcomes of this study was 1,801, compared to 1,667 other students. There were a total of 229 teachers in grades 3rd-6th. The total number of African American teachers was 69, compared to 160 other teachers. The rationale behind sampling 3rd-6th grade students relates
to these being the grade levels in which testing is aligned to state standards, along with the importance of district achievement as connected to Adequate Yearly Progress under the No Child Left Behind Act. These grade levels included major transitional years, in addition to being grades within the district that are being analyzed more closely to determine the academic future of students.

Variables Gathered for Analysis

Nationally, the Acuity assessment provides predictive and standard diagnostic measures for 3rd - 8th grade students in English/Language Arts, Mathematics, Science, Social Studies, and Algebra I. Acuity characteristics featured both Interim and Formative assessments that assisted educators with improving student achievement relative to the mandates and objectives of the NCLB. This assessment allowed growth to be measured across and within years at the student, class, school, district, and multi-district levels (CTB/McGraw-Hill, 2008).

The Acuity assessment was chosen to implement with fidelity for KCPS because it is aligned with the state assessment, MAP. It also helped to address diverse instructional needs in the classroom, while meeting rigorous accountability demands at the school and district levels, validating predictive outcomes for students’ success on the MAP (DESE, 2011).

The Acuity assessments included three predictive forms—A, B, and C—that reflected state accountability test blueprints for each content area and grade level. Work took place with the data department in the district to gather student assessment data on all three forms, with a focus on Math (CTB/McGraw-Hill, 2010).

Acuity A measured students’ content knowledge based on reading and math standards from the previous year’s state assessment, in addition to content for the current year. It was used as a standard diagnostic measure to determine skills that students mastered and skills that were
essential to review for academic success, relative to state standards (CTB/McGraw-Hill, 2010). This assessment was implemented in the first quarter during the third week of September.

Acuity B targeted instruction to accelerate learning. It measured students current content specific skills taught during the first semester of school and provided informed instruction at the student, class, and school level (CTB/McGraw-Hill, 2010). This assessment was implemented in the second quarter of school during the second week of December. Although data was gathered for Acuity B, this variable was not used in the final analysis due to the limited time provided between students taking Acuity B and Acuity C. It was determined that using this variable did not offer an accurate window of time between assessments.

Acuity C was used as a predictive assessment tool, measuring how well prepared students were in content and standards in their current grade level. This assessment was given to provide time to allow instructional intervention to occur in time to make a difference for students before taking the MAP assessment (CTB/McGraw-Hill, 2010). Acuity C was also used as the dependent variable due to its alignment to the MAP. This assessment was implemented during the third quarter of school and was administered to students at the end of the month in February.

The three predictive assessments provided a detailed measure of student growth and progress toward end-of-year goals (CTB/McGraw-Hill, 2008). Implementing these assessments over the course of two semesters provided a good lens in measuring what students truly knew and could accomplish.

The independent variables gathered in this study were classified as student, teacher, or school characteristics. Student variables included gender, race, grade level, SES status, IEP, and Acuity A scores.
Gender was considered, while the racial identities of students were organized in two categories of African American and other students (White, Hispanic, Asian, Indian, Pacific Islander, and Mixed).

Race was a critical variable to consider due to the focus of this study, determining the academic effectiveness of African American children being instructed by African American teachers. Research states that race matters, but it does not determine student performance (Bainbridge & Lasley II, 2002). Due to this being the major context of the study this variable was essential to the findings.

Student grade levels were selected as a variable due to the alignment of the assessment used. Acuity testing begins in 3rd grade and goes through 8th grade in the district. Selecting grade levels 3rd-6th provided me with a significant student sample, yet not too broad, allowing an accurate determination of the effects this had on student outcomes. Additionally, as a previous administrator in the district, I knew these grade levels were less transient than others. KCPS has K-6, 7-12 school configurations. When students entered the high school level as seventh graders, the attendance and enrollment dropped significantly. Third grade was selected as my lowest grade level due to this being a year in which a critical transition took place in what students learned from second grade. Students’ academic development would progress to another level from basic information learned, to applying information learned into multiple areas. In KCPS, many students were targeted if they were not making the needed progress as third grade students, which put them at risk for retention. Recognizing the importance of this juncture, 3rd-6th grade students would be critical to include in this study.

The socio-economic status of students was dichotomous, based on whether students received free or reduced lunch at their school site. Research stated that family economics and the
education levels of students’ parents were far more relevant than race and gender as it relates to predicting academic achievement. It has been found that the parents’ education level would be the best predictor of a child’s success in school (Bainbridge & Lasley II, 2002). Comparisons were faulty when looking at students who had their basic needs met opposed to other students who did not. Therefore, it was important for me to control for this and determine if SES would have any weight with the sample of individuals used by controlling for students receiving free or reduced lunch.

When students have an IEP many times they may not be able to access grade level instruction and participate fully on assessments. They are also expected to do worse than students without an IEP when it comes to a standardized assessment (National Center for Learning Disabilities, 2005). Students with an IEP have a variety of accommodations that they are provided based on their disability, which led this to being an important variable to control for. I wanted to hold this variable constant to determine if there was a relationship between African American students with African American teachers and Acuity C math assessment.

