THE IMPACT OF TEACHER EXPECTATIONS ON STUDENT ACHIEVEMENT

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

Lisa M. Kohut

Indiana University of Pennsylvania

May 2014

Indiana University of Pennsylvania
School of Graduate Students and Research
Department of Education and School Psychology

We hereby approve the dissertation of

Lisa M. Kohut

Candidate for the degree of Doctor of Education

_____	_____
	Mark J. Staszkiewicz, Ed.D. Professor of Education, Advisor
_____	_____
	Joseph F. Kovaleski, D. Ed., NCSP Professor of Education
_____	_____
	Roger L. Briscoe, Ph.D. Associate Professor of Education
_____	_____
	Lynanne Black, Ph.D. Associate Professor of Education

ACCEPTED

_____ _____

Timothy P. Mack, Ph.D.
Dean
School of Graduate Studies and Research

Title: The Impact of Teacher Expectations on Student Achievement

Author: Lisa M. Kohut

Dissertation Chair: Dr. Mark J. Staszkiewicz

Dissertation Committee Members: Dr. Joseph F. Kovaleski
Dr. Roger L. Briscoe
Dr. Lynanne Black

This study involved the use of archival TESA program evaluation data from 129 middle school teachers who taught at public middle schools in Indianapolis, Indiana during the 2007-2008 school year. Teachers were asked to identify five high achieving students and five low achieving students in their classroom. Teachers then completed a survey about each of these ten students.

This study examines the relationship between teacher expectations measured by their identification of students as high or low performing and race. This study also evaluated the impact that the implementation of Teacher Expectation Student Achievement Program (TESA), which was designed to increase teachers' awareness of discrepant expectations for students from different backgrounds, had on teacher's perceptions of student achievement.

The analyses showed that race predicted teacher identification of high or low achieving students. In other words, teachers were more likely to classify African-American students as low achieving as compared to White students. TESA also produced more perceived academic gains for high achieving students than for low achieving students, and teachers rated TESA as more important with high achieving students than with low achieving students. Results also showed that teachers who implemented TESA in higher frequency perceived more academic gains for their students. Finally, there was

not a difference between the impact that TESA had on African-American students and White students.

ACKNOWLEDGEMENTS

I dedicate my dissertation work to my family and special friends, who supported me and my life goal all the way through. Special gratitude goes to my parents, Millicent and Ted Brown, who have been encouraging and believing in me from the beginning. My sisters Dionne and Pauline and my brother, Darnell, have also been there every step. I also dedicate my dissertation to my amazing nephews, Wiliam and Luke, for their enthusiasm and support for this goal.

I would also like to dedicate my dissertation to my special church family and friends who prayed for me. Special thanks and appreciation to my dear friend Bobbye Skol, who is always cheering me on and praying for my projects.

Finally, I would like to dedicate this dissertation to all of those who helped with the fine details of my dissertation, like editing and formatting. I would especially like to thank Dr. Christopher Bradley for his role. Dr. Bradley mentored me with the statistics and did an amazing job of proof reading, editing and encouraging me towards the end.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

Currently there is a performance gap in the educational system between minority students (African-Americans and Hispanics) and Caucasian students that has been problematic and statistically alarming. African-Americans and Hispanics tend to have a higher dropout rate, a disproportionate referral rate to special education, a high failure rate, and a significantly higher suspension rate (Wise, 2009) as compared to Caucasian students. According to Wise (2009), minority students, particularly African-Americans and Hispanics, are significantly less likely to be given the opportunity to participate in honors or advanced placement classes even when White students have lower grades or test scores. Also, schools that have a large percentage of Caucasian students have about three times as many advanced level courses offered as schools that have a large percentage of negatively stereotyped minority students (Wise, 2009). There is also a discrepancy in the school discipline practices applied to negatively stereotyped minority students versus Caucasian students, which contributes to the achievement gap.

Skiba, Michael, Nardo and Peterson (2000) examined years of research on the disciplinary actions of schools and found that African American and Hispanic students were significantly more likely to be suspended from school than Caucasian students. It should also be noted that Skiba et al. (2000) did not find a statistically significant difference between the rates at which Caucasian students and minority students break serious school rules resulting in punishment. This disparity in school discipline that has no clear explanation may indicate that when it comes to discipline, educators may be responding based on racially biased perceptions. Racially biased perceptions may in turn

lead to higher levels of discipline for negatively stereotyped groups, reinforcing the stereotype in the student and the teacher.

There has been research that supports the concept that the expectations of K-12 teachers do in fact affect the achievement level of students (Davies, Hattie & Hamilton, 2006.). For example, Cacioppo (2002) coined the term "behavioral confirmation prophecies", which are basically the teacher's thoughts or expectations of a student's behavior being confirmed by the student's actions. In other words, if a teacher thinks a student is very smart, the student performs better in class; if a teacher thinks a student is hostile, the teacher's response may be more hostile towards that student, consequently eliciting more hostility from the student. Interestingly, if a person is unaware of some of these biased preconceptions, they act differently but think they are fully justified, which leads to more negative displays of social interactions. For example, if a teacher is unaware of her biased preconception of African-American males being more aggressive, she may respond with less patience and more fear towards African American males without being aware of how her response was different.

There have been some theories about the source of the achievement gap between Caucasians and some minority students, which indicates that African-American students and Hispanic students are innately less intelligent and have less intellectual capacity to learn. In 1994, Hernstein and Murray published the book, *The Bell Curve*, to explain certain differences in intelligence in American society and highlighted the intelligence gap that can pose problems by furthering the intelligence gap. Though the assertions are controversial, it provided an overview on low African-American test scores and how genetics may determine test scores among African-Americans, Whites and Asians.

Knowledge is Power Program (KIPP) is a national affiliation of 125 KIPP public schools in 20 states and the District of Columbia that has enrolled more than 41,000 students: 85% are from low-income families, and 95% are African American or Latino (KIPP Foundation, 2013). The results that these schools are producing lie in opposition to the arguments of Hernstein and Murray's (1994) Bell Curve theory. The outcomes that some of these 90/90/90 schools (schools that are 90% minority, 90% free and reduced lunch, and 90% proficient in reading and math) are accomplishing provide supporting evidence of the role that high expectations may be having on the performance of low income and minority students (Reeves, 2003). One of the five pillars or distinguishing characteristics of KIPP is having high expectations for all students and expecting every student to meet the high academic standards, regardless of background (Tuttle, Teh, Nichols-Barrer, Gill, & Gleason, 2010). As a result, outcome studies done by Henig (2008) have shown that KIPP schools are having a significant impact on student's state assessment scores in math and reading. In fact, by the third year, many KIPP schools are moving students from the 30^{th} percentile in math to the 48^{th} percentile, which is enough to cut the achievement gap between minority and Caucasian students in half (Henig, 2008). These schools are demonstrating that any theory which concludes that certain students are academically inferior and incapable of learning may be flawed. As such, it stands to reason that the process of exploring the achievement gap is complex and needs to include all possibilities. Although training teachers to have high expectations for all of their students may not completely close the achievement gap, it may be a viable way to begin to diminish the discrepancy in academic performance.

Factors Contributing to the Achievement Gap

While addressing the achievement gap and expectations, it is important to gain an understanding of some of the history of educational reform. The U.S. Supreme Court case of *Plessy v. Ferguson* in 1896 (as cited in Kozol, 1991) resulted in the high court setting up a policy of segregated schools for Blacks as the law of the land while also stipulating that these separate institutions must be equal to the schools for Whites. Because of the way schools are funded, and because of the income disparity between Blacks and Whites, separate but equal evolved into separate and unequal throughout the first half of the 20th century. The unequal status of schools was challenged in 1954 with the *Brown v. Board of Education of Topeka, Kansas* Supreme Court case. The Supreme Court used this case to strike down the *Plessy v. Ferguson* decision, effectively rendering separate but equal as illegal. The *Brown* decision set the stage for the desegregation of schools. This case was pivotal in acknowledging the inequity of education and educational resources in different schools.

According to Kozol (1991), the benefits of equitable educational funding cannot be calculated on a short-term basis, because just as the inequality was perpetuated for many years it would take several years before the consequences of so many years of systematic inequality are reversed. Kozol (1991) explains that there are some consequences of unequal funding that cannot be measured. One of these consequences includes the crumbling infrastructure of poor and urban schools, which diverts some of the financial resources that should be used for per pupil budget, and applies it to structural rehabilitation. These are funds that a district with an updated building would be able to use for educational resources, and not for infrastructure.

Another uncalculated consequence is the impact of the health conditions and psychological impact of children growing up in compromising environmental conditions including run-down housing and contaminated land. There are also uncalculated expenses from children's parents growing up in similar conditions. Keppel (1966) sums it up with the following quote:

> a caste society, violates the style of American democracy…the nation in effect does not have a truly public school system in a large part of its communities; it has permitted what is in effect a private school system to develop under public auspices…. Equality of educational opportunity throughout the nation continues today for many to be more a myth than a reality. (p. 28)

Purpose of the Study

Factors That Influence Teacher Expectations

There are various factors that may be responsible for contributing to the achievement gap; however, this research focuses on the impact that teacher expectations may have on academic performance.

Dusek and Joseph (1983) did a meta-analysis of teachers which indicated that teachers' expectations are influenced by a student's race and several other student factors, including gender, social class, and stereotypes. Wigfield, Galper, Denton and Seefeldt (1999) studied teacher expectations for 156 former Head Start and 114 non-Head Start children upon entering first grade. They found that teacher expectations for Caucasian students were significantly more positive than for African-American students. The teachers tended to rate Caucasian students higher in the areas of academics and social skills; additionally, the teachers reported higher levels of enjoyment in working with

Caucasian students. They also rated African-American children lower on scales predicting ability in academics, making friends, and the teacher's enjoyment in working with African-American students. This study may indicate that teachers are bringing biased preconceived notions into the classroom because their expectations were developed before they even had the opportunity to get to know their students. These debilitating circumstances can be additive. For example, minority students are entering the classroom environmentally compromised from living in poverty and other depriving ecological situations. Further, they tend to be intellectually discouraged because they are bombarded with statistics about their limited intelligence. This occurs before they even enter school; therefore, minority students begin their educational experience with teachers expecting less from them. These consequences can and often will follow minority students throughout their school experience.

Another example of evidence that has supported the reported effect of teachers' expectations on students is the study done by Entwisle and Alexander (1988). They studied 825 first grade African-American and Caucasian students. The African-American students started with slightly higher standardized test results in reading. On the first grade reports, Caucasians did a little better in reading. By year end, this small difference grew into a significant difference, which was also reflected in standardized reading test results. Entwisle and Alexander (1988) concluded that the teachers' expectations, which were also reflected in their grading, had a meaningful impact on the academic achievement of the students. They concluded this because they found no other evidence of discrepant academic ability and the discrepancy seemed to increase the

longer the students were in school. This evidence supports the notion that high expectations propel students to achieve at higher levels.

If we accept the conclusion that Entwisle and Alexander (1988) made as accurate, it becomes plausible to argue that as early as pre-school and first grade, children are picking up on the teachers' low expectations. These expectations consequently lead to decreased motivation and lower achievement for the negatively stereotyped minority groups, and increased motivation and higher achievement for Caucasian students and students who have teachers who have high expectations of them. Additionally, the Center for Effective Schools at the University of Washington surveyed 87 schools in 4 urban school districts including Chicago, Detroit, Indianapolis and Milwaukee as part of the data collection activities of the Academy for Urban School leaders. The results indicated that in the area of high expectations for student achievement, 2378 teachers did not expect every student to perform well academically in their schools (Reyna, 2000) Teachers in urban schools tend to have lower expectations of their students, regardless of grade level. According to the surveys, a large percentage of staff did not believe that their students would do well in school and a large portion of the teachers do not believe that their students will be successful, even if they believe that the students have the ability to learn. The question is, what factors contribute to a teacher's expectations of his/her students? According to Dusek and Joseph (1983), there are several factors that contribute to a teacher's expectations of her students which are based on the following characteristics: gender, ethnicity, social class, stereotypes, diagnostic labels, physical attractiveness, language style, personality, age, social skills, previous siblings, parent background and educational level, and personal names.

Low Expectations for Stereotyped Minority Groups

Some may ask, what is the philosophy or thinking that supports the ideology that some students are innately less capable of achieving than others? First, there has been a lack of understanding and misuse of standardized assessments. This has led to the belief that test results alone are a reliable source to determine a student's potential, and that intelligence is stable and unchanging. In other words, you are either gifted, average, or developmentally challenged at birth (Baumburg, 1994). Unfortunately, based on this deceptive belief, according to Oakes (1985), schools are structuring inequality by using tests to put students on an educational "track" at an early age. Lower track students receive a lower quality education due to the belief that the test results accurately predict a child's capacity to learn. The belief that intelligence is somehow fixed at birth and unchangeable, and that certain people have it and others do not, leads to stable judgments about students who are considered less intelligent. This is predicated on the belief that is entrenched in American culture. This belief emphasizes ability rather than effort in assessing potential, which has taught students to give up if they don't fit in the intelligent category because there is nothing they can do about it. This belief is contrary to Chinese and Japanese cultures which do not believe that low scores are a symptom of low ability, but instead are evidence that the student has not yet actualized his or her potential, which is available through perseverance and hard work (Baumburg, 1994).

