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Relationship Between Eighth Grade Social Science Students, Teacher Diversity and Academic Success

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2017

Abstract

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MA, Webster University, 2011

MPA, California State University, Northridge, 2007

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Dynamics between student teacher ethnicity and the practices of culturally plural curricula seeks to improve student performance and strives to minimize the achievement gap. This quantitative study explored whether there was a significant difference in the North Carolina Final Exam history-social science test performance between (a) African American and Hispanic students taught by a teacher from a different ethnic makeup and (b) African American and Hispanic students taught by a teacher from a similar ethnic makeup in 8th grade of social science classes. Student's performance is a key factor in evaluating the credibility of a school which is crucial to all stakeholders. The theoretical framework for this study centered around Tillmans' theory of culturally sensitive education which focused on variations of academic achievement based on student's engagements with teachers who share their cultural background or teachers who teach curricula that reflects their own cultures. Data were collected from a purposeful sampling of depersonalized archival records of 2,000 8th grade African American and Hispanic students who took the North Carolina Final Exam for Social Sciences. Data were analyzed using causal-comparative approach and focused on the fixed factor of race with 3 covariates and teacher race as the dependent variable. Results indicated that there was a significant difference in the students performance depending on the ethnicity of their teacher. Students with a teacher of their ethnic background, performed better compared to having a teacher from a different ethnic background. This study contributes to social change through the understanding of how teacher diversity and the need for relational teaching can promote greater academic achievement within their classrooms.

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Dedication

To my parents, Bruce I. Murphy and Marion L. Murphy. From the day I was born, you challenged me to always do my best and achieve nothing but the best. Your unwavering love and support is what propelled me to be who I am and to continue to reach for greatness. Your love, strength, and wisdom are the three pillars that continue to bolster me to achieve the unachievable and excel in my dreams.

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My parents, Bruce and Marion Murphy, I did it, better yet, we did it. I appreciate everything both of you have done for me and I will always continue to strive and be the best version of myself because I am a Murphy.

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Chapter 1: Introduction to the Study

Introduction

The United States is a culturally plural society; consequently, education policy-makers in the United States prioritize the utilization of culturally plural materials in the classrooms (Tillman, 2009). Such materials increasingly appear in textbooks, classroom handouts, films, and other educational content (Francis, 2011). Theorists and empirical researchers have assembled extensive evidence supporting the academic usefulness of culturally plural approaches to education (Francis, 2011; Harris, 2011). Scholars have identified at least three kinds of pluralism that contribute to students' academic success: pluralism within a school environment, pluralism within pedagogical approaches, and pluralism within curricula (Ladson-Billings, 2009; Tillman, 2009).

In practice, pluralism within a school environment typically refers to the diversity, particularly ethnic or racial diversity, of school personnel, as a mirror of the diversity of the student body (Riley & Ettlinger, 2011). Pedagogical theory as well as empirical results suggest that when students are taught by teachers who share their ethnic or racial backgrounds, students tend to pay more attention, work harder, and be more motivated to learn (Stinson, 2011). On the other hand, non-Caucasian students taught by Caucasian teachers sometimes feel suspicious, hesitant, or mistrustful about the motives of such teachers and fail to establish the teacher-student rapport necessary for learning (Au, 2009).

Pluralism within a pedagogical approach takes place when a teacher employs classroom techniques or other pedagogical resources that are likely to resonate with students of other backgrounds regardless of the teacher's own ethnicity or racial

background (Ladson-Billings, 2009). Scholars have noted the existence of many plural pedagogical techniques, including the use of so-called call-and-response pedagogy with African American math students noted in the seminal work by Martinez (2000) and the use of oral narratives with Native American children (Harris, 2011). The goal of pedagogical pluralism is to employ pedagogical techniques that are likely to be similar to the specific traditions from which student's hail (Green, 2011). Pluralism of curricula refers to the use of materials, such as textbooks, movies, and other materials, that incorporate different cultural viewpoints and content (Au, 2009). One example of culturally plural curricula in social sciences is the use of textbooks that devote more space to the histories or experiences of non-Western peoples (Teo, 2011). To some extent, culturally plural curricula are mandated by state educational guidelines for social science (Ladson-Billings, 2009). However, some teachers go further in their use of such materials, for example, by supplementing textbooks with readings or movies about non-Western experiences.

Constraints on pluralism have come indirectly from the educational policy designed by the administrators of school districts. Commonly, there will be sorting of students by their achievement levels When this happens, low achieving, economically disadvantaged, and ethnic students will be assigned to classes where teachers do not have enough experience to give proper guidance in addition, peers who are not capable of strong performance will surround such students (Kalogrides & Loeb, 2013). Because the system of the classroom as a whole is not capable of nurturing the development of the student or reaping any advantage from pluralism, the student is at a significant

disadvantage, which causes a cycle of low performance resulting in poor resources leading to bad outcomes for the student This essentially suggests that educational policy is one part of the problem causing lower performance in the pluralized classroom. Kalogrides and Loeb (2013) suggested that different strategies should be taken in order to sort students.

The topic of this quantitative, causal-comparative study was the contribution of teacher diversity to the academic success of eighth-grade students in an urban school district in North Carolina. The study focused on African American and Hispanic Students. Specifically, I used ex post facto data analysis of the scores of eighth-grade students on the North Carolina Final Exam for history-social science to reveal whether shared teacher-student ethnicity made a statistically significant contribution to student success.

Background

Among the nearly 43,000 students from this district who took the state standardized test for social science, 17% were rated as far below basic and another 12% as basic. Only 42% of students achieved results above the basic scores on the North Carolina Final Exam History-Social Science test. In particular, Hispanic and African American students were more likely to achieve below-basic scores on the North Carolina Final Exam History-Social Science test. It is possible that students from this district who achieve very low social science scores become worse at social science (and related subjects, such as world and U.S. history) in high school. Indeed, 53% of this district's 11th-grade students who were tested on the world history curriculum ranked far below

the basic skills necessary to demonstrate understanding of the subject. There are numerous possible explanations as to why students are not doing well in social science and related subjects. Educational leaders would benefit from attempting to diagnose and intervene in the problem early, especially in the transition from middle school to high school when there is some scope to prepare students for college.

One aspect of the problem is that educational leaders do not know whether teacher diversity is a significant contributor to student performance in social science. Educational theorists (Au, 2009; Ladson-Billings, 2009) have suggested that diverse teachers are more likely to engage Hispanic and African American students constitute the majority in the school district. However, no empirical analysis has demonstrated whether matching eighth-grade Hispanic and African American social science students with teachers of their own respective races is associated with better student performance on the North Carolina Final Exam History-Social Science test.

Addressing educational policy in terms of the idea of how students are sorted could be a key to understanding how to create more effective teaching, learning, and development of students. If students see the classroom as a place where they feel comfortable and trust their learning environment, this will lead to greater success and performance among students. The results of this study of the matching of ethnic students with ethnic teachers will therefore give support to new ways that educational policy could be constructed in order to address the underperforming nature of students who are learning in pluralized environments. Based on ideas from Lipman (2011), education policy should not displace African American and Hispanic students because the outcome

is that there are consequences that school districts are not able to deal with. One consequence may be that performance is affected when districts attempt to design pluralized classrooms.

Problem Statement

I based this study on the empirical evidence from North Carolina Final Exam History-Social Science test, namely, reprinted and processed data from the North Carolina Final Exams Score Frequency Distributions for years 2013–2014, 2014–2015, and 2015–2016 respectively. These data were applied to determine the hypothetical diversity in the urban school district in North Carolina. However, the gap identified in the literature showed that previous researchers failed to adequately approach the topic of matching the racial makeup of students with regard to their race compared to that of their teachers. The problem addressed in this study was that the school district in North Carolina has a high proportion of Hispanic and African American students who do not meet North Carolina Final Exam standards for history-social science. The school district in North Carolina did not know whether matching Hispanic and African American students with social science teachers of their own respective racial and ethnic background was associated with improved student performance. Consequently, the school district did not know whether the problem of declining history-social science performance among Hispanic and African American students could be addressed by increasing the diversity of the social science teaching staff. With this study, I sought to answer the paucity in research that currently exists surrounding the topic of racial matching between teachers and students.

Purpose of the Study

The purpose of this study was comprised of two major questions. Firstly, the study should determine whether eighth-grade Hispanic students who had Hispanic social science teachers performed better on the North Carolina Final Exam History-Social Science test than eighth-grade Hispanic students who had non-Hispanic social science teachers. Secondly, it should identify whether eighth-grade African American students who had African American social science teachers performed better on the North Carolina Final Exam History-Social Science test than eighth-grade African American students who had non-African American social science teachers. These findings will allow researchers to develop a more vibrant understanding of the topic of race matching between students and teachers in the educational setting.

Research Questions and Hypotheses

The following research questions guided this study:

Main research question: To what extent, if any, was there a significant difference in the North Carolina Final Exam History-Social Science test performance of eighth-grade (a) students taught by a teacher from a different ethnic background and (b) students taught by a teacher from a similar ethnic background?

> H_0: There was no significant difference in the performance of (a) students taught by a teacher from a different ethnic background and (b) students taught by a teacher from a similar ethnic background.

H_A: There was a significant difference in the performance of (a) students taught by a teacher from a different ethnic background and (b) students taught by a teacher from a similar ethnic background.

Specific research questions:

Research Question 1: Was there a difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth-grade Hispanic students who had Hispanic social science teachers and (b) eighth-grade Hispanic students who had non-Hispanic social science teachers?

$H_0 1$: There was no significant difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth-grade Hispanic students who had Hispanic social science teachers and (b) eighth-grade Hispanic students who had non-Hispanic social science teachers.

$H_A 1$: There was a significant difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth-grade Hispanic students who had Hispanic social science teachers and (b) eighth-grade Hispanic students who had non-Hispanic social science teachers.

Research Question 2: Was there a difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth-grade African American students who had African American social science teachers and (b)

eighth-grade African American students who had non-African American social science teachers?

> $H_0$2: There was not a significant difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth-grade African American students who had African American social science teachers and (b) eighth-grade African American students who had non-African American social science teachers.

> H_A2: There was a significant difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth-grade African American students who had African American social science teachers and (b) eighth-grade African American students who had non-African American social science teachers.

I answered the three research questions of the study with the use of (a) ANCOVA, which allowed not only the independent variable of race but also the covariate factors of student income, gender, and academic track to be included in the model and (b) independent samples t tests for hypothesis testing. All data needed to analyze the research questions already existed and was obtained from the state board of education.

Theoretical Framework for the Study

The theoretical framework for the study was Tillman's (2009) theory of culturally sensitive education. According to Tillman, observed variations in academic achievement across racial groups are not due to innate differences in intelligence but, rather, due to deficiencies in the environment of underprivileged schoolchildren, including deficiencies

in the educational environment. Tillman hypothesized that the engagement of non-Caucasian children is lower partly because they are insufficiently or improperly engaged by teachers who neither share nor appropriately respect their students' cultural backgrounds and by curricula that do not reflect the students' own cultures. Tillman did not begin with the presumption that non-White students are to blame for lower performance and instead suggested that the reasons for the achievement gap ought to be sought partly in the way schools approach non-Caucasian students. Tillman's theory offers support to any empirical study that proposes to examine the association between cultural aspects of school environment (in particular, teacher diversity) and student performance.

Tillman's (2009) theory suggests that while educational policy has sought to provide effective answers to the issue of bringing people of different races together, educational policy has created the unintended consequence of lower performance among non-White students. Within the context of Tillman's theory on culturally sensitive education, the suggestion to design the educational policy in a way that promotes pluralistic classrooms does not take into account the difficulties that exist in motivating children to trust or accept leadership from teachers of a different race. Without the acceptance of the teacher as a model of a good, trustworthy citizen, the student will not follow the teacher's behavior (Bandura, 2011). Moreover, students would fail to learn from teachers because the social interaction between the student and the teacher is such that the student does not perceive the teacher as an adequate model of what they want to be (Bandura, 2011).

