Spring 2016

The achievement gap and students living in poverty: The role of core self-evaluation and transformational leadership in teachers

India Harris
James Madison University

The Achievement Gap and Students Living in Poverty: The Role of Core Self-Evaluation and Transformational Leadership in Teachers

India M. Harris

A dissertation submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial Fulfillment of the Requirements

for the degree of

Doctor of Philosophy

Strategic Leadership Studies

May 2016

FACULTY COMMITTEE:

Committee Chair: Dr. Karen Ford

Committee Members:

Dr. Adam Vanhove

Dr. Robin Crowder

Dr. John Almadrode

Dedication

This work is dedicated to my fabulous parents, Russ and Janet Parrish, my supportive husband and best friend, Jon, and my four remarkable children, Lena, Alton, Romney, and Janet.

Acknowledgements

I thank the incredible James Madison University faculty, with whom I have had the pleasure to learn. Special thanks go to: Dr. Karen Ford for being supportive, demanding, and making me laugh all at the same time; Dr. Eric Stark for introducing me to core self-evaluation and providing me with an annotated bibliography of research articles; Dr. Adam Vanhove for his high-expectations and expertise in methods and data analysis; Dr. John Almarode for being my "go-to" K-12 expert and professional advisor; and Dr. Robin Crowder for my internship experience and for being my moral support, mentor, and advocate.

Table of Contents

List of Tables

List of Figures

Abstract

Research has shown that the combination of locus of control, self-efficacy, self-confidence, and emotional stability is a good predictor of life success. Until now, this second order factor, called core self-evaluations (CSE) has only been studied in adults. Findings from this study, showed levels of CSE were significantly and positively connected with academic achievement for middle and elementary aged students. CSE appears to play to a similar role between students and academic achievement as it plays with adults and job performance. In this study, the dimensions of transformational leadership were applied to teacher behaviors and students were grouped based on their teachers' leadership behavior. Reading achievement and core self-evaluation (CSE) were then examined across student groups. Findings indicated students living in poverty and students with low CSE performed better on reading achievement tests when a teacher, who exhibited transformational leadership behavior, taught them. This study establishes transformational leadership in teachers has the potential to offset the effects of poverty and negative self-views on performance. Results also add new information to our existing knowledge about student performance indicators, the student/teacher relationship, and the link between expectations and performance. The results of this study have powerful implications for evidence-based teacher training and preparation programs, hiring practices, and future research.

Chapter 1 Introduction

The Massachusetts Bay Colony initiated mandatory public education in the United States to ensure the community's social values, norms, and work ethic were instilled in its children. Fear that parents were not managing this essential task properly, and were thus causing a threat to the morality and economic well-being of the community, sparked this first law in 1652 (Katz, 1976). Two hundred years later in Massachusetts, this rationale continued to drive compulsory public education forward. With the massive influx of immigrants and the growth of cities, the demand for public education to ensure productive workers, law-abiding citizens, and economic contributors escalated the need for universal education (Katz, 1976). As a result, mandatory public education was reintroduced into law in Massachusetts in 1852. New York quickly followed in 1853, and by 1918, all children in the United States were required to attend elementary school (Watson, 2008).

Racial segregation and equal access became major issues for public education during the 20th century. In 1954, Brown v. Board of Education ended segregation of public schools, but equal access to quality education continues to be a major issue for minorities and children living in poverty (Bollinger, 2014). As part of his War on Poverty, President Lyndon B. Johnson recognized receiving a high quality education as an essential component of breaking the cycle of poverty for low-income students (Kilty, 2015). Despite these efforts to ensure equality in education for all students, 40% of black and Hispanic students currently attend schools where less than 10% of the population is white (Bollinger, 2014). Today, this segregation is a bi-product of residency and socio-

economics rather than educational policy or design (Semuels, 2014). Regardless of the reason, the problem is getting worse. For example, "in 1988, there were two thousand seven hundred and sixty-two schools in America with white populations of less than one percent; today there are six thousand seven hundred and twenty-seven" (Bollinger, 2014).

Three hundred and sixty-three years plus after its inception, the United States continues to struggle with successful public education for all students. Our education system is not producing the needed workforce and as a result, many corporations are seeking workers, but cannot find qualified candidates (Wise, 2010). Many students are becoming disengaged and unmotivated. They no longer buy into the belief that success in school is the key to continuing education opportunities and eventual economic prosperity (Rumberger, 2013). Almost 30% of students do not graduate from high school and this group has little prospect of finding employment that sustains them above the poverty rate (Ladner, LeFevre, & Lips, 2010, p. 4). The students with the greatest need are fairing far worse. Money (2014) explains teachers' expectations for their students are more predictive of success than student motivation, but teachers typically have lower expectations for students living in poverty. In 2009, a student living in poverty was more than fives times as likely to drop out of high school than a student from a more affluent background (Rumberger, 2013).

Breaking the cycle of poverty is not easy. Berkman states, "A child born in the bottom fifth of the income distribution has less than a one in ten chance of moving to the top fifth, and even the brightest poor children are still less likely to complete college than average wealthy children" (2015, p. 1). These students are also often isolated from their

more affluent peers and they see little hope of changing their future. Students living in poverty are more than six times more likely to attend high poverty schools than students not from poverty (Boser, 2015). Semuels (2014) posits, "Without access to high-quality education, kids born into poverty are likely to remain there their whole lives" (p.1). The repercussions for these at-risk children and our society will be significant if these issues continue. Research shows that persons with limited education earn less money in their lifetimes, have shorter life expectancy, and are at increased risk for incarceration. They are also less able to make significant economic impact as consumers (Reardon,Yun, & Kurlaender, 2006). The results will be all of those issues our predecessors tried to eliminate; increased crime, poverty, segregation, and need for support services (Ladner et al., 2010). The question of how to avoid these eventualities remains and our society again focuses on our public education system to find solutions.

The Power of Teachers

Schools cannot control many individual variables, like socio-economic status and family dynamics, which influence student performance. Research has shown, at an organizational level, the teacher is the dominant factor that schools can directly influence (Nye, Konstantopoulos & Hedges, 2004; Weisberg, Sexton, Mulhern, & Keeling, 2009). Finding ways to accurately measure the effect directly attributable to teachers has been challenging. Educational research has examined the value added link between teacher effectiveness and student performance (Stronge, Ward, Tucker, & Hindman, 2007). A 1994 study using multi-year data indicated that when third grade students were consecutively placed with three high performing teachers, their scores averaged at the

96th percentile on Tennessee's fifth grade math assessment. Placing students with three low performing teachers in a row resulted in their scores averaging in the 44th percentile on the same fifth grade math test. These findings indicate a 52 percentile point difference in math performance between students placed with highly effective teachers and those placed with less effective instructors (Sanders & Horn, 1994). Similar findings for reading performance have also been established. Wright, Horn, and Sanders (1997) found students with highly effective teachers showed reading achievement gains a third of a standard deviation above students placed with less effective teachers.

Wright et al., (1997) concluded that "effective teachers appear to be effective with students of all achievement levels, regardless of the level of heterogeneity in the their classrooms" (p. 63). Their research also concluded that low achieving students are more likely to be placed with less effective teachers than high achieving students. Popp, Grant, and Stronge (2011) also state that students living in poverty "do not have access to teachers of the same caliber as students from higher income" (p. 277). Recent research has also focused on identifying the factors that influence teacher performance. Stronge et al., (2007) propose there are four dimensions that differentiate teacher effectiveness: instruction, student assessment, learning environment, and personal qualities.

Educational researchers have also conducted meta-analyses to better understand the effect sizes of various instructional strategies utilized by high-effect teachers (Hattie, 2009; Marzono, Pikering, & Pollock, 2001). This research supports the notion that teachers matter a great deal when it comes to student success. Ensuring high-quality teachers are present in all classrooms is critical for maximizing successful outcomes for all students.

To date, research has primarily examined the qualities of effective teachers, on a broad spectrum. Popp et al., (2011) state, "Little evidence has been assimilated regarding the qualities of effective teachers of at-risk students" (p. 275). At-risk students also have unique affective, academic, and technical needs; so developing a better understanding of a highly effective teacher within this context is critical (Popp et al., 2011). These students also need the most support to ensure success in school so understanding what teacher behaviors support their needs is important. Improving our current understanding about what types of teacher behaviors impact at-risk students and determining if these behaviors impact all students in the same way is one area of focus for this research.

Teachers as Leaders

Teachers are leaders of students within classrooms; yet examining the relationship between teachers and students within the framework of leadership is relatively new to research. Reeves (2008) states, "Names we know – Diderot, Kant, and Locke from Europe – and teachers whose identity can be only inferred from archeological records from Africa, Asia, and South America, all testify to the truth that teaching and leadership are inseparable qualities". Applying multiple lenses to better understand effective teaching makes sense given the increasing concerns about our education system in the United States. Within organizational theory, the role of leadership has been well established (Judge, Woolf, Hurst, & Livingston, 2008). A number of researchers have maintained organizational leadership theories can be applied within the context of the classroom, but establishing the justification for this assertion is important (Bosler &

Bauman, 1992; Cheng 1994; Boyd, 2009; Harris, 2005; Harrison, 2011; Reeves, 2008). Teacher leadership and organizational leadership are not mirror images of one another, but there are many parallels between the two roles (Kuchinke, 1999).

Day and Antonakis (2012) define leadership as "an influencing process-and its resultant outcomes-that occurs between a leader and followers and how this influencing process is explained by the leader's dispositional characteristics and behaviors, follower perceptions and attributions of the leader, and the context for which the influencing process occurs" (p. 6). Similarly the relationship between teacher and student can be described as an influencing process- and its resulting outcomes- explained by the teacher's characteristics and behaviors, student perceptions and attributions of the teacher, and the school in which the interaction occurs. Antonakis, House, Roswold, and Borgmann (2012) also state that leaders need to examine internal and external environments, devise strategies based on strengths and weaknesses, and monitor outcomes to ensure goals are met (as cited in Day & Antonakis, 2012, p. 6). Teachers are expected to fulfill similar duties within the context of classrooms and schools. Teachers influence students, shape their development, focus them on tasks, and facilitate learning much like organizational leaders influence followers, focus attention, initiate and provide direction, and design activities toward a goal (House & Posakoff, 1994).

Theoretical Framework

Social cognitive learning theory. Social Cognitive Learning Theory is an important context to consider this research within. Albert Bandura (1989) maintained that humans are active processers of information and respond to their environment based

on their experiences and the conclusions they draw internally. Individuals observe and participate in social interactions throughout their lifetimes and they develop as individuals based on both these observations and their own interactions. Individuals who are observed are models of behaviors that will be imitated or avoided depending on the conclusions the observer makes. Many factors can influence if the behavior will be imitated. If the observer views the model as being similar to him/herself, the behavior is more likely to be imitated. The relationship between the model and the observer also greatly influences if imitation will occur, as do the perceived consequences for the behavior (Bandura, 1989).

Bandura (1989) proposed that behavior is not a product of unidirectional causation; it is instead influenced by cognition, environmental factors, and personal factors. The strength and timing of each influencer is also varied. Self-development occurs through this process. Each child is greatly influenced by those persons closest to him/her. The interactions, observation, and feedback of these individuals shape the child's view of him/herself. Personal factors also play a role in how self-development occurs. A child's personal and observed experiences with success and failure set the stage for how competent a child believes him/herself to be. This sense of competency impacts an individual's motivation. Bandura (1989) states, "Perceived self- efficacy is another cognitive factor that plays an influential role in the exercise of personal control over motivation. Whether negative discrepancies between internal standards and attainments are motivating or discouraging is partly determined by people's beliefs that they can attain the goals they set for themselves. Those who harbor self-doubts about their capabilities are easily dissuaded by failure. Those who are assured of their

capabilities intensify their efforts when they fail to achieve what they seek and they persist until they succeed" (p.47-48).

Eccles (1999) states, "Skills of self-awareness develop in middle childhood, which spans from age 6 to 14" (p.33). She describes children entering middle childhood as being optimistic about their abilities, but by age 10, they are far less optimistic. In regards to academic abilities this decline in confidence and motivation continues into adolescents (p. 34). This study will attempt to better understand if teacher leadership behaviors enhance perceptions of self-competence in children between the ages of 8 and 11.

Transformational leadership theory. There are many leadership theories that could be utilized to better understand the student/teacher relationship, but this broad research focus is not feasible for a single study. Narrowing this study to focus on one leadership theory is warranted and selecting transformational leadership, which is "the dominant theory in contemporary organizational behavior research" makes sense (Judge, Woolf, Hurst, & Livingston, 2008, p. 335). Focusing on a leadership theory that incorporates acting as a role model, setting high expectations, and increasing follower motivation also makes transformational leadership a good choice. The fact that transformational leadership has been linked with both organizational and individual outcomes also suggests its application to the teacher/student relationship may prove fruitful (Bono & Judge, 2004; Givens, 2008).

Transformational leadership is associated with employee performance, job satisfaction, and citizenship behaviors at the organizational level (Bono & Judge, 2004).

Examining the role of a transformational teacher as it relates to student academic performance aligns with the established relationships between transformational leadership and employee performance outcomes. Transformational leadership is also linked with outcomes like self-efficacy, motivation, and empowerment at the personal level (Givens, 2008). These variables have also been linked to learning outcomes; so developing a better understanding of the relationships between transformational teacher leadership, academic performance, and these intrinsic states is sensible (Multon, Brown, & Lent, 1991).

New research in organizational behavior, psychology, and motivation has proposed that the combination of locus of control, self-efficacy, self-confidence, and emotional stability is a good predictor of job performance (Bono & Judge, 2003; Durham, Kluger, Locke, & Judge, 1998; Gardner & Pierce, 2009; Judge & Hurst, 2007). The positive relationships with this combination of "core self-evaluation" variables and other life-long success variables have also been promising. Core self-evaluation (CSE) is associated with wellbeing, lifetime earnings, leadership, and physical health (Judge, 2009). In 2013, Nübold, Muck, and Günter concluded that transformation leadership behaviors increase CSE in adults with low CSE. Core self-evaluation has yet to be explored in children, despite these promising findings and the fact that self-concepts are first formed in childhood. If the findings with adult subjects can be replicated with children, particularly those from poverty, the implications for teacher training, hiring, and development can be established.