Hale and Fiorello (2004) stated that although IQ often predicts a child's performance in the classroom well, we foreclose the child's potential access to opportunities and even future career aspirations when we predict that the child's limitations on the assessment are caused by deficient intelligence. Although there is

controversy about whether or not IQ tests are biased or not, one argument is that they are considered statistically unbiased because they measure crystallized abilities. Hale and Fiorello (2004) define crystallized abilities as "skills acquired through formal and informal experiences and education" (p. 18). In other words, assessors are not able to clearly divide or separate the knowledge that students acquired from informal experiences that they have had outside of the school setting (possibly with their family or friends) from knowledge that was obtained through the formal educational system. Students from higher income families typically have more exposure to enriching experiences and resources. Consequently, there is no accurate way to measure the impact of previous experiences on IQ levels. We also know that those with enriched backgrounds and educational experiences tend to perform better on crystallized measures than those who come from impoverished backgrounds (Hale & Fiorello, 2004). According to Ogbu's (2002) research, "involuntary minorities", including African Americans and Native Americans, perform poorly on IQ tests and in school due to cultural differences, prejudice, and their own resistance to being culturally assimilated, as opposed to innate lack of ability. As Hale and Fiorello (2004) said, "this overemphasis has led to inappropriate identification of impoverished and minority children as having mental retardation, to the flawed "discrepancy model" of learning disability, and to testing practices that are irrelevant for individualized interventions" (p. 18).

Even if teachers are coming into the classroom with biases, prejudices, and preconceived notions, how is that converted in the classroom and negatively impacting student outcomes and achievement? According to Weiner (1985), there is a process in which beliefs or attitudes impact behavior. This is explained in these steps: first, a belief

or attitude is formed about a group of people including what they are and what they do. For example, Blacks are good at sports because of their genetics, but they are genetically weak with respect to academics. Second, an explanation is developed about why particular groups are the way they are. Evidence (life experiences) is compiled to support this theory, belief and explanation to make any events that occur legitimate and events or individuals or evidence that does not fit the previously formulated beliefs are thrown out or considered exceptional and unlike the rest. The explanations and interpretations that are used and nurtured as beliefs and attitudes toward these groups pave and foster the way group members are treated. For example, Blacks that do well academically are considered exceptions to the rule, and when they don't do well, the belief is reinforced. This is an example of how sustaining beliefs work. Teachers may continue to interact with students based on their previously developed expectations, regardless of the student's performance.

TESA – Teacher Expectations Student Achievement

The Teacher Expectations Student Achievement (TESA) program is designed to increase teachers' awareness of the impact that their expectations have on students and to teach them to have high expectations for all of their students. Cantor, Kester and Miller (2000) define TESA as a staff development program with a goal of narrowing the achievement gap for all students. The major intent of TESA is to help educators improve the quality of the interactions and assist all children succeed in school.

> TESA is designed to modify the way teachers interact with students through heightened awareness of how perceptions affect their expectations. Studies show that using TESA interactions enhances student academic performance and gender

and diversity awareness. It also improves attendance and classroom climate, and reduces student discipline challenges. (Los Angeles County Office of Education, 2011, para. 2)

The 1960s Civil Rights Movement gave a boost to the notion of equity for all American citizens. As an outgrowth of this time period, and under the leadership of Mary Martin, the Los Angeles County Office of Education developed TESA in 1971. Over time TESA has evolved and incorporated various theories and models to suit a particular period. TESA has also made attempts to equip teachers to deal and reach each student efficiently, effectively, and without discrimination (Cantor et al., 2000).

Statement of the Problem

Given the current achievement gap and the continued controversy regarding the impact that teacher expectations have on student achievement, it would be negligent to bypass the opportunity to examine the impact that a program like TESA has on student achievement. The present study explores the potential impact that instructing teachers to have high expectations for all students may have on the achievement, behavior and attendance of the students. This study determines whether there is a difference in TESA's level of efficacy for students identified as high versus low achieving students, determine whether factors such as race or sex influence a teacher's classification of a student as high or low achieving, and examine the impact that the teacher's level of implementation and rating of importance of TESA has on her perception of progress in the student's achievement, attendance and behavior.

Research Questions

This study attempts to answer the following questions related to TESA:

1. Does race predict teacher perceptions for identification of high or low performing students?
2. Is there a positive relationship between the degree of teachers' implementation of TESA and their perceptions of progress in academic achievement for low and high achieving students? Further, do teachers believe that the implementation of TESA produces more academic gains for low achieving students than for high achieving students?
3. Is there a positive relationship between a teachers' rating of the level of importance of TESA interactions and their perceptions of progress in academic achievement for low and high achieving students?
4. Does the TESA program have more impact on minority students than on White students?

Research Hypotheses

The following hypotheses were examined:

1. It is hypothesized that teachers will be more likely to identify African-American students as low achieving relative to White students in proportion to the percentage of African-American and White students in the school district.
2. It is hypothesized that teachers who implement TESA in higher frequencies will perceive more progress in academic gains for their students. Further, it is hypothesized that there will be more academic gains perceived for low achieving students than for high achieving students.

3. It is hypothesized that there will be a difference in the level of importance of TESA student-teacher interactions as a function of whether a teacher perceives a student as either a high or low academic achiever.
4. It is hypothesized that the TESA program will have a greater impact on minority students than on White students.

Procedures

Indianapolis public schools implemented the TESA program in their schools to help increase teacher awareness of expectations and to improve their achievement scores. The results of this implementation were analyzed in this research. The present investigation is a program evaluation examining the effectiveness of the TESA program. The study attempted to determine if the implementation of TESA by teachers would impact teacher perceptions of behavior, academic achievement, and attendance to assess whether or not TESA impacts the teacher's interactions with his students and whether or not the student's sex and race impact the teacher's expectations. Archival data including surveys completed during the 2007-2008 school year by teachers in the Indianapolis Public schools were collected and examined. The teacher responses to specific questions were analyzed using crosstabulation analysis, correlation analysis and the Wilcoxon Signed Ranks test (as appropriate) to determine if teacher responses were associated with perceptions of student behavior, academic achievement, attendance, race, sex, and high versus low achievement.

Assumptions

The following assumptions are being made to support this research. The first assumption is that the TESA trainers who trained the teachers implemented the training

with integrity. Second, it was also assumed that the teachers who participated in the program attended all of the training and implemented the TESA program consistently and with fidelity. Finally, it was assumed that the teachers completed the TESA surveys accurately and with integrity.

Limitations and Delimitations

There are several limitations of this study which indicate that the results should be interpreted with caution. One limitation of this study is that there is no baseline for the students' level of achievement. It is not possible to determine if the minority students that are perceived as low achievers are classified as such because of previous academic performance or if in fact their academic achievement is commensurate with their Caucasian counterparts, which would indicate biased perceptions. Another limitation of this study is the fact that there were no pre and post- tests done before and after TESA was implemented. This makes it difficult to link any changes in teacher perceptions to the TESA program, although for the purposes of this study we will make that assumption and invite others to investigate this assumption further in their own research endeavors. Finally, since teacher expectations are difficult to measure quantitatively, the idea of linking teacher expectations to student achievement is somewhat difficult to achieve.

One of delimitations of this study is the fact that the data were collected from one centralized location. This delimitation makes it difficult to generalize the results of this sample outside of the parent population or to other populations that may have different demographic profiles. This study was done in a metropolitan area that has high concentrations of African-American and Hispanic students, thus limiting the ability to generalize this data to populations that have higher populations of Caucasian students,

such as what is found in rural areas. Also, this study was implemented in an urban area, which makes it difficult to generalize to areas that are more rural.

Operational Definitions

High Expectations - Measured by the frequency which teachers implement TESA and the rating of importance given by teachers for TESA.

Expectations - Related to the achievement levels of the students with the same demographics.

Minority students - African-American and Hispanic Students.

TESA-Teacher's Expectations Student Achievement - A program developed to heighten teacher's awareness of biased perceptions of students.

Bias or preconceived notions - Assumptions made about students based on previous beliefs, experiences, or interactions that are not factual.

Stereotypes - Belief systems about individuals based on the group that they belong to.

Negatively stereotyped groups - Includes African-Americans and Hispanics.

Perceptions - The teacher's assumption about what a student's academic ability is.

Race - Defined as Black, White, Hispanic, Caucasian, or Asian.

CHAPTER TWO

LITERATURE REVIEW

There has been considerable controversy and an abundance of research in the literature regarding expectation formation and the role that teacher's expectations may play in student achievement. This chapter begins with a discussion on attribution theories and follows with a review of the literature regarding the factors that influence teachers to develop, form, and maintain expectations of their students. The discussion continues with an overview of the various ways that expectations are communicated in the classroom by teachers and teacher expectancy effects on student achievement. The focus of the chapter then shifts to the student. Social learning theory is presented as a theoretical explanation of students' responses to teachers' expectations; the factors that make a student vulnerable to expectancy effects are then discussed. The chapter ends with a section on the Teacher Expectations Student Achievement (TESA) (Cantor et al., 2000), with emphasis placed on the evaluation outcomes of TESA as they relate to teachers' expectations and consequently, student achievement.

Attribution Theory

Attribution theory was developed by Fritz Heider in 1958. According to attribution theory, people have a tendency to attribute causal explanations for others' behavior by blaming the person's situation or the person's disposition. For example, when a teacher encounters an aggressive student, she either will blame the student's personality (a dispositional attribution) or will consider the student's behavior a reaction to stress or abuse (a situational attribution). The fundamental attribution error is the tendency to overestimate the role of the person's disposition in a negative situation and

underestimate the role of the person's circumstances or situation. Attribution theory is important in all situations because the explanation that we provide for behavior determines how we respond to the behavior. In other words, if a teacher attributes a student's aggressive behavior to his personality (disposition), she will be less compassionate and understanding in her reaction. If the teacher attributes the student's behavior to stress she may act more compassionately. According to Reyna (2000), teachers respond differently to students' failures based on what the teachers attribute the failures. These attributions are communicated to the student in the classroom, either directly or indirectly, through emotional or behavioral cues. For example, when teachers attribute failures to something controllable (like effort), they are more likely to have angry and punitive responses. However, when teachers attribute failures to conditions that are uncontrollable (like ability), they are more likely to respond with sympathy and pity. Once the student is able to discern the teacher's attributional response, which occurs during the elementary levels (Butler, 1994), the student's own beliefs about the causes of their outcome is affected. Consequently, this influences the student's motivation and future achievement strategies (Reyna, 2000).

According to Weiner (1986), attributions can be grouped into one of three categories: locus of causality, controllability, and stability. Locus of causality attributes the outcome of situations or circumstances to the internal or external attributes of an individual. Controllability explains whether the behavior is within the individual's control or not. For example, if a student performed poorly on a test, was it because of ability, which is uncontrollable, or effort, which is controllable? Low intelligence is considered internal to the individual, uncontrollable by the individual and stable, which

means that intelligence is likely to stay the same. Therefore, being placed in the low intelligence category can influence a student's school trajectory throughout his academic career. According to attribution theory, children who attribute successes to ability and effort are more successful while children who attribute failures to effort are more likely to improve. Finally, stability indicates whether the behavior is changeable or unchangeable. The stability factor plays a strong role in predictions and expectations for future behavior. For example, according to research done on stereotype consistency, Jackson, Sullivan, and Hodge (1993) found that when targets successfully completed tasks that were consistent with stereotypes about that group, it was attributed to characteristics that are internal and stable. However, when individuals successfully completed tasks that are inconsistent with stereotypes for that group, they were attributed to unstable traits, like effort. This concept was demonstrated in one particular study done by Jackson et al. (1993) where the race of the applicants was categorized as African-American or White and the participants were asked to rate the applicants. The outcomes showed that when African-Americans were academically successful, it was considered to be caused by unstable factors like effort. Contrarily, when African-Americans did not perform well academically, it was considered to be the result of more stable factors like low ability. The opposite was found for Whites. Successful academic performance was attributed to high ability and poor performance was attributed to poor effort. The findings were consistent with stereotypes for both groups.

Factors Leading to Teacher Expectations

The effect of teacher expectations was illustrated in what Rosenthal and Jacobson (1968) called *The Pygmalion Effect*. This study consisted of several classes of children in

grades one through five who were given a nonverbal intelligence test (Rosenthal & Jacobson, 1968). The test was said to measure the student's potential for intellectual growth. Students were selected at random by the researchers and designated as "intellectual bloomers". The students' names were given to their teachers along with the message to be on the alert for signs of intellectual growth. The students who were identified as "intellectual bloomers" showed greater gains than did other students, and were rated by their teachers as being more interesting, curious, happy and thought to be more likely to succeed later in life (Rosenthal & Jacobson, 1968). This study demonstrates the interactive effect that the teacher's expectations have on her interactions with the student, and consequently, the student's level of achievement. This research may also support the idea that a teacher's expectations have more impact on a student's achievement than the student's performance on an ability or achievement test. Although these studies were done in a classroom, they were inspired by studies that were done in laboratory psychological experiments. Two groups of psychology students were given rats that they were to teach to perform different skills, including maze learning. One group was told that their rats had been specially bred for high intelligence, and the other group was told that they would be working with rats bred for dullness in learning mazes. The rats of the students who were informed that their rats had been specially bred for high intelligence reported significantly faster learning times than the learning times of the group identified as bred for dullness in learning mazes (Rosenthal & Fode, 1963).