Acuity A was the last student variable in which I controlled for. It was important that the measurement tool aligned to the expected standards that were critical for the district and state. The district only used the Acuity assessment as a formative tool. The district also depended on Acuity to outline the blueprint of student achievement aligned to MAP. Without prior achievement information for students, there was no way in which confounding affects could be accounted for such as African American teachers being assigned to African American students with lower achievement and these teachers being strategically placed to boost student achievement. Therefore, Acuity was an essential variable as the results of my study would be
determined on academic outcomes for African American students with African American teachers strictly aligned to Acuity C math.

Teacher characteristic variables consisted of gender, race, and years of experience. Both male and female teachers were considered, in addition to their race as African American and other race teachers (White, Hispanic, Asian, Indian, Pacific Islander, and mixed).

Minority teachers are hard to come by, while research states that African American male teachers have become nearly extinct in the field of education (Toldson, 2013). This variable was important in concluding if there was a relationship between Acuity C math and African American students with African American teachers.

Teachers today are less likely to reflect the student body. However, research analysis showed that minority students, who were paired with a minority teacher, performed as much as 5% better on formative assessments (Alexander, 2012). Including this variable was of great interest due to the demographics of the district staff. There were a large number of female teachers at the elementary level in KCPS, which reflects national trends. In addition, less than 40% of those teachers are African American. My assumption was that this variable may have a relationship due to the number of African American teachers in 3rd-6th grade. I looked to determine if my assumption was valid upon the conclusion from the regression model.

Years of teaching experience was a categorical variable, with two categories of 1-5 years and 6 years or higher. The purpose of placing years of experience in categories of 1-5 years and 6 years or higher was due to teachers being considered tenured after 5 years of satisfactory teaching experience in the district. Tenure status has been plagued with the question of whether it has a negative effect or promotes student achievement. One study stated that when students received instruction from tenured teachers versus non-tenured teachers, they would have greater
academic achievement than the other students (Harris-Clark, 2010). This was a variable that I sought due to what research has stated and also due to the effects of the district’s non-tenured teachers, primarily consisting of teachers from the Teach For America organization. This variable was also critical based upon what research states is best for students and the impact tenured versus non-tenured has on academic achievement.

School characteristic variables consisted of the percentage of African American students at a specific school location. During the process of outlining descriptive statistics, the percentage of African American students attending both signature and non-signature schools was not equitable. Looking at the characteristics of the schools proved to be an area of great interest. Another variable was the designation of signature schools. Signature schools were defined as schools with an educational theme that were created so that students could develop specific talents or skills to enhance their understanding in certain subjects. Signature schools are not neighborhood schools, but students had the option to enroll based on their assessment scores, grade level entering school, and/or talents (KCPS, 2011). So when taken into consideration, controlling for signature schools would not only provide critical information to the district in how these schools were organized, but it would also provide information on which students would be likely to attend a signature school and if there would be a relationship with the outcomes of Acuity C math and African American students.

The variables above were all critical areas reviewed, controlling for any biases to the study and to determining what specific characteristics might be relevant to the outcomes of African American students being instructed by African American teachers. Table 1 provides a list of all variables used in addition to the description and source in which the information was obtained.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American Students</td>
<td>$3^{rd}$-$6^{th}$ grade students that are enrolled in Kansas City Public Schools</td>
<td>KCPS Data Department</td>
</tr>
<tr>
<td>Acuity A</td>
<td>Acuity A is the standard diagnostic measure used to determine skills that students need to review and have mastered</td>
<td>KCPS Data Department</td>
</tr>
<tr>
<td>IEP</td>
<td>Individualized Education Program is a written document for children who are eligible for special education services</td>
<td>KCPS Sped and Data Department</td>
</tr>
<tr>
<td>SES</td>
<td>Socio Economic status of students was determined by eligibility for free and/or reduced lunch services</td>
<td>Data Department</td>
</tr>
<tr>
<td>Female</td>
<td>All African American and other students who are not of the male gender</td>
<td>Data Department</td>
</tr>
</tbody>
</table>
Table 1 (Continued)

Variable Description and Sources

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>All teachers who classify themselves of the African American race that include both male and female</td>
<td>Human Capital</td>
</tr>
<tr>
<td>Teacher</td>
<td>All teachers who are not of the female gender regardless of race</td>
<td>Data Department</td>
</tr>
<tr>
<td>Male Teacher</td>
<td>Teachers who have been in their instructional roles for 5 years or less, known as new and beginning teachers</td>
<td>Human Capital</td>
</tr>
<tr>
<td>Teacher no tenure</td>
<td>Teachers who have been in their instructional roles for 5 years or less, known as new and beginning teachers</td>
<td>Department</td>
</tr>
<tr>
<td>Signature School</td>
<td>Schools within KCPS that have specific educational themes and focus areas in specific talents and/or skills</td>
<td>Kansas City Public Schools</td>
</tr>
<tr>
<td>African American</td>
<td>All African American male and female teachers that are currently KCPS employed</td>
<td>Data Department</td>
</tr>
<tr>
<td>Teacher</td>
<td>Grade level used as a dummy variable that will be compared to grades 3, 5, and 6</td>
<td>Data Department</td>
</tr>
<tr>
<td>Fourth Grade</td>
<td>Grade level used as a dummy variable that will be compared to grades 3, 4, and 6</td>
<td>Data Department</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>Grade level used as a dummy variable that will be compared to grades 3, 4, and 6</td>
<td>Data Department</td>
</tr>
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</table>
### Table 1 (Continued)