Summary of the Issue

There is an increasing divide between the academic achievement of students living in poverty and students from more affluent backgrounds. Research also shows students living in poverty are dropping out of school more frequently than their more affluent peers and they have little prospect of becoming economically independent members of society. Educational attainment is the best-documented strategy to break the cycle of poverty; therefore finding ways to help these at-risk students succeed in school is paramount.

Importance

Prior academic performance is the variable primarily used to project future academic performance in public school organizations (Center for Public Education, 2007). If CSE in children can add further value over and above prior academic performance (as it does with adults and job performance) it may provide educators with a viable area of focus to increase academic performance. Understanding if the potential transformational leadership impact is different based on socio-economics is especially important. If a difference can be established it may suggest that transformational leadership behaviors in teachers can help counteract the negative impact of socio-economic status on student academic performance. This type of finding would have major implications for teacher preparation programs and professional development initiatives for teachers, particularly those in high poverty schools.

Purpose of Study

The first purpose of this study is to determine if core self-evaluation stimulates variance in reading and math achievement in 3rd and 4th grade children. The second purpose is to explore the relationships between teacher transformational leadership behaviors, student's CSE, student's socio-economic status and student's reading and math achievement while controlling for prior reading and math performance. The third purpose is to gain better understanding of the factors associated with the reading and math achievement of at-risk students.

Chapter 2 Literature Review

Leadership

Day and Antonakis (2012) state, "leadership is often easy to identify in practice, but difficult to define precisely" (p. 5). Its importance in human and animal interactions is well documented and easily observable, but establishing a unified leadership theory or even definition has yet to be established. Instead, leadership theory has evolved over history and continues to do so.

The study of leadership started at the end of the nineteenth century and the beginning of the 20th century and primarily focused on a trait-based perspective. This school of thought is rooted in the work of Thomas Carlyle, a nineteenth century Scottish historian. Carlyle (1940) maintained history is simply "a biography of great men". Similarly, the trait-based leadership perspective maintains that leaders are born, not made. Trait theorists believe leaders have specific, biological dispositions that differentiate them from non-leaders. Trait theorists like Mann and Stogdill "identified traits like intelligence and dominance as being associated with leadership" in the mid twentieth century (Day & Antonakis, 2012, p.7). The rise of behaviorism and social psychology during this same time period caused the trait perspective to fall from favor for several decades (Judge & Long, 2012, p. 180). It re-emerged with the "Big Five" Personality model when a meta-analysis organized leadership traits based on the five personality factors (Judge, Bono, Ilies, & Gerhart, 2002). This meta-analysis found that four of the five "Big Five" traits had meaningful correlations with leadership emergence and effectiveness: extraversion, conscientiousness, emotional stability, and openness to

experience. The research also showed the "Big Five" factor model had a multiple correlation of $R = .53$ with leader emergence and $R = .39$ with leader effectiveness (p. 772).

Like many social scientists, leadership researchers began studying the behavioral practices of effective leaders in the 1950s. During this time, two overarching leadership factors emerged known as person-oriented leadership (supportive) and task-oriented leadership (directive) (Day & Antonakis, 2012, p. 8). Research showed that one style of leadership was not preferable to another in all situations and tasks, so there was a shift in focus to better understand leadership contingencies.

Fiedler is generally credited as the forerunner in leadership contingency theory. He argued leader-member relations, task structure, and the leader's position of power dictate the best type of leadership style to utilize (Day & Antonakis, 2012, p. 9). In 1971 House introduced a path-goal theory of leader effectiveness. This theory proposes that a leader's effectiveness is based on his/her ability to match his/her leadership style to the situation at hand and the needed outcomes. Based on the behaviorist factors, House's leadership styles were identified as directive, achievement-oriented, supportive, and participative (Ayman & Adams, 2012, p. 226).

Researchers began to shift their focus a way from situational contingencies to examining the relationship between the leader and followers. Leader-member exchange (LMX) theory describes high-quality relationships as being based on trust and respect and low-quality relationships as being contractual in nature. Leader-member exchange theory maintains that high-quality relationships produce positive outcomes. A study by

Schriesheim and Schriesheim (1980) found positive relationships were influenced by the personal characteristics of the followers. This study maintains followers with an external locus of control were happier with a participative leader and followers with an internal locus of control preferred task-oriented leadership. A later study by Wofford and Liska (1993) showed that low ability followers performed better with leaders who provide a high degree of structure and focus on task-related behaviors, while high ability subordinates preferred less structure and focus on task. Both of these studies' findings have implications for the context of the teacher/student relationship. Determining if certain types of students are happier or perform better with certain types of teachers is just beginning to be explored.

Leadership theory transitioned from examining the relationship between the leader and followers to a focus on the followers' influence on the leader. Brown (2012) states "Ultimately, it is followers who legitimize leaders, empower them, and provide them with the means to attain their visions and goals" (p. 333). These theorists stressed leadership was dependent on followers and maintained good followers equated to effective leadership. Bass's transformational leadership theory acknowledges the importance of followers, but his leadership theory examines the relationship between followers and leaders as one of "bidirectional influence" (Brown, 2012, p. 350).

In 2008 a meta-analysis by Robinson, Lloyd and Rowe found instructional leadership in school leaders was linked with student academic performance at higher levels than transformational leadership. Robinson et. al. (2008) defined the most critical dimensions of instructional leadership as: establishing goals and expectations; resourcing

strategically; planning, coordinating and evaluating teaching and curriculum; promoting and participating in teacher learning; and ensuring an orderly and supportive environment. The focus of this research is not instructional expertise that potentially increases student learning. This study also targets teacher leadership behavior rather than the leadership of school administrators. Further, the constructs of instructional and transformational leadership are not exclusive of one another. The most effective school leaders are the ones who combine the characteristics of both instructional and transformational leadership (Marks & Printy, 2003). This research will focus on students' sense of self-worth, how this view impacts their performance, how teachers interact with students, what impact these factors have on academic performance, and if this impact is different for students living in poverty. For these reasons, transformational leadership theory best aligns with the goals of this study. Transformational leadership theory takes both leaders and followers into account and is a good match because this study will focus on characteristics of both teachers and students.

Transformational Leadership

In 1978, Burns proposed that the leader-follower relationship was defined as being either transactional or transforming in nature. This relationship is based on what the leader and follower can do for each other. The transactional relationship is bedded in an exchange between the leader and follower. This exchange occurs when something with perceived value (tangible or intangible) is given and/or received between the two entities. On the other hand, a transforming relationship occurs when motivation, goals, ethics, and vision are increased for both the leader and the followers. Burns proposed

that most of leadership theory focused on the transactional nature of leadership and disregarded its transformational nature. Burns states "the transforming leader looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower" (p. 4).

Bass (1985) built on the work by Burns and developed it further. Instead of focusing on the exchange between the leaders and followers, Bass examined the behaviors of leaders and followers to better understand transactional and transformational leadership. The theory evolved overtime. "In the most recent version, there are four dimensions of transformational leadership, three dimensions of transactional leadership and one non-leadership dimension" (Judge& Piccolo, 2004, p. 755).

The three dimensions of transactional leadership are contingent reward, management by exception (active), and management by exception (passive). Contingent reward describes the degree to which the leader effectively establishes a system of expectations and rewards with the followers. According to Avoli and Howell (1993) the major difference between passive and active management by exception is the timing of the leader's involvement when problems occur. Active management by exception occurs when a leader foresees problems and intervenes before they become major issues. Passive management by exception happens when a leader waits to intervene until the situation has created major problems. The non-leadership dimension, Laissez-faire leadership, can be described as an absence of leadership. Laissez-faire leaders actually avoid or refuse to act in a leadership capacity. It is different from passive management by exception because the leader never addresses problems or behaviors of concern, whereas in passive management by exception problems are eventually addressed to some

degree (Judge & Piccolo, 2004, p. 755-756).

The four dimensions of transformational leadership are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence describes the degree to which the leader acts as a role model for followers. Idealized influence is directly related to Bandura's social learning theory. Individuals are greatly impacted by their interactions with perceived role models and many factors influence the degree to which a role model will be imitated. It is important to remember that children's self-concepts are fundamentally influenced by those closest to them. Children look to role models to make meaning of the world and understand their own role within it (Bandura, 1989). Followers want to emulate transformational leaders. The leader models behavior for the followers and they emulate this behavior because they have a high regard and respect for the leader (Bass, 1999).

Inspirational motivation explains a leader's ability to communicate and inspire a vision for followers. "Leaders with inspirational motivation challenge followers with high standards, communicate optimism about future goal attainment, and provide meaning for the task at hand" (Judge & Piccolo, 2004, p. 755). This dimension plays a key role for the teacher/student relationship because it supports the importance of setting high expectation for students. There have been many studies that show that students' performance and behavior aligns with the expectations of their teachers (Cotton, 1989; Dusek & Joseph, 1983; Good, 1987). Teachers who set and communicate high expectations consistently to their students motivate them. The best teachers inspire students to seek academic and behavioral excellence. Research shows that the social class of the student has a direct influence on the level of expectations teachers set.

Teachers tend to set lower expectations for students living in poverty (Cotton, 1989; Dusek & Joseph, 1983; Good, 1987).

Intellectual stimulation is another component of transformational leadership. Transformational leaders challenge the status quo and encourage followers to think differently. They allow people to take risks and value the process over the product. Failure is an opportunity for growth, learning, and improvement rather than a negative end result. Intellectual stimulation applies to the relationship between a teacher and students. Many maintain that intellectual stimulation is one of the primary functions of being a teacher. Children cannot learn if they are not intellectually stimulated. The more students are intellectually stimulated, the better they will process information and acquire knowledge (Bandura, 1989).

The fourth and final dimension of transformational leadership is individualized consideration. This component describes the leader's ability to build a unique relationship with each follower and adjust his/her behaviors to best meet the needs of each individual. Teachers are also expected to meet the needs of each child in their class. Building relationships by establishing trust and respect is critical for teachers and leaders alike. By developing these bonds, teachers are able to adjust and differentiate learning experiences based on the needs of the student. In *Experience and Education*, Dewey (1938) maintains that teachers need to recognize the capacities of each student and assure each child's needs are addressed. Making each person feel valued and important is a critical aspect of both transformational leadership and effective teaching.

Bass describes the transformational leader as "one who motivates us to do more

than we originally expected to do" (p. 20). The four dimensions of transformational leadership are the vehicles these leaders utilize to motivate, inspire, stimulate and empower followers to grow and improve. Focusing on transformational leadership theory for this study makes logical sense. Not only does this theory relate to the role of teacher, it also aligns nicely with examining followers who have a distinctive set of needs. Popp et al., (2011) indicated students living in poverty have unique academic and affective needs. Determining what teacher qualities best meet their needs is critical if closing the academic achievement gap is to become a reality.

Children Living in Poverty

The disparity between school performance for students living in poverty and students from more affluent backgrounds is well documented (Berkman 2008; Bollinger, 2014; Coley & Baker, 2013; Kilty, 2015; Rumberger, 2013; Semuals, 2014). Coley and Baker (2013) state more than one in five American children live in poverty (p. 3). They go onto share another disturbing statistic. Although the United States is one of the 35th wealthiest nations in the world, they rank the 2nd highest in childhood poverty for developed nations (Coley & Baker, 2013, p. 7).

Poverty can take different forms. Situational poverty occurs because of a specific circumstance, like loss of employment or serious illness. This form of poverty tends to be temporary and short-lived, although not always. Generational poverty describes a cycle of poverty experienced by two or more family generations when there are limited resources. Finally, absolute poverty describes living circumstances that focus only on sustenance and survival. For those experiencing absolute poverty, there are no excess

resources for any emotional or social spending (Cuthrell, Stapleton, & Ledford, 2010).

The American Psychological Association (2015) reports poverty is associated with decreased academic performance, increased risk for behavioral and emotional problems, and increased risk for health issues. Children living in poverty are more likely to be raised in single parent homes, suffer from food insecurity, live in unsafe neighborhoods, experience abuse or neglect, and attend under-resourced schools. Coley and Baker (2013) explain, "Children growing up in poverty complete less schooling, work and earn less as adults, are more likely to receive public assistance, and have poorer health. Boys growing up in poverty are more likely to be arrested as adults and female are more likely to give birth outside of marriage" (p. 3).

Breaking the cycle of poverty is difficult. Educational attainment and income level are positively associated in adults. Income level and academic performance are positively associated in children. Thus, the cycle is established. Children living in poverty do not perform as well in school, so they have lower income trajectories as adults (Berkman 2008; Bollinger, 2014; Coley & Baker, 2013; Evans & Cassell, 2013; Kilty, 2015; Retka, 2013; Rumberger, 2013; Semuals, 2014).

Finding ways to increase success in school for students living in poverty is critical. Of the factors that influence student performance, which schools can directly influence, the quality of the teacher in the classroom is the most important (Nye, et al., 2004; Weisberg, Sexton, Mulhern, & Keeling, 2009). The fact that students living in poverty have unique needs has also been established (Payne, 1996; Popp et al., 2011; Wright, et al., 1997; Walls, 2003). Determining if there are certain teacher qualities that

specifically impact students living in poverty is a focus for this study.

Teachers of Students Living in Poverty

Effective instructional practices are essential for all students to meet success. Most research on instructional practices focuses on methods that have the greatest positive affect for students in general. Ensuring high levels of engagement and personal relevance are important for all students. A focus on utilizing instructional time, setting clear expectations and providing feedback are also essential instructional practices that positively impact math and reading performance for all students (Nye, et al., 2004; Popp, et al., 2011; Weisberg et al., 2009). In 2009, John Hattie published *Visible Learning,* which shared the results of the largest meta-analysis of evidenced-based research in education. In this work, Hattie describes what practices produce the largest effects in student learning and encourages educators to strategically utilize the most effective, evidence-based practices. Student expectations, teacher credibility, regular feedback, and teacher/student relationships are among the factors that have high effect sizes for all students (p. 266).