According to Good (1987), teachers develop lasting expectations on the first day of school. These expectations are influenced by various characteristics of students including ethnicity, gender, social class, stereotypes, etc. According to Ferguson et al.

(1998), teachers' expectations are unbiased when there is a correlation between their expectations and children's achievement records or grades. In other words, if a minority student's achievement records indicate a history of lower achievement, it is not biased for a teacher to have lower expectations of this student. Ferguson et al. (1998) note that it is only considered biased if the teacher has different expectations for students that who have similar achievement records, which is a term that Ferguson et al. (1998) calls "conditional race neutrality". Evidence suggests that teachers expect less of African-American students and/or lower income students, as well as students with different values, despite equal achievement of these students (Alvidrez & Weinstein, 1999; Baron, Tom & Cooper, 1985; Hauser-Cram, Sirin & Stipek, 2003). Jussim and Eccles (1996) concluded that, for the most part, the teachers' predictions of future behavior tend to be reasonably accurate. It is plausible to ask how one goes about determining whether a teacher's expectations are in fact an effect of their accurate prediction of students' ability, since the student's achievement could be an effect of the teacher's expectations. Currently, most classroom environments consist of predominantly White teachers and diverse students. This makes it difficult to believe that societal stereotypes, racial and class divisions would not contribute to negative appraisals of minority students in some way. According to Bobo (2001), African-Americans and Latinos are more likely to be negatively stereotyped and Whites and Asian-Americans are more likely to be positively stereotyped when it comes to academic ability.

Expectation Formation Based on Perceptions

There is an increasing body of research that suggests that individuals may have implicit stereotypes and prejudices that are not completely in their control even when

they appear to have egalitarian racial attitudes (Dovidio & Gaertner, 1996). This is to say, even when people (including teachers) do not want to be prejudiced or have stereotypes and don't believe that they do, their decisions can be influenced by subtle and implicit stereotypes that can adversely impact their expectations and perceptions of students that are diverse. Dovidio and Gaertner (2004) attempted to explain this type of bias by arguing that as a result of automatic responses based upon the "historical roots" of the United States, that "the actual or imagined presence of a Black person is typically enough to automatically activate racial categories without conscious effort or control" (p. 311). Individuals tend to categorize members from their in-group more positively than members that are not in their group: Caucasians automatically activate stereotypes of Whites as intelligent, successful and educated, and of Blacks as aggressive, impulsive and lazy. According to Gaertner & Dovidio (2000), even individuals who appear to support principles of racial equality may have unconscious, negative feelings and beliefs about minorities who are rooted in social and psychological processes that consequently promote racial bias and influence decision-making. This societal trend also applies to the classrooms.

Baron et al. (1985) summarized studies from the Auckland area that included twenty-one primary school teachers from twelve different schools. The schools selected, had students from diverse socioeconomic levels. The participants completed surveys related to teacher expectations twice during the year of 2001, with one survey at the beginning of the year and once at the end of the year. Baron et al. (1985) summarized these studies and found that when White teachers rated the characteristics of an unknown child, the teachers consistently rated European American children more positively than

African American children. This experimental research may indicate that some teachers are making biased decisions about the characteristics of students based on ethnicity without having enough information to assess a student's accurate achievement level.

Rist (1970) conducted a study of social-class based self-fulfilling prophecies. The study concluded that by the eighth day of school, a kindergarten teacher had separated her class into three groups. This included students who were smart, average, or dumb. These groups of students were divided into three different tables (A, B, and C respectively). When these groups were further explored, it was determined that the main difference between the student was social class. Students at Table A came from homes that had larger incomes, were less likely to be supported by social services, and were more likely to come from a household with both parents. There were also comparable differences between the students who were at tables B and C. Students that sat at Table A were seated closest to the teacher and most of the teacher's time and attention was directed to these students. It was also reported that the teacher was generally warmer and friendlier to the students at Table A. These examples may support the theory that teachers are entering the classroom with preconceived perceptions of socially different students that is adversely affecting their expectations of some students and consequently influencing their assessments of these students. In contrast, naturalistic studies evaluating the correlation between child ethnicity and teacher expectations have had inconsistent findings. Research has found that teachers rated students from different ethnic backgrounds differently (Moore & Johnson, 1983; Saft & Pianta, 2001; Skiba et al., 2000).

Sustaining Expectation Effects

Teachers often expect students to continue to achieve or behave according to previously established patterns, often to the point of ignoring evidence of change. The teacher responds to her previous expectations instead of responding to changes the student may have made. According to Good (1987), sustaining expectations diminishes the likelihood of change in a student's behavior. The teacher's initial expectations can sustain high expectations, which could be beneficial for students or low expectations. In other words, if a teacher sustains high expectations for a student, regardless of the student's performance, the student may eventually begin to respond to the teacher's high expectations. Contrarily, if a teacher has low expectations, despite a student's strong performance, the student may begin to respond to the low expectations, thereby diminishing effort and performance.

The self-fulfilling prophecy, which is defined as an initially erroneous belief that leads to its fulfillment (Rosenthal & Jacobson, 1968), is another type of expectation theory. Merton (1948) developed a model describing the process of the self-fulfilling prophecy in the classroom. First, the teacher forms expectations of her students. Next, the teacher interacts with the students according to these expectations of the students. Third, the teacher's behavior conveys to each student what behavior and what achievement is expected. Fourth, the teacher's behavior shapes the student's behavior and achievement. Finally, the student's behavior and achievement conforms more and more closely to what is expected. In other words, the internalization of the expectations influences the student's self-concept and motivation positively or negatively. For example, teachers may begin the year perceiving certain students as high achievers and

others as low achievers. The teacher's perception may cause the teacher to spend more class time interacting with students that they perceive to be high in ability rather than those perceived as being lower in ability (Brophy, 1983; Brophy & Good, 1974). The students perceived as high and perceived as low begin to notice the discrepancy in the amount of class time spent with different students and the students begin to internalize or adopt similar beliefs about their academics and behavior as what they perceive the teachers believe. Finally, the student's behavior and achievement begins to conform more and more to the implied expectations of the teacher. In fact, according to Butler (1994), once students reach the elementary grade levels, they are able to decipher a teacher's expectations based on their interactions.

Expectations Communicated in Classroom

As stated by Clark, Chein and Cook (2004), "if a child scores low on an intelligence test and then is not taught to read because she has a low score, then such a child is being imprisoned in an iron circle and becomes the victim of an educational self-fulfilling prophecy" (p. 496). Historically, when examining achievement and student outcomes, schools have emphasized observable and measurable variables including grades, achievement test scores, and measurable behavior patterns. Although those variables are critical, they are merely symptoms of what is going on in the classroom. In this section, the research that is presented addresses some of the less obvious nonverbal cues that are expressed by teachers to their students in the classroom every day, whether they are aware of it or not.

According to both Nichols and Good (2004) and Weinstein (2002), one way teachers express their expectations of students is by the types of learning opportunities

they provide. For example, placing a student in the low reading group may send the message that the student is not a good reader or not capable of reading well. Another expression of expectations is type of classroom climate teachers provide (e.g., smiling, nodding, eye contact and proximity). For example, according to Baumburg (1994), teachers interact differently with students who they perceive as bright than students who they perceive as slow or lower achieving. Students perceived as bright receive more smiles and head nods from teachers than students perceived as slow. Teachers also lean toward and look into the eyes of smarter students more often (Chaiken, Sikler, & Derlega, 1974). In addition, the type of feedback teachers give students that they perceive as brighter is often more meaningful and specific than the feedback they give students perceived as low.

Often teachers give more praise and higher quality feedback to students of whom teachers have higher expectations. Teachers often provide more *input* – they put more effort into their teaching – to these students of whom they have higher expectations. They also provide more *output* to these students; that is, they encourage greater responsiveness from students whom they have higher expectations. In other words, some students are given the opportunity to participate in the classroom, which provides to them an extra resource to enhance their learning. The message sent to these students would indicate that the teacher believes that these students are intelligent and capable of doing more than their peers do. On the contrary, a student who is placed in the lowest math group and reading group from first grade receives the message and internalizes the message that he is not smart. When students in the fourth grade were asked about how they determined their smartness, 66% of their responses reflected that it came from their

teacher's evaluation of them in some way (Weinstein, 2002). Students also reported being aware of differential treatment between high and low achieving students in the classroom by making the following comments about perceived "smart" students: "The teacher trusts him"; "The teacher is interested in him;" "The teacher makes him feel good about how hard he tries;" "The teacher asks him to lead activities;" and "The teacher lets him make up his own projects" (Weinstein, 2002, p. 95).

In contrast, children reported that perceived low achievers are more likely to receive more negative feedback. They reported comments such as, "The teacher scolds him for not listening;" "The teacher makes him feel bad when he does not have the right answer"; and "When he is working on a project, the teacher tells him what to do" (Weinstein, 2002, p. 96). These statements indicate that children are picking up cues from their teacher and environment and internalizing them as true. This could have a significant impact on the student's educational trajectory. According to Schmader, Major, and Gramzow (2001), continued exposure to low and negative expectations leads to detachment from the task and consequently to devaluing academics to protect self. Unfortunately, African Americans and other minority students appear to be targets of low expectations in the classroom. For example, Rubovits and Maehr (1973) concluded that African-American students are given less attention and are ignored more often than Caucasian students in the classroom, regardless of their academic performance or gifted status. Based on Weinstein's (2002) research, the expectations of teachers directly impacts student achievement in the early grades and by the fifth grade, primarily because teacher expectations are influenced by the children's expectations. Irvine (1986) also

found that African Americans receive more negative feedback and mixed messages from teachers.

The following are additional behaviors that may be given in the classroom by teachers to indicate students are perceived to be low performers (Dusek & Joseph, 1983) received less genuine praise, less frequent and less meaningful feedback, had seating assignments further away from the teacher and were offered less access to more challenging work. These were just a few of the additional behaviors that one may see in the classroom when teachers are interacting with students perceived as low achievers.

By observing the list above, it is evident that students who are perceived as low achievers have a very different learning experience in the classroom than students who teachers perceive as high achievers. Being denied some of these subtle yet powerful learning interactions make learning and the motivation to learn more difficult for students who are perceived as low achievers. Cohen and Lotan (1997) support the belief that these different classroom interactions can lead to different outcomes. Essentially, the more engaged a student is in the classroom, the higher the student will achieve. Although the interactions listed above are not considered to be academic, they could subjectively be linked to engagement and classroom climate, which has been linked to academic achievement.

Teacher Expectancy Effects on Achievement

Research done by Kuklinski and Weinstein (2001) and Weinstein (2002) found that teacher expectations could be linked to year-end achievement gaps for minority students who started the year with comparable records of achievement. In other words, in classrooms where children report a significant discrepancy between their teacher's

interactions with high achievers compared to low achievers, teacher expectations contribute more strongly to student achievement, and potentially contributed to more significant discrepancies between high and low achieving students.

According to a study by Jussim and Eccles (1996), teacher perceptions of talent significantly related to sixth grade math grades and seventh grade Michigan Educational Assessment Program (MEAP) scores. MEAP is a standardized test that is administered to students in Michigan during their seventh grade year. The teacher's expectations of the student's performance predicted changes in student's self-concept of math ability throughout the sixth grade school year. Additionally, the teacher's perceptions of the amount of effort student's invested significantly predicted sixth grade math grades. Teachers gave higher grades to students whom they predicted exerted more effort. The results suggested that teachers assumed that the students who they had perceived as being high achievers exerted more effort than the students who they perceived as low achievers.

Contrary to the teachers' assigned grades and assumptions of effort, the results demonstrated no evidence that students who were assigned the higher grades for effort actually worked harder. In fact, the students who received lower grades reported expending more effort on homework. This is an example of how a teacher's perceptual bias can significantly impact achievement outcomes. In other words, teachers assumed the students who they perceived as high achievers were working harder. Consequently, they assigned higher grades to those students even if it was not deserved. At the same time, they assigned lower grades to students they perceived as low achievers, even if it was not deserved.

According to Steele and Aronson (1995), African-American college students showed depressed academic performance when they were tested under a "threat" condition or a condition that reminded them of negative stereotypes associated with their race. McKown and Weinstein (2008) found similar results with elementary school students when the children were conscious of stereotypes associated with their race. Stereotype consciousness appears to increase with age. However, children from stigmatized groups report stereotypes at an earlier age (Weinstein, 2002). Research has also found that teacher perceptions have more of an impact on economically disadvantaged students and Black students than White students or students that are not economically disadvantaged (Weinstein, 2002). Additionally, Black students are more vulnerable in confirming negative self-fulfilling prophecies than White students, which could contribute to the discrepant achievement gap (McKown & Weinstein, 2008). The academic vulnerabilities that many ethnic stereotyped students encounter may often lead these students to protect themselves by devaluing academics, evaluation, and school to maintain social mobility (Schmader et al., 2001; Steele & Aronson, 1995).

Accuracy and Susceptibility to Expectancy Effects

Jussim and Eccles (1996) argued that three expectancy phenomena accurately describe any given situation involving teacher expectations. The first phenomenon was the *self-fulfilling prophecy*, where the teacher's initial erroneous expectation influences the target, or student, to act according to the teacher's expectations (Jussim & Eccles, 1996). The second phenomena was described as *perceptual biases*, whereby the teacher or perceiver may assess, interpret, explain and remember only the target behaviors that are consistent with their beliefs or expectations about the target (Jussim & Eccles, 1996).