**Variable Description and Sources**

<table>
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<tr>
<th>Variable</th>
<th>Description</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sixth Grade</td>
<td>Grade level used as dummy variable that will be compared to grades 3, 4, and 5</td>
<td>Data Department</td>
</tr>
<tr>
<td>Race Match</td>
<td>This is a specific match of African American teachers who teach African American students</td>
<td>Data Department</td>
</tr>
</tbody>
</table>

**Method Used in Analysis**

Regression predicts an outcome of multiple independent variables on a dependent variable. The two methods used in this study were descriptive statistics and OLS regression model. For descriptive statistics, the researcher described characteristics and summarized 7 groups of data. The descriptive statistics was computed to address the first and second part of the research question, “How do schools vary in the extent to which African American students are matched to African American teachers?” and “In KCPS for 3rd-6th grade students, what proportion of African American students are enrolled with African American teachers?” For the OLS regression model, the researcher determined which characteristics had an association with Acuity C math scores and African American students being instructed by African American teachers. This process was completed by running multiple regression analysis on independent variables to address the second research question, “What is the affect on achievement of having African American teachers instruct African American students, as measured by Acuity C scores?”
Human Subjects Protection and Other Considerations

Data obtained from the district was de-identified so that individual teachers, students, and schools could not be recognized by name. Each was identified with a coded number. As a consequence, the study posed no human subjects risks to the participants.

Review of Limitations

Chapter 1 explained in greater detail how this study may have provided some limitations relating to how assessments were gathered, student-teacher placement, and school based structures.

Having enough data gathered from Black teachers and Black students in grades 3rd-6th was looked at as a possible limitation, if the numbers of these individuals were low. Turnover among district staff was also a possible limitation, relating to the accessibility and the time in which it took to retrieve information to complete this study. The current placement of students enrolled in their classrooms also proved to be a limitation when students had not been present in their current classroom for a minimum of 5 months during the school year. Not having information related to the student’s prior years instructional experience as it relates to a specific race was a limitation. A principal having the autonomy to decide how students were placed and organized in classrooms this year was a limitation of knowing if race was already a factor with student placements at the building level.

Summary

Research provided many perspectives from which to see things and a way of empirically analyzing the findings. It allowed us to see from where we have come, provided us with a description of where we are now, and gave us some semblance of the direction in which we seem headed (Rinaldo, 2005).
This chapter described the regression model in which the research was conducted. An outline supporting the method in how data was collected included the setting, participants, variables, and other considerations.
Chapter 4
Findings

Introduction

The achievement gap continues to be one of the largest social injustices for black students in the urban core. The relationship between race, class, and academic performance has been one of the most consistent features of education in the United States (Fass, 1989; Tyack, 1980). Research has been conducted in a variety of areas in attempt to identify factors contributing to urban students’ achievement. Areas of focus have consisted of increasing the number of minority teachers in schools, increasing parent support, a rigorous curriculum, culturally relevant pedagogy, teacher training, and teacher support to name a few (Ladson-Billings, 1994; Chubb & Moe, 2000; NAEP, 2007; Coley, 2009).

The research being conducted in this study was designed to determine the relationship between a teacher and student’s race, as it relates to a child’s educational achievement. As humans we face the difficult task of communicating across our individual differences. Teachers, however, are faced with an even more difficult challenge when communication guides instruction across racial and class lines (Delpit, 1995).

Study Design

The purpose of this study was to compare the achievement of African American students who had African American teachers with the achievement of African American students who had teachers of other races in the Kansas City Public Schools, as measured by the district Acuity C math assessment.

This first step to answering the fundamental question above was to determine how schools in the Kansas City Public School District varied to the extent of which African American
students were matched to African American teachers. It was then determined what proportion of African American students were enrolled with African American teachers.

Descriptive statistics were used to illustrate the distribution of teachers and students in the district. The OLS (ordinary least squares) regression method for estimating the unknown parameters in the linear regression model which is used for prediction, was used to determine the effect that African American teachers had on the achievement of African American students.

Students were deleted from this study if they had missing information or if they did not take one or more portions of the Acuity assessments. Another factor relating to students being deleted from this study was students who had not been assigned to their teacher for a minimum of 5 months during this instructional year. Lastly, students were removed from the study if the teacher they were assigned to was missing teacher characteristics in the database, such as gender and race. There were a total of 241 students’ with missing information. Therefore, the total number of students included in this study was 3,468.

Research Question

The following research questions were examined during the completion of this study:

1. In Kansas City Public Schools for 3rd-6th grade students, what proportion of African American students are enrolled with African American teachers? How do schools vary in the extent to which African American students are matched to African American teachers?