Less is known about how some practices may influence student groups differently. Many students living in poverty experience unstable living conditions, which may result in frustration, isolation and decreased motivation for these students (Walls, 2003). Payne (2005) defines eight resources whose presence or absence in a child's life impacts the long-term effect of poverty: financial, emotional, mental, spiritual, physical, support systems, relationships, and role models. Teachers cannot provide all of these resources, but some of them are within their power. Payne (2005) maintains teachers

must understand the culture of poverty in order to work successfully with these students. By understanding their world outside of school, teachers can help empower and teach students behaviors that will lead to successful outcomes.

Classroom management is particularly important for students living in poverty. A chaotic, unpredictable classroom environment is likely to exacerbate high levels of anxiety and feelings of instability (Menchaca, & Ruiz-Escalante, 1995). The most effective teachers for these students establish a calm, quiet, and consistent management style. They foster students' practicing self-control and taking personal responsibility for their actions (Popp et al., 2011).

Effective teachers for children living in poverty meet their unique needs by building strong, respectful, and trusting relationships with each student. These teachers also establish and model an enthusiasm for learning and teaching. They model respect and project a high level of expectation for their students. These teachers not only set high expectations for their students, they also model setting them for themselves. These teachers believe in their own power to make a difference in the lives of their students (Cuthrell, et al., 2010; Popp, et al., 2011; Reeves , 2008).

A longitude study by Midgley, Feldlaufer, and Eccles (1989) found that teacher efficacy impacted student achievement, particularly for low-achieving students. ''The fact that teacher efficacy beliefs have a stronger impact on low-achieving students than on high-achieving students is especially provocative given the tendency to assign teachers with a less positive sense of efficacy to groups of low-achieving students'' (Midgley et al., 1989, p. 256). Although this study did not specifically focus on students

living in poverty, research has established many of them likely fell within the low-achieving group (Berkman 2008; Bollinger, 2014; Coley & Baker, 2013; Kilty, 2015; Rumberger, 2013; Semuals, 2014). The discovery that low-achieving students respond positively to teachers with high self-efficacy at higher rates than high-achieving students supports the possibility that students living in poverty may also respond differently to teacher leadership behaviors.

Core Self-Evaluation

Child development and social learning theory have established that children begin to develop a sense of their own self-worth in middle childhood. During this stage of development, children spend more and more time with their same aged peers. They observe other children's behaviors and see what responses are received as a result. They begin to compare themselves to others and evaluate their own worthiness based on what they observe and experience. A child's personal and observed experiences with success and failure also set the stage for how competent a child believes him/herself to be (Bandura, 1989; Eccles, 1999).

Children living in poverty are particularly vulnerable because of their environmental instability. How these factors might impact a child's sense of self-worth is concerning. Children living in poverty are more likely to be raised in stressful homes, live in unsafe neighborhoods, experience abuse or neglect, and attend schools with children who have similarly unstable living situations. A study by Evans and Cassell (2013) found that low-income students exhibit greater levels of learned helplessness than their higher income peers. The researchers surmise that helplessness is conditioned into children living in poverty due to repeated exposure to uncontrollable and unpredictable

stimuli. Their work indicates that these effects are long lasting and do not disappear even if financial security improves.

Children develop learned helplessness to help protect their fragile sense of self-worth, but learned helplessness then creates a self-reinforcing cycle. These children often attribute their failures to lack of ability. The few times when they do experience success, they often conclude that their achievement is the result of external factors or that the task was made easy for them. These children believe that academic ability is a fixed characteristic and they are powerless to change anything about themselves or their circumstances. They do not think their academic performance can be improved by trying hard. When a task is difficult for them, these children become anxious, experience high levels of stress, shut down, and their negative sense of self-worth is reinforced (Elliot & Dweck, 1988; Sinha & Gupta, 2006).

Finding ways to help children of poverty experience higher levels of predictability, stability, empowerment, and control may have some positive impact on their capacity to break this cycle. Setting high standards for all students and scaffolding instruction to ensure all students meet success is critical (Retka, 2013). Some factors that have been shown to increase self-worth for at-risk students are having an internal locus of control, an ability to form meaningful relationships, and positive adult role models who value education (Rockwell, 2006).

Core self-evaluation is a single personality factor comprised of four traits, which all involve the internal evaluation of oneself. Durham, Kluger, Locke, and Judge first proposed this factor in 1998. The four traits that comprise it are locus of control, emotional stability, self-confidence, and self-efficacy. "Core self-evaluations are

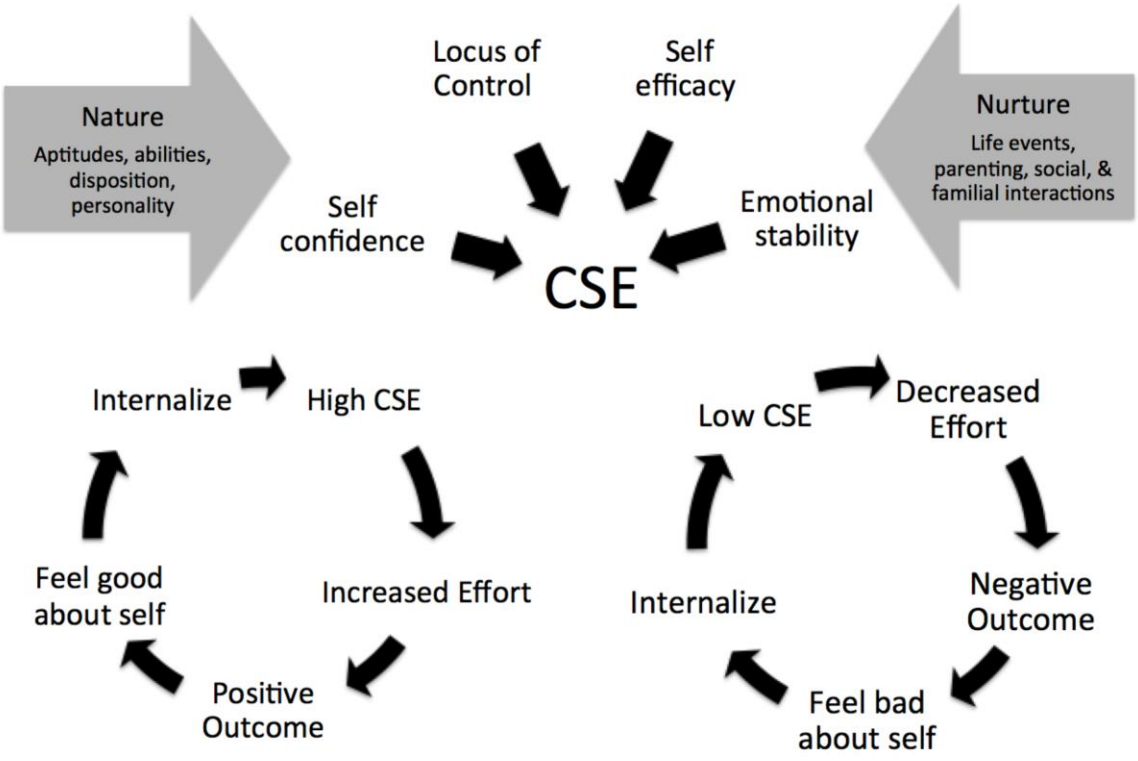
fundamental, bottom-line evaluations that people make of themselves. Like self-esteem, CSE is an appraisal of one's self-worth. However, CSE is broader than self-esteem in that it also reflects beliefs in one's capabilities (to control one's life) and one's competence (to perform, cope, persevere, and succeed) and a general sense that life will turn out well for oneself" (Judge, 2009, p. 58).

Core self-evaluation was first introduced within an organizational management context to help differentiate between high-performing and low-performing employees. It has primarily been studied in adults and little to no research addresses how CSE develops. In adults, CSE has been shown to be a good predictor of job satisfaction, job performance, and life satisfaction. Further, it is associated with increased lifetime earnings, motivation, persistence, physical health, leadership, and a general sense of wellbeing (Bono & Judge, 2003; Di Fabio & Palazzeschi, 2012; Gardner & Pierce, 2009; Judge, 2009; Durham et al., 1998; Judge & Hurst, 2007; Koumoundourou, Tsaousis, & Kounenou, 2011). These powerful associations with the long-range goals we have for students warrant further exploration.

There is evidence that CSE can be influenced. Because CSE is a combination of personality traits, we can surmise personality theory also relates to CSE (Judge, 2009). Most broad personality traits have a genetic and environmental origin. Judge explains, "Traits differ in their changeability and stability. Although self-esteem shows significant heritability and long-term stability, it also shows evidence of short-term within-individual variation. Because evaluations of our self-concept are intimately tied to our environment, it stands to reason that CSE will show both short-term and long-term variability" (Judge, 2009, p. 61). Like learned helplessness, having high or low CSE reinforces itself (See

Figure 1). Understanding if and how teachers can influence this cycle is one goal of this study.

Figure 1.
The core self-evaluation cycle



The research on how CSE develops and the degree to which it fluctuates is just beginning to be explored and so far it has reinforced Judge's prediction that it can be influenced (2009). Schinkel, Van Dierendonck, and Anderson (2004) found CSE to be significantly influenced by feedback and a study by Nübold, Muck, and Günter (2013) concluded transformation leadership behaviors increase CSE in adults with low CSE. Given that high-levels of CSE are associated with high-levels of financial, social, and emotional success in adults, we need to better understand CSE in children. Researchers

must begin to ask these types of questions: Is CSE higher or lower based on student demographics? Can parents impact a child's CSE? If CSE can be increased in children, what parent behaviors influence it? Can teachers impact a student's CSE? If CSE can be increased in students, what teacher behaviors influence it? If CSE can be influenced, are there differences on the degree of influence based on age, gender, or other child-specific variables? Are changes to CSE permanent? What are the long-term implications of increasing CSE in children?

Summary

Public education in the United States was created to produce industrious, law-abiding citizens and to ensure the economic and social welfare of our communities. Access to public education is part of our country's culture and links directly to our vision that the United States is a land of opportunity for all citizens. The reality is equal access to high-quality education is not an actuality for all citizens. Social class typically segregates our neighborhoods, and school attendance is based on physical residence. As a result many children living in poverty are served in schools where the majority of the student population is economically disadvantaged. These schools are typically under resourced and have lower-quality teachers.

Many children living in poverty experience instability, stress, abuse/neglect, dangerous neighborhoods, and a lack of basic resources outside of school. Many of these students develop learned helplessness, which carries over into their behavior at school. They do not perform as well in school as their more affluent peers. They have increased affective, emotional, and academic needs. Their increased needs are then compounded

by under resourced schools, limited positive role models, and less qualified teachers. Children living in poverty have little chance of breaking the cycle of poverty.

New research in human resource management has shown that adults with high CSE perform better at work than those with low CSE. Further research has found associations between high CSE and career and life satisfaction, general wellbeing, physical health, and financial earnings. Despite CSE's association with successful life outcomes for adults, little is known about CSE in children.

Children begin to evaluate themselves and develop a sense of self-worth in middle childhood, so focusing on this age group is appropriate. Determining if the positive relationship between job performance and CSE can be replicated with children is a logical place to start. Using reading and math performance as necessary conditions for job performance is also a practical approach.

It makes sense to explore if teachers can influence CSE and how their behavior impacts student performance in reading and math, particularly for students living in poverty. Transformational leadership is associated with increased employee performance, satisfaction, and citizenship behaviors in adults. The dimensions of transformational leadership apply to teacher behaviors. Acting as a positive role model, inspiring followers, stimulating learning, and setting high expectations have been associated with increased reading and math performance for students. Applying transformational leadership to the role of teacher and exploring potential connections to student CSE, achievement in reading and math, and student socioeconomic status will build upon previous research and lay new groundwork for future study.

Hypotheses

While public schools cannot control most variables that influence students' lives, they can control who teaches them. This study will explore if and how teacher leadership behavior impacts students' CSE, math achievement, and reading achievement. If leadership behavior impacts CSE, math achievement, and/or reading achievement, understanding if the relationship is different based on students' demographics is warranted. Given the achievement gap between students living in poverty and those not living in poverty, examining if poverty moderates the relationship is a practical next step. The hypothesized relationships between these variables are depicted in Figure 2.

Hypothesis 1

Transformational leadership behavior will be associated with higher levels of math achievement than not-transformational leadership behavior.

Hypothesis 2

Transformational leadership behavior will be associated with higher levels of reading achievement than not-transformational leadership behavior.

Hypothesis 3

Transformational leadership behavior will be associated with higher levels of CSE than not-transformational leadership behavior.

Hypothesis 4

The relationship between transformational leadership behavior and math achievement is mediated by CSE.

Hypothesis 5

The relationship between transformational leadership behavior and reading achievement is mediated by CSE.

Hypothesis 6

Poverty will moderate the relationship between transformational leadership behavior and math achievement, so that transformational leadership behavior will be more strongly related when the student lives in poverty and will be less strongly related when the student does not live in poverty.