This phenomenon exists in the mind of the perceiver and not in the behavior of the target. Although both of the former phenomena can be responsible for shaping the actual behavior of the target, neither originates from accurate expectations. The third expectation was *accuracy,* which is the ability of the teacher to accurately reflect and predict student behavior, without subjectively influencing the behavior (Jussim & Eccles, 1996).

It is possible for teacher's perceptions of students based on self-fulfilling prophecy, perceptual bias, and accuracy to have no effect on the student's achievement or to differentially affect certain groups of students. Despite Jussim and Eccles (1996) findings that, generally, teachers were able to accurately predict a student's achievement level, they found that there were particular groups that tended to be more easily influenced by teacher expectations, making teacher expectations of these groups less accurate. These groups include (a) females, (b) students from lower SES backgrounds (based on family income and education), and (c) African American students. Jussim and Eccles' (1996) research demonstrated the significant impact that teacher expectations have on students from these vulnerable groups. For example, a teacher's expectations influenced the grades of upper income students by two grade levels and lower income students by three grade levels. The difference was even greater for standardized test scores on the MEAP. Another group that was found to have increased vulnerability to teacher's expectancy effects is African American students. Teacher perceptions of performance made about a 2.5 point difference on the MEAP scores for White students and a 6 point difference for African American students. In other words, the 2.5 point difference reflected among the test results of White students would mean going from the

55th percentile to the 78th percentile, whereas the 6 point difference among the African American students would mean going from the 31st percentile to the 89th percentile. Additionally, in the same study (Jussim & Eccles, 1996), teacher perceptions predicted a four-unit change in grades (C to B+) among African Americans and a two-unit change in grades (C to C+) among White students. After reviewing the evidence supporting the belief that specific groups (Low SES, African Americans, and girls) are more vulnerable to expectancy effects, and the students with the multiple vulnerabilities (low income, African American, female) are the most vulnerable to a teacher's expectancy effects, we may explore some of the theories on the causes of this conclusion.

Focusing on the Student: Differential Achievement Across Ethnic Groups

According to Huang and Hauser (2000), there has been a difference of one standard deviation through the 1970s on achievement test scores between African American and Caucasian students in the United States. Although this gap began to close between 1970 and the mid to late 1980s (Smith & O'Day, 1991), the scores began to diverge again without explanation from 1980 to 1992. This gap remains in 2013. In addition to the achievement gap, there seems to be a discrepancy in the way African-Americans and Hispanic students are treated compared to Caucasian students. For example, when compared with White students, African-Americans are two times more likely to be suspended, three times more likely to be placed in special education, and 3.2 times less likely to be placed in a gifted class (Weinstein, 2002). African-Americans, especially males, are three times more likely than White students to be in educable mentally retarded or special education/slow learner classes. They are also half as likely to be in gifted and talented classes according to Irvine (1990), as referenced by Reyna

(2000). While teacher expectancy behaviors can partially explain this disparity in achievement across student ethnic groups, factors within the student also play a role. These factors can be explained by Bandura's social learning theory.

Bandura's Social Learning Theory

According to Bandura (1977), there are two premises that explain students' approach to school tasks. First, individuals tend to set their expectations based on their interpretations of their past accomplishments and failures. Consequently, students may avoid tasks they have determined are too difficult or that exceed their capabilities. On the contrary, they approach tasks that they judge themselves as being capable of accomplishing successfully with confidence. In other words, an individual's beliefs about her abilities will determine her sense of self-efficacy. Another component of Bandura's theory includes outcome expectations. These are beliefs that specific actions will lead to specific outcomes and efficacy expectations, which are beliefs that the individual is capable of successfully completing the specific course of action that will lead to success. According to Bandura, there are four origins for the development of self-efficacy: (a) previous success in accomplishing the task, (b) observing and modeling another person's that resulted in a desired outcome, (c) "verbal persuasion" and related persuasive actions from others, and (d) "states of physiological arousal" (Bandura, 2001, p. 3). According to Bandura (1977), mastery experiences influence students' expectations the most, particularly if success is attributed to ability or effort. Factors that confound this depend upon whether or not the tasks are easy or if the student receives sufficient help. Typically, students with high self-efficacy increase effort as tasks become more difficult, and students with low self-efficacy vary in their patterns of effort

depending on their goal orientation. Students with performance goals are more likely to attribute their failures to low ability and consequently withdraw effort. Students with learning goals attribute failure to ineffective strategies and consequently increase their efforts (Bandura, 1977).

Overall, social learning theory (Bandura, 1977) has indicated that high self–efficacy and learning goals increases effort. There appears to be a conversion in the attribution of success to effort versus ability between the time that young children are seven to eight years old and the time they reach middle school. In other words, young children between seven and eight years old view ability as a source of effort and they tend to attribute success to effort over ability. When they do well on a test or in a class, they attribute it to the effort they put into studying. However, when they reach middle school, they begin to place more emphasis on ability than effort. This limits the expected outcomes that can be obtained through effort. Based on the attribution research mentioned above, which indicates that students discern teachers' attributions and are often influenced by what they discern, students who see themselves as incapable may reduce effort to protect their self-worth.

Teacher Expectancies and Student Achievement

There are many relevant and controversial explanations for the achievement gap between minority students and Caucasian students. However, the expectancy component is often overlooked, particularly related to the increased impact that it has on students from negative ethnically stigmatized groups. Some research suggests that school has historically been an unfriendly place for many stigmatized minorities and lower income students (Lareau, 1987; Steele, 1992). Students from stigmatized or negatively

stereotyped minority groups often must enter the classroom prepared to face the unwelcome challenge of inaccurate low teacher expectations (Jussim, 1989). This often results in making members of these groups more vulnerable to negative school events and leading to negative self-fulfilling prophecies (Jussim, 1989). This reality is critical based on the findings of social psychologists (i.e., Allport, 1954; Miller & Turnbull, 1986) who have suggested that stereotypes of stigmatized groups are often inaccurate and the more inaccurate an expectation, the more likely it is that the stereotype will create a self-fulfilling prophecy. Although the adverse effects of low expectations often lead to self-fulfilling prophecies, the same is true for high expectations of stigmatized groups leading to high achievement for previously low achieving students.

Research by Artiles and Trent (1997) has suggested that referral and placement to special education could possibly be limited to poverty, discrimination or cultural bias in referral assessment, and is influenced by factors including district size, percentage of culturally diverse teachers, teacher experience, certification, age, and ethnicity. In fact, one study investigating teacher referrals and race (i.e., African American, Hispanic American or European American) indicated that when teachers thought a student was either African American or Hispanic American, they were more likely to recommend special education placement as appropriate (National Research Council, 2002). Skiba, Poloni-Staudinger, Gallini, Simmons and Feggins-Azziz (2006) examined the theory that educators assume cultural differences are indicative of intellectual or behavioral disabilities by looking at data in one state for one year. The authors examined five disability categories to determine whether African American students were proportionately placed in more or less restrictive settings. They found that in four out of

five of the disability categories that the African-American students were more likely to be placed in a more restrictive setting, even with the same disability as their Caucasian counterpart. African-American students were also more likely to be underrepresented in general education.

Irvine (1986) suggests that teacher attitudes and expectations contribute to these results. Further, data on suspensions, expulsions, retentions and dropout rates suggest that African-American and Hispanic students are receiving differential treatment from the mainstream (Kuykendall, 2004) compared to Caucasian students. Essentially, many African-American children may be entering school with high aspirations for achievement, and lose heart due to low expectations expressed by teachers. Teachers express these expectations through body language, body movements, non-verbal communication and other communication styles. Some teachers reach the conclusion that African-American children are simply not capable of achieving high levels of academic competency (McCray, 1994). The research suggests that even when achievement is equal, teachers tend to underestimate the ability of lower income, African American students and Hispanic students, as well as any student that appear to have different values than the teacher (Alvidrez & Weinstein, 1999; Baron et al. 1985; Hauser-Cram et al., 2003). This achievement gap could be indicative of teachers' tendency to perceive students from particular minority groups as low achievers and students from the majority as high achievers. A survey of 133 fourth grade students representing 16 urban classrooms indicated that two thirds of the students' rating of their intelligence was influenced by the comments or actions of their teachers (Weinstein, 2002).

Steele and Aronson (1995) described an experiment in which previously low-achieving students were invited to take difficult honors-level courses in a supportive yet challenging environment. The authors explained that the African American students began to outperform their White and Asian classmates. This finding suggests that an environment that values and supports the achievement of every student creates high achievers. An environment that sends devaluing messages to certain students from stigmatized groups often creates low achievers. Steele and Aronson (1995) have argued that students who feel undervalued and stigmatized are more vulnerable to failure, even when they have had fewer experiences of failure. These failures can be devastating to a student's identity, which may cause them to "dis-identify" with school and achievement in order to protect their self-image (Steele & Aronson, 1995).

Bruce Hare, an educational researcher, documented the *dis-identifying* phenomena among fifth grade boys in Champaign, Illinois (Steele & Aronson, 1995). Hare compared the self-esteem of Black boys who had low achievement test scores with their White classmates who had considerably higher achievement test scores. He found that overall, the self-esteem of the Black students was just as high as their White classmates. He also found that these students de-emphasized school achievement and emphasized peer group relations to feel better about themselves. This is seen as an area of strength. Historically, there have been devaluing messages related to academic achievement and success targeted at stigmatized minorities. These messages have been implicit and explicit and have been reinforced by schools, the media, peer groups, parents, and the students themselves. These devaluing messages appear in the form of not offering the same opportunities for honors classes or extra projects, placement in low ability groupings,

offering remediation when it has not been warranted, and/or communicating negative statistics about the achievement of these groups in the media.

Such messages have created and reinforced negative images for stigmatized groups, especially where related to achievement. Consequently, this leads many of these students to de-emphasize achievement in response to societal devaluing and to protect their own self-concept. Stigmatized minorities have learned that society will see them as inferior. They are often on the defense, avoiding proving society and teachers right. Unfortunately, this defense may often include devaluing achievement, misconduct and fear, which creates hostility and depresses the opportunity for a healthy learning environment. This is a dilemma that non-stigmatized groups are not forced to deal with.

The Teacher Expectations Student Achievement (TESA) Program

Teacher Expectations Student Achievement (TESA) is a program that was developed in the 1970's by The Los Angeles County Office of Education to help teachers increase their awareness of the preconceived notions they form of students based on the race, socioeconomic class, gender, skills, or temperament of each student. According to Cantor et al. (2000), TESA is a unique mixture of elements that is crucial to successful teaching. The goal was to help teachers counteract any of these biases or judgments. The program was also developed in response to research that suggested that students tend to meet their teacher's expectations, even when they are expressed in subtle ways, as well as research that demonstrated that teachers interact more positively to students who they perceive as higher achieving (Reyna, 2000). TESA encourages teachers to evaluate their interaction style with students in three areas, which are known as strands: (a) response

opportunities, (b) feedback, and (c) personal regard. Each of these strands consisted of five pivotal behaviors, or *interactions*, that the teacher is encouraged to implement.

The first of the three strands is *response opportunities*: Brandt (1982) noted that teachers in schools that were considered ineffective were more likely to question the students who they predicted most likely to know the answers. The other children who were in the classrooms, but were not being called on as much, decided that the teacher didn't expect them to know the answers and were less likely to do their homework and master lessons. According to Sutherland, Alder, and Gunter (2003), providing adequate opportunities to respond is an effective teaching tool for special educators and has positive outcomes on the effects of academic outcomes and behavior of students with EBD. The review conducted by Sutherland et al. (2003) also points out how reading outcomes, math outcomes, and task engagement were all improved by increasing the opportunities to rates of response. Moreover, instructional time was used more efficiently as a result of the increased opportunities to respond.

The interactions that fall under equitable distribution of response opportunities strand are (a) equitable distribution: teachers are encouraged to call on all students equitably, providing "low achievers" as many opportunities to respond as other students; (b) individual helping: teachers are encouraged to provide as much individual help to "low achievers" as they do other students; (c) latency: teachers are encouraged to give "low achievers" as much time to respond to questions as they give other students; (d) delving: teachers are encouraged to assist "low achievers" to answer questions by providing additional information as much as they do other students, and; (e) higher level questioning: teachers are encouraged to challenge the thinking abilities of "low

achievers" as often as they do other students by requiring them to do more than recall information.

Feedback is the second strand that has been identified by TESA as being important for teachers to communicate high expectations in the classroom. The TESA feedback interactions are (a) affirmation or correction: teachers are encouraged to provide "low achievers" as much meaningful feedback about their performance as they provide their "high achieving" peers; (b) praise: teachers are encouraged to praise the performance of "low achievers" as often as they praise other students; (c) reasons for praise: teachers are encouraged to provide as many specific reasons for praiseworthy class work to "low achievers" as they do for other students; (d) listening: teachers are encouraged to listen as attentively to "achievers" as they do other students, and; (e) accepting feelings: teachers are encouraged to express understanding of the feelings of "low achievers" as often as other students.