2. What is the effect on achievement of having African American teachers instruct African American students, as measured by Acuity scores?
Variable Creation

In order to ensure the use of all variables, it was imperative that the data was sorted into mutually exclusive categories using dummy variables. A dummy variable is known as a numerical variable used in regression, representing subgroups of the sample in this study. The value 0, 1 was used to indicate if a characteristic was true or not true. The variable was given a 0 when they were in the control group and a 1 when they were in the treated group (Trochim, 2006).

A total of 14 variables were controlled for in this study. The first variable was AA student. This variable was created by 1 equaling African American students and 0 equaling students of other races. Using a dummy variable meant that separate equation models for each subgroup did not require being written.

Acuity A math scores was the second variable. 1 equaled students having Acuity A math score and 0 equaled students who did not have an Acuity A math score.

Students with an IEP were the third variable and were classified as such. If a student had an IEP they were a 1 and if a student did not have an IEP they were a 0.

The SES status of students was the fourth variable outlined in this study. If students received full pay for their lunch they were 1 and if students received either partial or no pay to their lunch, they were a 0.

Characteristics relating to the gender of students were a critical factor. Therefore, the variable listed was female. 1 equaled a female student while 0 equaled a male student.

Teacher characteristics were also considered, making African American teachers the sixth variable. If a teacher was an African American teacher they were a 1 and teachers of other races were classified as 0.
Teacher years of experience were outlined as tenure and non-tenure status. If a teacher had one to five years of teaching experience they equaled a 1, while teachers who had six years or more experience equaled a 0.

The district in which this study was conducted was not only an urban public school system but it was a school system that included signature schools. This was an important variable to include; therefore, if a school was a signature school it was a 1, while non-signature schools were a 0.

The percentage of African American students within a school site was the tenth variable. If there were African American students enrolled in the school within 3rd-6th grade, they were in the treated group 1. If there were no African American students enrolled in a school within 3rd-6th grade then they were in the controlled group and labeled 0.

Achievement of fourth grade students was the eleventh variable, while fifth and sixth grade student achievement was the twelfth and thirteenth variable. If a student was in the fourth, fifth, or sixth grade, they were coded 1 while students who were not in those grades were coded 0. Students in 3rd grade were not included due to grades 4, 5, and 6 having to be compared to it.

The final variable used was race matched which consisted of African American students matched with African American teachers for instruction. If there was a teacher/student race match, then this was coded 1 and if there was not a teacher/student race match, then this was coded 0.

Descriptive Statistics for Students

Of the 3,468 student scores examined in this study, Table 2 outlines student characteristics: gender, race, grade level, SES, and IEP status.
There was a fairly even divide relating to student gender, with a slightly higher number of male students compared to female students. In terms of race, 4% more African American students enrolled in these grade levels compared to other students. Grade level configurations varied; however, it was determined that the largest number of enrolled students within a grade level was fourth grade followed by third grade, fifth grade, and sixth grade.

The SES status of students indicated that 93% of students were on free or reduced lunch, while 7% were full pay. This variable showed that there was not a wide enough variation to be considered and this will be displayed even further in the regression table.

There were 8% of students in 3rd-6th grade that had an IEP. This variable showed that there was not a wide enough variation to be considered because 92% of students did not have an IEP. This variable, however, was still considered during the regression model.

Table 2

Student Characteristics (N = 3468)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>940</td>
<td>27.1</td>
</tr>
<tr>
<td>4</td>
<td>1006</td>
<td>29.0</td>
</tr>
<tr>
<td>5</td>
<td>805</td>
<td>23.2</td>
</tr>
<tr>
<td>6</td>
<td>717</td>
<td>20.7</td>
</tr>
</tbody>
</table>

Table 2 (continues)
Table 2 (Continued)

Student Characteristics (N = 3468)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1725</td>
<td>49.7</td>
</tr>
<tr>
<td>Female</td>
<td>1743</td>
<td>50.3</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/AA</td>
<td>1801</td>
<td>51.9</td>
</tr>
<tr>
<td>Other</td>
<td>1667</td>
<td>48.1</td>
</tr>
<tr>
<td>SES Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free/Reduced</td>
<td>3234</td>
<td>93.2</td>
</tr>
<tr>
<td>Full Pay</td>
<td>234</td>
<td>6.8</td>
</tr>
<tr>
<td>Special Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEP</td>
<td>290</td>
<td>8.4</td>
</tr>
<tr>
<td>Other</td>
<td>3,178</td>
<td>91.6</td>
</tr>
</tbody>
</table>

The Acuity A math scores ranged from a low of 240 to a high of 718. The mean of Acuity A score was 437 (S.D. = 64.89). The Acuity C scores ranged from a low 240 to a high of 740. The mean of Acuity C scores was 476 (S.D. = 62.35). There were 241 missing cases not counted, however due to this being an outcome variable the levels were determined using a total of 3,468 students. All figures were under absolute one, indicating that the assumption of normality was met.
Table 3

Student Acuity A & C Results (N = 3468)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acuity A</td>
<td>437.29</td>
<td>64.89</td>
</tr>
<tr>
<td>Acuity C</td>
<td>476.33</td>
<td>62.35</td>
</tr>
</tbody>
</table>
Descriptive Statistics for Teachers

There were a total of 191 teachers providing instructional support for 3rd-6th grade students. As would be typical for elementary schools, there were a higher number of female teachers than male teachers. There were significantly fewer African American teachers compared to other teachers driving instruction in 3rd-6th grade as displayed in Table 4. As with the overall teacher population, African American teachers were more likely to be female. Additionally, it was clear that students regardless of race would more likely than not receive instruction by teachers who were not African American.