Hypothesis 7

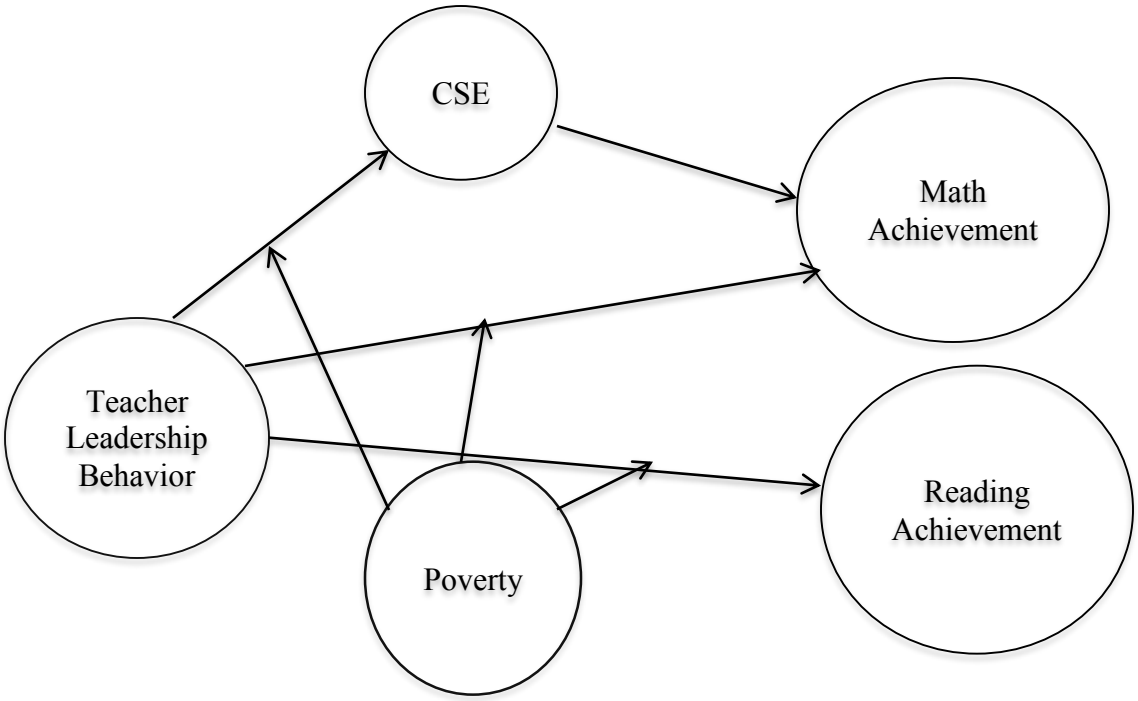
Poverty will moderate the relationship between transformational leadership behavior and reading achievement, so that transformational leadership behavior will be more strongly related when the student lives in poverty and will be less strongly related when the student does not live in poverty.

Hypothesis 8

Poverty will moderate the relationship between transformational leadership behavior and CSE, so that transformational leadership behavior will be more strongly related when the student lives in poverty and will be less strongly related when the student does not live in poverty.

Figure 2

Diagram of Hypotheses



Chapter 3 Methodology

This multifactor study examines a set of relationships between transformational leadership behavior, CSE, math achievement and reading achievement, and poverty (See Figure 2). Quantitative research design allows researchers to objectively investigate and examine relationships between variables. Because this study will examine variables that potentially influence outcomes and will look for group differences, a quantitative research approach is warranted. (Creswell, 2009, p. 18).

Study Type and Subjects

This study is classified as a non-experimental study and utilizes a cross-sectional survey design (Gliner, Morgan, & Leech, 2009, p. 12). Data were collected using structured record reviews and administering an online survey. The James Madison University Institutional Review Board (IRB) gave permission for the study on April 7, 2015, IRB Number 15-0478. Nine 3rd grade and eleven 4th grade classes from a small rural city in Virginia were identified as possible participants. These classes were selected based on accessibility for the researcher and the ages of students in 3rd and 4th grade (8-11 years). The target population is children in middle childhood, which is when self-worth is developing (Eccles, 1999). Middle-aged children living in poverty, not living in poverty, and their teachers are also target populations.

Seven administrators (four principals, two assistant principals, and one instructional director) were asked to participate in the study. All seven voluntarily participated and signed a consent form (Appendix A). One of the seven administrators is male and the other six are female. All of the administrators are white.

Twenty 3rd and 4th grade teachers were asked to participate in this study. Seventeen (eight 4th and nine 3rd) voluntarily agreed to participate and signed participation forms (Appendix B). Three of the teachers were unable to participate due to time and/or personal conflicts. All of the teachers are female. One of the teachers is black and 16 are white.

Three hundred and fifty-four students, in the participating teachers' classes, were also asked to take part in the study. One hundred and thirty-three of the students (37.6%) agreed to participate and returned signed parent and student participation/assent forms (Appendixes C and D). There were 66 males and 67 females in the sample. Sixty-five of the students were on free or reduced lunch at the time of the survey's administration. The sample included 108 white students and 25 minority students. Forty-nine of the students were in 4th grade and 84 were in 3rd grade at the time of the study.

Measurements

Prior academic achievement. Because students in this division are primarily screened for intervention at the beginning of each school year, using the Phonological Awareness Literacy Screening (PALS) reading test and the division's math pretests, these scores were obtained to be utilized as control variables for prior reading and math achievement. The scores were obtained from the school system using student numbers and student confidentiality was maintained.

The PALs reading assessment was developed in 1997 by the Curry School of Education at the University of Virginia and is required across the state of Virginia as a literacy screening instrument. Cronbach's alpha has been calculated to measure internal consistency across Word Recognition (.79-.96) and Spelling (.86-.92) tasks. Teacher

raters also score portions of the test. Inter-rater reliability estimates for PALS have ranged from .81 to .97 (Invernizzi, Meier, & Juel, 2004, p. 33-37).

To support content validity, "special care was taken to select tasks shown by research to be essential to reading comprehension and to select words that are appropriate for each grade level being assessed" (Invernizzi, Meier, & Juel, 2004, p. 39). Support for construct validity was addressed with principal components analyses on PALS data to confirm the underlying factor structure. Second, discriminant analyses on PALS data was utilized to verify the degree to which group membership could be predicted accurately from PALS subtask scores. Supportive evidence of predictive validity was established by using PALS scores to predict achievement on the 3rd grade Virginia Standards of Learning Reading Test ($R^2 = .36$). The scores on the Developmental Reading Assessment and PALS scores were consistent, which supports concurrent validity ($r = .81$, $p < .01$), as were comparisons between the PALS and the Virginia Standards of Learning Reading Test ($r = .57$, $p < .01$) (Invernizzi, Meier, & Juel, 2004, p. 41-51).

The state of Virginia does not provide school divisions with a screening assessment for mathematics as they do with reading (PALS), so the division's math pretests were developed by central office instructional specialists. The pretests are based on the Virginia Math Standards of Learning (SOL) for each grade level. These tests have been used to measure math achievement for the past two years in grades K-5. Internal consistency was conducted and found to be acceptable: Grade four test ($\alpha = .83$) and Grade three test ($\alpha = .84$). Student scores on these tests correlate with their performance on the math SOL tests ($r = .60$, $p < .05$) and establish reliability and predictive validity.

Academic achievement. The Spring 2015 results from the Virginia Math and Reading SOL Tests were used to measure academic achievement. The scores were obtained from the school system using student numbers and student confidentiality was maintained. These are criterion-referenced tests that are given across the state annually. In 2008-09, the Virginia Department of Education (VDOE) provided evidence of internal consistency as well as content validity based on the tests' alignment with the Standards of Learning curriculum and educator input on their development (α =. 87- .90). Construct validity was also supported by the correlation of the results with the results from the Stanford 9 (r = .72-.78) and Literacy Passport tests (r = .76-.78). Although the standards and tests have changed since 2008-09, validity and reliability information are not currently provided; however it is reasonable to assume the VDOE did due diligence before implementing the new state-wide assessments.

Demographic measures. Demographic information was obtained from the division's student information system. A student's socio-economic status was measured based on their free and reduced lunch status. These data were obtained using student numbers and student confidentiality was maintained at all times during this study.

Core self-evaluation. The participating students completed the Children's Core Self-Evaluation Scale (CCSES) in the spring of 2015 (See Appendix E). One major obstacle that prohibits studying core self-evaluation (CSE) in children is finding an appropriate measurement instrument. Measuring CSE in young children using Judge, Bono, and Thoresen's 12-item Likert scale poses major problems because the questions are tailored to adults in both content and reading level. In order to study CSE in children, it was necessary to create and establish an effective measure of CSE for children.

The item stem development for the CCSES was completed based on items from Judge, Erez, Bono, and Thoresen's CSE scale (2002). The first part of the process was to simplify the language in the 12 items on the adult scale to match the reading and comprehension level of a young child. For example, words like "depressed" were replaced with "unhappy" and phrases like "I feel confident" were replaced with "I am sure". An additional 9 items were added to the scale to allow items that prove problematic based on future scale analysis to be removed. These additional items attempt to measure similar concepts, but are worded differently. For example, one item uses the language "do not do well" and another instead uses "have a hard time". Like the adult CSE scale, the items probably cut across more than one of the four CSE traits rather than measure each one in isolation.

Based on the work of Harter (2012), who found that young children report more consistently when Likert scales are worded in third-person rather than first-person, one version of the scale was written in third-person and the other was written in first-person. Both scales were given to 7 children between the ages of 6-10. Each child was independently asked which scale he/she preferred. All 7 children indicated they preferred the scale written in third-person, which was the version utilized for this study.

The CCSES consists of 21 Likert scale items with statements describing how some kids feel or behave. Students are asked to rate the degree to which the description is like them or not like them. The choice are "just like me", "like me", "not like me" and "not at all like me". An additional option that states, "don't know if this is like me or not" is also included. The items range in value from 1 to 5, with 5 indicating high CSE and 1 indicating low CSE. "Don't know if this is like me or not" is scored with a value of 3.

Eleven of items are negatively worded, so that "just like me" indicates low CSE and "not at all like me" indicates high CSE. The scores for these items were reverse coded accordingly.

One of the main challenges in adapting the adult CSE scale into a measure for children was to ensure that the reading level is appropriate. In order to address this concern, 6 elementary teachers and 1 reading specialist reviewed the CCSES. All agreed that the content and reading level were appropriate for students in grades 3 and 4.

The internal consistency of the instrument was examined prior to its administration in this study. One hundred and forty-seven middle school students were administered the survey. Cronbach's alpha was .87, which supports the internal reliability of this instrument with this particular age group. Based on adult CSE studies, which show CSE scores have correlations (r = .23 to .35) with job performance, some evidence to support of the validity of the CCSES is based on similar correlations between CCSES scores and academic performance (Judge et al., 2003). Using the data compiled with the 147 middle school students, correlations between total CCSES scores and scores on reading (r = .25, p < .01) and math (r = .39, p < .01) SOL tests are similar, which helps establish concurrent validity. In addition to the pilot data reported, tests of internal consistency, concurrent validity, inter-item correlations, and factor structure will be conducted on the study sample prior to using the measure in hypotheses testing.

Teacher leadership behaviors. Two vignettes, each describing a teacher, were used to identify teachers as primarily exhibiting transformational leadership behavior or not (See Appendix F). Effort was made to ensure both teachers were described as being equally competent and to remove any potential bias based on social desirability. Care

was taken to describe each teacher as being highly effective in their instructional practices in order to target the differences in their interactions with students, rather than their instructional expertise. Three students enrolled in a strategic leadership doctoral program and one professor within this program reviewed the vignettes independently. All four correctly identified the teacher with transformational leadership behavior, which helps support this measure's validity for use in this study.

For this study, seventeen 3rd and 4th grade teachers and seven administrators were asked to read the vignettes of two highly effective teachers and determine which teacher vignette best matched their teaching behaviors. The teacher and two school administrators with personal, direct knowledge of the teacher matched each teacher. This exercise was conducted independently with the researcher.

To address reliability, inter-rater reliability was established at ICC (1,3) = .88 (95% CI, .72-.95) $p < .01$. When the ratings were not in agreement, the teacher rated herself, as having transformational leadership behavior and the school administrators did not. There was not a case in which the school administrators disagreed or when they rated the teacher, as having transformational leadership behavior and the teacher did not.

Research has consistently found low levels of agreement between an individual's self-evaluation of his/her performance and performance evaluations completed by supervisors, peers, and subordinates (Facteau & Craig, 2001; Ross, 2006). Individuals tend to rate themselves higher than others and there is less discrimination in the level of performance of self-raters (Facteau & Craig, 2001, p. 225). Based on this research and the fact that the two administrators' ratings matched, the teachers, who rated themselves

as having transformational leadership behavior when their administrators did not, were grouped with the not-transformational leadership behavior teachers.

To ensure this approach is statistically sound, two Multivariate Analysis of Variance (MANOVA) analyses were conducted. The first MANOVA compared the disagree classrooms with the transformational leadership behavior classrooms. *Box's M* (70.73) test of equality of variance was significant ($p < .01$), which indicated that homogeneity of variance across these classrooms could not be assumed. MANOVA results (Wilks' $\lambda = .71$, F [22, 136] = 1.17, $p = .28$, partial $\eta^2 = .16$) were not significant, which indicated there were not significant classroom differences. Levene's test of the equality of error variances showed an insignificant result for the reading pretest (F [11, 69] = 1.38, $p = .20$), but there was a significant result for the math pretest (F [11, 69] =3.54, $p < .01$). This finding indicated significant group differences on math pretest between these classrooms could have existed and did not support grouping the disagree classrooms with the transformational classrooms. When the disagree classrooms were compared to the not-transformational leadership behavior classrooms, *Box's M* (34.59) test of equality of variance was not significant ($p = .36$), which indicated that homogeneity of variance across these classrooms could be assumed. MANOVA results (Wilks' $\lambda = .84$, F [18, 140] = .73, $p = .77$, partial $\eta^2 = .09$) were not significant, which also supported no significant group differences. Levene's test of the equality of error variances showed insignificant results for the reading pretest (F [9, 71] = .73, $p = .68$) and for the math pretest (F [9, 71] =1.47, $p < .18$). These results showed the assumption of homogeneity of variance was met when the disagree classrooms were compared with the not-transformational leadership behavior classrooms. Therefore, the decision to

include the disagree classrooms with the not-transformational leadership behavior classrooms was supported by both theory and statistical analysis.

Data Analysis

There will be three phases of data analysis. The first phase will focus on analyzing the CCSES. The second phase will examine the within and between group differences on the pretests for the transformational leadership behavior and not-transformational leadership behavior conditions and the classrooms which are nested within each condition. The final phase will be conducting the analyses to test the study's eight hypotheses.