According to the U.S. Department of Education Office of Educational Research and Improvement Programs for Improvement of Practice (Tucker, 1999), feedback was found to be very important to a student's success. The more students receive feedback in the form of written comments from their teachers, the more the students developed study aids. In addition, the more specific and detailed the feedback was on quizzes and homework, the better the students managed their study time and took initiative for their own learning. Hattie and Temperley (2007) note that feedback is most powerful when it is given to address wrong interpretations as opposed to a total lack of understanding. Hattie and Temperley (2007) discovered this as part of a meta-analysis synthesis of over 500 various influences on student achievement. This analysis identified feedback as

being a very powerful mechanism when it comes to influencing achievement; however, there are different types of feedback and they all had varying effects on achievement. In their work Hattie and Temperley (2007) demonstrated that the highest effect sizes included students receiving feedback about a task or how to do it more effectively and feedback that involved rewards, punishments, or praise had lower effect sizes (.14).

Personal regard is the third and last strand that TESA has found to have an impact on achievement. The social-emotional atmosphere of each school and classroom has an effect on the achievement of students. The Harvard Graduate School Education Risk and Prevention Program found that having one interested adult was the most important factor preventing students from failing or leaving school (Ackerman, 1997). There are various ways that a teacher can convey that she is interested in more than a student's academic achievement via personal regard. One example was a four-week study done at Genosha Middle School, which investigated the factors that affect Hispanic student achievement. The results suggested that teacher proximity led to improvement in grades and accuracy in homework (Bartley, Sutton, Swihart & Thiery, 1999). Acknowledging student needs and characteristics not related to instructional tasks is one way that teachers can demonstrate a teacher's personal interest in a student.

There are specific TESA interactions related to personal regard, and these include the following: (a) proximity: teachers are encouraged to be within arm's reach of "low achievers" as often as with other students; (b) courtesy: teachers are encouraged to use as many words considered courteous and respectful towards "low achievers" as with other students; (c) personal interest statements and compliments: teachers are encouraged to give as many personal compliments and express personal interest in the outside activities

of "low achievers" as they do other students; (d) touching: teachers are encouraged to touch "low achievers" in a friendly manner as often as they do other students; and (e) desisting: teachers are encouraged to be as calm redirecting the behavior of "low achievers" as with other students.

Overall, the TESA interactions have been found to help increase teacher's expectations for low income and minority students. As a result of TESA increasing teacher's awareness of high expectations for all students, student achievement improves. The TESA program may be one of the missing components to enhancing student achievement among the groups at risk, which may be an effective tool in closing the achievement gap.

Previous Research on TESA

Although TESA has been around for approximately 40 years, there has not been much empirical research conducted on the program. Following are three studies that have been done on the TESA program over the course of the past 40 years. Two of the studies were dissertations, and one was a TESA follow-up satisfaction survey that was done through a partnership between the Los Angeles County of Education and Phi Delta Kappa. The follow up satisfaction survey was done in 1994 and included 931 teachers in the California area who had been recently trained on the TESA program. According to Cantor et al. (2000), the outcomes were as follows: 95% of the respondents responded positively when asked "How would you rate your TESA training?"; 94% responded positively when asked "How useful has your TESA training been?"; 94% responded that they would recommend TESA to a colleague; 89% support TESA being a priority for professional development in their district; 83% of the teachers who have been trained by

TESA continue to team with other teachers to work on teaching lessons one and one half to two years after the training; 71% of the teachers reported that their principal understands and promotes TESA, and; over half of the respondents stated that they would like more training.

Another study done by Hindalong (1993) compared the academic achievement levels in reading, math and language arts, of students in third, fourth, and fifth grade who had TESA trained teachers as opposed to students who didn't have TESA trained teachers. This was a homogeneous group of Caucasian, middle class, and English speaking students. The results indicated that there were no statistically significant differences found between the two groups. The experimental group (5 TESA trained teachers) and the control group (6 non TESA trained teachers) produced similar outcomes.

Finally, Harris (1990) conducted a study evaluating the influence of TESA training on teacher behavior in the classroom. The purpose of the study was to determine which factors are related to persistence of TESA teacher interactions in the classroom. The variables that were being evaluated included the following: when the teachers took the TESA training, type of training, who taught the training, the quality of the training reported by the teacher, and the degree of the principal's support. The results indicated that teachers who received the TESA training from the principal demonstrated more courteous and accepting behavior to students, teachers who perceived their TESA instructor as having a broader depth of knowledge showed more acceptance of the student's feelings, and when teachers perceived the program to provide functional practices, a higher level of high level questioning was demonstrated. These results

indicate that the TESA trainer and the teacher's perceptions of the knowledge of the trainer may have influenced the impact that the TESA training had on the teachers.

Summary

This chapter summarized the research that supports the relationship between teacher expectations and student achievement. The theories discussed provide an explanation for how teachers develop expectations, how students determine their own expectations for themselves, how students determine the teacher's expectations, and how these expectations are maintained, dependent upon if the expectations are high or low. This chapter also provided explanation for how teachers communicate their expectations in the classroom both verbally and nonverbally, how those expectations may impact student achievement and which student groups are more vulnerable to teacher expectations. Finally, this chapter discussed TESA and how it may be used to educate and influence teachers to have high expectations of every student in the classroom.

CHAPTER THREE

METHODS AND RESEARCH

The purpose of this quantitative study was to evaluate the efficacy of components of the Teacher Expectations Student Achievement (TESA) intervention via a survey research design. TESA is a program designed to increase teachers' awareness of discrepant expectations for different students on enhancing teachers' perceptions of the academic achievement of high and low achieving students who attend public middle schools. This research study is designed to specifically investigate the impact of the level of (a) teacher implementation of the TESA program, (b) importance of TESA student-teacher interactions as rated by the teachers, and (c) positive impact of the TESA program in improving student-teacher interaction on teachers' perceptions of academic gains in high and low achievers. Moreover, this study is designed to assess whether child gender and race moderate between TESA program factors as perceived by the teacher and teacher perceptions of academic gains in high and low achievers.

Research Questions

The following research questions were addressed in this study:

1. Does race predict teacher perceptions for identification of high or low performing students?
2. Is there a positive relationship between the degree of teachers' implementation of TESA and their perceptions of progress in academic achievement for low and high achieving students? Further, do teachers believe that the implementation of TESA produces more academic gains for low achieving students than for high achieving students?

3. Is there a positive relationship between a teachers' rating of the level of importance of TESA interactions and their perceptions of progress in academic achievement for low and high achieving students?
4. Does the TESA program have more impact on minority students than on White students?

Sample

This study utilized archival TESA program evaluation data from the 2007-2008 school year from 129 middle school teachers who taught at public middle schools in Indianapolis, Indiana. At the beginning of the 2007-2008 school year and as part of the TESA program, 129 middle school teachers were asked to identify 10 students from their classrooms for inclusion into the TESA program. Teachers were asked to identify five high achieving students and five low-achieving students in their classroom. Teachers then completed a survey about each of these 10 students they had selected at the end of the school year. As such, there were initially 1,310 surveys completed by the teachers.

Through support of the Superintendent of the Indianapolis Public School system, the researcher was able to access the teacher data in accordance with ethical research practices established to protect human subjects. Indianapolis Public School administrators maintained a blind database; that is to say, all data were anonymous, given that any data which could potentially identify the student (e.g., student address, phone number) was removed. The data were delivered to this researcher in the same manner. Although the original data came from 131 teachers, two cases had incomplete teacher and teacher-reported student data and thus were removed from the study. This resulted in a

final sample of 129 middle school teachers who reported on ten students each, resulting in 1,290 student reports.

Measures and Statistical Testing Procedures

TESA Evaluation Survey

The TESA evaluation survey is a component of the program and is utilized to gauge the effectiveness of the program as perceived by teachers. The TESA survey was comprised of 54 items (see in the Appendix). Of those 54 items, 9 were single-item questions. For this study, the following single items were utilized: (a) question 3, which pertained to high versus low student achievement status; (b) question 4, which assessed teacher perceptions of student academic gains; (c) question 9, which was a measure of teacher perceptions as to the importance of TESA interactions; (d) question 10, which assessed the frequency of the teachers' use of TESA interactions, and; (e) question 11, which assessed the teacher's perception of the positive impact of the TESA program These study variables are discussed in more detail below.

The TESA evaluation survey also contained 3 questions containing 15 sub-questions regarding TESA interactions (see survey questions in the Appendix). The 15 TESA interactions assessed were (a) equitable distribution, (b) affirm/correct, (c) proximity, (d) individual help, (e) praise, (f) courtesy, (g) latency, (h) reasons for praise, (i) personal interest an compliance, (j) delving, (k) listening, (l) touching, (m) higher-level questioning, (n) accepting feelings, and (o) desist.

Impact of Race on the Teacher's Identification of the Student as High or Low Achieving

The first statistical calculation done as part of this study was to ascertain the impact that the student's race will have on the teacher's identification of them as high or

low achieving. A crosstabulation with the associated Chi-Square statistic was used to determine if the race of a student was associated with level of performance. For this test, race was coded as White, Black, Hispanic, Asian or Other. Level of performance was coded as either "high performing student" or "low performing student".

Teachers' Level of Implementation of the TESA Program

The second statistical calculation conducted as part of this study was a comparison of teachers' level of implementation of the TESA program and their perception of progress in academic achievement for low and high achieving students. The variable which measured how often a teacher uses the TESA interaction in each class was estimated via a scale comprised of 15 items that estimated how often teachers reported they used each TESA interaction in each class. The fifteen responses were summed into a single scale representing TESA implementation; that is to say, the fifteen items were added together. The sum of these fifteen items was then divided by the number of items present in the scale. In other words, the fifteen scores were added together and then divided by 15 to produce a single score that represented the summated scale. This scale displayed strong inter-item consistency, with a Cronbach's alpha score of .911. The variable which measured if a teacher believes that implementation of the TESA Interaction Model has resulted in academic gain for the student was coded along a three-point continuum. Answers for this question were rank ordered as "no", "undecided" and "yes". Scores were coded from a low of "no" to a high of "yes".

Teachers' Belief that Implementing TESA Produces Academic Gains

The third statistical procedure used as part of this investigation was used to see if there were more academic gains for low achieving students than high achieving students.

A crosstabulation with the associated Chi-Square statistic was used to determine if achievement was associated with teachers' beliefs. Level of performance was coded as either "high performing student" or "low performing student". The variable which measured if a teacher believes that implementation of the TESA Interaction Model has resulted in academic gain for the student was coded along a three-point continuum. Answers for this question were rank ordered as "no", "undecided" and "yes". Scores were coded from a low of "no" to a high of "yes".

Teachers' Perception of the Level of Importance of the TESA Interactions

The fourth statistical procedure used as part of this investigation examined whether there was a relationship between a teacher's ratings of the level of importance of TESA interactions and a teacher's perceptions of progress in academic achievement for low and high achieving students. Two variables were used as part of a Wilcoxon Signed Ranks test. The first variable which measured how often a teacher uses the TESA interaction in each class was estimated via a scale comprised of 15 items that measured how important a teacher believed each of the TESA interactions for promoting student achievement was in her classroom. The fifteen responses were summed into a single scale representing TESA interactions as previously discussed above. The scale for this variable ranged from a low of "never" to a high of "very often" on a four-point continuum. This scale displayed strong inter-item consistency, as it had a Cronbach's alpha of .893. The second variable indicated whether a teacher perceives a student as either a high or low academic achiever. This variable was a nominal-level dichotomous indicator.

Teachers' Perceptions of the Level of Positive Impact of the TESA Program

The final statistical procedure used as part of this study looked at whether a student's racial classification as White versus non-White would impact whether a student was classified as either high achieving or low achieving by a teacher. A crosstabulation with the associated Chi-Square statistic was used to determine if race influenced classification as high versus low achiever status. The variable that indicated whether a teacher perceives a student as either a high or low academic achiever was a nominal-level dichotomous indicator that was coded as "high achiever" versus "low achiever". In addition, the variable which measured the race of a student was collapsed into a dichotomous nominal-level indicator that was coded as "White" versus "non-White".

CHAPTER FOUR

RESULTS

Introduction

The sample included a balance of sexes, with 534 males (40.8%) and 530 females (40.5%) in the dataset. Gender data were missing for 246 respondents (18.8%) The sample was not ethnically balanced. In the sample there were 705 African American students (53.8%), 225 White students (17.2%), 111 Hispanic or Latino students (8.5%), 7 Asian students (0.5%), and 12 students of other ethnicities (0.9%). 250 students (19.1%) failed to report their racial or ethnic identity. In instances where there were missing data for gender and race, the mode was substituted for the missing data.

Teachers were asked to describe the subjects in which students had been instructed. There were 10 students instructed in all major academic areas including: reading, math, (0.8%), 261 in English and language arts (19.9%), 265 in math or arithmetic (20.2%), 205 in social studies (15.6%), and 186 in science (14.2%). An additional 383 students went unreported (29.2%). There were a total of 131 teachers in the sample; each teacher had ten students apiece. As part of the statistical analyses, student level data were used as opposed to teacher-level data; therefore, the sample size was inflated by a factor of 10. However, since the number of students was constant (10 per teacher) throughout all statistical computations, and since this constant was carried through all multiplication and division operations performed as part of all statistical computations, its effect was negated as a function of the mathematics involved when using a constant as part of a statistical calculation. In other words, the use of the student

level data did not distort the statistical results, as all data were multiplied and divided by a constant.

Statistical Analyses of Research Questions

The TESA program is designed to increase teachers' awareness of the impact that their expectations have on students and to teach them to have high expectations for all of their students. This study attempts to answer the following research questions related to TESA and teacher expectations:

Research Question 1: Does race predict teacher perceptions for identification of high or low performing students?

Research Question 2a: Is there a positive relationship between the degree of teachers' implementation of TESA and their perceptions of progress in academic achievement for low and high achieving students?