Table 4
Teacher Characteristics (N = 191)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>32</td>
<td>17.3</td>
</tr>
<tr>
<td>Female</td>
<td>159</td>
<td>82.7</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/AA</td>
<td>73</td>
<td>38.2</td>
</tr>
<tr>
<td>Other</td>
<td>118</td>
<td>61.7</td>
</tr>
</tbody>
</table>

Teachers years of experience was a dichotomous variable, with categories of teachers with 1-5 years of teaching as being non-tenured and teachers with 6 or more years of teaching as
being tenured. Table 5 shows that more than half of the teachers instructing in 3rd-6th grades were tenured compared to the total of non-tenured teachers.

Table 5

Teacher Characteristics (N = 191)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenured</td>
<td>132</td>
<td>69.1</td>
</tr>
<tr>
<td>Non-tenured</td>
<td>59</td>
<td>30.8</td>
</tr>
</tbody>
</table>

In Table 6, data shows that African American teachers were different from other teachers on their years of experience. African American teachers had on average almost 4 years more experience than other teachers. The variances were different, so the “equal variance not assumed” was used.

Table 6

Teachers Years of Experience Independent Sample (N = 191)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Black/AA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Years of experience</td>
<td>15.89</td>
<td>10.668</td>
</tr>
</tbody>
</table>
Descriptive Statistics for School

A total of 26 elementary schools in KCPS were included in this study as outlined in Table 7. Out of the 26 schools, 6 schools were identified as signature schools. Out of 3, 468 students enrolled in the Kansas City Public School District, a total of 845 (24%) attended a signature school while 2,623 (76%) attended a traditional public school. From the total of 854 students attending signature schools, 172 of those students were African American, while 682 of those students were classified as other.

Table 7

School Characteristics (N = 26)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>Traditional</td>
<td>20</td>
<td>77</td>
</tr>
<tr>
<td>Students Enrolled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td>845</td>
<td>24</td>
</tr>
<tr>
<td>Traditional</td>
<td>2623</td>
<td>76</td>
</tr>
<tr>
<td>Race of Students at Signature School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/AA</td>
<td>172</td>
<td>20</td>
</tr>
<tr>
<td>Other</td>
<td>682</td>
<td>80</td>
</tr>
</tbody>
</table>
The percentage of African American students enrolled at the traditional school was 36% and 64% for other students. Table 8 outlines school by school the enrollments; the average enrollment of African American students at signature schools was only 20% compared to other students enrolled around 80%. Figure 1 is a visual representation of the number of African American students matched to African American teachers at each school site, displaying vast differences of matches per school. Although the graph is not an aligned representation of the schools numbered in Table 8, it provided an image of the disparities from school to school.

Table 8

Percentage of Black/AA Students per School (N = 1,801)

* = Signature School

<table>
<thead>
<tr>
<th>School</th>
<th>Black/AA Students</th>
<th>Other Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1*</td>
<td>120</td>
<td>63</td>
</tr>
<tr>
<td>2</td>
<td>72</td>
<td>87</td>
</tr>
<tr>
<td>3*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>7*</td>
<td>30</td>
<td>12</td>
</tr>
</tbody>
</table>

(Table 8 continues)
Table 8 (continued)

Percentage of Black/AA Students per School (N = 1,801)

* = Signature School

<table>
<thead>
<tr>
<th>School</th>
<th>Black/AA Students</th>
<th>Other Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>68</td>
<td>31</td>
</tr>
<tr>
<td>11*</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>33</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>70</td>
<td>63</td>
</tr>
<tr>
<td>15*</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>31</td>
<td>70</td>
</tr>
<tr>
<td>17</td>
<td>79</td>
<td>45</td>
</tr>
<tr>
<td>18</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>19</td>
<td>53</td>
<td>43</td>
</tr>
<tr>
<td>20</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>21</td>
<td>154</td>
<td>99</td>
</tr>
</tbody>
</table>

(Table 8 continues)
Table 8 (continued)

Percentage of Black/AA Students per School (N = 1,801)

* = Signature School

<table>
<thead>
<tr>
<th>School</th>
<th>Black/AA Students</th>
<th>Other Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>22</td>
<td>19</td>
<td>68</td>
</tr>
<tr>
<td>23</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>72</td>
<td>67</td>
</tr>
<tr>
<td>25</td>
<td>48</td>
<td>66</td>
</tr>
<tr>
<td>26</td>
<td>94</td>
<td>51</td>
</tr>
</tbody>
</table>
Figure 1 displayed the race match of African American teachers to African American students at each school site. This figure led to an unexpected finding that will be discussed in further detail during the analysis.