The CCSES will be further analyzed to examine the reliability and validity of each item. The Flesch-Kincaid Grade Level formula, Gunning-Fog formula, and the Automated Readablity Index will be utilized to measure the reading level of each item on the scale. If any items have reading levels that are not appropriate for children over the age of 7, the item will be removed from the scale. Total-item and inter-item correlations will also be used to analyze the scale. Total-item correlations will examine how each item correlates with the total scale. Inter-item correlations will show the correlations between each item and the other twenty items on the scale. Any items, which do not consistently align with the scale and/or other items based on these analyses, will also be removed. Exploratory factor analysis (EFA) will also be utilized to determine if calculating additional variables, based on item sets within the scale, is appropriate or if additional items need to be removed from the scale. Once the final set of items has been determined, internal reliability and correlational analyses to establish concurrent validity will be completed with the sample group.

Three MANOVA analyses will be conducted during the second phase of the data analysis. Three additional statistical tests will be included as part of the MANOVA analyses. Correlations between the PALS and math pretest scores will be obtained to establish if there is a reasonable relationship between the dependent variables, which shows there is a multivariate effect. The correlation between dependent variables should be present, but it should not be too strong because there is little sense in using two variables to measure the same concept. Generally, a moderate relationship is considered acceptable (Mayers, 2013). Box's M tests for each of the three MANOVA analyses will examine multivariate homogeneity of variance and covariance and if there are consistent correlations between the combined dependent variables between the groups. An insignificant Box's M test will establish that neither of these assumptions has been violated. Levene's tests for each of the MANOVAs will examine the homogeneity of between-group variance for each dependent variable in isolation. An insignificant Levene's test will indicate this assumption has not been compromised.

The first MANOVA analysis will be completed to ascertain if there are significant differences on the reading and math pretests between students in the transformational and not-transformational leadership behavior conditions. If there are not significant differences between the two conditions based on the pretests, any resulting differences on math and reading achievement tests cannot be attributed to the reading and math pretests. For this reason, the reading and math pretests will not be utilized as covariates in the final analysis if no significant differences between conditions can be established.

The second MANOVA will examine differences on the PALS and math pretests between the classrooms nested within the transformational leadership behavior condition

and the third MANOVA will determine if there are differences on the PALS and math pretests between the classrooms nested within the not-transformational leadership behavior condition. Ideally, these two analyses will establish the independence of observation assumption, which will support utilizing linear regression for the final analysis. Any systematic variance in student-level scores based on the classrooms nested within each condition will be attributed to error in regression. It is important to determine if this type of variance will negatively impact the accuracy of the regression analysis before attempting to utilize it. If these analyses establish there are not significant differences within the nested classrooms; linear regression is an appropriate choice for the final analysis.

The final phase of data analysis will focus on the eight hypotheses. This study examines a set of linear relationships (See Figure 2). There are direct relationships between transformational leadership behavior, CSE, math achievement, and reading achievement that correspond with hypotheses 1, 2 and 3. There are also more complex relationships with both mediating and moderating variables as described by Baron and Kenny in 1986. The relationship between teacher leadership behavior may be mediated by CSE, which will result in a direct and an indirect effect, if hypotheses 4 and 5 are supported. Additionally, hypotheses 6, 7, and 8 suggest poverty will act as a moderating variable and impact and the direct effects proposed in hypotheses 1, 2, and 3. Baron and Kenny explain how to use regression equations to test mediation, moderation, and moderated mediation (1986). Preacher and Hayes (2004) also recommend utilizing bootstrapped samples to test mediation using confidence intervals. Assuming the

statistical assumptions are met, regression analysis with bootstrapping will be utilized to analyze the revised model using the PROCESS macro for SPSS (Hayes, 2013).

Ethical Considerations

The CCSES is about student self-perceptions so it was possible a student could be upset by the questions. Parents were informed of this possibility and only students with parental consent participated in this study (See Appendix C). Children were also required to sign an assent form (See Appendix D). The researcher was present during the survey administration and reminded students they could stop if the survey made them uncomfortable or if they wanted to stop for any reason. No students showed any signs of being upset or concerned by questions on the survey. The survey took no more than 15 minutes for each child to complete. The researcher worked closely with school staff to ensure minimal loss of instruction time for participating students. There were no major risks for the adults who participated in this study. All of them participated voluntarily. Participating teachers were assured the activity had no relationship with their performance evaluation. Confidentiality of students and teachers was protected at all times during this study. Teacher ratings were manually entered by the researcher into an Excel spreadsheet. Each teacher was pre-assigned a number and names were not part of this dataset. Qualtrics software was used to capture student survey data. Student identification numbers, rather than names, were entered as part of the survey. Students' Fall 2014 PALS and math pretest scores, Spring 2015 reading and math SOL scores, gender, race, lunch status, and survey results were compiled. The student numbers and corresponding teacher numbers were merged to match teachers and students in the dataset. Only anonymous student and teacher datasets were analyzed for this study.

Strengths and Weaknesses

The CCSES is a new measurement and its validity and reliability need to be established. Further analysis of the CCSES's relationship with independent measures of each of the four factors that make up CSE is recommended. The subjects are also from one school district in Virginia and the students, who participated in this study, were the ones who returned parental permission forms. Teachers and administrators also participated voluntarily. For these reasons, the subjects are homogenous so these findings may not apply to other populations. CCSES scores were collected once at the end of the school year, so it is impossible to know if these scores changed over time. The potential impact of previous transformational leadership behavior is also unaccounted for in this study. Instructional expertise was not controlled for in this study. Although the vignettes described two highly competent teachers, it is not possible to know if the teachers within the two groups differed on instructional expertise. Defining poverty is difficult. Students' status on free and reduced lunch at the time of the study was used to identify students living in poverty. While this measure is the best available mechanism in a public school setting, it is not perfect. It is possible and even likely that some children on free and reduced lunch status were experiencing situational poverty and not generational or absolute poverty. It is also possible that the required paperwork to be placed on free or reduced lunch was not completed for all students living in poverty.

This study is the first to analyze CSE in children and examine its possible relationships within the context of an academic setting. Applying a leadership lens to the role of teacher is also a relatively new area of research. It is essential to find methods and practices that reduce the achievement gap to ensure students living in poverty have equal

opportunities to become successful, productive adults. More research on the qualities of successful teachers, who work with students living in poverty, is needed. This study seeks to help address this area of need and contribute to our existing body of knowledge. The findings may have implications for student intervention programs, student monitoring, teacher development programs, teacher professional development, and leadership programs.

Chapter 4 Analysis

The data analysis process was conducted in three phases. The first phase examined the reliability and validity of the Children's Core Self-Evaluation Scale (CCSES). The second phase analyzed the within and between group differences on the pretests for the transformational and not-transformational teacher leadership behavior conditions. The final phase addressed the study's hypotheses.

Phase 1: Children's Core Self-Evaluation Scale Analysis

Prior to this study, six certified elementary teachers and a reading specialist reviewed the CCSES and all agreed it was appropriate in content and reading-level to use with 3rd and 4th grade students. Several readability calculations were utilized to further analyze the scale as a whole and also each item within it. The readabilty formulas used in this study are available for public use on-line and require text to be entered directly on the website, Readability-score.com (Child, 2016). The formulas utilized were the Flesch-Kincaid Grade Level (FKGL), Gunning-Fog Score (GFS), and the Automated Readablity Index (ARI). The FKGL formula is based on total words, total sentences, and total syllables. The GFS utilizes sentence length and the complexity of words, based on the number of syllables. The ARI also calculates number and length of sentences and complexity of words, but bases the calculation on characters in the word rather than syllables (Childs, 2016).

The 21-item CCSES, excluding the directions, which were read orally to participants, was scored as a whole and yielded two scores below the 3rd grade-level and one score above the 3rd grade-level (See Table 1). The answer choices and each item

stem were then analyzed separately using the same formulas and the results are also shown in Table 1. Because two of the three scores on items 5, 6, 8, 10, 12, 16, and 20 were above the 3rd grade-level, these items were removed from the CCSES. The revised 14-item CCSES, as a whole, was then recalculated and none of the formulas showed the scale's readability as being above the 3rd grade-level.

Table 1

CCSES Readability Levels

	FKGL	GFS	ALI
CCSES 21 Items	2	4	2
Answer choices	K	1	K
Item 1	2	8	1
Item 2	2	5	1
Item 3	2	3	3
Item 4	1	3	3
*Item 5	7	5	7
*Item 6	5	10	1
Item 7	K	2	K
*Item 8	2	4	5
Item 9	1	3	3
*Item 10	5	8	5
Item 11	1	2	1
*Item 12	5	8	8
Item 13	2	3	5
Item 14	3	3	5
Item 15	2	4	2
*Item 16	4	9	5
Item 17	K	2	K
Item 18	K	3	K
Item 19	3	8	2
*Item 20	10	9	8
Item 21	3	3	6
CCSES 14 Items	1	3	1

Notes. K= Kindergarten and K-12 represent grade level equivalence
*indicates item removed based on readablity analysis

To further analyze the 14-item CCSES, inter-item and item-total correlations were utilized. Because the CCSES was intended to measure four positively related, but different traits, the inter-item correlations should have all been positive. The inter-item correlation analysis showed the fourteen items on the scale were positively correlated with one another with the exceptions of item 7, "Some kids choose to be happy", item 9, "Some kids think they can change how smart they are", and item 15, "Some kids need a lot of help learning new things". Item 7 showed low negative correlations with seven of the items on the scale. Items 9 and 15 showed a negative correlation with each other. Analysis of item-total correlations indicated item 7 had a low correlation (r = .06) with the overall CCSES. Item 9 had a lower item-total correlation (r = .34) than item 15 (r = .44). For these reasons, items 7 and 9 were removed from the scale, which resulted in a revised 12-item CCSES (See Appendix G).

Inter-item correlations and item-total correlations were re-calculated for the 12-item scale (See Tables 2 & 3). The inter-item correlations revealed there were no longer items with negative correlations and the item-total correlations indicated removing any of the remaining 12 items on the scale would not have improved internal consistency. Internal consistency of the revised 12-item CCSES was α = .81, which supported high levels of consistency among items (Trochim, 2006). According to Judge et. al. (2003) and Judge and Hurst (2007) this finding also aligned with the internal reliability of the adult CSE scale (α = .80 to .87).

Table 2

Inter-item correlation matrix for 12-item CCSES

	Item 1	Item 2	Item 3	Item 4	Item 11	Item 13	Item 14	Item 15	Item 17	Item 18	Item 19
Item 1											
Item 2	.25*										
Item 3	.27*	.47*									
Item 4	.24*	.32*	.32*								
Item 11	.23*	.19*	.15*	.24*							
Item 13	.24*	.15*	.16*	.12	.28*						
Item 14	.16*	.27*	.45*	.58*	.24*	.11					
Item 15	.16*	.35*	.23*	.37*	.40*	.03	.54*				
Item 17	.13	.50*	.40*	.30*	.18*	.17*	.31*	.34*			
Item 18	.25*	.36*	.26*	.31*	.30*	.20*	.33*	.29*	.33*		
Item 19	.24*	.10	.26*	.16*	.17*	.31*	.26*	.13	.20*	.22*	
Item 21	.10	.12	.33*	.40*	.16*	.10	.46*	.28*	.20*	.19*	.26*

Note. * $p < .05$

Table 3

Item-total correlations for 12-item CCSES and Cronbach's alpha if item deleted

Item	Corrected Item Total Correlation	Cronbach's Alpha if deleted
Item 1	.35	.80
Item 2	.48	.79
Item 3	.52	.79
Item 4	.54	.78
Item 11	.41	.80
Item 13	.29	.80
Item 14	.61	.78
Item 15	.51	.79
Item 17	.49	.79
Item 18	.49	.79
Item 19	.36	.80
Item 21	.40	.80

An exploratory factor analysis (EFA) was conducted to determine if calculating additional variables, based on item sets within the scale, was appropriate or if additional items needed to be removed from the scale. Before conducting the analysis, the

factorability of the 12-item CCSES was considered. As previously shown in Table 2, the 12 items correlated at least .27 with at least one other item on the scale and the majority of pairs were significantly correlated. The anti-image correlation matrix also showed mostly small values in the off-diagonal calculations (Tabachnick & Fidell, 2013, p. 619-620). The Kaiser-Meyer- Olkin measure of sampling adequacy was .79, which met the recommended value of .60 or above (Tabachnick & Fidell, 2013, p. 620). Bartlett's test of sphericity was also significant (χ^2 (66) = 391.27, $p < .01$), which supported the postulation that the correlations within the correlations matrix were not zero. Given these indicators, which confirmed each item shared common variance with the other items; factor analysis was appropriate to utilize (Tabachnick & Fidell, 2013; Neill, 2016; Neill, 2008).

A principal components analysis with a Varimax rotation was utilized. The analysis found four factors with Eigenvalues greater than 1.0, which aligned theoretically with CSE as a factor composed of four traits. The four factors explained 33%, 11%, 9%, and 9% respectively and total 62% of the variance. Based on Tabachnick and Fidell's rule for interpretation, all of the items loadings were acceptable (2013, p.654). Several items had loadings over .30 on multiple factors, but only the highest loading was considered in interpretation (See Table 4).

Table 4

Factor loadings for 12-item CCSES

Item	Factor One	Factor Two	Factor Three	Factor Four
Item 1			.57	
Item 2		.85		
Item 3		.63		
Item 4	.64			
Item 11				.82
Item 13			.75	
Item 14	.78			
Item 15				.63
Item 17		.70		
Item 18				.49
Item 19			.69	
Item 21	.78			

Notes. Factor loadings < .47 are repressed

Based on a principal component analysis with a Varimax rotation

Although the scale loaded with four factors with Eigenvalues greater than 1.0 and each item loaded at an acceptable level on at least one factor, the items did not clearly cluster based on the four CSE traits. For example, three items from the scale loaded highest on Factor 3, but the three items were not necessarily aligned with one another. Item 1, "Some kids feel unhappy most of the time" and item 13, "Some kids believe they will have really happy lives" logically aligned with emotional stability, but item 19, "Some kids make up their minds to do something and then do it", did not. This item would have better aligned with either self-efficacy or internal locus of control.

The fact that the items did not clearly cluster based on the four traits that make up CSE was not overly concerning because the items were not developed to measure each trait separately. Instead, the items should measure the CSE factor as a whole. The item design process was based on that of the adult CSE scale, which designed items to

measure the commonality between the traits, not each trait in isolation (Judge et. al, 2003).