Nature of the Study

In this quantitative study, I used ANCOVA to examine secondary data. I selected a quantitative approach for this study because I sought to mathematically measure the relationship, if any, between variables, in particular, the independent variable of teacher-student racial alignment and the dependent variable of performance on the history-social science test. This study did not involve human subjects and was based on the analysis of existing, anonymized data held by the state board of education. The study was reliant on ANCOVA because of the ability of ANCOVA to analyze the relationship between independent and dependent variables while also measuring the impact of covariates. However, independent sample, t tests, were used for hypothesis testing.

Definitions

The following terms have specialized definitions in this study:

Culturally plural curricula: Curricula that include content and means of presentation that are drawn from sources other than the White majority culture (Lopez, 2011). Such curricula have been formally adopted in the urban school district in North Carolina from 1998 onwards.

Culturally plural pedagogy: Pedagogy that draws on specific, culturally sensitive techniques to establish engagement between teachers and students (Ladson-Billings, 2009).

Cultural sensitivity: Teachers' awareness and use of specific pedagogical and communication techniques that resonate with the cultural background of their students (Tillman, 2009).

School environment: Consists of the 12 measures identified by the National School Climate Center (2012) and discussed further in the literature review.

Assumptions

This study was based on the use of ANCOVA, which has a number of assumptions, including minimal presence of outliers, normality of sampled values, and equality of population variances I tested these assumptions through the use of ANCOVA diagnostics in SPSS software. Another assumption I made in this study was that students' and teachers' ethnicities were randomly matched in the district; in other words, it was assumed that students of color were not purposively assigned to teachers of a specific race based on factors such as student performance. If the assignment of students to teachers was random, the variation in teacher race was more likely to be a meaningful determinant of variation in student performance.

Scope and Delimitations

The setting of this study was a major urban school district in North Carolina. I collected and analyzed only data from this district for this study. Furthermore, the study was limited to the data obtained from eighth-grade social sciences students who had taken the North Carolina Final Exam for social sciences.

Limitations

One of the limitations of this study was that observed differences in eighth-grade students' performance on the social sciences standardized test might not be ascribable to variations in teachers' races but, rather, to other variables that were not tracked in the study. For example, it could have been the case that qualitative aspects of the teacher-

student interaction determined student performance on the social sciences test. It could also have been the case that even observed significant relationships between teacher race and student performance were due to other factors not encompassed in the study. Accordingly, no causal conclusions can be reached on the basis of this study. With this study, I was only capable of identifying associations between teacher diversity and student performance on social science tests.

Significance

In the school district under study, well over half of the students at all grade levels are Hispanic or African American. Such students have been observed to perform at an academic level lower than that of their Caucasian peers. Theories of social and academic performance suggest that this disparity can be due to numerous factors, some of which I will examine in detail in the second chapter of this study. One frequently advanced explanation of gaps in social science achievement is that non-Caucasian students feel alienated by non-Caucasian teachers (Tillman, 2009). The significance of this study lies mainly in its ability to test the empirical validity of this explanation through statistical analysis of thousands of data records from a major school district, offering educational leaders an improved ability to design educational policy relating to diversity hiring practices.

Summary

The purpose of this quantitative study using secondary data and based on results from ANCOVA and independent t tests was to examine the association between the independent variable of teacher-student racial consonance and the dependent variable of

performance on the state's standardized social science test. At the same time measuring the impact of the covariates of students' income, gender, and academic track. The results from this study can help to identify and quantify the usefulness of diverse teacher hiring practices as a precursor of social science academic achievement, subject to the noted limitations of the study.

I structured this study to address the research questions and draw meaningful, if any, correlations showing the significance of the findings. The first chapter, the introduction to the study, contained the background of the problem as well as a discussion of the methodological and theoretical bases for the study. The second chapter, the literature review, will contain a discussion of theories and empirical studies related to the topic of multicultural factors in education and academic achievement. In the third chapter, the methodology, I will discuss and justify the study design. The fourth chapter will contain the findings of the study. In the fifth chapter of the study, I will present a summary of findings, my recommendations for future research, my recommendations for school policy, and a discussion of the study findings in relation to previous scholarly evidence.

Chapter 2: Literature Review

Introduction

The purpose of conducting this literature review was to describe, analyze, and critique both theories and empirical studies relevant to the following topics: (a) culturally plural pedagogy and student achievement among cultural ethnic students, (b) culturally plural curricula and student achievement among cultural ethnic students, and (c) culturally plural environments as well as student achievement among cultural ethnic students. The literature also analyzes how education policy influences cultural plurality. The main gap that I identified in the literature was that it is not clear whether — and if so, how and why — various aspects of cultural pluralism might be responsible for the academic success of cultural ethnic students.

Culturally Plural Pedagogy

In order to define culturally plural pedagogy, it is first necessary to define pedagogy itself. Reigeluth's (1983) seminal discussion of teaching isolated four specific forms of pedagogy. Firstly, instructional design is the process whereby a teacher decides how to deliver a lesson (Reigeluth, 1983) In this stage of pedagogy, teachers make basic decisions about what to teach and how to teach (Reigeluth, 1983). Secondly, instructional development is the process whereby, having already decided what to teach and how to teach, the teacher defines specific strategies to convey lessons to a classroom (Reigeluth, 1983). Thirdly, instructional implementation is the stage of pedagogy in which the teacher delivers the lesson (Reigeluth, 1983). The success or failure at this stage of pedagogy is defined by how well implementation aligns with the earlier stages of design

and development and also by how well the teacher executes the plan in the actual process of teaching; for instance, well-designed pedagogy can fail if the teacher does not teach in an engaging manner (Reigeluth, 1983) Eventually, instructional management is the process of adjusting pedagogy on an ongoing basis, usually by (a) identifying and retaining whatever teachers feel to be working in the classroom and (b) identifying and discarding or modifying what teachers do not feel to be working in the classroom (Reigeluth, 1983)

In Reigeluth's (1983) model of pedagogy, which remains widely used in the literature, pedagogy is not a single activity or orientation; rather, it is a set of four broadly related processes. In this model, pedagogy can be considered the sum of the decisions that teachers make about (a) what to teach and how to teach it; (b) which specific strategies to employ in conveying the lesson; (c) delivering the lesson in an engaging, organized, and effective manner; and (d) learning from the process of teaching so as to make necessary and ongoing adjustments to the other aspects of pedagogy. This model is constructed on a basis useful for understanding the characteristics and purpose of culturally plural pedagogy.

Ladson-Billings (1995) provided an influential definition of cultural pedagogy as pedagogy "that not only addresses student achievement but also helps students to accept and affirm their cultural identity" (p. 465). There are a number of ways in which this goal can be achieved. Firstly, conforming to the first stage of Reigeluth's (1983) model, teachers can incorporate culturally plural approaches in deciding what to teach and how to teach. In many cases, teachers' choice of content or subject matter is limited by

existing standards (Donnell, Stairs, & Dunn, 2011). However, when they have to teach from a standard curriculum, teachers still possess a certain amount of leeway in terms of being able to emphasize certain aspects of curricular content or calling attention to assumptions within the curriculum (Green, 2011). Thus, culturally plural pedagogy can be applied even when the teacher has no choice of curriculum or other content. Scholars have demonstrated that teachers obliged to teach fixed curricula can still engage in culturally plural pedagogy by emphasizing the culturally plural aspects of curricula, crafting homework or exercises that require students to engage more meaningfully with culturally plural subject matter, or calling attention to and critiquing the dominant cultural assumptions in certain texts (Donnell et al., 2011; Green, 2011). In this manner, teachers can exercise a fair amount of control over what to teach and how to teach even when particular curricula are forced on them.

Teachers can also utilize culturally plural pedagogy in instructional development, which is the second stage of Reigeluth's (1983) model of pedagogy. In this stage, teachers can identify specific means of conveying lessons about cultural pluralism; for example, they can do it through the use of in-class exercises, homework, anchor charts, as well as other classroom material (Donnell et al., 2011; Green, 2011). With the instructional design stage, teachers have a great amount of freedom to employ culturally plural approaches in the instructional development stage (Ben-Peretz, 2011).

It should be noted that, in both the instructional design and instructional development stages, there are two main ways in which cultural pluralism can manifest itself in pedagogy. The first manifestation is that of content (Witkins & Lall, 2011). By

highlighting the existing material or introducing new material that is of relevance to cultural minorities, teachers can achieve Ladson-Billings' (1995) goal of helping diverse students "accept and affirm their cultural identity" (p. 465). In American schools, certain cultural perspectives, such as those of Native Americans or African American, have been included in textbooks as part of the curricular reform dating from the 1990s (Riley & Ettlinger, 2011). The curricular reform has allowed for textbooks to be designed so as to devote more attention to non-White perspectives; however, teachers still exercise some volition in determining how much time might be spent on certain units or how and when particular supporting content (such as films, PowerPoint presentations, or anchor charts) will be introduced in the classroom (Riley & Ettlinger, 2011). Teachers retain the ability to introduce more or less culturally plural content into both the instructional design and instructional development stages of pedagogy at their own discretion (Riley & Ettlinger, 2011).

In addition to the content, the second way in which cultural pluralism can manifest itself in pedagogy is through presentation. In a seminal study, Martinez (2000) described how African American teachers employed culturally specific "call-and-response" techniques (p. 73). Martinez stated that call-and-response techniques, which evolved in African American settings such as churches and recreational activities, can be used to teach mathematics to predominantly African American kindergarten students. In this way, teachers can utilize culturally plural means of presentation, or methods of instruction, while keeping the course content itself stable (Bonner, 2009; Martinez, 2000).

Martinez's (2000) work helped to explain how culturally plural presentation approaches can influence instructional development, the second stage of Reigeluth's (1983) model of pedagogy. However, Martinez's work is also a demonstration of cultural pluralism in instructional implementation, the third stage of Reigeluth's model. The teachers profiled in Martinez's work were able to succeed with the so-called call-and-response pedagogy because they, too, were African Americans for whom this technique was authentic. According to Ladson-Billings (2009), culturally relevant pedagogy does not require the teacher to be of the same cultural orientation as the students whom they are teaching; however, if the teacher is of a different orientation, they have to be particularly careful in the implementation stage of pedagogy. There is a danger that teachers who draw upon cultural traditions, such as the call-and-response tradition identified by Martinez, that are not their own will, might, at best, fail to connect with students and, at worst, be seen as guilty of trifling with others' cultural traditions (Achinstein, Ogawa, Sexton, & Freitas, 2010; Bonner, 2009).

There does not appear to be a simple solution to the question of how teachers can identify and utilize implementation methods (including concerns having to do with the tone of voice, vocabulary, body language, and so forth) that are designed to reach out to cultural ethnic students while themselves not belonging to that cultural ethnic. Some teachers, through long associations with cultural traditions that are not their own, appear to have been successful in adopting certain implementation mannerisms that resonate with their students (Ladson-Billings, 1995, 2008). Other teachers have failed in this attempt (Bonner, 2009; Martinez, 2000). Yet, many teachers attempt to avoid the issue

altogether by retaining their own culturally authentic methods of implementation and trusting to other aspects of pedagogy (in particular, design and development) to convey culturally plural lessons (Cochran-Smith & Dudley-Marling, 2012; Irvine, 2012).

Culturally plural pedagogy is also relevant to Reigeluth's (1983) final stage of pedagogy, that of instructional management. Instructional management is essentially a combination of quality control and continuous improvement processes (Reigeluth, 1983) In this stage, teachers examine their pedagogy to identify successes and failures and adjust pedagogy accordingly (Reigeluth, 1983) In the past, classroom experiences of American students from cultural ethnic backgrounds were not generally considered important inputs into the stage of instructional management (Ball & Tyson, 2011; Banks, 2012; Butchart, 2010). For example, when African American students failed to do well in academics or when they complained about biased pedagogy, the typical assumption was that the failure lay with the students — and their communities — rather than with their teachers' pedagogy (Cushner, McClelland, & Safford, 2009). That situation began to change in the late 1960s and, in contemporary times, has given way to institutional sensitivity to the concerns of cultural ethnic students (Francis, 2011).