Figure 1

Number of Black/AA students (N=1,801)
Analysis of Multiple Regression

Sample data was assembled from a variety of sources for this study. The dependent variable used for this study was Acuity C. This variable represented the predictive outcomes on how well prepared students would be for the MAP assessment given during the month of April.

The analysis of the study for all variables as displayed in Table 9, suggests a number of new perspectives on factors that have shown to have an association to the achievement outcomes for African American students in the KCPS as measured by Acuity C math.

In order for research question number 2 to be answered, several OLS regressions had to be run. Column 1 looked at the relationship of students who were African American and Acuity C math. On average, African American students scored 23.95 points below a student of another race on the Acuity C math assessment which is statistically significant at p<0.001 in the model. This model produced an R-square of 0.04 which indicates that 4% of the variation of Acuity Math C and African American students can be explained. The second regression looked at the relationship of African American students, Acuity A math scores, and other students holding ability constant. This regression displayed that if a student was African American and Acuity A math ability was controlled for, they would score .73 points below students who were not African American. This variable was also statistically significant at p<0.001 in the model. Race and ability now indicated that 59% of the variation of Acuity Math C, African American students, and Acuity A can be explained, producing a R-square of 0.59. Column 3 looked at a student being African American, Acuity A math scores, if a student had an IEP, paid for their school lunch, and was a female.

An interesting find was that there was no significance if students paid for their lunch, had an African American teacher, or had a male teacher. Column 5 also showed there was no
significance if students attended a signature school or if there was a percentage of African American students enrolled at a specific school site. Additionally, there was no significance of students being 4th graders in this regression as displayed in column 6.

Column 7 examined the full model which revealed race match of African American students to African American teachers was not significant to outcomes of the Acuity C math scores as displayed in Table 9.

Table 9

OLS Regression model for Students and Acuity C

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AA student</td>
<td>-23.95***</td>
<td>-7.99***</td>
<td>-7.82***</td>
<td>-7.72***</td>
<td>-6.08***</td>
<td>-6.76***</td>
<td>-7.70***</td>
</tr>
<tr>
<td>(2.00)</td>
<td>(1.37)</td>
<td>(1.41)</td>
<td>(1.66)</td>
<td>(1.69)</td>
<td>(1.83)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 4th</td>
<td>0.72***</td>
<td>0.72***</td>
<td>0.72***</td>
<td>0.72***</td>
<td>0.68***</td>
<td>0.68***</td>
<td></td>
</tr>
<tr>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student characterisitcs</td>
<td>-12.85***</td>
<td>-12.96***</td>
<td>-13.03***</td>
<td>-14.64***</td>
<td>-14.64***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEP student</td>
<td>(2.50)</td>
<td>(2.50)</td>
<td>(2.50)</td>
<td>(2.50)</td>
<td>(2.50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.50)</td>
<td>(2.50)</td>
<td>(2.50)</td>
<td>(2.50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES-Fall Free</td>
<td>-3.14</td>
<td>-3.14</td>
<td>-2.77</td>
<td>-1.94</td>
<td>-1.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.70)</td>
<td>(2.70)</td>
<td>(2.70)</td>
<td>(2.70)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female student</td>
<td>-3.74**</td>
<td>-3.75**</td>
<td>-3.72**</td>
<td>-3.57**</td>
<td>-3.60**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.36)</td>
<td>(1.36)</td>
<td>(1.36)</td>
<td>(1.36)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Characteristics</td>
<td>AA teacher</td>
<td>0.86</td>
<td>1.52</td>
<td>0.92</td>
<td>-1.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.52)</td>
<td>(1.52)</td>
<td>(1.52)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male teacher</td>
<td>0.86</td>
<td>0.96</td>
<td>0.96</td>
<td>(1.66)</td>
<td>(2.50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.96)</td>
<td>(0.96)</td>
<td>(0.96)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-tenured</td>
<td>0.86</td>
<td>0.86</td>
<td>0.86</td>
<td>(1.31)</td>
<td>(1.31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.82)</td>
<td>(1.82)</td>
<td>(1.82)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Characteristics</td>
<td>Signature School</td>
<td>-2.05</td>
<td>-1.68</td>
<td>-1.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.74)</td>
<td>(1.74)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of AA student/school</td>
<td>-5.67</td>
<td>-5.67</td>
<td>-5.67</td>
<td>-5.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.09)</td>
<td>(2.09)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Grade Level</td>
<td>Fourth Grade</td>
<td>-1.65</td>
<td>-1.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.94)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>6.06***</td>
<td>6.17***</td>
<td>(2.26)</td>
<td>(2.26)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.26)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>9.47***</td>
<td>9.72***</td>
<td>(2.48)</td>
<td>(2.48)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.48)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racematch</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3.17)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>488.77***</td>
<td>162.32***</td>
<td>168.60***</td>
<td>172.06***</td>
<td>174.11***</td>
<td>187.03***</td>
<td>187.53***</td>
</tr>
<tr>
<td>(1.50)</td>
<td>(4.84)</td>
<td>(4.96)</td>
<td>(5.08)</td>
<td>(5.22)</td>
<td>(5.93)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>3,468</td>
<td>3,468</td>
<td>3,468</td>
<td>3,468</td>
<td>3,468</td>
<td>3,468</td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.04</td>
<td>0.59</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05.
Findings

The following research questions were examined during the completion of this study:

1. In Kansas City Public Schools for 3rd-6th grade students, what proportion of African American students are enrolled with African American teachers? How do schools vary in the extent to which African American students are matched to African American teachers?