Despite the items not clearly clustering on one of the four CSE traits, the CCSES was balanced across the four factors identified in this analysis. Three items loaded highest on each of the four factors and at least one of the three items loaded above .71, which was considered excellent (Tabachnick & Fidell, 2013, p. 654). For these reasons, none of the 12 items were removed from the scale and like the adult CSE scale, the CCSES was interpreted as a total score and subsets of items were not utilized to measure additional variables.

As previously shown in the pilot study, support for the validity of the CCSES was based on its having a similar relationship with academic performance as the adult CSE scale has with job performance. Adult CSE studies have consistently shown CSE scores correlate with job performance (r = .23 to .35). Using the data from this study, correlations between total CCSES scores and scores on reading (r = .33, p < .01) and math (r = .41, p < .01) Standards of Learning tests were again similar.

Phase 2: Multivariate Analysis of Variance analyses

For this study, it was critical to determine if there were significant differences on pretest scores between students in the transformational and not-transformational conditions because significant differences on pretests would carry over to the posttest scores unless they were controlled in the final analysis. In addition to determining if the students in each condition were homogeneous on pretest scores, it was also important to consider differences that might have existed between the classrooms nested within the transformational and not-transformational conditions. If classroom differences existed

within the two conditions, a regression analysis would have calculated them as error, which would impact the results. In such a case, a hierarchical linear model (HLM) analysis would have been a better analysis to utilize. Three Multivariate Analysis of Variance (MANOVA) analyses were conducted to examine the possible differences on pretest scores between the transformational and not-transformational conditions and the classrooms nested within the transformational and not-transformational conditions. Prior to conducting these MANOVAs, a correlational analysis between reading and math pretests found they were moderately correlated ($r = .34$, $p < .01$) and appropriate for MANOVA

Analysis of between group differences for transformational and not-transformational conditions. The first MANOVA was conducted to determine if there were significant differences on math and reading pretest scores between students in the transformational and not-transformational conditions. *Box's M* (1.57) was not significant ($p = .67$), which indicated homogeneity of variance across the two leadership conditions could be assumed. Results of the MANOVA were not significant, which indicated there were not significant differences between the conditions on math and reading pretest scores (Wilks' $\lambda = .984$, F [2, 130] = 1.25, $p =$. 29, partial $\eta^2 = .02$). Levene's test of the equality of error variances also supported non-significant differences between the two leadership conditions on both the reading pretest (F [1, 131]=. 20, $p = .66$) and the math pretest (F [1, 131]=. 01, $p = .80$). Because the transformational and not-transformational conditions did not differ on math and reading pretest scores, there was no need to control for pre-existing differences and the pretest scores were not included as control variables in the final analysis.

Analyses of within group differences for classrooms nested within the transformational and not-transformational conditions. Two MANOVAs were utilized to examine possible differences between classrooms nested within the not-transformational and transformational conditions. For the classrooms within the not-transformational condition, *Box's M* (34.59) was not significant ($p = .37$) which indicated homogeneity of variance across these classrooms could be assumed. The results of the MANOVA (Wilks' $\lambda = .84$, F [18, 142] = .73, $p = .77$, partial $\eta^2 = .09$) were also not significant and indicated there were not significant classroom differences. Levene's test of the equality of error variances also supported no significant classroom differences on both the reading pretest (F [9, 71] = .73, $p = .68$) and the math pretest (F [9, 71] =1.5, $p = .18$). For the classrooms within the transformational condition, *Box's M* (44.97) was significant ($p < .05$), which indicated homogeneity of variance across the classrooms could not be assumed. MANOVA results (Wilks' $\lambda = .68$, F [12, 88] = 1.6, $p = .11$, partial $\eta^2 = .18$) were not significant, which indicated there were not significant classroom differences. Levene's test of the equality of error variances supported no significant classroom differences on the reading pretest (F [6, 45] = 1.8, $p = .11$); however, the test indicated possible significant classroom differences on the math pretest (F [6, 45] = 5.5, $p <. 05$). Because homogeneity between the classrooms nested in the transformational condition on the math pretests could not be assumed, math achievement was dropped as a dependent variable in the final analysis and hypotheses 1, 4, and 6 were not tested.

Phase 3: Testing the Hypothesized Relationships

The final stage of data analysis was to test the remaining hypothesized relationships using a regression analysis in SPSS PROCESS with bootstrapped samples. Before conducting this analysis, the variables' descriptive statistics were examined. The reading achievement test scores fell between 294 and 600 and the scores on 12-item CCSES fell between 20 and 60. Mean scores and standard deviations are shown in Table 5. The data for the continuous variables were also analyzed to ensure normality by plotting the score distributions and calculating skewness, and kurtosis, which are also shown in Table 5. Both the reading achievement scores and the CSE scores fell between +/-1 for both kurtosis and skewness, which indicated a good distribution in terms of normality for both variables. Correlations between the variables are shown in Table 6. Because group differences were hypothesized in this study, the descriptive statistics of the groups were also examined before the final analysis and are shown in Table 7.

Table 5

Descriptive statistics for variables

	M	*SD*	Skewness	Kurtosis
Reading Achievement	465	66.69	-.13	.11
CSE	46	7.91	-.87	.61
Poverty	.49	.50	-	-
Teacher Leadership	.39	.49	-	-

Table 6

Bivariate correlations between variables

	Teacher Leadership	Reading Achievement	Poverty
Teacher Leadership	-	-	-
Reading Achievement	.22*	-	-
Poverty	-.11	-.25**	-
CSE	.03	.34**	-.13

Note: * $p < .05$, ** $p < .01$

Table 7

Descriptive data on continuous variables by not-transformational and transformational conditions

Measure	Poverty	Teacher Lead.	*M*	*SD*	*N*
Reading Achievement	Not in poverty	Not-trans	480.11	69.52	38
		Trans	482.23	59.36	30
		Total	481.04	64.77	68
	Living in poverty	Not-trans	429.51	60.00	43
		Trans	484.45	59.72	22
		Total	448.11	64.95	65
	Total	Not-trans	453.25	69.07	81
		Trans	483.17	58.93	52
		Total	464.95	66.69	133
CSE	Not in poverty	Not-trans	47.74	6.10	38
		Trans	46.40	7.05	30
		Total	47.15	6.52	68
	Living in poverty	Not-trans	44.42	7.76	43
		Trans	46.59	11.30	22
		Total	45.15	9.08	65
	Total	Not-trans	45.98	7.18	81
		Trans	46.48	8.99	52
		Total	46.17	7.91	133

A bootstrapping resampling method for linear regression was utilized to analyze the hypotheses using the PROCESS macro for SPSS **(**Hayes, 2013). This type of analysis obtains confidence intervals for specified indirect effects by taking random cases from the existing sample to create bootstrapped samples (Preacher & Hayes, 2004).

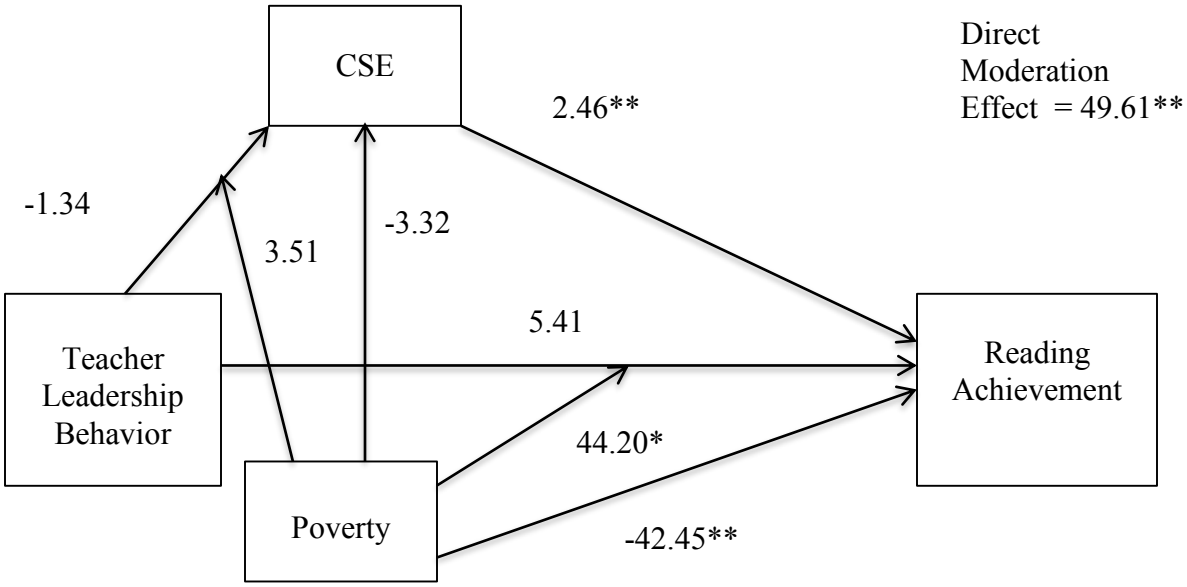
Significance is determined based on zero falling within the 95% confidence interval. If the confidence interval does not contain zero, the mediation is significant. Conversely, if zero falls within the confidence interval there is not significant mediation. Based on the PROCESS model options provided by the Institute for Digital Research and Education (2016), PROCESS model 8 was used to test for moderated mediation utilizing 1000 bootstrapped resamples. In this model, reading achievement was the dependent variable and teacher leadership behavior was the independent variable. CSE was treated as a mediator between teacher leadership behavior and reading achievement. Poverty was a moderator between teacher leadership behavior and reading achievement and for the mediation between teacher leadership behavior and CSE (See Figure 3).

A bootstrapping resampling regression for moderated mediation. Results for the moderating effect of poverty in the relationship between teacher leadership behavior and reading achievement showed the main effect of teacher leadership behavior on reading achievement (b = 5.41, SE = 14.65, p = .71) was not significant. This finding did not support hypothesis 2. Findings showed a significant direct effect of CSE on reading achievement (b = 2.46, SE = .67, p < .01). The direct effect of teacher leadership behavior on CSE was not significant (b = -1.34, SE = 1.93, p = .49), which indicated there were no differences in students' CSE scores associated with teacher leadership conditions. Thus, Hypothesis 3 was not supported. There was also a non-significant indirect effect of teacher leadership behavior on reading achievement through CSE (b = -3.28, SE= 4.21, 95% CI [-13.30, 3.21], p > .05) because zero fell within the confidence interval. This finding indicated there was not a mediated relationship between teacher leadership behavior and CSE, and hypothesis 5 was not supported. The main effect of

poverty on reading achievement (b = - 42.45, SE = 13.51, $p < .01$) and the interaction between teacher leadership behavior and poverty on reading achievement *(*b = 44.20, SE = 21.58, $p < .05$) were both significant. The total direct moderation effect of teacher leadership behavior on reading achievement moderated by poverty (b = 49.61, SE =15.76, $p < .01$) was significant and supported hypothesis 7. The significant interaction between teacher leadership behavior and poverty was plotted and showed students living in poverty performed better on reading achievement with teachers who had transformational leadership behavior (See Figure 4). There was little difference between leadership conditions for students not living in poverty. Based on the work of Preacher, Rucker, & Haynes (2007) moderated mediation between variables cannot exist if there is not significant mediation. Hypothesis 8 suggested poverty would moderate the mediation between teacher leadership behavior and CSE and was not supported by the results of this study. As previously shown the direct effect of teacher leadership behavior on CSE was not significant. The interaction effect for poverty and teacher leadership behavior on CSE was also not significant *(*b = 3.51, SE = 2.83, p = .22).

Figure 3

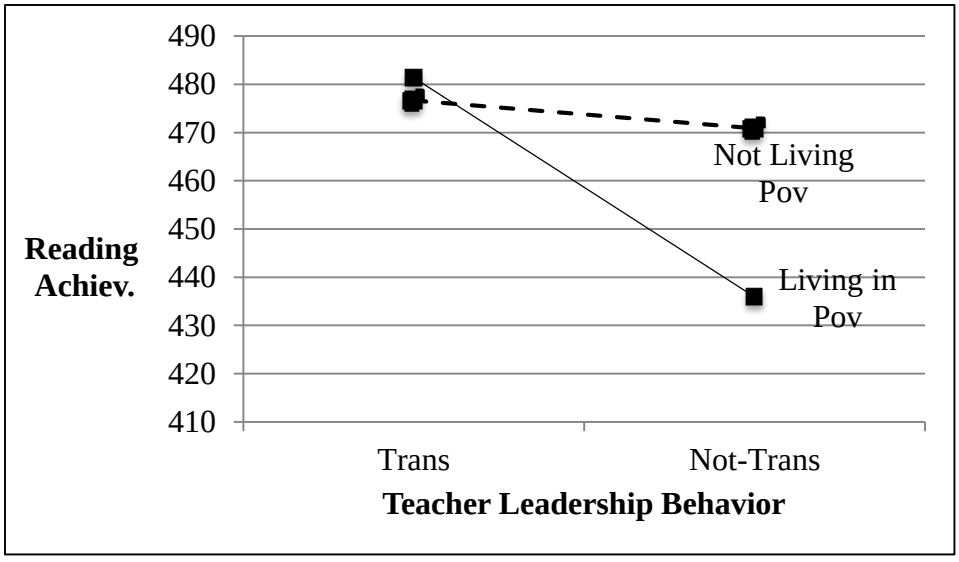
Diagram of moderated mediation model



Note. * $p < .05$, ** $p < .01$

Figure 4

Interaction between teacher leadership behavior and poverty on reading achievement



Follow-up regression analysis. The positive correlation between reading achievement and teacher leadership behavior ($r = .22$, $p < .01$) showed a significant relationship. Inspection of the mean reading achievement scores of the teacher leadership conditions, as shown in Table 7, also indicated a mean difference of 29.92 points. However, the relationship between teacher leadership behavior and reading achievement within the PROCESS model analysis was not significant. An interaction between teacher leadership behavior and CSE on reading achievement, that was not a mediated relationship, needed to be considered. In order to test this moderation, a multiple regression analysis without bootstrapped samples was conducted. The regression of teacher leadership behavior, CSE, and their interaction on reading achievement was significant ($R^2 = .19$, F [3, 129] = 10.02, $p < .01$). Each variable played a significant role in the variability of reading achievement (See Table 8). The interaction was plotted based on mean scores one standard deviation below and one standard deviation above the mean score of CSE (See Figure 5). For students with high levels of CSE there was little difference between teacher leadership conditions; however, students with low levels of CSE performed significantly higher on reading achievement when in the transformational leadership condition.