In evaluating their pedagogy, contemporary teachers are required, whether formally or informally, to take account of how students from different cultural orientations appear to be responding to the pedagogy (Derman-Sparks & Edwards, 2010). Teachers are empowered to retain aspects of pedagogy that resonate with culturally plural populations (as in the case of Martinez's [2000] call-and-response pedagogy for kindergarten) and are encouraged to modify or discard aspects of pedagogy that do not

appear to be resonating with culturally plural students. In addition, independently of legal and policy considerations, teachers themselves are more sensitive to evaluating their pedagogy in light of the experiences of their culturally plural students (Feng, Byram, & Fleming, 2009).

There is a substantial body of academic work, both theoretical and empirical in orientation, on the topic of culturally plural pedagogy (Green & Cherrington, 2010). However, one of the limitations of such research is that it has not revealed the relative contribution of culturally plural pedagogy to the academic success of cultural ethnic students (Greer, 2009; Gurung, Regan, & Prieto, 2009). Culturally plural pedagogy often coexists with culturally plural curricula (Donnell et al., 2011). The effects of these two inputs cannot be reliably differentiated from each other in statistical models, and accordingly, scholars have often treated cultural plural pedagogy and culturally plural curricula as parts of the same construct of cultural pluralism (Kitchen, Ciuffetelli Parker, & Pushor, 2011; Kugler, 2010; Lee & Buxton, 2010).

Culturally Plural Curricula

A *curriculum* is the body of materials taught, or taught from, in a classroom (Donnell et al., 2011). Typical curricula consist of textbooks, articles, novels, films, music, or other materials that students encounter in educational settings (Manning & Barruth, 2009). Historically, curricula in American public schools have not demonstrated sensitivity to the concerns of cultural pluralism (McLeod, 2011; Ouellett & Stanley, 2012). There are three primary criticisms leveled against such curricula, particularly against textbooks: (a) positive criticisms (that is, criticisms about what such textbooks

have included); (b) negative criticisms (criticisms about what such textbooks have

excluded; and (c) contextual criticisms (criticisms about textbooks' use of language and

related characteristics. (Pantoji et al., 1976) As cultural pluralism in curricula has arisen

in response to the perceived shortcomings of earlier curricula (Parker, 2009), it would be

useful to examine each criticisms of traditional curricula in turn.

In terms of both positive and negative criticisms, the main charge against older

textbooks is that they included Caucasian perspectives in a largely noncritical and non

reflective manner, while they excluded much that was of value to non-Caucasian people

as well as people from other cultural minorities (Pinder, 2013; Powell & Powell, 2010).

Such concerns are most apparent in history and social science textbooks; for example,

many history textbooks written before the 1990s include what critics have described as an

inordinate amount of material on European culture (Spradlin, 2012). Even world history

textbooks have often devoted relatively little space to the histories of non-Caucasian

people (Spradlin, 2012). In addition, textbooks have historically failed to mention the

histories or experiences of the lesbian, gay, bisexual, and transgender community

(Shaklee & Baily, 2012).

Culturally plural curricula are curricula in which the experiences or histories of

cultural minorities (whether understood from racial, ethnic, gender, or other perspectives)

have been treated with greater sensitivity and attention while the histories and

experiences of majoritarian culture (especially Caucasian, Christian, male, and

heterosexual cultures) have come under critique (White, 2011). In history textbooks, for

example, it now tends to be noted that, for the indigenous peoples of the Western

Hemisphere, Christopher Columbus is not seen as a discoverer but, rather, as a participant

in the subsequent genocide of native people carried out by Spain and other colonial

powers (Vang, 2010). Culturally plural curricula are not only represented by new

textbooks. Another important characteristic of culturally plural curricula is that they

include content and media that have traditionally been excluded from the sphere of

acceptable classroom materials (Stinson, 2011). For example, hip-hop music, a

fundamentally African American form of expression, now appears on many curricula as

an example of an art form or as a social commentary (Leach, 2011). In addition, the idea

of the Western canon of writers — the vast majority of whom were Caucasian and male

— has been contested by teachers who increasingly include the works of non-Western,

non-Caucasian, and non male writers in the curricula (Irvine, 2012).

The rationale for the existence of culturally plural curricula is twofold, relying on

both academics and ethics. Firstly, in terms of academics, scholars have argued that the

experiences of cultural minorities have unfairly been excluded from American curricula

while the experiences of the cultural majority have been unfairly and uncritically

enshrined (Rueda & Stillman, 2012). Cultural minorities have made numerous important

contributions to every branch of learning and society; and thus, the utilization of

culturally plural curricula is in accordance with the principles of academia because such

curricula are a more accurate depiction of the human experience (Krolak-Schwerdt,

Bohmer, & Grasel, 2012). Secondly, in terms of ethics, there are important reasons to

include the experiences of cultural minorities in curricula even if such experiences could

somehow be demonstrated to be less important in the context of history or social

sciences. One of the core purposes of liberal education is to engender self-esteem among students, and one of the main precursors of self-esteem in students is positive regard for their cultural orientations (Glock, Krolak-Schwerdt, Klapproth, & Bohmer, 2013). For this reason, there is a case for deploying culturally plural curricula even if it could be demonstrated that such curricula are not academically sound — which is far from being the case, according to numerous scholars (Glock, Kneer, & Kovacs, 2013; Pugach & Blaton, 2012).

Culturally Plural Environments

Pedagogy and curricula are important mechanisms through which one disseminates culturally plural content and demonstrates culturally plural means of teaching. While it is important to understand pedagogy and curricula as discrete areas, it should also be acknowledged that both pedagogy and curricula are parts of a larger system, namely the school environment (Frankenberg, 2012). Accordingly, it is necessary to understand the relevance of school environments to culturally plural education. There are numerous ways of approaching the variable of school environment. One influential model of school environment is that of the National School Climate Center (2012), which has subdivided school environments into five dimensions (safety, teaching and learning, interpersonal relationships, institutional environment, and staff) and twelve related dimensions. The National School Climate Center's model has been presented in Table 1.

Table 1

The 12 Dimensions of School Climate

Dimension	Measure	Major Indicators
Safety	1 Rules and Norms	Clearly communicated rules about physical violence; clearly communicated rules about verbal abuse, harassment, and teasing; clear and consistent enforcement and norms for adult intervention.
	2 Sense of Physical Security	Sense that students and adults feel safe from physical harm in the school.
	3 Sense of Social-Emotional Security	Sense that students feel safe from verbal abuse, teasing, and exclusion.
Teaching and Learning	4 Support for Learning	Use of supportive teaching practices, such as encouragement and constructive feedback; varied opportunities to demonstrate knowledge and skills; support for risk-taking and independent thinking; atmosphere conducive to dialog and questioning; academic challenge; and individual attention.
	5 Social and Civic Learning	Support for the development of social and civic knowledge, skills, and dispositions, including effective listening, conflict resolution, self-reflection and emotional regulation, empathy, personal responsibility, and ethical decision making.
Interpersonal Relationships	6 Respect for Diversity	Mutual respect for individual differences (e.g. gender, race, culture, etc.) at all levels of the school—student-student, adult-student, adult-adult, and overall norms for tolerance.
	7 Social Support (Adults)	Pattern of supportive and caring adult relationships for students, including high expectations for students' success, willingness to listen to students and to get to know them as individuals, and personal concern for students' problems.
	8 Social Support (Students)	Pattern of supportive peer relationships for students, including friendships for socializing, for problems, for academic help, and for new students.
Institutional Environment	9 School Connectedness / Engagement	Positive identification with the school and norms for broad participation in school life for students, staff, and families.
	10 Physical Surroundings	Cleanliness, order, and appeal of facilities and adequate resources and materials.
Staff Only	11 Leadership	Administration that creates and communicates a clear vision and is accessible to and supportive of school staff and staff development.
	12 Professional Relationships	Positive attitudes and relationships among school staff that support effective cooperative working and learning.

In the National School Climate Center's model, pedagogy is appropriately matched in Measures 4, 5, 6, and 7 while curricula can align itself in Measure 4. However, as numerous scholars have argued, pedagogy and curricula are not the only determinants of successful education for culturally plural populations. Such populations must also feel safe, supported, and engaged (Huntsinger & Jose, 2009; Lowery & Wout, 2010); without feeling so, a culturally plural curriculum is not likely to engage students. In terms of safety, there have been numerous documented incidents of students from cultural minorities experiencing violence at schools (Klein, Cornell, & Konold, 2012). Such violence can take many forms, including racial violence and gendered violence (Shirley & Cornell, 2012). Students who do not feel safe at school are less likely to attend (Mitchell, Bradshaw, & Leaf, 2010). If students become truant, they are less likely to do well in their classes and are at a greater risk of dropping out (Fan, Williams, & Corkin, 2011). Safety is not just a physical concern; students from cultural minorities who do not feel emotionally safe at school are also more likely to become truant and drop out (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013).

Safety is closely related to engagement in that safety is a necessary but not sufficient condition for engagement (National School Climate Center, 2012). In order to identify with a school, students must feel safe both physically and emotionally (Oseguera, Cochas, & Mosqueda, 2010; Hill & Tyson, 2009). Although the issue of racial violence has received a great deal of attention and has been the subject of numerous policy reforms in American schools, it should be noted that physical and emotional violence against LGBT students continues to be high. Moreover, bullying in the school

environment can be cited as one of the greatest threats that violate the safety standards and prevent students from better achievement by affecting their academic focus, ability to engage effectively in class activities, motivation, and other integral parts of the learning process.

Support can be thought of as a bridge between safety and engagement. When students feel supported by teachers and by other students, they are more likely to overcome the overt or ambient safety risks in their environment and become more engaged with the school (Babad, Inbar, & Rosenthal, 1982; Bondy & Ross, 2008; Cheung, 2009). Contemporary American schools are required by law to provide physically and emotionally safe climates to all students, regardless of their backgrounds or orientations; however, in practice, certain schools function as toxic environments for students from particular ethnic groups (Mitchell et al., 2010). While administrators and policy-workers attempt to rectify this problem from the top down by crafting laws and policies designed to create better environments, individual teachers and administrators play an important role through building safe local environments (classrooms, offices, and other educational spaces) for specific students whose cultural ethnic status puts them at risk (Klein et al., 2012).

Educational Policy and Cultural Plurality

As the United States continues to seek answers to the problem of inequality, one of the answers that educational policymakers have sought to employ is that of creating a purposeful mix of races in the classroom (Paris, 2012). This is a strategy that has been around in the U.S. for a number of decades, and it began with school districts bussing

children in from other districts so these students would have the same educational

opportunities as students in predominately Caucasian areas. The goal of this mix was to

identify whether the creation of a more culturally and racially pluralistic society is

possible (Horsford, 2011). An unintended consequence, however, has been that students

will struggle to perform when they are in these situations. So, while educational policy

was drafted with good intentions to answer the problem of cultural plurality, the real

outcomes of these efforts show that students lack a feeling of leadership. Moreover, they

do not feel that they are being understood when being taught by teachers who they do not

believe have had the same experiences or dealt with the same struggles that they have in

their lives (Lin, 2013). This leaves educational policy with the problem of students

underperforming when they are in a classroom with a teacher who is Caucasian, as such

individual will not give the students in the class confidence that they have had the same

experience.

Educational policy that seeks to create a greater deal of cultural plurality will

commonly be focused on a number of different dimensions of the problems that non-

Caucasian students face in their communities and education. Educational policy will base

plurality initiatives on the need to create greater familiarity between people of different

races so that there is more understanding of one another when they get older and mature

and participate in economy and society (Astor, et al., 2011). Another reason of avoiding

plurality is the belief that if students are taken from a school where they are causing

trouble or underperforming, these initiatives will lead to more effective student

performance (Le & Stockdale, 2011). Lipman (2011) proposed these approaches are

neoliberal in nature and that they have the consequence of imposing values on the students that they may not have. If students involved in these programs do not seek to have their values changed, there is a lack of trust; thus, the learning system where the student can be developed and prepared for life after education becomes stunted.