2. What is the effect on achievement of having African American teachers instruct African American students, as measured by Acuity scores?

There were 739 African American students who were instructed by African American teachers and there were 1,062 African American students who received instruction from other teachers. The number of student’s that teachers had within their classroom ranged from 1 to 32. The mean of African American students per class was 11. This information showed that 26% of African American students were being instructed by African American teachers. There was no effect of having an African American teacher instruct African American students, as measured by Acuity C math scores on student achievement. Students with African American teachers fell slightly below other teachers who instructed African American students. Although the effects of the match were positive, it was not statistically significant. The insignificance could relate to a variety of reasons that may consist of, but is not limited to, the sample size not being large enough, using only one formative assessment to determine outcomes, and this study not being extended over a two to three year period, as compared to one instructional year. Reasons may also relate to the grade level of students in which this study was conducted. High school students may have presented different outcomes based on assessments and methods used. If determined by a larger sample size, this
could denote that matching teachers to students of the same race in actuality could be an
important strategy to closing the achievement gap.

An unexpected finding of these results was that of the six signature schools included in
the study, three of the six schools had a range of 0% to 2% African American students
enrolled and African American teachers instructing in the buildings. Two of the six schools
had a range of 12% to 25% African American students enrolled.
Chapter 5

Discussion

Chapter 4 described the presentation of descriptive statistics, multiple regression, and results. Chapter 5 will provide an overview of the study, discussion of findings, limitations of study, conclusions, and recommendations for further study.

Overview of Study

Minority student achieving in urban schools pose a multifaceted problem (Ladson-Billings, 1994; Hale, 2001; Kunjufu, 2001; Perry, 2003). The purpose of this study was to compare the achievement of African American students who had African American teachers with the achievement of African American students who had other teachers. There were few statistical studies that substantiated the claim that African American teachers were likely to be more effective with African American students by meeting developmental and academic needs (Milner, 2006).

Research Questions

The following research questions were examined during the completion of this study:

1. How do schools vary in the extent to which African American students are matched to African American teachers? In Kansas City Public Schools for 3rd-6th grade students, what proportion of African American students are enrolled with African American teachers?

2. What is the effect on achievement of having African American teachers instruct African American students, as measured by Acuity scores?
Discussion of Findings

This study focused on the academic effectiveness of African American teachers who were assigned African American students as compared to other students with other teachers in Kansas City Public Schools. An analysis of the data collected in this study was completed to enhance the understanding for educators, especially in the urban core, bringing light to a subject that has been among closing the achievement gap.

The results of the study were surprising based on previous studies on like topics. There was no major effect of African American students having an African American teacher, as measured by the Acuity assessment. The Acuity score range was approximately 4 points higher for other students which does not display a significant growth rate as compared to African American students peers (CTB/McGraw-Hill, 2010).

The reason I believe no significant difference took place with African American teachers instructing African American students, compared to other teachers instructing African American students is due to not all possible variables and factors being including in this study. Some variables that may have impacted the outcomes of the study consist of cultural identities, family circumstances, and gender of teachers within the same race.

Due to KCPS experiencing a great deal of instability that includes reassignment of students and teachers, it was difficult to control for all factors that may have been relevant, although mobile students were not included in this study. Data displayed that the majority of African American teachers were in schools with the highest percentage of FRL students, which was a considerable disadvantage. Therefore, the findings if this factor was incorporated may have indicated that the African American students being instructed by African American teachers were actually doing as well or better than other students under more difficult circumstances.
Secondary findings revealed themselves in the process of the regression. These findings were not a specific focus, but were interesting enough to warrant further discussion and possibly research in the future. Findings for gender showed that female students scored 3.74 points below male students on the Acuity C math assessment which was statistically significant at p<0.05 in the model. Research states that although boys and girls today score roughly the same on most measures of cognitive ability, boys on average receive lower grades, have more disciplinary problems, are more likely to enjoy school less than girls, be retained, placed in special education, and believe their teachers are less likely to encourage them (Kleinfeld, 1998). However, boys had a tendency to score higher in math and science, while girls scored higher in reading and writing as outlined in the 1996 National Assessment of Educational Progress. (Sommers, 2000). This may justify the significance for this study due to the assessment subject of focus being math.

The findings of the demographics for Signature Schools were also thought-provoking. Of the six Signature Schools in the district, only one school had 30 or more African American students enrolled and had 2 or more African American teachers employed. Additional research would need to be conducted to determine how this divide among race took place and to determine if schools are equitable.