Research Question 2b: Do teachers believe that the implementation of TESA produces more academic gains for low achieving students than for high achieving students?

Research Question 3: Is there a positive relationship between a teachers' rating of the level of importance of TESA interactions and their perceptions of progress in academic achievement for low and high achieving students?

Research Question 4: Does the TESA program have a greater impact on minority students than on White students?

In order to effectively investigate these research questions, a number of hypotheses have been developed. Each research question, and its associated hypothesis, are discussed below.

Research Question 1: Does race predict teacher perceptions for identification of high or low performing students? With respect to this research question it is hypothesized that teachers will identify students differentially as high or low achieving based on race. Specifically, it is hypothesized that teachers in the sample will be more likely to identify African-American students as low achieving relative to White students in proportion to the percentage of African-American and White students in the sample.

In order to empirically investigate this hypothesis, a crosstabulation with the associated Chi-Square statistic was calculated. As part of this statistical calculation, a student's race was used as the independent variable, and whether or not a student was identified as high achieving or low achieving by a teacher was used as the dependent variable. This statistical procedure is appropriate as the independent variable is a multi-category nominal-level variable and because the dependent variable is a dichotomous nominal level variable.

Table 1

Chi-Square Analysis for High Versus Low Ability by Race of Student

		Race of Student				
		White	Black	Hispanic	Asian	Other
Level of Performance	Low Performing Student	44.0% (99)	54.3% (383)	43.2% (48)	14.3% (1)	41.7% (5)
	High Performing Student	56.0% (126)	45.7% (322)	56.8% (63)	85.7% (6)	58.3% (7)
Model Chi-Square		14.316**				
Model *df*		4				

Note: N=1060, *=p<.05, **=p<.01, ***=p<.001.
The number of respondents in each category are in parentheses.

Table 1 presents the results associated with the empirical test of the hypothesis associated with Research Question 1. The Chi-Square test is statistically significant ($\chi^2 = 14.316$, $p < .01$), suggesting that there is a difference within the data. The results show that African Americans are more likely to be classified as low performing than Whites, Hispanics, Asians or other students. Investigation of the adjusted cell residuals supports this assertion by showing that African-Americans (residual score = 3.5) were most likely to be different from the expected count than were Whites (residual score = 2.2), Asians (residual score = 1.9), Hispanics (residual score = 1.6) and others (residual score = 0.6). The strength of the relationship was measured by two variables known as the Phi and Cramer's V. The value of Phi is .116, and the value of Cramer's V is also .116. These values indicate a weak (but statistically significant) relationship between the race of the student and the level of performance. The evidence supports the hypothesis that teachers will be more likely to identify African-American students as low achieving relative to White students in proportion to the percentage of African-American and White students in the sample.

Research Question 2a: Is there a positive relationship between the degree of teachers' implementation of TESA and their perceptions of progress in academic achievement for low and high achieving students? With respect to this research question it is hypothesized that teachers who implement TESA in higher frequencies will perceive more progress in academic gains for their students.

In order to empirically investigate this hypothesis, a Pearson Product-Moment Correlation Coefficient was calculated. As part of this statistical calculation, the variable that estimated how often a teacher uses the TESA interactions in each class was

correlated with whether or not a teacher believes that implementation of the TESA Interaction Model has resulted in academic gain for the student. This statistical procedure is appropriate because the two variables have sufficient variability to meet the assumptions inherent in the Pearson Correlation test.

Prior to the calculation of this statistic, a variable that estimated how often a teacher uses the TESA interactions in each class needed to be constructed. In its original form on the survey, this concept was measured via a series of fifteen different questions. As such, the construction of a single summated scale item was deemed to be the correct course of action prior to the calculation of any correlation. The decision to construct a single summated scale is supported by the fact that when used in concert, the fifteen scale items demonstrate excellent Cronbach's alpha reliability (Cronbach $\alpha = .911$). Thus the fifteen original questions used to estimate how often a teacher uses the TESA interactions in each class were added together and then divided by the number of items present. Said calculation resulted in a single variable that was correlated against whether or not a teacher believes that implementation of the TESA Interaction Model is related to academic gains.

Results of the Pearson Correlation suggest that there is a weak and positive correlation between how often a teacher uses the TESA interactions in each class and whether or not a teacher believes that implementation of the TESA Interaction Model has resulted in academic gain for the student ($r = .085$, $n = 913$, $p < .05$). Although the relationship is weak, it is statistically significant. The evidence supports the hypothesis associated with Research Question 2a and suggests that there may be a relationship between the frequency the teacher uses the TESA interactions in each class and their

belief that implementation of the TESA Interaction Model results in academic gain for the student.

Research Question 2b: Do teachers believe that the implementation of TESA produces more academic gains for low achieving students than for high achieving students? With respect to this research question it is hypothesized that there will be more academic gains perceived for low achieving students than for high achieving students.

In order to empirically investigate this hypothesis, a crosstabulation with the associated Chi-Square statistic was calculated. As part of this statistical calculation, whether or not a student was identified as high achieving or low achieving by a teacher was used as the independent variable, and whether or not a teacher believes that implementation of the TESA Interaction Model has resulted in academic gain for the student was used as the dependent variable. This statistical procedure is appropriate as the independent variable is a dichotomous nominal level variable, and the dependent

Table 2

Chi-Square Analysis for Academic Gain by High Versus Low Ability

		Level of Performance	
		Low	High
Do you believe that implementation of the TESA Interaction Model has resulted in academic gain for the student?	No	43.7% (238)	39.4% (211)
	Undecided	32.7% (178)	30.0% (161)
	Yes	23.7% (129)	30.6% (164)
Model Chi-Square		6.583*	
Model *df*		2	

Note: N=1081, *=p<.05, **=p<.01, ***=p<.001.
The number of respondents in each category are in parentheses.

variable is a three-category ordinal-level variable that can be considered discrete in this case.

Table 2 presents the results associated with the empirical test of the hypothesis associated with Research Question 2b. The Chi-Square test is statistically significant ($\chi^2 = 6.583$, $p < .05$), suggesting that there is a statistically significant difference within the data. The results show that teachers are more likely to believe that implementation of the TESA Interaction Model results in gains for high performing students (30.6%) as compared to low performing students (23.7%). Examination of the adjusted cell residuals supports this suggestion by showing that teachers who were more likely to believe that the implementation of the TESA Interaction Model resulted in gains for high performing students (residual score = 2.6) were most likely to be different from the expected count than were undecided teachers (residual score = -0.9) and teachers who said no (residual score = 1.4). The strength of the relationship can be measured by two variables known as Phi and Gamma. The value of Phi is .078, and the value of Gamma is.109. These values indicate a weak (but statistically significant) relationship between beliefs concerning the TESA Interaction Model and the level of performance. The evidence does not support the hypothesis associated with Research Question 2b that there will be more academic gains perceived for low achieving students than for high achieving students. In fact, the evidence suggests the opposite of what was originally hypothesized.

Research Question 3: Is there a positive relationship between a teachers' rating of the level of importance of TESA interactions and their perceptions of progress in academic achievement for low and high achieving students? With respect to this research question it is hypothesized that there will be a difference in the level of importance of

TESA student-teacher interactions as a function of whether a teacher perceives a student as either a high or low academic achiever.

Prior to any statistical calculations, a variable that estimated how important each of the TESA interactions for promoting student achievement in a teacher's classroom needed to be constructed. In its original form on the survey, this concept was measured via a series of fifteen different questions. As such, the construction of a single summated scale item was deemed to be the correct course of action prior to the calculation of any statistics. The decision to construct a single summated scale is supported by the fact that when used in concert, the fifteen scale items demonstrate excellent Cronbach's alpha reliability (Cronbach $\alpha = .893$). Thus the fifteen original questions used to estimate how important each of the TESA interactions for promoting student achievement in a teacher's classroom were added together and divided by the number of items present. Said calculation resulted in a single variable that measures how important each of the TESA interactions were for promoting student achievement in a teacher's classroom.

Under normal circumstance, the correct technique to empirically investigate the hypothesis associated with Research Question 3 would be an Independent Samples t-test. The use of an Independent Samples t-test is appropriate when a dependent variable is continuous in nature and the independent variable is a dichotomous nominal-level discrete variable. Whether a teacher perceives a student as either a high or low academic achiever is the independent variable in this case, and it is a nominal-level dichotomous variable. The dependent variable, how important each of the TESA interactions are for promoting student achievement in a teacher's classroom, is measured on a four-point

Likert scale ranging from a low score of "never" to a high score of "very often". As such, the dependent variable can be considered a continuous variable.

An additional assumption of the Independent Samples t-test is that the dependent variable is normally distributed. A check of this assumption shows that this is not the case. Both the Kolmogorov-Smirnov test of normality ($KS = .019$, $df = 1110$, $p < .001$) and the Shapiro-Wilk test of normality ($SW = .956$, $df = 1110$, $p < .001$) were highly significant, which suggests that the dependent variable significantly skews from a normal distribution. Under these circumstances, the Wilcoxon Signed Ranks test becomes the appropriate technique to use. As Sprent (2000) notes, the Wilcoxon Signed Ranks test is the non-parametric equivalent to the Independent Samples t-test and is appropriate for use when the dependent variable under investigation is not normally distributed.

Given these facts, the Wilcoxon Signed Ranks test was used to empirically investigate the hypothesis associated with Research Question 3. Results of the test ($Z = 5.275$, $p < .001$, $r = .15$)[1] show that there is a statistically significant difference in the level of importance of TESA student-teacher interactions as a function of whether a teacher perceives a student as either a high or low academic achiever. Direct investigation of group means show that when a teacher perceives a student as a high achiever, he or she is more likely to rate the level of importance of TESA student-teacher interactions higher (average score = 3.21) than when the teacher perceives a student as a low achiever (average score = 2.47). The tenets of the hypothesis associated with Research Question 3 are supported, as there is a positive relationship between a teacher's

[1] In this instance, $r = Z/\sqrt{N}$

rating of level of importance of TESA and her perception of students as high or low achieving.

Research Question 4: Does the TESA program have a greater impact on minority students than on White students? With respect to this research question it is hypothesized that the TESA program will have a greater impact on minority students than on White students.

In order to empirically investigate this hypothesis, a crosstabulation with the associated Chi-Square statistic was calculated. As part of this statistical calculation, whether a student is White or non-White was used as the independent variable, and whether or not a student was identified as high achieving or low achieving by a teacher was used as the dependent variable. This statistical procedure is appropriate as the independent variable is a dichotomous nominal level variable (or a discrete variable), and the dependent variable is a three-category ordinal-level variable that can be considered discrete in this case.

Table 3

Chi-Square Analysis for Academic Gain by White Versus Other

		White versus Other	
		Non-White	White
Do you believe that implementation of the TESA Interaction Model has resulted in academic gain for the student?	No	41.4% (355)	42.2% (94)
	Undecided	31.7% (272)	30.0% (67)
	Yes	26.9% (231)	27.8% (62)
Model Chi-Square		0.231	
Model *df*		2	

Note: N=1081, *=p<.05, **=p<.01, ***=p<.001.
The number of respondents in each category are in parentheses.

Table 3 presents the results associated with the empirical test of the hypothesis associated with Research Question 4. The Chi-Square test is statistically non-significant (χ^2=0.231, p > .05), suggesting that there is no statistically significant difference within the data. Thus the evidence does not support the hypothesis associated with Research Question 4 that the TESA program will have a greater impact on minority students than on White students. Because there was a statistically non-significant relationship within the data there is no need to calculate a measure of strength.

Summary of Findings

Chapter 4 of this dissertation posed and tested five hypotheses. These hypotheses, and the outcomes of the various statistical tests associated with each hypothesis, are briefly summarized below.

Hypothesis 1: Teachers in the sample will be more likely to identify African-American students as low achieving relative to White students in proportion to the percentage of African-American and White students in the sample. This hypothesis was supported by the data. It was found that race did predict teacher perceptions concerning the identification of high or low performing students, insofar as teachers were more likely to identify African-American students as low achieving relative to White students.

Hypothesis 2a: Teachers who implement TESA in higher frequencies will perceive more progress in academic gains for their students. This hypothesis was also supported from the data. A positive relationship was found between the degree of teachers' implementation of TESA and a teacher's perceptions of progress in academic achievement for low and high achieving students. In other words, teachers who

implemented TESA in higher frequency had higher perceptions of academic progress among their students.

Hypothesis 2b: There will be more academic gains perceived for low achieving students than for high achieving students with respect to the implementation of TESA. This hypothesis was not supported by the data; in fact, the data suggest the opposite of what was originally hypothesized. The data clearly show that the implementation of TESA produces more perceived academic gains for high achieving students than for low achieving students.

Hypothesis 3: There will be a difference in the level of importance of TESA student-teacher interactions as a function of whether a teacher perceives a student as either a high or low academic achiever. This hypothesis received support from the data. It was found that when a teacher perceives a student as a high achiever, he or she is more likely to rate the level of importance of TESA student-teacher interactions higher than when the teacher perceives a student as a low achiever.

Hypothesis 4: The TESA program will have a greater impact on minority students than on White students. This hypothesis received no support from the data; in other words, the TESA program does not appear to have a greater impact on minority students than on White students.