Conclusion

There are a number of points of consensus in the literature on cultural pluralism in schools. One important point of consensus (Green, 2011; Ladson-Billings, 2008; Lopez, 2011; National School Climate Center, 2012; Stinson, 2011; Tillman, 2009) is that pluralism emerges within a system in which various student needs, including the needs for safety, engagement, warmth, cultural relevance, and academic rigor, are met. In other words, pluralism emerges from a number of interweaving student-centered orientations and practices. Another point of consensus in the literature (Bonner, 2009; Donnell et al., 2011; Harris, 2011) is that pluralism is a form of decentering; in pluralistic environments or curricula, no cultural experience is considered paradigmatic or normative; but rather, all cultural experiences are accorded respect and treated as coexistent as opposed to parts of a hierarchy of importance.

Qualitative studies (Martinez, 2000; Riley & Ettlinger, 2011) have helped to bolster the case for promoting cultural pluralism as an academic philosophy for the reasons discussed in the literature review. However, the existing research is not necessarily helpful to schools that do not have the resources to utilize both culturally plural pedagogy and culturally plural curricula at the same time or that are still in the process of building culturally plural environments. What is necessary for such schools is

research that can identify the most important components of culturally plural education; the absence of such research constitutes an important gap in the body of both scholarly knowledge and school practice. These components could then receive funding and institutional attention on a preferential basis, with other components of cultural pluralism to be added subsequently. In the absence of such research, schools have no empirical basis on which to decide which components of culturally plural education to prioritize. As demonstrated in the literature review, there are many forms of culturally plural education; however, only schools with extensive resources or schools that are already in progress of a transition to cultural pluralism can hope to achieve competence in all of these forms. Conversely, other schools are obliged to take a more piecemeal approach to implementing culturally plural education, an approach that requires more specific knowledge about the relationship between cultural pluralism and student achievement.

The present review of literature has identified two important gaps understood from the perspective of student achievement, which is the central mandate of American public schools. Firstly, there is insufficient knowledge on the topic of whether, or to what extent, exposure to a specific curriculum is associated with improved student performance. The qualitative literature has established that students, particularly students from non-Caucasian backgrounds, report greater engagement when exposed to culturally plural curricula (Tillman, 2009), but it is not clear whether this superior engagement can be measured in terms of improved test scores. Similarly, while the qualitative literature has established the importance of exposing ethnic students to teachers from their own racial or cultural background, it is also not clear whether such exposure is correlated with

better academic performance. These two main gaps arising because of the innate inability of qualitative research methods to establish objective connections between pluralism and performance will be addressed in the proposed quantitative study.

Placing academic achievement at the center of the analysis on cultural pluralism is not a common approach in the literature, but there are convincing economic and political reasons to acknowledge the role of performance measurement as part of initiatives that support cultural pluralism. If a school district decides to preferentially adopt a certain form of cultural pluralism, there are cost and performance pressures that can lead schools to making short-term decisions that might not be viable in the long-term perspective. In the post No Child Left Behind era, schools are vulnerable to losing federal funding if they do not meet predetermined performance criteria on standardized tests (Donnell et al., 2011). As a result, schools tend to seek performance solutions based on measurable increases in standardized test results. Such test-driven strategies can neglect the needs of cultural ethnic students, especially if these students are also an ethnic in a school or district. Research has demonstrated that culturally plural students often take years to obtain academic improvement because such students often take longer to engage with teachers and schools, trust the educational system, and ascribe a high value to academic achievement (Hill & Tyson, 2009; Ladson-Billings, 1995, 2008). Because of the complex array of inputs (including aspects of pedagogy, curricula, and environment) that help to improve the academic performance of cultural ethnic students and because of the long delays that can take place between exposure to these inputs and an observed increase in academic performance, the kinds of quantitative models existing in the literature might

not be appropriate to discovering exactly how culturally plural education spurs academic

achievement in culturally plural students. The methodology that I will describe and

defend in the next chapter of the study has the potential to address this gap in the

literature on cultural pluralism and the academic achievement of culturally plural

students.

Chapter 3: Research Method

Overview

The purpose of this chapter is to describe and defend the aspects of research design associated with the study, including choice of methodology and statistical tests, population, setting, sample, data collection, data analysis, reliability, validity, and ethical concerns. In this chapter, I will present these sections to cumulatively justify my use of a quantitative methodology to examine the potential relationship between aspects of cultural pluralism and academic performance at an urban school district in North Carolina. The chosen methodology was causal-comparative and was rooted in ANCOVA and related statistical techniques.

Research Design

The problem I identified in this research study was that the urban school district in North Carolina under study had a high proportion of Hispanic and African American students who did not meet North Carolina performance standards for history-social science. The school district did not know whether matching Hispanic and African American students with social science teachers of their own respective races was associated with improved student performance. Consequently, the school district did not know whether the problem of declining history-social science performance among Hispanic and African American students could be addressed by increasing the diversity of the social science teaching staff. According to Creswell (2009), problems requiring the analysis of how variation in one or more independent variables impacts one or more dependent variables are innately suited to quantitative analysis; therefore, quantitative

methodology was the most appropriate orientation for this study. McNabb (2010) defined

the differences between quantitative and qualitative research as seen in Table 2.

Table 2

Differences Between Quantitative and Qualitative Research

Foundations	Qualitative Research Designs	Quantitative Research Designs
Ontology (perceptions of reality)	Researchers assume that multiple, subjectively derived realities can coexist.	Researchers assume that a single, objective world exists.
Epistemology (roles for the researcher)	Researchers commonly assume that they must interact with their studied phenomena.	Researchers assume that they are independent from the variables under study.
Axiology (researchers' values)	Researchers overtly act in a value-laden and biased fashion.	Researchers overtly act in a value-free and unbiased manner.
Rhetoric (language styles)	Researchers often use personalized, informal, and context-laden language.	Researchers most often use impersonal, formal, and rule-based text.
Procedures (as employed in research)	Researchers tend to apply induction, multivariate, and multiprocess interactions following context-laden methods.	Researchers tend to apply deduction, limited cause-and-effect relationships with context-free methods.

Note. Adapted from McNabb, D. E. (2015). *Research methods in public administration and nonprofit management: quantitative and qualitative approaches*. London: Routledge, Taylor & Francis Group.

Causal-comparative research is a type of quantitative approach in which the

underlying hypothesis is that a sample's observed scores on some dependent variable are

likely to be due to variation in conditions to which the sample was exposed (Myers, Well,

& Lorch, 2013). In this study, the underlying hypothesis was that variations in exposure

to racially diverse teachers are causally associated with variations in social science

scores. In addition, the specific approach to causal-comparative analysis was

retrospective, not experimental, because the observed effect (variations in social science

scores) and causes (variations in teacher diversity) have already taken place. Meanwhile,

I assessed four important constructs--charisma, inspirational motivation, intellectual stimulation, and individualized consideration--in terms of their correlations and mutual influence on the validity of the study.

I based the ontology of the study on the assumption that the phenomena of culturally plural curricula, racial difference, and social science achievement are part of what McNabb (2010) called "a single, objective world" (p. 225). While race, achievement, and curricula can be understood in multiple, subjective ways, they have been defined objectively for the purposes of this study. The epistemological stance of the study was based on researcher-variable independence; there was no interaction between me and the phenomena. The axiology of the study was value-free and unbiased in that unvarying and objective statistical procedures were utilized to answer the research questions of the study. My stance towards the values of cultural pluralism and racial diversity among teachers was neutral. This stance will be reflected in my impersonal and formal discussion of results in Chapter 4. Finally, in keeping with the basic orientation of quantitative methodology, the study contained applications of causal analysis, deduction, and other "context-free methods" (McNabb, 2010, p. 225) associated with statistical methods in particular.

While the study itself was executed in alignment with the quantitative orientations described in Chapter 3 I used the results to inform some value-based suggestions, recommendations, and observations in Chapter 5. In addition, the limitations of quantitative methodology and their implications for practice will also be discussed in Chapter 5. In general, while the chosen research design of the study was explanatorily

powerful in addressing the central problem of the study, the analysis should not be considered a comprehensive exploration of the phenomena of cultural pluralism and academic success, as will become clearer in Chapter 5.

Population, Setting, and Sample

The population for this study consisted of eighth-grade social science students in public schools in North Carolina and college-educated, state-certified educators varying in age from early 20s to late 60s and consisting of men and women of various races and ethnicities. The setting for this study was a single school district in a major urban center in North Carolina.

I obtained the required sample size for the study through the use of G*Power software in conjunction with Cohen's (2013) recommendations for power analysis. In conducting the a priori sample size analysis, it was first necessary to specify the test family and statistical test of the study. The chosen test family was *F* tests, a category that encompasses all ANCOVA designs (Cohen, 2013). Following Cohen's ANCOVA effect size conventions of a moderate (.25) effect size and a standard alpha error probability of .05, counting four covariates in the model (gender, income, academic track, and teacher race, which is technically an independent variable but included as a covariate for a sample size calculation purposes), the recommended sample size was 400. The G*Power a priori sample size recommendation, including all accompanying inputs and outputs is seen in Figure 1.
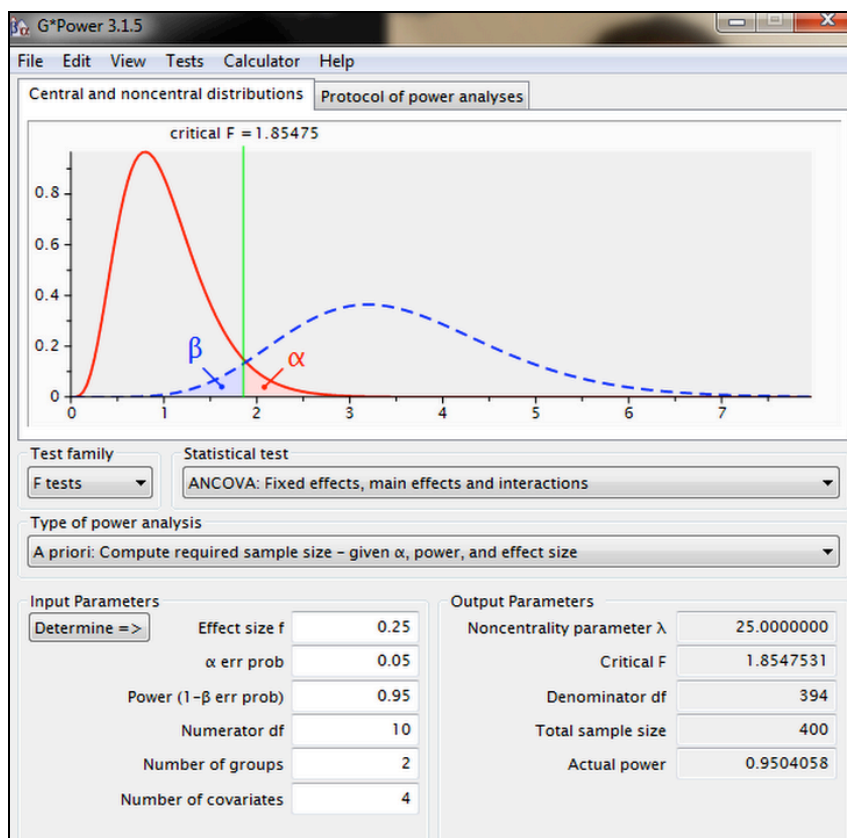
Figure 1. A priori sample size calculation in G*Power 3.15.

I sought a minimum sample of 400 students, comprised of 200 students of African American descent and 200 students of Hispanic descent. No data were sought from human subjects. As I will describe in the section on data collection, all data were in the form of depersonalized archival records requested from the school district. Sampling of the data was purposive in that data pertaining to students with specific characteristics was sought from the school district. The school district was asked to provide all records from the 2013–2014, 2014–2015, and 2015–2016 testing years. I then used a randomizing algorithm to randomly identify 200 Hispanic students and 200 African American students for inclusion in the analysis.