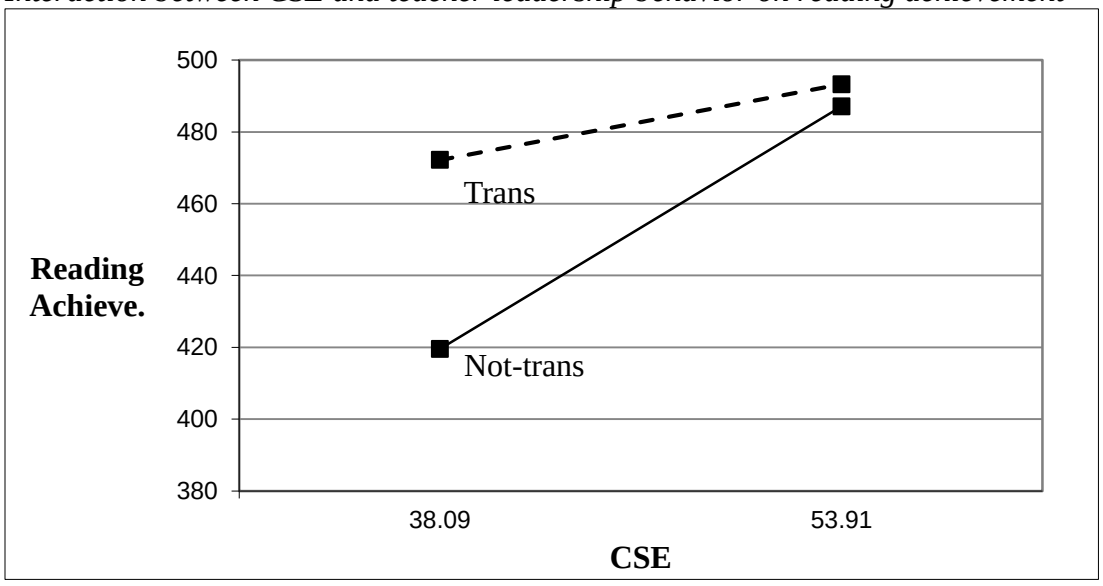
Table 8

Multiple regression coefficients and semi-partial squared correlations

	B	*SE*	sr^2	*p*
TeachLeadCond	164.61	62.78	.04	.01
CSE	4.27	.95	.12	.00
CSExTeachLeadCond	-2.94	1.34	.03	.03

Figure 5

Interaction between CSE and teacher leadership behavior on reading achievement



Note. CSE = +/- 1.0 *SD Mean*

Discussion

This dissertation proposed a model for moderated mediation between teacher leadership behavior, CSE, and poverty on reading achievement. The non-significant relationship between teacher leadership behavior and CSE was not anticipated, given the findings of Nübold, Muck, and Günter (2013). Their study concluded that transformational leadership behaviors increased CSE in adults with low CSE, so this study hypothesized CSE scores would be significantly higher within the transformational leadership condition. The target populations for these studies were different, which may have contributed to the conflicting results, but it was more likely the differences in the research designs of the two studies created the discrepancy. The study by Nubold et. al. (2013) was a repeated measure design to explore changes in CSE. In this study, CSE was measured at one point in time and examined across groups to examine potential group differences.

Although this study found no direct effect between teacher leadership behavior and CSE, interaction effects between teacher leadership behavior and CSE and teacher leadership behavior and poverty were discovered. Students with low levels of CSE and students living in poverty performed significantly better on reading achievement with teachers, who exhibited transformational leadership behaviors than with teachers who did not. Previous research surrounding self-efficacy, self-esteem, and self-confidence has consistently established the positive correlation between views of self-worth and performance (Bono & Judge, 2003; Elliott & Dweck, 1988; Good, 1987; Judge 2009: Multon, Brown, & Lent 1991). Hattie's meta-analysis results showed students' expectations of their own academic success had the highest effect size of the indicators studied (2009, p. 268). Educational research has also established students living in poverty have significantly lower academic performance than those who are not living in poverty (Berkman 2008; Bollinger, 2014; Coley & Baker, 2013; Hattie, 2009; Kilty, 2015; Rumberger, 2013; Semuals, 2014). Findings from this study suggest transformational leadership may be able to off set the negative influences of living in poverty and of having low levels of CSE.

Transformational leaders serve as positive role models (Idealized Influence), express individualized concern (Individualized Consideration), stimulate (Inspirational Motivation), and challenge followers (Intellectual Stimulation). Individuals with low CSE do not believe in their own competence and they believe they have little control over their lives. Often these internal beliefs are reinforced by learned helplessness, low levels of intrinsic motivation, and lack of effort (Sinha & Gupta, 2006). Transformational leaders empower followers to develop their skills, knowledge, and abilities and ultimately

to reach their full potential (Zhu, Sosik, Riggio, & Yang 2012). Bass's description of a transformational leader as "one who motivates us to do more than we originally expected to do" (p. 20) describes this finding. Pairing students with low CSE with a teacher, who exhibits transformational leadership behavior, likely allows them to feel a sense of empowerment, provides them with a role model who sets high expectations, increases their motivation, and is ultimately associated with improved reading performance.

For the students living in poverty, who participated in this study, transformational leadership behavior in their teachers offset the achievement gap associated with poverty. Students living in poverty often do not have families who highly value education. Because education is not highly valued, these students are often apathetic and unmotivated at school (Rumberger, 2013). The findings of this study suggest teachers with transformational leadership behaviors increase motivation and inspire learning for students living in poverty much as they do for students with low CSE.

Chapter 5 Conclusion

Free public education is engrained in our country's culture and contributes to our belief that the United States is a land of opportunity for its people. However, equal access to high-quality education is not a reality for all children. Social class divides our neighborhoods and as a result, our schools experience segregation based on socio-economics. Schools, with impoverished student populations, operate with fewer resources and less financial capital. These schools tend to hire lower-quality teachers, despite the fact that the quality of the teacher is the most important school-based factor in predicting student academic success (Bollinger, 2014; Coley & Baker, 2013; Rumberger, 2013; Weisberg, Sexton, Mulhern, & Keeling, 2009).

Research shows that persons with limited education earn less money in their lifetimes, have shorter life expectancy, and are at increased risk for incarceration. They are also less able to make significant economic impact as consumers (Reardon,Yun, & Kurlaender, 2006). Despite the fact that educational attainment is the best way to break the cycle of poverty, many students do not value the idea that success in school is the key to eventual economic prosperity (Rumberger, 2013). These students are also often isolated from their more affluent peers and they see little hope of changing their future.

Public education continues to face many challenges so finding new approaches to help schools implement sound research-based best practices is essential. One overarching goal of this dissertation was to apply leadership theory to the complex relationship between teacher and student, which is paramount to student success (Hattie, 2009). Within organizational theory, the role of leadership has been well established (Judge, Woolf, Hurst, & Livingston, 2008), but it is not often applied to the relationship

between teacher and student. By viewing this relationship through the lens of leadership, practices that have proven successful in organizational research, can be explored and applied within the realm of our public schools. Results from this study legitimize this approach and suggest successful leadership training programs should be applied to the professional development of teachers.

Research in organizational behavior, psychology, and motivation has shown that the combination of locus of control, self-efficacy, self-confidence, and emotional stability is a good predictor of job performance, wellbeing, lifetime earnings, leadership, and physical health. Theory posits that core self-evaluation (CSE) is a personality trait and its formation is based on both genetics and environment (Bono & Judge, 2003; Durham, Kluger, Locke, & Judge, 1998; Gardner & Pierce, 2009; Judge & Hurst, 2007). There is also indication that high and low levels of CSE are reinforced much like learned helplessness reinforces itself (Judge, 2009). Another purpose of this study was to establish CSE as a viable area for educational research. Results support CSE is significantly associated with academic achievement for middle and elementary aged students, much like it is associated with job performance in adults. This finding establishes it as a promising area of research focus.

Current research has primarily examined the qualities of effective teachers on a comprehensive spectrum. Little focus has been given to the notion that teacher behaviors might impact at-risk students differently. Improving our current understanding about what types of teacher behaviors impact at-risk students and determining if these behaviors impact all students in the same way was also a goal for this study. This research aimed to explore the relationships between teacher transformational leadership

behaviors, student's CSE, student's socio-economic status, and student's reading achievement to gain a better understanding of the factors associated with the achievement of at-risk students. Findings indicated CSE and poverty were not significantly correlated so students with low CSE and students living at poverty were not the same. However, both of these groups were associated with low reading performance unless a teacher with transformational leadership behaviors taught them. This finding did not hold true for students with high levels of CSE and those not living in poverty, which shows teacher behaviors impact at-risk students differently. This result adds to the existing research concerning the actions of highly effective teachers and establishes the need to examine teacher effects for different student groups.

Implications

Training teachers to apply transformational leadership behaviors in the classroom will add a new area of focus to existing evidence-based teacher development programs. The description of the transformational teacher in the transformational leadership measure from this study should be utilized to design targeted teacher training and units of study for teacher preparation programs. School divisions should provide professional development specifically designed for teachers of at-risk students. This training should include strategies to ensure students meet success while simultaneously challenging them to meet high demands. Creating a classroom climate that empowers students to take ownership of their own learning, strive for excellence, and find their passion needs to be stressed. At-risk students need teachers whose main focus is empowering students rather than helping them. Providing this evidence-based training to teachers in high-poverty schools will improve teacher effectiveness within these schools. If these types of teacher

behaviors are taught, fostered, and increased over time, the likelihood of breaking the negative and reinforcing CSE and poverty cycles for at-risk students will be increased.

Future Research

The problems facing public education are complex and multiple solutions are needed to help move schools forward. This study establishes the potential benefits of utilizing a leadership lens to improve student and teacher relationships and establishes CSE as a viable area of focus for schools. As part of this study, the first measure of CSE in children, the Children's Core Self-Evaluation Scale (CCSES) was designed and utilized. Its reliability and validity were also explored. The CCSES is a new measurement and examination of its validity and reliability needs to be continued. Investigating the CCSES's relationship with independent measures of each of the four factors that make up CSE is needed to further support its validity. This study's sample size (N=133) was a limitation and increasing the sample for future studies to further examine the scale's validity and reliability is suggested.

Determining what aspects of transformational leadership account for the improved reading performance of at-risk students should be part of future studies. The vignette used to measure transformational leadership behaviors in teachers should be closely analyzed to understand why these behaviors positively impact at-risk students and have little impact on other students. To fully understand CSE and the impact of transformational leadership on the performance of at-risk children, longitudinal data is needed. Future studies that extend over long periods of time to account for developmental changes in children and the influence of multiple teachers will need to be implemented. This study suggests plausible avenues for improving the performance of

at-risk students and evidence-based professional development for teachers. It also adds new dimensions to the existing body of knowledge of these complex constructs and lays the groundwork for continued research.

Appendices

Appendix A

Administrator Consent to Participate in Research

Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by India Harris from James Madison University. The purpose of this study is to better understand how teaching style impacts students. This information will help us create high quality staff development opportunities for our teachers. This study will also contribute to the researcher's completion of her doctoral course work.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. This study consists of a survey that will be administered to your students in your classrooms or school computer lab. You will be asked to categorize your fourth and fifth grade teachers into one of two categories based on their teaching style. Neither of the categories is negative nor do they reflect any judgment or evaluation on their job performance. Upon categorization, each class will be assigned a class number and teacher names will not be part of this study.

Time Required

Participation in this study will require 15 to 20 minutes of your students' time and 15 to 20 minutes of your time.

Risks

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).

Benefits

There are no direct benefits for the participants, although the knowledge gained will help improve school experiences for students and teachers.

Confidentiality

The results of this research will be presented at James Madison University classrooms and may also be shared a professional conferences. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers will be destroyed.

Participation & Withdrawal

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Questions about the Study

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

India Harris
School of Strategic Leadership Studies
James Madison University
harrisim@dukes.jmu.edu

Dary Erwin, Ph.D.
School of Strategic Leadership Studies
James Madison University
Telephone: (540) 568-7020
erwintd@jmu.edu

Questions about Your Rights as a Research Subject

Dr. David Cockley
Chair, Institutional Review Board
James Madison University
(540) 568-2834
cocklede@jmu.edu

Giving of Consent

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

_____
Name of Participant (Printed)

_____ _____
Name of Participant (Signed) Date

_____ _____
Name of Researcher (Signed) Date

Appendix B

Teacher Consent to Participate in Research

Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by India Harris from James Madison University. The purpose of this study is to better understand how teaching style impacts students. This information will help us create high quality staff development opportunities for our teachers and successful intervention programs for students. This study will also contribute to the researcher's completion of her doctoral course work.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. This study consists of a survey that will be administered to your students in your classroom or school computer lab. Your principal will be asked to categorize you into one of two categories based on your teaching style. Neither of the categories is negative nor do they reflect any judgment or evaluation of your job performance. Upon categorization, your class will be assigned a class number and your name will not be part of this study.

Time Required

Participation in this study will require 15 to 20 minutes/hours of your students' time.

Risks

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).

Benefits

There are no direct benefits for the participants, although the knowledge gained will help improve school experiences for students and professional development for teachers.

Confidentiality

The results of this research will be presented in James Madison University classrooms and may also be shared at professional conferences. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers will be destroyed.