CHAPTER FIVE

DISCUSSION OF FINDINGS

The primary scope of this dissertation was to investigate whether or not teachers are aware of the impact that their expectations can have on students. The more teachers are aware of the research that indicates that African-Americans and Hispanics tend to have a higher dropout rate, a disproportionate referral rate to special education, a high failure rate, and a significantly higher suspension rate (Wise, 2009) as compared to Caucasian students. The more teachers may feel empowered to address this issue. Teachers may be even more motivated if they are aware of the possible role that expectations may play in these statistics. Awareness is a precursor for developing remedies. For example, if teachers were familiar with Cacioppo's (2002) coined term "behavioral confirmation prophecy", which states that teacher's thoughts are confirmed by student behaviors, would this change many teacher's thoughts? Would it cause teachers to be more intentional about their thoughts toward all students and consequently change the behavior of all students? According to Gladwell (2005) and the concept of thinking without thinking, it is possible that teachers assigning low expectations to particular minority groups may be more of a subconscious decision than a conscious decision. Some research indicates that teachers who assign low expectations to particular minority groups do so as part of a subconscious dilemma. Is it possible for a concept as pervasive as expectations to be so far reaching? Can we pinpoint the extent the impact of a concept like expectations has on learning and in life? If that is true, can programs like TESA, which was developed to inform teachers about how their high expectations may potentially influence student outcomes and also impact their own teaching behaviors? It

would almost seem neglectful to not explore this concept. In order to effectively investigate whether or not TESA achieves its intended goals, this study posed the following research questions concerning TESA and teacher expectations:

Research Question 1: Does race predict teacher perceptions for identification of high or low performing students?

Research Question 2a: Is there a positive relationship between the degree of teachers' implementation of TESA and their perceptions of progress in academic achievement for low and high achieving students?

Research Question 2b: Do teachers believe that the implementation of TESA produces more academic gains for low achieving students than for high achieving students?

Research Question 3: Is there a positive relationship between a teachers' rating of the level of importance of TESA interactions and their perceptions of progress in academic achievement for low and high achieving students?

Research Question 4: Does the TESA program have a greater impact on minority students than on White students?

A summary of the findings associated with each research question is presented below.

With respect to Research Question 1, it was hypothesized that teachers would identify students differentially as high or low achieving based on race. Specifically, it was hypothesized that teachers will be more likely to identify African-American students as low achieving relative to White students in proportion to the percentage of African-American and White students in the school district. The hypothesis that teachers would

identify students differentially as high or low achieving based on race was confirmed from the data. The independent variable of race appears to be a predictor of the identification of students as high achieving or low achieving. African-American students were significantly less likely to be placed in the high achieving category than White students, Hispanic students and Asian student. Furthermore, African-American students were more likely to be considered low performing as compared to the other aforementioned groups.

Based on the evidence that the teachers did identify students as high or low achieving solely based on race, this finding indicates that the teachers were less likely to identify African-American students as high achieving, which could consequently have several potential implications. For example, African-American students may have fewer opportunities to participate in a more challenging or rigorous curriculum that could prepare them for college. Being identified as low achieving could also increase the likelihood of African-American students being in a lower educational track throughout their school career. These results are in alignment with research findings that African-American students are significantly less likely to be given the opportunity to participate in honors or advanced placement classes, even when Caucasian students have lower grades or test scores (Wise, 2009). The results of the current study also align with the findings from the Dusek and Joseph (1983) meta-analysis, which indicated that teachers' expectations are influenced by race, among other factors.

There are complex implications of teachers having lower expectations of students based on race, especially in light of the fact that prior research shows how teacher expectations influence everything from student achievement (Kuklinski & Weinstein,

2001) to tracking or ability grouping. A student's placement in a low ability group in first grade can impact the curriculum content the student is exposed to (college prep or remedial), the instructional quality, and the classroom climate. According to Oakes (1985), students placed in low ability grouping, in which minority groups like African-Americans and Hispanics tend to be overrepresented, receive less of a high-quality education throughout school. This means that these groups are less prepared for college, which sets them up for fewer opportunities for employment after high school.

The results associated with this research question emphasize the need for teachers to be encouraged to discover ways to maximize a students' potential, as opposed to erroneously making premature judgments that could have far reaching consequences. This is especially so when once considers that bias in the classroom is challenging to identify and measure, primarily because it is somewhat of an invisible and subconscious component of a teacher's instructional habits. But with today's technology, it is no longer impossible or even unrealistic to measure unconscious bias. Greenwald, Nosek and Banaji (2003) describes how a computer program called IAT, which stands for the Implicit Attitudes Test, can measure a respondent's unconscious biases towards one or more racial groups. According to Greenwald et al. (2003), a person who has an overly strong association with Caucasians will unconsciously behave differently around African-Americans (i.e., that person will have a closed posture, will lean away from the person, will have less eye contact, etc.) without even being aware of it. These are just some of the behaviors that have been identified in the classroom by teachers when they are interacting with low achieving students (Reyna, 2000). The IAT can uncover these

unintentional behaviors; once identified, teachers can work to overcome their unconscious biases.

The hypothesis associated with Research Question 2a investigated whether teachers who implement TESA in higher frequencies will perceive more progress in academic gains for their students. The statistical analyses found that there was a significant and positive relationship between a teacher's degree of implementation of TESA and perceptions of academic achievement progress for her students. This could suggest that in some way, using or implementing the TESA interactions in higher frequencies is related to teachers believing that implementation of the TESA Interaction Model results in academic gain for their students. This result could also indicate that the teachers who were consistently implementing TESA observed some actual academic progress in their students. Although speculative, this notion makes more sense if we assume that TESA is effective in doing what it purports to do, which is help teachers to have high expectations for all of their students. Although this wasn't found to be the case in this study, TESA did appear to increase teacher expectations for higher achieving students. This line of thought leads to the understanding that TESA did its job in helping teachers to have high expectations for some students, as well as to help teachers recognize said progress when it occurs. As a teacher recognizes the impact of low expectations or even the benefits of high expectations on her students, she may value the tool that is helping to bring her to this awareness. If TESA helps teachers to adopt high expectations for their students, and students respond by improving their achievement level, the results obtained by this study could be reflecting this progress. Additionally, this result could indicate that as teachers increasingly implemented the program, they

began to buy into or be more invested in the program. Regardless, it does appear that the more a teacher implemented TESA, the more they believed that it resulted in academic gain. This finding is of note in light of the fact that Hindalong's research (1993) did not find any differences between the achievement of students in classrooms being instructed by TESA trained teachers compared to classrooms being instructed by non TESA trained teachers. Although the current study does not repudiate the findings associated with Hindalong's (1993) work, further research examining whether or not the teachers who implemented TESA in higher frequencies resulted in actual academic gains for their students versus perceived gains is clearly warranted. Future research in this area could seek to confirm through experimental measures (as opposed to the correlational measures used by the current study) the efficacy of TESA when applied consistently in the classroom by teachers who believe in it. Future researchers may also wish to explore whether or not teachers who "believe in" TESA (as measured by their willingness to implement TESA consistently) create different results in the academic gains of students as compared to teachers who do not "believe in" TESA.

Another finding of note was that teachers perceived that TESA is more beneficial for higher achieving students than it is for low achieving students. This finding, which was associated with Research Question 2b, was contrary to the original hypothesis formulated for this research question. It was hypothesized that TESA would be found as more beneficial for low achieving students than for high achieving students. This finding dovetails with the finding associated with Research Question 3. The third research question sought to understand whether there is a positive relationship between a teachers' rating of the level of importance of TESA interactions and their perceptions of progress

in academic achievement for low and high achieving students. Interestingly, when a teacher perceives a student as a high achiever, he or she is more likely to rate the level of importance of TESA student-teacher interactions higher (average score 3.21) as compared to when a teacher perceives a student as a low achiever (average score of 2.47). The findings from Research Question 2b and Research Question 3 suggest that teachers interact more, and in more meaningful ways, with students who they perceive as high achieving. The implication of these findings is that teachers may value their relationships or interactions with higher achieving students more than with low achieving students.

These findings could also indicate that teachers are more invested in interventions for high achieving students than for low achieving students. For example, students who are perceived as high achieving are more likely to be referred for gifted, or other challenging and rigorous academic programs (Wise, 2009) are more likely to be placed in higher groupings and given more opportunities to access more challenging curriculum. This finding could also be related to sustaining effects, which is part of the expectation theory. Expectation theory basically states that teachers expect students to sustain or maintain their level of performance, and even when it does change, the teachers continue to see the student based on their previous perceptions. This could be indicative of TESA's efficacy for higher achieving students, which could indicate that there can be benefit from using an educational program like TESA for higher achieving students. Nevertheless, the fact that some of the teachers recognized progress in their students' academic achievement in the current study supports the notion that a relationship between

some areas of progress and TESA exists. As such, it would be beneficial to continue to explore the benefits of using educational programs like TESA.

Finally, the hypothesis associated with Research Question 4 proposed that the TESA program would have a greater impact on minority students than on White students. The data shows that TESA does not have a greater impact on African-American students than on Caucasian students. Again, expectation theory could in fact be influencing even the level of impact that a program like TESA has on the academic progress of students and teacher's perceptions. If a teacher has preconceived notions about a student's achievement level, and also expects the student's achievement level to stay the same based on sustaining effects, this could impact the actual impact that TESA has or the perception of the impact that TESA has.

Conclusions

Recommendations for School Psychologists

School psychologists play an influential role in the referral and educational process of students who are identified as being in need of special education. This role could be expanded to include educating teachers and administrators on the role that expectations play in the classroom, and the benefits of implementing programs like TESA can have on student performance. School psychologists can also help teachers and administrators to be mindful of the role that psychological testing which assesses I.Q. plays in over-identifying particular groups as special education. Although cognitive assessments can be useful, it is important to recognize the limitations of these assessment tools in predicting student potential. For example, cognitive assessments may be helpful

when it comes to identifying a student's academic strengths and needs; however, assessments cannot predict a student's capacity to learn (Hale & Fiorello, 2004).

The findings associated with the current research project also underscores the role that both administrators and school psychologists can play in assessing the short term and long term effects of tracking students and placing them in ability groups. For example, ability groups appear to be more beneficial for students placed in the higher groups than for students placed in the lower groups. Further, ability groups may be more damaging than beneficial for those in lower ability groups. Overall, it would be beneficial to examine tools like TESA and their utility in helping to increase teachers' awareness of expectations and the impact of these expectations on student achievement.

Suggestions for Future Research

Further research may need to explore a student's perceptions of his or her own progress or achievement level pre-TESA and post-TESA. Future researchers may also wish to examine whether or not the student's perception of progress or lack thereof after the implementation was accurate. Finally, it may be interesting to explore the students' perceptions of their relationship with their teachers or their teachers interactions with them pre-TESA and post-TESA.

Although the research design used by this study was not structured so as to definitively establish causation, the results nevertheless underscore some of the possible and far-reaching effects of bias or preconceptions in the classroom, their potential influence on students from groups who don't benefit from positive preconceptions or high expectations, and the impact that programs like TESA may be able to have on achievement. Due to the complexity and sensitivity of these issues, they may be

challenging to investigate, but the pervasive difference in teachers' expectations of Caucasian versus African-American students is worth exploring.

We may consider the pervasive effects that low expectations of African-American males and students in general may be having on their academic achievement in school and even in society. The findings of this study may also pave the way for future and more extensive research on the TESA educational program and its potential effects on teacher expectations. Longitudinal research that is able to look more closely at whether or not race is being used to predict performance level and that include the student's academic achievement records would be useful, as this design would help to more accurately establish causation.

It should be noted here that the current research did not include the grades or previous achievement of the students; therefore, we do not have the necessary information to determine whether teacher classifications were based on actual achievement or based on race alone. It may be beneficial to repeat this study and include previous grades and academic records as statistical controls. It may also be beneficial to have teachers identify their students as high or low based not on identifying characteristics, but instead solely on previous academic records.

It should also be noted that some limitations of this study include the small geographic area that the sample was taken from (Indianapolis area public schools), self-selection of poorly performing schools, and the limited diversity of the sample. As a result, this study may not be generalizable to all school populations.

REFERENCES

Ackerman, T. (1997). *Educating throw away children: What we can do to help children at risk.* San Francisco, CA: Jossey-Bass.

Allport, G. (1954). *The nature of prejudice.* Cambridge, MA: Addison Wesley.

Alvidrez, J., & Weinstein, R. S. (1999). Early teacher perceptions and later student academic achievement. *Journal of Educational Psychology, 91*(4), 731-746.

Artiles, A. J., & Trent, S. C. (1997). Building a knowledge base on culturally diverse students with learning disabilities: The need to enrich research with a socio-cultural perspective. *Learning Disabilities Research and Practice*, *12*(2), 80-81.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*, 1-26.

Baron, R. M., Tom, D. Y. H., & Cooper, H. M. (1985). Social class, race and teacher expectations. In J. B. Dusek (Ed.), *Teacher expectations* (pp. 251-269). Hillsdale, NJ: Lawrence Erlbaum.

Bartley, S., Sutton, R., Swihart, S. & Thiery, T. (1999). *Cultural perspectives at Goshen Middle School: Examination of internal and external factors that affect Hispanic student achievement.* Retrieved from ERIC database. (ED430771)

Baumburg, J.D. (1994). *Raising expectations to improve student learning.* Oak Brook, IL: North Central Regional Educational Laboratory**.** Retrieved from ERIC database. (ED378290)

Bobo, L. (2001). Racial attitudes and relations at the close of the twentieth century. In N. J. Smelser, W. J. Wilson, & F. Mitchell (Eds.), *America becoming: Racial trends and their consequences* (pp. 264-301). Washington, D.C.: National Academy Press.