Data Collection

I filed an academic use request for data with the school district (see Appendix). The request for the following data was sorted under an alphanumeric designation preserving the anonymity and privacy of the students and included:

- grade level at time of record collection (to ensure that each student record included in the dataset represents enrollment in Grade 8);

- social science standardized test score (dependent variable of the study), a continuous variable indicating percentile rank on test;

- race of students' Grade 8 social science teachers at the time the standardized test was taken (independent variable of the study);

- lunch eligibility by ethnicity achievement gap for eighth grade social sciences;

- student sex (covariate);

- student gender (covariate); and

- student race (to ensure that only Hispanic and African American students are included in the sample).

The roles that each of these variables played in data analysis will be discussed in the following section.

Data Analysis

In the ANCOVA, the independent variable, also known as the fixed factor, was race, coded 1 for Hispanic and 2 for African American. The three covariates were (a) student gender (coded as 1 for male and 2 for female); (b) academic track (coded as 1 for special education and 2 for general education); and (c) teacher race (coded as 1 for

Hispanic, 2 for African American, and 3 for neither Hispanic nor African American). The dependent variable was student score, measured as a percentile from 1 to 99, on the North Carolina Final Exam History-Social Science test administered by the state of North Carolina.

I conducted two follow-up independent samples *t* tests for purposes of hypothesis testing. In the *t* tests, I compared race-aligned pairs (Hispanic students with Hispanic teachers and African American students with African American teachers) with non race aligned pairs (Hispanic students with non-Hispanic teachers and African American students with non-African-American teachers) on the dependent variable of the North Carolina Final Exam History-Social Science score. With the results of the *t* tests, I was able to identify any significant differences in social science achievement between the aligned and nonaligned pairs for each race. The results of the ANCOVA was used to identify any interactions between the variables in the model, offering important insights about relationships between achievement, teacher race, student race, gender, income, and educational track that could not have been captured in an independent sample *t* test. Cross-tabulations were used to identify trends and meaningful correlations between such factors and constructs as race, gender, and other characteristics of students and teachers.

Validity, Reliability, and Generalizability

Assembling a sample of a minimum of 400 students allowed me to achieve an actual alpha of .05 and an actual power of .95 in the study. In other words, the study was generalizable to some extent because the data were obtained from a specific geographical location, which also bore signs of specific cultural traditions and backgrounds for

respondents, which limited its generalizability. The validity of the study in terms of the causal link between exposure to racially diverse teachers and social science achievement was raised by the inclusion of covariates in the ANCOVA that could furnish alternate explanations of teacher-student interaction effects.

Reliability refers to the ability of an evaluation or assessment tool to produce results that are consistent across administrations (Creswell, 2009). Because I conducted this study on existing data that were objectively defined, reliability was not a major concern. The statistical procedures in this study will yield the same results regardless of who conducts them. Reliability could have been an issue if the procedures were run on a non generalizable sample; however, as discussed previously, the sample size I chose for the study supported generalizability.

Validity is a descriptor of how well a test measures what it was intended to measure (Creswell, 2009). In this study, validity was obtained by using North Carolina's official measure for elementary school students' academic achievement in history and social science. The North Carolina Final Exam for Social Science test is valid because of the extensive pedagogical research that has gone into designing and placing questions that actually measure knowledge of history and social science.

Ethical Concerns

In this study, I obtained depersonalized student data from a school district. The research design did not involve human subjects. Because of the use of depersonalized data, both the privacy and anonymity of participants were safeguarded. According to Creswell (2009), studies in which both privacy and anonymity of participants are

shielded radically reduce the chances of unethical use of data or harm to the participants. Because no research on human subjects was conducted, there was also no risk of harm to any participant. Accordingly, there were minimal pressing ethical concerns associated with the study.

Summary

The purpose of this chapter was to describe and defend the aspects of research design associated with the study, including choice of methodology and statistical tests, population, setting, sample, data collection, data analysis, reliability, validity, and ethical concerns. Cumulatively, in these sections of the chapter I justified the use of a quantitative, causal-comparative, retroactive, and ANCOVA-based methodology to examine the relationship between social science teacher diversity and the social science performance of Hispanic and African American students at an urban school district in North Carolina. The chosen research design addressed the identified problem of the study, which is that Hispanic and African American students at the school district understudy had lower-than-expected social science scores on the North Carolina Final Exam History-Social Science test. It was possible that the lack of consonance between non-Caucasian students and Caucasian teachers, who were largely represented in the social science teacher staff, could explain some of the lower performance of Hispanic and African American students, who might have felt alienated or otherwise not properly engaged by Caucasian teachers in the manner described by Tillman (2009). In the next chapter, I will present the results obtained from testing this hypothesis.

Chapter 4: Results

Introduction

The creation of a culturally plural environment seems essential for the effectiveness of the learning process. I addressed this issue via the analysis of data from the North Carolina test on social science and history with the inclusion of the demographics from both students and teachers regarding their ethnic and racial backgrounds. In the previous chapters, I outlined the overall relevance of discussing this topic, validity of methods and design as well as demonstrate the importance of measuring performance with regard to such constructs and potentially contributing factors as race, gender, and even charisma.

I conducted data analysis using the SPSS statistical software (SPSS, 2016). This chapter will include a discussion of testing the data collected in order to determine whether significant differences existed when students were ethnically matched and unmatched with their eighth-grade social studies teacher. Descriptive statistics were used to analyze the mean, median, mode, and standard deviation in order to explain the sample taken with regard to the standardized test scores and to test for normal distribution of the data through the use of the skewness and kurtosis statistics. I also used cross-tabulations to identify trends between teacher race, student race, the matching of student and teacher, the sex of the student, whether the student received free lunch, and whether the student was on an academic track of special education or not with the categorization of the student's performance as being either low or high. The role of matching in relation to mean scores on the standardized test will be presented in the form of a line graph to

illustrate the difference between the matched and unmatched mean scores on the standardized test.

Validity Analysis

Validity refers to how well a test measures what it is purported to measure (Phelan & Wren, 2005-06). Reliability is not sufficient on its own; for a test to be reliable, it also needs to be valid (Phelan & Wren, 2005-06). Meier, Brudney, and Bohte (2015) defined validity as the accuracy and meaningfulness of inferences that are based on the research results. In order to ensure the instruments and measures were valid in this study, I made use of construct validity. Construct validity was measured from two different dimensions, namely convergent validity and discriminant validity. The extent to which multiple indicators represent a common construct is what is referred to as convergent validity (Westen & Rosenthal, 2003). For instance, each of the constructs, charisma, inspirational motivation, intellectual stimulation, and individualized consideration, was measured by a set of four different indicators. To what extent these four indicators measured the construct is the question of concern here. In this study, I assessed convergent validity using standardized factor loadings. Factor loadings with the theoretically predicted sign, an estimate above 0.5, were classified as acceptable convergence and statistical significance constituting evidence of convergence (see Carlson & Herdman, 2012).

Discriminant validity is defined as the degree of divergence among indicators that are designed to measure different constructs (Edwards, 2003). In this case, I tested whether indicators for a construct were distinct and would not measure another construct;

for instance, in discriminant validity, to what extent indicators of charisma would measure inspirational motivation. Alternatively, it was assessed to what extent indicators of charisma were different from those of inspirational motivation. In this study, I assessed discriminant validity using the chi-square difference test. In this test, two measurement models were compared for each possible combination of pairs of factors. In one model, the correlation between the two factors was constrained to 1.0 whereas this correlation parameter was freely estimated in the other model. Finally, a chi-square difference test between the chi-square values of these two models was performed. A statistically significant difference indicated adequate discriminant validity.

Measures of Skewness and Kurtosis

The measure of asymmetry or lack of symmetry is what is referred to as skewness (Itl.nist.gov, 2013). A data set is said to be symmetric if it is equally distributed to the left and right of the midpoint; for normalcy, the statistical values should be -1 to 1 (Mills, 1993). Tables 3, 4, and 5 show that the skewness of the data was ranging between -.056 to .186, which indicates that there was normalcy in the variables.

Kurtosis is referred to as a measure of *tailedness* of frequency distribution of variables with respect to normal distribution (Itl.nist.gov, 2013). The data might have outliers or heavy tails, which is the characteristic of high skewness (Itl.nist.gov, 2013). On the other hand, light tails or lack of outliers are characteristic of data sets with low kurtosis (Itl.nist.gov, 2013). Extreme cases are experienced when there is uniform distribution of outliers and heavy tail (Itl.nist.gov, 2013). According to Acock (2016), for normalcy, the kurtosis should be 3. My findings showed a kurtosis of -.671.

The Kurtosis for the sex of the student was -1.998 in 2013–2014 school years. The kurtosis for these variables was only .002 from the /-2.0 standard for a normally distributed data set (George & Mallery, 2010); hence, it was considered close to normal. The standardized test score mean for Hispanics only was higher than the mean for performance by the students in the state as a whole and higher than the mean for the cases used in this study. The kurtosis for sex of students in the fall and spring of 2014–2015 school years were -1.994 and -2.000, which was considered very close to normal. In the fall and spring of the academic year 2015–2016, the kurtosis for the student sex was -1.996 and -1.983, which was also considered to be very close to normalcy. Based on the numbers demonstrated in Tables 3, 4, and 5, it was obvious that there was a symmetry in the distribution of sex and ethnicity as well as NCFE score as identified via the test and other data collected on the demographics of students that passed this test. In other words, there was nothing unusual in the distribution of ethnicity, gender, and test scores between students reported in the study.

Table 3

Demonstration of Skewness and Kurtosis in 2013-2014 Academic Years

		Fall 2013-2014			Spring 2013-2014		
		NCFE Score	Ethnicity	Gender	NCFE Score	Ethnicity	Gender
N	Valid	2,604	2,605	2,604	2,605	2,605	2,604
	Missing	1	0	1	0	0	1
Skewness		.186	.378	-.056	.186	.378	-.056
Std. Error of Skewness		.048	.048	.048	.048	.048	.048
Kurtosis		-.671	-1.859	-1.998	-.671	-1.859	-1.998
Std. Error of Kurtosis		.096	.096	.096	.096	.096	.096

Table 4

Demonstration of Skewness and Kurtosis in 2014-2015 Academic Years

		Fall 2014-2015			Spring 2014-2015		
		NCFE Score	Ethnicity	Gender	NCFE Score	Ethnicity	Gender
N	Valid	2,041	2,041	2,041	1,895	1,902	1,902
	Missing	0	0	0	7	0	0
Skewness		.186	-.087	.349	.268	.358	.355
Std. Error of Skewness		.048	.054	.054	.054	.056	.056
Kurtosis		-.671	-1.994	-1.880	-.578	-.351	-1.876
Std. Error of Kurtosis		.096	.108	.108	.108	.112	.112

Table 5

Demonstration of Skewness and Kurtosis in 2015-16 Academic Years

		Fall 2015-2016			Spring 2015-2016		
		NCFE Score	Ethnicity	Gender	NCFE Score	Ethnicity	Gender
N	Valid	2,229	2,229	2,229	2,085	2,072	2,085
	Missing	0	0	0	0	13	0
Skewness		.186	-.078	.258	.306	-.005	.429
Std. Error of Skewness		.048	.052	.052	.052	.054	.054
Kurtosis		-.671	-1.996	-1.935	-.761	-2.002	-.519
Std. Error of Kurtosis		.096	.104	.104	.104	.107	.107

The Number of Ethnic Teachers

The collected data were overt on the presence of a constant racial-ethnic equality gap between the percentage of ethnic students and that of the ethnic teachers in the school system of the United States. According to the data collected on the demographics of educators from the North Carolina Final Exam test of history-social science, in the 2013–2014 school years, only 22.096% of all teachers were ethnic (see Table 6). In 2014–2015, 23.7324% of all the teachers were from the ethnic. While in 2015-2016 school years, 23.79% of the teachers were from the ethnic. Correspondingly, the gap between the student-teacher ethnicity also exists for each of the major ethnic subgroups.