Tenured verses non-tenured teachers were also an interesting finding in this study. African American teachers had more experience, while the large majority of non-tenured teachers were white. This may relate to the district partnering with the Teach for America organization that maintains a large percentage of white corps members as opposed to corps members of color. However, the impact of Teach for America on urban education and African American students may be another study of focus, for a future researcher.
One of the goals in this study was to put forward a framework that can be used to guide the improvement of urban public schools (Noguera, 2003, pp16). My long-held beliefs about African American children and their learning journey were not substantiated in this study. Building relationships and getting to know a child for who they are and what they bring is known to get the best results for students. However, I felt that there was an additional impact that teachers could have with students if they shared the same race. I am hopeful that future research will paint a more complete picture and help unlock the mystery of teaching and learning in the African American community.

Limitations of Study

This study is one of the first to look at the achievement of African American children who are assigned to classrooms with African American teachers empirically; therefore, it can be considered an initial or introductory study. However, there are some limitations to the study that should be noted.

The study took place in a district that has recently been deemed unaccredited by the State Board of Education, so therefore has many challenges. African American students in another setting may differ somewhat in achievement levels.

The analysis of tests scores was limited to one type of exam and subject: Acuity C math in the 3rd – 6th grades. This assessment tool was chosen because it was the subject area of focus for the district and also a predictor of how well students should be able to perform on the MAP assessment.

The data could not be generalized to all students and all teachers due to it being obtained from a sample at the elementary level. Another limitation was that this study was conducted over
one instructional year and was not conducted over a longitudinal period that could have consisted of two to three years.

As the researcher, previously employed by the district, I had the opportunity to review data outcomes over many schools that included student in which I previously supported. However no students or teachers were made specific to me as the author.

Conclusions

The following conclusions drawn are inconsistent with the researcher’s findings, based on the results of the study:

The study displayed that African American students are instructed by other teachers at a much higher rate, than African American students being instructed by African American teachers.

Schools varied to the extent in which African American students were matched to African American teachers. Approximately 26% of African American students were matched to African American teachers. There was no significant difference on student achievement between African American students who were instructed by African American teachers, as measured by Acuity C math. The data indicated that African American students who were instructed by African American teachers did somewhat worse as outlined in their Acuity C scores.

Furthermore, during the review of this data an unexpected finding was that most Signature schools had limited to no enrollment of African American teachers and African American students in grades 3rd-6th, female students scored lower than male students, and African American teachers had more classroom experience than other teachers.

Despite the shortcomings in determining a concrete, viable solution to the disparities in our educational system, we as a nation recognize that this issue is not something that is
diminishing. The way in which we embrace our educational system, and those affected by it, is through a radical change. At the end of the day it is our responsibility to ensure that all students, especially those who are minority, achieve (Brown-Jeffy & Cooper, 2011).

Recommendation for Further Study

It is my hope that this research will lead into a series of studies that will expand over the district and provide insight for outlining the components needed to support this community of learners. Based on the analysis in this study, the following are some recommendations for future research:

1. Conduct another study in KCPS to obtain comprehensive information regarding student achievement of African American students and investigate the impact of strong relationships between teachers and students regardless of race, by utilizing quantitative (survey) and qualitative (interviews) research methods. These types of designs would create variables that may not have been utilized in this study.

2. Replicate this study with one that includes, but is not limited to, additional control variables such as class size, SES background of teachers, certification status, HBCU graduates, and Teach for America teachers.

3. A follow-up study should take place that focuses on informing preparation programs of the impact race and culture may have on academic achievement. This study will be critical in helping preparation programs align their course work and field time with the skills and background needed to support urban learners.

4. Conduct a study using a different dependent variable such as Communication Arts which may have a more direct correlation to shared culture.
5. A statewide study could be conducted using DESE data on teacher/student and MAP as the outcome.

6. Another study should be conducted to determine if African American teachers who complete their coursework and training at HBCU’s have a stronger cultural connection, than African American teachers who receive their coursework and training at traditional universities.

7. A longitudinal study following students through their careers to see how many African American teachers they encountered and if there was a relationship to their long-term outcomes.

8. Another study should be conducted to see if African American male students do better with African American teachers and/or administrators.

9. A study should be conducted on a sample population of African American teachers that may or may not share the same “culture” as low income urban African American students.

10. It is recommended that this study be replicated using a larger African American teacher and student population to help determine if the findings of this study were influenced by the utilization of one district and specific testing grades.
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VITA

Judith Jordan Campbell was born and raised in Kansas City, Missouri. Judith has been committed to promoting the development of children through rigorous instructional and curriculum planning, which is the foundation to her dissertation of examining the achievement gap for urban children.

Her educational career began at the University of Kansas in which she graduated with a Bachelor of Science degree in Elementary Education. She completed her Master of Arts degree at the University of South Florida in Exceptional Education. Judith received her Educational Specialist degree from Southeastern University in Educational Leadership. Her most recent accomplishment has been receiving her Doctor of Philosophy degree in Educational Leadership and Policy Analysis from the University of Missouri, Columbia.

Judith is currently a building administrator in Raytown, Missouri and an adjunct professor for the University of Missouri, St. Louis. She plans to continue researching and studying urban education with a focus on student achievement, as the gap continues to be examined and compared to the outcomes of children in suburban districts.