Brandt, R. (1982). On school improvement: A conversation with Ronald Edmonds. *Educational Leadership, 40*, 12-15.

Brophy, J. E. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology, 75*(5), 631-661.

Brophy, J. & Good, T. (1974). *Teacher-student relationships: Causes and consequences.* New York, NY: Holt, Rinehart & Winston.

Butler, R. (1994). Teacher communications and student interpretations: Effects of teacher responses to failing students on attributional inferences in two age groups. *British Journal of Educational Psychology, 64*(2), 277-294.

Cantor, J., Kester, D., & Miller, A. (August 2000). *Amazing results! Teacher expectations and student achievement (TESA) follow-up survey of TESA-trained teachers in 45 states and the District of Columbia.* Paper presented at the annual conference of the California Educational Research Association, Santa Barbara, CA.

Cacioppo, J. T. (2002). Social neuroscience: Understanding the pieces fosters understanding the whole and vice versa. *American Psychologist, 57*, 819-831.

Chaiken, A. L., Sigler, E., & Derlega, V. J. (1974). Nonverbal mediators of supervisor expectancy effects. *Journal of Personality and Social Psychology, 30,* 144-149.

Clark, K.B., Chein, I., & Cook, S.W. (2004). The effects of segregation and the consequences of desegregation: A social science statement. *American Psychologist*, *59*, 495–501.

Cohen, E. G., & Lotan, R. A. (1997). *Working for equity in heterogeneous classrooms: Sociological theory in practice.* New York, NY: Teachers College Press.

Davies, C.R., Hattie, J., & Hamilton, R. (2006). Expecting the best for students: Teacher expectations and academic outcomes. *British Journal of Educational Psychology, 76,* 429-444.

Dovidio, J. F., & Gaertner, S. L. (1996). Affirmative action, unintentional racial biases, and intergroup relations. *Journal of Social Issues*, *52*(4), 51-75.

Dovidio, J. F. & Gaertner, S. L. (2004). Aversive racism. *Advances in Experimental Social Psychology*, 36, 1-51.

Dusek, J. B. & Joseph, G. (1983). The bases of teacher expectancies: A meta-analysis. *Journal of Educational Psychology, 75*(3), 327-346.

Entwisle, D. R. & Alexander, K. L. (1988). Factors affecting achievement test scores and marks of black and white first graders. *Elementary School Journal, 88*(5), 449-471.

Ferguson, D. L., Meyer, G., Dalmau, M., Droege, C., Ferguson, P. M., Gudjonsdottir, H., … Rivers, E. (1998). *Reinventing schools research project: Collaborative research project on the merger of general and special education school reforms*. Final Report - Executive Summary.

Gaertner, S. L., & Dovidio J. F. (2000). *Reducing intergroup bias: The common in group identity model.* Philadelphia, PA: Psychology Press.

Gladwell, M. (2005). *Blink: The power of math thinking without thinking.* New York, NY: Little, Brown and Co.

Good, T. L. (1987). Two decades of research on teacher expectations: Findings and future directions. *Journal of Teacher Education*, *38*(4), 32-47.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: An improved scoring algorithm. *Journal of Personality and Social Psychology,* 85(2), 197-216.

Hale, J. B. & Fiorello, C. A. (2004). *School neuropsychology: A practitioner's handbook*. New York, NY: Guilford.

Harris, J. (1990). *Evaluating the influence of TESA training on teacher behavior in the classroom.* (Unpublished doctoral dissertation). Virginia Polytechnic Institute and State University, Blacksburg, VA.

Hattie, J. A. & Temperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81-112.

Hauser-Cram, P., Sirin, S. R., & Stipek, D. (2003). When teachers' and parents' values differ: Teachers' ratings of academic competence in children from low income families. *Journal of Educational Psychology,* 95, 813-820.

Heider, F. (1958). *The psychology of interpersonal relations.* Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Henig, J. R. (2008). *What do we know about the outcomes at KIPP schools?* Retrieved from http://greatlakescenter.org/docs/Policy_Briefs/Henig_Kipp.pdf

Herrnstein, R. J., & Murray. (1994). *The bell curve*. New York, NY: The Free Press.

Hindalong, R. (1993). An Analysis of the achievement of students with TESA trained teachers compared to the achievement of students with non TESA trained teachers. (Unpublished doctoral dissertation). University of Nebraska-Lincoln, Lincoln, Nebraska.

Huang, M., & Hauser, R. M. (2000). *Convergent trends in black-white test-score differentials in the U.S.: A correction of Richard Lynn.* Retrieved from http://www.ssc.wisc.edu/~hauser/lynn0810.pdf

Irvine, J. J. (1986). Teacher-student interactions: Effects of student race, sex, and grade level. *Journal of Educational Psychology, 78*(1), 14-21.

Irvine, J. J. (1990) *Black students and school failure.* New York, NY: Greenwood Press.

Jackson, L., Sullivan, L. A., & Hodge, C. N. (1993). Stereotype effects of attributions, predictions, and evaluations: No two social judgments are quite alike. *Journal of Personality and Social Psychology, 65*(1), 69-84.

Jussim, L. (1989). Teacher expectations: Self fulfilling prophecies, perceptual biases, and accuracy. *Journal of Personality and Social Psychology,* 57, 469-480.

Jussim, L., & Eccles, J. (1996). Social perception, social stereotypes, and teacher expectations: Accuracy and the quest for the powerful self-fulfilling prophecy. *Advances in Experimental Social Psychology, 28*, 281-388.

Keppel, F. (1966). *The necessary revolution in American education.* New York, NY: Harper & Row.

KIPP Foundation. (2013). *KIPP schools*. Retrieved from http://www.kipp.org/schools

Kozol, J. (1991). *Savage inequalities: Children in America's schools*. New York, NY: Harper Collins.

Kuklinski, M. R. & Weinstein, R. S. (2001). Classroom and developmental differences in a path model of teacher expectancy effects. *Child Development, 72*(5), 1554-1578.

Kuykendall, C. (2004). *From rage to hope: Strategies for reclaiming Black & Hispanic students,* 2nd ed. Bloomington, IN: Solution Tree.

Lareau, A. (1987). Social class differences in family school relationships: The importance of cultural capital. *Sociology of Education, 2,* 73-85.

Los Angeles County Office of Education. (2011). *Teacher expectations and student achievement*. Retrieved from http://www.lacoe.edu/PreKCommunityServices/ParentCommunityServices/TESA.asp

McCray, J. W. (1994). Challenges to diversity from an African-American perspective. *Journal of Extension*, *32*(1).

McKown, C., & Weinstein, R.S. (2008). Teacher expectations, classroom context, and the achievement gap. *Journal of School Psychology, 46*, 235-261.

Merton, R. K. (1948). The self-fulfilling prophecy. *Antioch Review, 8*, 193-210.

Miller, D. T., & Turnbull, W. (1986). Expectancies and interpersonal processes. *Annual Review of Psychology,* 37, 233-256

Moore, H. A. and Johnson, D. R. (1983). A reexamination of elementary school teachers expectations: Evidence of sex and ethnic segmentation. *Social Science Quarterly, 64*(3), 400-475.

National Research Council. (2002) *Minority Students in Special and Gifted Education.* Committee on Minority Representation in Special Education, M. S. Donovan & C. T. Cross (Eds.). Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.

Nichols, S. L., & Good, T. L. (2004). *America's teenagers—myths and realities: Media images, schooling, and the social costs of careless indifference.* Mahwah, NJ: Erlbaum.

Ogbu, J. (2002). Black- American students and the academic achievement gap: What else you need to know. *Journal of Thought, 37*(4), 9-33.

Oakes, J. (1985). *Keeping track: How schools structure inequality.* New Haven, CT: Yale University Press.

Reeves, Douglas B. (2003). High performance in high poverty schools: 90/90/90 and beyond. *Center for performance assessment* , 1-20. Retrieved from http://www.gvsu.edu/cms3/assets/8D75A61E-920B-A470 -F74EFFF5D49C6AC0/forms/boardmembers/resources/ high_performance_in_high_poverty_schools.pdf

Reyna, C. (2000). Lazy, dumb, or industrious: When stereotypes convey attribution information in the classroom, *Educational Psychology Review*, *12*(1), 85-108.

Rist, R. C. (1970). Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. *Harvard Education Review, 40,* 411-50.

Rosenthal, R., & Fode, K. (1963). The effect of experimenter bias own the performance of the albino rat. *Behavioral Science,* 8, 183-189.

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development.* New York, NY: Holt, Rinehart and Winston.

Rubovits, P. C., & Maehr, M. L. (1973). Pygmalion black and white. *Journal of Personality and Social Psychology, 25*(2), 210-218.

Saft, E. W., & Pianta, R. C. (2001). Coping with ethnic stereotypes in the academic domain: Perceived injustice and psychological disengagement. *Journal of Social Issues, 57*(1), 93-111.

Schmader, T., Major, B., & Gramzow, R. H. (2001). Coping with ethnic stereotypes in the academic domain: Perceived injustice and psychological disengagement. *Journal of Social Issues, 57*(1), 93-111.

Skiba, R., Michael, R.S., Nardo, A.C. & Peterson, R. (2000). The color of discipline: Sources of racial and gender disproportionality in school punishment. *Urban Review, 34*, 317-342.

Skiba, R. J., Poloni-staudinger, L., Gallini, S., Simmons, A. B., & Feggins-Azziz, R. (2006). Disparate access: The disproportionality of African-American students with disabilities across educational environments. *Exceptional Children, 72,* 411-424.

Smith, M. S., & O'Day, J. (1991). *Putting the pieces together: Systemic school reform* (CPRE Policy Brief, RB-06-4/91). New Brunswick, NJ: Consortium for Policy Research in Education.

Sprent, P. (2000). *Applied Nonparametric Statistical Methods,* 2nd ed. Boca Raton, FL: Chapman & Hall/CRC.

Steele, C.M. (April 1992). Race and the schooling of black Americans. *Atlantic Monthly,* 65-78.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test-performance of African-Americans. *Journal of Personality and Social Psychology, 69*(5), 797-811.

Sutherland, K. S., Alder, N., & Gunter, P. L. (2003). The effect of varying rates of opportunities to respond to academic requests on the classroom behavior of students with EBD. *Journal of Emotional and Behavioral Disorders, 2*(4), 239-248.

Tucker, J. (1999). Tinto's model and successful college transitions. *Journal of College Student Retention: Research, Theory & Practice, 1(2),* 163-175.

Tuttle, C. C., Teh, B., Nichols-Barrer, I., Gill, B. P. & Gleason, P. (2010). *Student characteristics and achievement in 22 KIPP middle schools.* Washington, DC: Mathematic Policy Research.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychology Review, 92*, 548-573.

Weinstein, R. S. (2002). *Reaching higher: The power of expectations in schooling.* Cambridge, MA: Harvard University Press.

Wigfield, A., Galper, A., Denton, K. & Seefeldt, C. (1999). Teachers' beliefs about former head start and non–head start first-grade children's motivation, performance, and future educational prospects. *Journal of Educational Psychology*, *9*(1), 98-104. doi:10.1037/0022-0663.91.1.98

Wise, T. (2009). *Between Barack and a hard place: Racism and white denial in the age of Obama.* San Francisco, CA: City Lights Books.

APPENDIX

Teacher Expectations Student Achievement

Target Student Information Survey

1.) I instructed the student in: a) all major academic areas; b) only English/language arts; c) only math or arithmetic; d) only social studies; e) only science; f) other

2.) Compared to my initial perception of the student, the student has performed: a) better than expected; b) as well as expected; c) not as well as expected.

3.) Since the beginning of the year, the student's behavior; a) has improved; b) no significant change; c) has worsened

4.) Do you believe implementation of the TESA Interaction Model has resulted in academic gain for the student? a) yes; b) no; c) undecided.

5.) The student's attendance pattern: a) has improved; b) no significant change; c) has worsened.

6.) The student is: a) male; b) female

7.) The student's ethnic background is: a) White; b) Black or African-American; c) Hispanic or Latino; d) Asian; e) American Indian; f) other.

8.) How important are each of the TESA interactions for promoting student achievement in your classroom? (N=Not important, S=Somewhat important, I=Important, VI=Very important)

a.) Equitable Distribution

b.) Affirm/Correct

c.) Proximity

d.) Individual Help

e.) Praise

f.) Courtesy

g.) Latency

h.) Reasons for Praise

I.) Personal Interest & Compliance

J.) Delving

K.) Listening

L.) Touching

M.) Higher-Level Questioning

O.) Accepting Feelings

P.) Desist

9.) How often do you use the TESA interactions in each class? (N=Never, S=Sometimes, O=Often, VO=Very often)

10.) Implementing TESA has positively changed how I interact with my students. a) Strongly Disagree;

b.) Disagree; c.) Agree; d.) Strongly Agree

11.) I will use TESA interactions with my students next year. a) Strongly Disagree; b.) Disagree; c.) Agree; d.) Strongly Agree

12. Indicate the TESA interactions that are most difficult to implement. Would you like further professional development for those selected (Y=Yes, N=No) a.) Not at all Difficult; b.) Somewhat Difficult; c.) Difficult; d.) Very Difficult