Table 6

Teacher Ethnicity Across 3 School Years (2013-2016) in North Carolina

Teacher Ethnicity	2013–2014	2014–2015	2015–2016
Asian	0.7587%	1.5962	0.7406
Black	19.4642%	19.29577	20.8979
Hispanic	1.7307%	1.6901	1.8746
Indian	0.07112%	0.939	0.1389
White	77.904%	76.2676	76.2092
Others	0.0711%	0.02113	0.1389

The proportion of ethnic ethnic teachers in particular school years can be correlated to the performance of ethnic ethnic students of the North Carolina Final Exam test of history-social science. The data seen in Table 6 and Figure 2 shows that ethnic ethnic teachers are still represented in the teaching staff of North Carolina urban school district, making it possible to contribute certain performance of ethnic ethnic students, particularly Hispanics and African Americans, to the representation of ethnic minorities in teaching staff. Moreover, the percent of teachers from the ethnic increased over time from 22.096% in 2013–2014 academic years to 23.79% in 2015–2016 academic years.
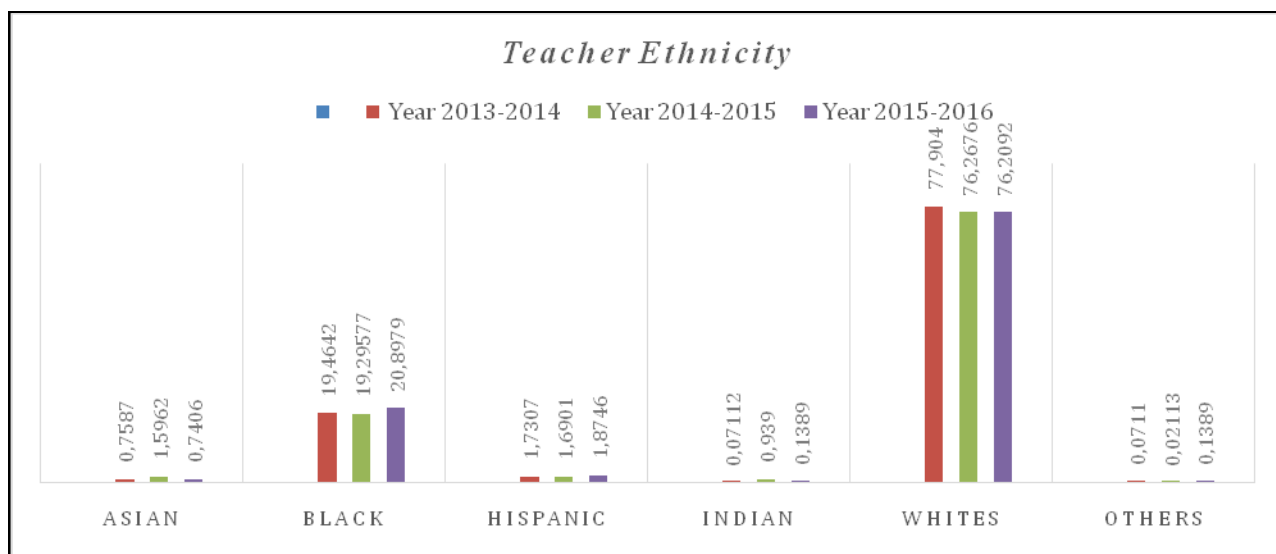
Figure 2 A graphical representation of teacher ethnicity across 3 school years (2013-2016) in North Carolina.

Descriptive Statistics

I used descriptive statistics in this study as they helped to describe and understand the features of the collected data set. They provided simple summaries about the sample and the measures. This was done by analyzing the mean, median, mode, and standard deviation. These measures use graphs, tables, and general discussions to help people understand the meaning of the data being analyzed. The plot of the mean scores on the standardized test illustrates differences between the performance of students when matching is present and was used to compare the performance of Hispanic and African American matched and unmatched students investigated in the study.

Means, Ranges, and Standard Deviations

Table 7 indicates the mean, range, and standard deviation as well as the minimum and maximum score of combined Hispanics and African Americans in fall 2013–2014. The mean exam score was 19.31 as compared to the maximum exam score of 38. The mode examination score was 16 while the minimum score was 3. The mean score

reduced in the 2013–2014 spring period to 14.96. Equally, the maximum exam score was

reduced to 34 from the initial 38 in spring. Table 5 shows a fluctuation in the maximum

performance of the students with the fall of 2015–2016 school years, reporting a high of

38 with a low of 0 in the same period. The poorest performance was experienced in the

spring of 2014–2015 school years with a high of 33 and a low of 1. However, a

comparison of the means shows that the spring of the 2013–2014 school year experienced

a general low performance of 14.96.

Table 7

Range, Means, Standard Deviation, and Distribution for the Whole Population (Fall 20132014)

		NCFE Score	Ethnicity	Gender
N	Valid	2,604	2,605	2,605
	Missing	1	0	0
Mean		19.31	.41	.51
Mode		16	0	1
Std. Deviation		6.794	.491	.500
Range		35	1	1
Minimum		3	0	0
Maximum		38	1	1

Table 8

Range, Means, Standard Deviation, and Distribution for the Whole Population (2013-16)

		Spring 2013-2014	Fall 2014-2015	Spring 2014-2015	Fall 2015-2016	Spring 2015-2016
		Score	Score	Score	Score	Score
N	Valid	2,122	2,041	1,895	2,229	2,072
	Missing	2	0	7	0	13
Mean		14.96	17.67	16.63	17.51	16.60
Mode		15	15	12	11[a]	15
Std. Deviation		4.921	6.763	5.965	7.113	6.755
Range		31	36	33	38	34
Minimum		3	0	1	0	2
Maximum		34	36	34	38	36

ANOVA

The ANOVA shows the joint effort of the independent variables on the dependent variable; it is the overall test significance (McDonald, 2014) According to Table 9, a significance of .503 was recorded, which is a high level of significance of the combined covariates.

Table 9

ANOVA Test of Significance

	NCFE Score				
	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	20.508	1	20.508	.448	.503
Within Groups	93,279.933	2,039	45.748		
Total	93,300.441	2,040			

ANCOVA Analysis

Table 10 is an ANCOVA of the ethnicity of the student influencing standardized test performance as controlled by student sex among Hispanic and Black students. It was found that the ethnicity of the student was significantly related to student performance on

the test. The model of the ethnicity of the student influencing standardized test

performance was controlled by student sex, which explains 21.2% of variance in student

performance on the standardized test. According to Table 10, The *P*-value says that

Ethnicity (.010) is a significant predictor of scores on the students' academic

performance while gender is further from .000 significance point; hence, it is not a

significant factor.

Table 10

ANCOVA Tests between Ethnicity, Gender, and Grade Level

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	368.242ᵃ	2	184.121	3.999	.018
Intercept	331,222.972	1	331,222.972	7,193.143	.000
Ethnicity	304.190	1	304.190	6.606	.010
Gender	71.904	1	71.904	1.562	.212
Grade Level	.000	0	.	.	.
Error	119,768.368	2,601	46.047		
Total	1,090,865.000	2,604			
Corrected Total	120,136.609	2,603			

Note. Dependent Variable - NCFE Score *R* Squared = .003 (Adjusted *R* Squared = .002)

Cross-Tabulation

The cross-tabulation of teacher ethnicity and the low and high standardized test

scores show that the students who were taught by members of the "other" group would

generally be more likely to score lower on the test. Students who did not have a match

between their ethnicity and the ethnicity of their teachers were more likely to be in the

low category. The data showed that the linkage between student and teacher ethnicity

played a vital role in the academic success of the ethnic students.

Hypothesis Testing

Data collected from the Hispanic students is not the same as that of the African American students; however, the data can be used to answer the main research question. For example, we can use the findings from the Hispanic students to determine if the teacher's ethnicity affected their performance. Following this, we then use data collected from African American students to determine the same. After this, a comparison can be made to determine whether the results from both groups point to the same fact.

Research question 1

H1: There is no significant difference in the North Carolina Final Exam History-Social Science test performance between (a) eighth grade Hispanic students who had Hispanic social science teachers and (b) eighth grade Hispanic students who had non-Hispanic social science teachers. The mean test score of the students is 16.60, which is lower than the population "normal" test score of 50, and the SD is 6.755.

one-sample t-test. The "normal' test score value is 50. The *P*-Value is less than .05; it is .000. It can be concluded that there is a significant difference between the performance of the Hispanic students with Hispanic teachers and those with non-Hispanic teachers. More to this, table 10 shows that Hispanic students performed well when matched with a Hispanic teacher. This is evidenced from the fact that 97 students were able to hit the high score compared to only 16 students when the teacher was from another ethnic background; hence, we accept the hypothesis.

Research question 2

Was there a difference in the North Carolina Final Exam history-social science test performance between (a) eighth grades African American students who had an African American social science teacher and (b) eighth grade African American students who had non-African American social science teachers? Thirty-Eight African American students taught by African American teachers recorded high scores while only four recorded low scores. When the teacher was Hispanic, only 11 students scored high scores while nine recorded a low score. These results show a correlation in which a match between the teacher's and the student's ethnicity leads to the student's better performance. However, when the student teacher' ethnicity is unmatched, the students tend to perform poorly. Furthermore, when the teacher was from another race, 102 students recorded low scores while only 36 recorded high scores. One can note that the most students scored high scores when the teacher was from the African American ethnicity. It is clear that the highest percentage of high scores were obtained when the teacher was African American. As to the second research question, there was a significant difference in the performance of the African American students when matched with an African American teacher as compared to having a teacher from a different race. In this way, the hypothesis is true.

Main research question

All evidence collected suggests that the ethnicity of the teacher affects the performance of the students. For instance, in the specific research questions, we determined that Hispanic students performed better while having a Hispanic teacher; this was also the case for the African Americans. African American students having an

African American teacher performed better than those with a teacher from a different ethnic group. More to this, the performance of spring 2014-2015 was the poorest; this was the same year when ethnic teachers (African American, Hispanic, and other excluding whites) were lowest. This fact shows that having teachers from the ethnic ethnic groups helps improve student performance since the students will be matched with a teacher from their ethnic group, therefore improving their performance.

To answer the main research question, there is a significant difference in the performance of students depending on the teacher they have. The ethnicity of student and the teacher plays a crucial role. When students have a teacher from their ethnic background, they perform better compared to having a teacher from a different ethnic background. In this way, the proposed hypothesis is true.

Conclusion

The study has made use of random data collected from secondary sources in order to produce high quality information on the study subject. The available data, however, does not determine the dynamics of how the existing difference between a teacher's race and that of their students affects the learning environment. However, we can see that this difference affects the performance of the students. According to the results, Hispanic and Black students' performance is low based on the ethnical difference between them and the teachers. Majority of the employed teachers are white, hence contributing to the low performance of the Black and Hispanic students. This fact is further supported by findings that the performance of the students is improved when matched with a teacher from their ethnic background. In this way, the persistent racial gap in student

performance may be attributed to the racial dynamics within classrooms. The importance of the results show that student teacher dynamics could be affecting the outcome of other testable subjects that eighth graders or students in other grades within the district are required to take. It's imperative that there be an assessment of all of the subjects to determine if there is a trend that is or could be further affecting the students as they progress throughout their academic careers.

Several key conclusions can be drawn from this research. White teachers need to become more sensitive to the specific needs of Black students. In addition, the personal epistemology of a teacher can be disadvantageous to the academic success of Black students. Based on the data, it is important for a teacher to be aware of their individual frames of reference while disregarding their personal feelings, which would interfere with their work. The classroom environment should be free of biases and prejudices of all type. Lastly, teachers, counselors, and administrators play a vital role in the academic achievement of all students, Black students in particular. It is incumbent of these professionals to hold all students to the same high standards of academic success and ensure that hatred deception is not bred in our schools; instead, academic success and equality should be harnessed.

Chapter 5: Summary of Findings, Limitations, Conclusions, and Recommendations

Introduction

In this chapter, I will present a summary of the findings, limitations, and discussions; the conclusions drawn from them; and lastly, my recommendations. The implications of the research will be discussed and suggestions made on areas of further study. Useful solutions will be recommended for all stakeholders in teaching and the race of the students and their teachers. The summary and conclusions proposed in this chapter were aimed at enlightening the stakeholders within the North Carolina urban school district to create viable solutions with regard to the problem statement.

The main objectives of this study were to determine whether eighth-grade Hispanic students who had Hispanic social science teachers performed better on the North Carolina Final Exam History-Social Science test than eighth-grade Hispanic students who had non-Hispanic social science teachers and whether eighth-grade African American students who had African American social science teachers performed better on the North Carolina Final Exam History-Social Science test than eighth-grade African American students who had non-African-American social science teachers. What inspired the undertaking of this research was that at the time of the study there had not been a sufficient approach in the field of matching the race of the teachers and their students. The school administrators lacked sufficient knowledge of why there was a decline in the student performance in history-social science. This research project was focused on answering this paucity, and some assumptions were necessary to enable the answering of the research questions developed.

In order to add reliability to this project, I conducted a review of the related works of other researchers and theorists. In this literature review I captured the areas of culturally plural pedagogy, curricula, and environment. In addition, I focused on theories related to these topics including the theory of culturally sensitive education proposed by Tillman (2009). This theory argued that the difference seen in the performance of a student of the same race in the same class and taking a similar subject under an instructor of a different race is not a result of innate variations in their intelligence but rather due to deficiencies in their surrounding of less privileged students, which includes their educational environment (Tillman, 2009).

In this study, I used a quantitative approach, mostly based on secondary data. ANCOVA was one of the main techniques used in data analysis. The independent variable was teacher-student racial alignment, while the dependent one was student performance on the history-social science test. The study involved human subjects and anonymous data held by the state board of education. The scope of this study took place in an urban school district in North Carolina. This chapter is the most crucial in this study, as I provide the findings of the study in it

Summary of Findings

In the third chapter, I described my data collection process for this study using various techniques. A sample of 2,000 plus students was used, and this substantial sample size allowed the achievement of an actual power of .95 and alpha of .05. In the fourth chapter, I provided an analysis of the results. In order to ensure a rational distribution of descriptive data statistics, which involved the use of mean, the standard deviation of both

African-Americans and Hispanics was used. In this section, I will discuss the findings from data collected and analyzed.

Ethnicity

According to the results in the cross-tabulation, a teacher's ethnicity has a significant relation to the standardized tests performance of the students. African American students scored low when taught by Hispanic teachers. This variation could be attributed to lack of a match between Hispanic teachers and African American students. Despite the ethnicity differences, females performed better than males. Overall, the Hispanic teachers were more successful than teachers of other ethnicities. This could be attributed to the fact that there were more than twice as many Hispanic teachers as there were African American ones. In conclusion, when learners were matched with their instructors, there was a consistency of high performance in both groups.

There are several studies that explain why the ethnicity of the teacher might affect the student's performance. Ethnicity is defined as a group of individuals who identify with one another based on their similarities, such as national experiences, language, social culture, and ancestral (Diffen.com, 2016). An interaction between a teacher and students who vary in their races could affect the student's performance in various ways. Students tend to trust and respect someone with whom they have a common salient trait; hence, learning is made easier Diffen.com, 2016). On the same note, teachers who are of the same race as the students may serve as a better role model, promoting the learner's enthusiasm as well as confidence in their training Diffen.com, 2016). However, while

such role model attributes are commonly believed to be important, there is little empirical evidence that proves their existence.

In the stereotype theory, Steele and Aronson (1995) suggested that stereotype threat can cause a race of the teacher effect on student's performance; for instance, when an African American student is taught by a White teacher. There is certain evidence of the existence of stereotype phenomena. Investigations into these phenomena prove that there might be traces of racial biasness, precisely, in ethnic students (Gaertner & Dovidio, 1986; Schuman, Steeh, Bobo, & Krysan, 1997), The same problem applies to Hispanic teachers and Hispanic students, as there is no sufficient evidence on the association between the students' exposures to teachers who belong to a similar race as them; subsequently, there is little proof of the same in their academic performance.

Free Lunch

The sample I used in this study involved some learners who used to receive free lunch. According to the results, Hispanic students who did not receive free lunch performed as well as those who received it. There was no close association between free lunch and the performance of the students. However, 60% of African American students who received free lunch performed poorly, and 43% of Hispanic students who got free lunch did poorly as well. For centuries, scientists have been investigating the effects of nutrition on student's performance. Florence, Asbridge, & Veugelers (2008) reported that fifth-graders who ate fast food for lunch performed poorly. Other researchers found that eating fast food reduced students' reading scores (Luscombe, 2014).

There are both direct and indirect effects of nutrition on the performance of students. The daily performance of students has a significant relationship with their nutrition, mentality, and behaviors (Education, A.I., 2016). Gowda and Gowda (2016) suggested that eating food with a high content of saturated and trans fats affects cognition negatively, which may also negatively alter the ability of the students to learn. Proper nutrition enables the students to sustain their psychosocial wellbeing and reduces aggressiveness (Gowda and Gowda, 2016) Poor nutrition can also result in illnesses (Gowda and Gowda, 2016)

Standard Test Scores and Ethnicity of the Teacher for Hispanic and African American Students

The findings lead to a conclusion that only ethnicity and education of the students had a fundamental relationship with their performance on the test. I found that the ethnicity of the teacher influencing standardized test performance as controlled by student sex, income, and education accounted for 72.8% of the variance in student performance on the standardized test. This could be attributed to the fact that factors, such as sex and income level, are shared across the world, ensuring their acceptance, unlike ethnicity, which ties a person to particular beliefs, norms, and ways of doing things (Gaertner & Dovidio, 1986; Schuman, Steeh, Bobo, & Krysan, 1997). Sex and pay have no significant relationship with the performance of the students in the standardized test. However, education and ethnicity of the students had an important link to their performance in the test.

Limitations of the Study

Though science has precise techniques that researchers have perfected over the years, there is hardly any perfect research projects. All studies have at least one limitation that contributes to the inaccuracy of some aspects of the results.

One of the significant limitations I observed was that this study was confined to the eighth-grade student and not any other. The results may not give a universally-accepted conclusion, as the findings may not be the case in all the other grades. Eighth grade is just one class out of eight; better results could have been found if 50%–70% of the levels were involved as part of the research sample (Yao et al., 2013). What is important to gather from the results of this study is that this could be an indicator for a larger issue. Until an overall assessment is completed on all grades and subjects, the district will not be able to gain a full assessment as to if this is just centralized to social sciences of if it affects other subjects.

Secondly, there are several academic subjects that students study. My focus on just the social sciences reduced the sample, as not all students, both Hispanic and African American, take those subjects. There could have been a difference if the sample used in the study considered many academic subjects, which would have resulted in a larger population.

The third limiting factor was the fact that the scope of the investigation was confined to the schools of an urban school district in North Carolina. I only concentrated on one region, and the results were used to make a general conclusion about the many not researched on the same. Also, researching schools in one district also limited the data

gathering, as it was only the area schools that were kept in consideration. Another limitation in this study was the lack of a clear distinction whether the race of the teachers caused variation of the students' performance on the standardized test or there were other factors that affected the same and were not tracked in the study.

Recommendations

Many factors affect the success of culturally diverse students, for example, the school atmosphere and the attitude toward variation in culture and community involvement. This study aimed to assess whether the teacher's ethnicity affects the performance of the students. The findings provide evidence that teacher ethnicity is a critical aspect when it comes to students' performance. Therefore, this study calls for some recommendations to help stabilize the situation. Students should be encouraged to embrace their studies regardless of who their instructors are. The same case applies to the teachers; they should not practice any biasness whatsoever in their teaching, as professionalism should be their key point. Below is an outline of recommendations suggested to enhance a coherent and prejudice free environment in schools.

All stakeholders in the school education have a role to play when it comes to racism and cultural variations in their context. The foundation for educational achievement begins with the school districts administration. It is imperative that the districts administration review the test score results and perform a needs assessment on their district and the individual high schools that reside within the district to assess what is and is not working for the students. Based on the results of this study I would recommend the following, first, assess classroom diversity within each of its schools as it

pertains to student and teacher makeup to ensure that all schools are diverse as possible.

Second, recognize the schools and teachers that are excelling in their classrooms and

leverage what strategies they are employing to be successful. Third, collaborate with

other school districts within the vicinity to assess how they address student and teach

diversity and utilize their best practices which in turn could assist other schools within the

school district in furthering diversity. Forth, evaluate current curriculum and its standards

to ensure all teachers are meeting the districts and states standards to ensure all students

are receiving the level of instruction.

From the side of teachers, the teachers' behavior is a crucial factor in influencing

the success of students in their studies and in making perceptions toward the people who

do not participate on their lifestyles. Therefore, I would recommend teachers to do the

following Firstly, teachers should focus on building relationships with students; these

relationships entail developing concerns about the life of the students. This not only

fosters good attitudes toward the teachers and the students but also helps the teacher to

provide more relevant and meaningful examples in their lessons. A recent study

conducted on African American students revealed that high school students with

behavioral problems for staff would appreciate if the teachers discovered their way of

living outside the school.

Second, teachers should train the learners to match their behavior to the settings.

Everyone behaves differently in different settings. For instance, people tend to behave

more formally in an official setting. Letting the teachers understand there is a difference

between their home community setting and the school enables them to switch to a

preferred behavior in relation to the setting they are in. An adjustment of behavior by students to fit in a certain context is crucial, and to achieve this, teachers and parents' involvement is required. However, while some students are capable of automatically adjusting their manners, others need to be taught this and be exposed to many opportunities to practice it.

Thirdly, teachers need to tolerate and appreciate the similarities and differences among the student's cultures. It requires the teachers to not only acknowledge but also to respect the varying ways of doing things from the students. A positive identification provides a base for the improvement of effective communication and strategies when giving information. Cross-cultural understanding and respect are some of the social skills that should be taught, reinforced, and prompted by teachers. Finally, teachers should observe students to identify their activities orientation and focus on the way students learn. Once the teachers are able to recognize the students' orientation, they are able to structure factors that consider those students. For instance, some students need time to prepare for a certain task. Teachers should give the students enough time for exam preparation and possibly provide the students with advance organizers. It is a good way of honoring the need for preparation customs and rituals.

Student performance largely depends on the students themselves. In fact, 75% of the probability in succeeding in tests is linked to the students. However, many other factors affect students' performance. Nevertheless, students should try their best not to be highly affected by the other factors that influences their school achievement. Below are recommendations that should be implemented on the side of the learners. Firstly, they

should respect one another, which implies not thinking of oneself as superior to others simply because they do not belong to the same ethnicity. Students should learn how to appreciate the unique traits in each other. People are different, and understanding and appreciating these variations would be a better strategy for survival, especially in a context where their variation is cultural, such as at workplaces and in schools.

Second, when electing their school leadership representative, students should be ensured the leadership composure is a constituent of diverse ethnicities. When not represented, students from a particular ethnicity might feel unrecognized and inferior. Most of the time, such students deliberately fail to comply and cooperate with the school administration, and eventually, this affects their school performance negatively. Third, student should interact freely with members of a different ethnicities. In school, it is observed that students separate by an ethnic group when they are at recess or when taking lunch. According to Henze (2002), most students take that route as they aspire to have a sense of belonging. However, they do not understand that they can gain much more by intermingling and learning from one another instead of being comfortable in their comfort zones. The use of classroom tasks that lead to interaction of students should be employed outside the classroom setting to help break the barriers. Moreover, students can develop a setting within their setting for interaction and learning about each other's cultures; they should develop class policies that encourage intermingling; this fosters acceptance of oneself by others.

Additionally, students should challenge discrimination of other. They should model comradeship in such a way that they develop an independent thinking perspective

different from that provided by the society. The society may not be ready to change, but a school and class setting has a chance to reduce ethnicity unacceptance. The reason behind this is that people in a school setting have many common goals for being in school, such as good performance. Every student wants to perform well; if they put their differences aside, there is a high possibility they will achieve that.

Parents are another pillar that shapes the growth and behavior of children. There is significant evidence that links parents' behavior to that of their children (Parents' interest in their child's activities at school and student science performance, 2017). Therefore, how parents perceive a certain ethnic group may be replicated in their children. Parents and guardians should be very careful in how they bring up their children as well as what they teach them regarding others who differ in their way of being. Suggestions for parents' behavior that promote cooperation and integration of culture in schools are outlined below.

Parents groups in schools should always reach out to parents of ethnically diverse students. Leading by example is the right strategy to employ. Children tend to admire their parents and imitate their actions. When meeting or forming parent's groups in school, it is advisable for the parents to be open and respect parents from other races and cultures. Secondly, parents should engage in their children's school activities. They should be principle supervisors of their children's performance trends. They should be at the frontline to collect their children's results and discuss their performance, which entails encouraging and supporting the students to perform better.

Guardians and parents should challenge any negative attitude in their children towards a particular ethnicity, especially what concerns their teachers and their colleagues. This reduces the continuity of bad effects as a result of aspects like racism. It also enables the students to accept diversities around them and interact freely with their fellows of a different ethnicity. Fourthly, parents should avoid stereotype slogans. It is very likely that children will adapt and use them to describe others. This may offend others, causing grudges, hatred, intimidation, and domination. All these negative aspects should not be encouraged in children, especially in the school setting.

Finally, parent should depict a sense of acceptance when their children comfortably associate with people of a different culture or race. Instances have been witnessed when parents would not acknowledge their children when they associate with other students of a different race. For example, if a Hispanic male has an African American as his girlfriend, chances are high that the parents from the son's side would object the relationship; the response from the parents from the girl's side may have an equal effect. Therefore, parents should be discouraged to create such negative impressions on their children.

Academicians and policy makers are also parts of the school community; they also have a role to play to sustenance of race justice in schools. They should develop laws that punish the discriminators in the school setting. Laws should be made and others amended concerning the issue of giving equal chances in hiring teachers from different ethnicities. The same equal chance should be considered for enrollment of students in any school across the country. The school curriculum should be shaped such that it highly

embraces cultural diversity. I would specifically suggest activities like a cultural fun day where people from different cultures display uniqueness of their cultures. This way, people learn from one another and are able to appreciate as well as respect other cultures more. Another point the academicians should instill is efforts that address and transform race justice. Lastly, these two groups should ensure that the school leadership is well promoting the diverse communities that compose it. This creates a sense of belonging as well as boosting royalty.

Chapter Relevance

In most research projects, chapter five is always the last one. Every study is required to interpolate, conclude, and give the recommendation at the end. This section on relevance as its constituents is projected summary, the overview of the finding, conclusions, and recommendations. Project summary serves as a succinct and clear description of the proposed project when separated from the application. It provides the overall view of the work done by the scholar. (De Wit, 2016) The conclusion, on the other hand, gives the interested parties in the project the final word, implying that it gives the readers the value of a completely developed arguments or thorough answering of the question that needed to be answered. Conclusions connect the paper's finding to the entire context in that the wider conversation on the issue is presented in the course in other writings and investigative projects. (De Wit, 2016) The conclusion also gives the results of the finding and the importance of the subject. It gives ideas on the topic, and lastly, it revisits the main idea in the research project, creating a new insight. Recommendations are the proposed course of action after the project is completed. It is

crucial, therefore, as it provides suggestions, opinions, ideas, and the best possible course of action to solve particular problems.

Suggestions for Further Study

It is next to impossibility to study an aspect or a project and touch on all the areas that concerns it. This is because some aspects of those concepts affect it directly while others affect the same indirectly. It is therefore a complex affair to deal with in a certain study exhaustively. That is why most researchers and scientists always a have a sub-section in their project where they propose a further study of the same. Below are outlined suggestions where this study can be extended.

The study mostly concentrated on the performance of Hispanic and African Americans in social science subjects. A further study should be conducted to test whether the same case exists with other disciplines. Second, the major factor that was put into consideration was ethnicity of both the students and the teachers. I would suggest an extension study of other factors that may influence variation in students' performance on a standardized test apart from the ethnicity concept. Third, further research should involve a larger sample in order to enhance more accurate conclusions of the findings. Fourth, the study focused on the urban district school in North Carolina; an extensive investigation should be undertaken in rural school to determine whether the same case scenario exists or differs, and if so, why. Fifth, the study concentrated on the performance of the students. In school, students learn beyond the books; they can socialize with others, discover and develop their talents, acquire other skills outside the class, and grow both physically and psychologically. A research project should be carried out to evaluate

whether the teacher's ethnicity affects the performance of the students' co-curricular activities. Since the research focused on the eighth-grade students, I suggest another grade to be investigated on the same perimeters. Eventually, the study of other school districts should also be considered. The study geographical scope was in North Carolina; thus, it would be beneficial to do the same research in other regions of the country and find out whether the case remains the same.

Conclusion

Diversity amongst people living together comes with benefits as well as challenges. The best part is that with different cultures, ethnicities, and races we are able to learn from one another. The challenging aspect is understanding each other's culture in order to enhance cooperation and collaboration. Naturally, people use their own culture to judge other cultures. However, people might draw conclusions that discriminate those whose lifestyle differs from theirs (Hiemstra etal., 2017).

Obviously, ensuring that each student has the benefit of being trained and educated by a skilled and caring teacher is the first priority regardless of what race or ethnicity the teacher belongs to. Therefore, how teachers are recruited, assigned duties, and retained should have no correlation with their race and ethnicities. According to this study, it is clear that teacher's ethnicity has a significant relationship with the students' performance. Therefore, there is a prevailing problem in our mindset that is, thinking one group as inferior. However, there is a high possibility that highly skilled teachers teaching a student from a different race may not be successful in teaching, and subsequently, the students might perform poorly. What causes most of the students not to

perform well in their studies is not exactly the teacher's ethnicity but the perception the students have on that ethnicity. If they regard the teacher's race as inferior, there is a very high possibility that the students will relate the teacher with inferiority.

There is a need to promote and embrace cultural diversity. According to Castagno (2014), wrong perspective and stereotype should be detoxified from our mindsets. It might be a complex affair, but it has a chance of succeeding in the near future if we continue to support cultural diversity. Ways this can be done includes, firstly, avoiding imposition on other people's values that might conflict or inconsistent ways of thing different from ours; secondly, making a proper intervention upon observing others participating in behaviors that are culturally insensitive, prejudiced and biased; thirdly, being proactive in welcoming, listening, and accepting ideas of people that vary from one's own; fourthly, increasing interactions with people of other cultures to promote understanding and respecting their way of doing things (Castagno, 2014); fifthly, identifying and understanding the aspects within the helping profession, such as gender roles, family, emotional wellbeing, and so on; and lastly, in our work place, advocating for the choice of representatives from different cultural groups.

Determinants of student's performance have been the center of discussion in many debates among education trainers, policy makers, and academicians. Many studies have been undertaken to examine the issue, most of which have focused on the performance of students in the United States and Europe. The findings from these studies highlighted hard work of the teachers, ethnicity of the teachers versus that of the students, parental support, previous school, and self-motivation as some of the primary factors that

affect a student's performance. Since cultural variations may have a vital role in shaping the performance of students, it is very crucial, therefore, to examine these factors in details in order to account for the actual root of it and develop strategies to curb its bad effects.

Teachers have an obligation to all of their students. They should ensure every student has equal opportunity to achieve the best of their abilities (Holton, 2015). No discrimination should be treated from the side of the teachers or the side of the student. Incorporation, interaction, respect, and appreciation of their diversities are appropriate strategies. Teachers have a power when it comes to molding the student's mindset. They should recognize this fact and use this to change the status quo where discrimination is still present and influence the students to become a discrimination and intimidation free generation.

The educational system develops curriculum for learning institutions, and teachers represent "institutional agents". When the school curriculum falls short in considering the need of all learners, teachers must stand up to this, act as a bridge, and address such instances (Holton, 2015). For instance, teachers may plan a demonstration involving the unconsidered group to fight for their rights. It is a display of support and understanding of all the students. In return, students develop a sense of belonging and would like to be identified with that particular school.

According to The Center for Comprehensive School Reform and Improvement studies, students are more likely to achieve well in their academics if they feel their teachers identify with them, are supportive, and care about them. When teachers are

honest with the student achievements and understand their strengths and weaknesses, students become honest and open to teacher's rectification and outselling. This way, it is easier to maintain both teachers' and students' motivation. Improvement of students' behavior in the classroom setting is the responsibility of the teachers. They include taking measures to support students, focusing on rigorous standards of education, and having different strategies of teaching.

Student's performance is the key factor in evaluating the credibility of a school. Therefore, student's achievement is very crucial to all stakeholders of the school. Be it the teachers, the parents, the students themselves, policy makers, and other schools for comparison purposes. Many factors affect students' performance in line with several ways one can use to improve the performance of the students (Holton, 2015). They include incorporation of different learning styles; each student has a varying style of learning, and this defines their level of understanding what is being taught in class. Therefore, one teaching style may not cover the need of all students. Also, a diversified teaching style is an important ingredient in teaching. Use of group discussions, hand-on learning, and outside the class learning modes could reduce boredom in class as well as attention disorders.

Equality and justice are two words that are used interchangeably in the same context implied to mean the same. However, this is not always the case (Matravers & Meyer, 2011). Most of the time, equality is not about treating everyone in the same manner. It entails treating individuals in a manner in which the outcome for each person is similar. This involves facilitating different people in different ways to achieve similar

results. Equality can be achieved by ensuring everyone is provided with the support they

need to enable them access the required resources and be able to make decisions that

earns them recognition, respect, and value. On the other hand, justice is the principle of

protecting and defending the rights and punishing the wrongdoers. The way justice is

defined differs for people of different backgrounds (Matravers & Meyer, 2011). In a

school setting, it is only prudent to have a precise understanding of what each group

regards as just. Equality is something else that should be highly embraced in order to

foster harmony, tolerance, and peace.

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Appendix

IRB Approval Number: 03-27-15-0285263/ Project Approval Number: 2017-10

Superintendent's Name
District Name
Address 1
Address 2
City, State, Zip

Dear Superintendent X,

This letter is in regard to the information that I require in order to complete an academic study on the matching of student and teacher races in Grade 8 in the academic discipline of social science. There is currently a gap in academic literature concerning this topic. As such, I have proposed a dissertation at Walden University in order to respond to this paucity in study regarding the matching of teacher and student races. This dissertation shall determine whether there is a significant relationship between student and teacher race matching and the performance of students on standardized tests concerning social science in the sample taken. This request is not expected to put students at risk, as the data will be depersonalized. In the second page attached to this letter is a listing of the information that I request from your office.

With the data collected there, statistical analysis will be performed, and only the findings from the statistical analysis will be published in the dissertation. These findings will be made available through the publication of my dissertation. In addition, the findings from this research may be used in subsequent academic work that may be published in academic research journals or presented at academic conferences focused on academic study in the fields of education and sociology.

The benefit from your participation is that these findings may suggest more about how school districts should conduct the selection of faculty, the placing of faculty, and the mix of faculty and students. Significant findings in this research may suggest that there is a need for students and teachers to be racially homogeneous. If this is the case, then, the design of the classroom and the strategies of teachers may need to be addressed. If you choose to participate, the findings from this research can be delivered to you at the conclusion of this study or at any point over the course of the next five years.

Thank you for the time and consideration you have given to this letter.

Sincerely,

<Signature>

Rachel Murphy

(See attached for list of data required)

1. Grade level at time of record collection (to ensure that each student record included in the dataset represents enrollment in grade 8);

2. Social science standardized test score (dependent variable of the study), a continuous variable indicating percentile rank on test;

3. Race of student's grade 8 social science teacher at the time the standardized test was taken;

4. Student sex;

5. Student gender;

6. Student race (to ensure that only Hispanic and African American students are included in the sample);

7. Lunch Eligibility by Ethnicity Achievement Gap for 8th grade Social Sciences

8. Student income (measured as a dichotomous variable, with free lunch-eligible students being counted as lower income, and all other students counted as moderate or high income); and

9. Student academic track (measured as a dichotomous variable indicating either special education or mainstream education).