Participation & Withdrawal

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Questions about the Study

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

India Harris
School of Strategic Leadership Studies
James Madison University
harrisim@dukes.jmu.edu

Dary Erwin, Ph.D.
School of Strategic Leadership Studies
James Madison University
Telephone: (540) 568-7020
erwintd@jmu.edu

Questions about Your Rights as a Research Subject

Dr. David Cockley
Chair, Institutional Review Board
James Madison University
(540) 568-2834
cocklede@jmu.edu

Giving of Consent

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

_____
Name of Participant (Printed)

_____ _____
Name of Participant (Signed) Date

_____ _____
Name of Researcher (Signed) Date

Appendix C

Parent/Guardian Informed Consent

Identification of Investigators & Purpose of Study

Your child is being asked to participate in a research study conducted by India Harris from James Madison University. The purpose of this study is to better understand how teacher behaviors impact students. This information will help us create high quality staff development opportunities for our teachers and effective intervention programs for students. This study will also contribute to the researcher's completion of her doctoral course work.

Research Procedures

Should you decide to allow your child to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. Your child will also be asked to sign a consent form, which will be read and discussed with him/her. This study consists of a survey that will be administered to students in their current classroom. Your child will be asked to provide answers to a series of questions related to their feelings about school and themselves. Standards of Learning Test scores for math and reading from spring 2014 and 2015 will also be used to measure academic performance. Demographic data (gender, race, lunch status) will also be also accessed and used as part of this study. Your child's identity will be protected at all times and his/her name will not be used to collect information. Your child's Waynesboro Public Schools (WPS) student identification number will be collected during the survey. This student number will be utilized to link your child's survey responses to his/her reading and math SOL scores and demographic (gender, race, lunch status) information. Your child will be assigned a de-identifiable number, which will replace his/her WPS student number once all data has been connected. All identifying information will be destroyed once this process is complete.

Time Required

Participation in this study will require 15 to 20 minutes of your child's time. The researcher and school staff will work together to minimize any loss of instruction or valued free time for your child.

Risks

The investigator does not perceive more than minimal risks from your child's involvement in this study; however, the survey questions are related to your child's self-perceptions. It is possible a student could experience some stress. Students will be closely monitored during the survey to ensure each child is comfortable. The survey will be discontinued immediately if a child reports or shows any signs of being under stress. The school guidance counselor will be available and you will be notified if your child shows any signs of stress.

Benefits

There are no direct benefits for the participants, although the knowledge gained will help improve school experiences for students.

Confidentiality

Your child will be identified in the research records with a code number. The researcher retains the right to use and publish non-identifiable data. When the results of this research are published or discussed in conferences, no information will be included that would reveal your child's identity. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers will be destroyed.

There is one exception to confidentiality we need to make you aware of. In certain research studies, it is our ethical responsibility to report situations of child abuse, child neglect, or any life-threatening situation to appropriate authorities. However, we are not seeking this type of information in our study nor will you or your child be asked questions about these issues**.**

Participation & Withdrawal

Your child's participation is entirely voluntary. He/she is free to choose not to participate. Should you and your child choose to participate, he/she can withdraw at any time without consequences of any kind.

Questions about the Study

If you have questions or concerns during the time of your child's participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

India Harris
School of Strategic Leadership Studies
James Madison University
harrisim@dukes.jmu.edu

Dary Erwin, Ph.D.
School of Strategic Leadership Studies
James Madison University
Telephone: (540) 568-7020
erwintd@jmu.edu

Questions about Your Rights as a Research Subject

Dr. David Cockley
Chair, Institutional Review Board
James Madison University
(540) 568-2834
cocklede@jmu.edu

Giving of Consent

I have read this consent form and I understand what is being requested of my child as a participant in this study. I freely consent for my child to participate. I have been given satisfactory answers to my questions. I certify that I am at least 18 years of age.

_____
Name of Child (Printed)

_____
Name of Parent/Guardian (Printed)

_____ _____
Name of Parent/Guardian (Signed) Date

_____ _____
Name of Researcher (Signed) Date

Appendix D

STUDENT ASSENT FORM

I would like to invite you to take part in a research study. I am asking you to complete a short survey on the computer. This survey will describe the behavior and feelings of some kids. You will be asked to choose if these behaviors or feelings are a lot like you, like you, not like you, or not at all like you. Your responses will help us better understand how fourth and fifth graders feel about themselves and about school.

Your parents have been asked to give their permission for you to take part in this study. Please talk this over with your parents before you decide whether or not to participate.

You do not have to be in this study if you do not want to. If you decide to participate in the study, you can stop answering questions at anytime. The researcher and your teacher will work together to make sure that you do not miss important information or special free time while you complete the survey.

If you have any questions at any time, please ask me.

IF YOU PRINT YOUR NAME ON THIS FORM IT MEANS THAT YOU HAVE DECIDED TO PARTICIPATE AND HAVE READ EVERYTHING THAT IS ON THIS FORM. YOU AND YOUR PARENTS WILL BE GIVEN A COPY OF THIS FORM TO KEEP.

_____ _____

Name of Child (printed) Date

_____ _____

India Harris
301 Pine Avenue
Waynesboro, VA 22980
(540) 946-4600 ext. 45

Date

Appendix E

The Children's Core Self-Evaluations Scale

Please read each sentence and decide if it is just like you, like you, not like you, or not at all like you. If you are unsure, you can answer, "I don't know if this is like me or not". Please make sure to answer each question. Also, please ask if you do not understand a sentence or you need help with reading. Thank you for helping me with my homework!

1. Some kids feel unhappy most of the time.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

2. Some kids just do not do well in school even if they try.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

3. Some kids are good at solving hard problems.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

4. Some kids have a hard time learning new things.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

5. When something is really hard, some kids keep trying harder and harder.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

6. Some kids get upset easily.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

7. Some kids choose to be happy.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

8. Some kids believe they get smarter when they learn new things.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

9. Some kids believe they can change how smart they are.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

10. Some kids stop trying when they cannot do something very well.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

11. Some kids are scared they will fail.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

12. Failing makes some kids feel really bad about themselves.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

13. Some kids believe they will have really happy lives.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

14. Some kids can solve hard problems without much help.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

15. Some kids need a lot of help solving hard problems.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

16. Some kids feel good about themselves.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

17. Some kids are just not very smart.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

18. Some kids are afraid to try new things.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

19. Some kids make up their minds to do something and then do it.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

20. Some kids worry about almost everything.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

21. Some kids can handle their problems without much help.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know

Student Information
Please enter your lunch number.

Student Number _____

Appendix F

Teacher categories vignettes

Teacher: Name_____

Alex

Alex is an excellent teacher, who is goal-oriented and works diligently to ensure that goals are achieved. Alex sets realistic expectations for students and helps them throughout the learning process. Alex leads a well-structured classroom and ensures students understand the content. Alex tailors instruction, remediation, and enrichment to match each student's ability and current level of performance. Alex quickly responds to students who are struggling academically or socially to fix the problem. Alex sympathizes with students and tries to support them as much as possible. Alex cares passionately about students and expresses this feeling with students, parents, and colleagues.

Pat

Pat is an excellent teacher, who recognizes and understands the learning style of each student and often incorporates student choice into learning. Pat empowers and motivates students. Pat leads by example and establishes a calm and stable sense of security for students. Pat fosters student autonomy and independence. When problems occur, Pat expects students to take an active role in finding a solution. Pat challenges students to strive for excellence and inspires creativity. Pat believes that a student can reach goals with determination and hard work. Pat sets high expectations for students and communicates with confidence that students will meet or exceed them.

Appendix G

The Children's Core Self-Evaluations Scale
(Updated Based on Scale Analysis)

Please read each sentence and decide if it is just like you, like you, not like you, or not at all like you. If you are unsure, you can answer, "I don't know if this is like me or not". Please make sure to answer each question. Also, please ask if you do not understand a sentence or you need help with reading. Thank you for helping me with my homework!

1. Some kids feel unhappy most of the time.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

2. Some kids just do not do well in school even if they try.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

3. Some kids are good at solving hard problems.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

4. Some kids have a hard time learning new things.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

5. Some kids are scared they will fail.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

6. Some kids believe they will have really happy lives.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

7. Some kids can solve hard problems without much help.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

8. Some kids need a lot of help solving hard problems.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

9. Some kids are just not very smart.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

10. Some kids are afraid to try new things.
- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

11. Some kids make up their minds to do something and then do it.

- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know if this is like me or not

12. Some kids can handle their problems without much help.

- ❍ Just like me
- ❍ Like me
- ❍ Not like me
- ❍ Not at all like me
- ❍ Don't know

Student Information
Please enter your lunch number.

Student Number _____

References

American Psychological Association (2015). Effects of poverty, hunger, ND homelessness on children and youth. Retrieved from: http://www.apa.org/pi/families/poverty.aspx

Ayman, R. & Adams, S. (2012). Contingencies, context, situation, and leadership. . In D.V. Day & J. Antonakis (Eds.) *The nature of leadership* (pp. 179-217). Los Angeles, CA: Sage.

Bandura, A. (1989). Social cognitive theory. In R. Vasta (Ed.), Annals of child development. Vol. 6. Six theories of child development (pp. 1-60). Greenwich, CT: JAI Press. Retrieved from: http://www.uky.edu/~eushe2/Bandura/Bandura1989ACD.pdf

Baron, R. & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategically, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182

Bass, B. M. (1985). *Leadership and performance beyond expectations.* New York: The Free Press.

Bass, B.M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 13*(3), 26-40.

Bass, B.M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology, 8*(1), 9-32.

Berkman, E. (2015). It's not a lack of self-control that keeps people poor. *The Psych*

Report. Retrieved from: http://thepsychreport.com/society/its-not-a-lack-of-self-control-that-keeps-people-poor/

Bollinger, L.C. (2014). Sixty years later, we need a new Brown. *The New Yorker.* Retrieved from: http://www.newyorker.com/news/news-desk/sixty-years-later-we-need-a-new-brown

Bono, J., Erez, A., Judge, T., & Thoreson, C. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, *83* (3), 693–710.

Bono, J. & Judge, T. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality, 17*, 5–18.

Bono, J. & Judge, T. (2004). Personality and transformational and transactional leadership: a meta-analysis. *Journal of Applied Psychology, 89* (5*)*, 901-910.

Boser, U. (2015). Separate and economically unequal: Lack of economic diversity in schools is a problem that needs to be addressed. *U.S. News*. Retrieved from: http://www.usnews.com/opinion/knowledge-bank/2015/06/17/separate-and-economically-unequal-why-schools-need-socioeconomic-diversity

Bosler, R. & Bauman, D. J. (1992, June 2-7). Meeting cultural diversity with personal conviction: The teacher as change agent and transformational leader. *The National Forum of the Association of Independent Liberal Arts Colleges*, Louisville, KY.

Boyd, B. (2009). Using a case to develop the transformation teaching theory. *Journal of Leadership Education, 7* (3), 50-59. Retrieved from: http://www.leadershipeducators.org/Resources/Documents/jole/2009_winter/JOLE_7_3_Boyd.pdf

Brown, D. J. (2012). In the mind of followers. In D.V. Day & J. Antonakis (Eds.) *The nature of leadership* (pp. 331-362). Los Angeles, CA: Sage.

Burns, J. M. (1978). *Leadership*. NY: Harper & Row.

Carlyle, T. (1840). On heroes, hero worship and the heroic in history. Retrieved from: http://www.gutenberg.org/files/1091/1091-h/1091-h.htm

Carter, S. C. (2000). No excuses: Lessons from 21 high-performing, high-poverty schools. Washington, DC: Heritage Foundation. Retrieved from: http://files.eric.ed.gov/fulltext/ED440170.pdf

Cheng, Y. C. (1994). Teacher leadership style: A classroom-level study. *Journal of Educational Administration, 32,* 54-71.

Child, D. (2016). Test Statistics Project. Retrieved from: https://readability-score.com/

Coley, R.J. & Baker, B. (2013). Poverty and the future: finding the way forward. The ETS Center for Research on Human Capital and Education Retrieved from: http://www.ets.org/s/research/pdf/poverty_and_education_report.pdf

Cotton, K. (1989). Expectations and student outcomes. School Improvement Series. Retrieved from: http://educationnorthwest.org/sites/default/files/expectations-and-student-outcomes.pdf

Creswell, J. W. (2009). *Research design: Qualitative, quantitative and mixed methods approaches*. Thousand Oaks, California. Sage Publishing.

Cuthrell, K., Stapleton, J., & Ledford, C. (2010). Examining the culture of poverty: promising practices. *Preventing School Failure, 54* (2), 104-110.

Elliott, E.S., & Dweck, C.S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*, 5-12.

Evans & Casell (2013). Childhood poverty, cumulative risk exposure and mental health in emerging adults Retrieved from: http://cpx.sagepub.com/content/early/2013/09/26/2167702613501496.full.pdf+html

Day, D.V. & Antonakis, J. (2012). Leadership: past, present and future. In D.V. Day & J. Antonakis (Eds.) *The nature of leadership* (pp. 3-25). Los Angeles, CA: Sage.

Dewey, J. (1938). Experience and Education. New York: The MacMillian Company.

Durham, C., Kluger, A. Locke, E., & Judge, T. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of applied Psychology 83*(1), 17-34.

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

Eccles, J. (1999). The development of children ages 6-14. *When School Is Out*, 9 (2) 30-44.

Facteau, J. D. & Craig, S. B. (2001). Are performance appraisal ratings from different rating sources comparable? *Journal of Applied Psychology, 86* (2) 215-227.

Gardner, D. & Pierce, J. (2009). The core self-evaluation scale: Further construct validation evidence. *Educational and Psychological Measurement, 70* (2), 291-304.

Givens, R. (2008). Transformational leadership: The impact on organizational and personal outcomes. *Emerging Leadership Journeys*. *1*(1), 4-24.

Gliner, J.A., Morgan, G.A., Leech, N.L. (2009). *Research methods in applied settings: An integrated approach to design and analysis*. New York, NY: Routledge.

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

Harris, A. (2005). Teacher leadership: More that just a feel good factor? *Leadership and Policy in Schools, 4*: 201-219.

Harrison, J. L. (2011). Instructor transformational leadership and student outcomes. *Emerging Leadership Journeys, 4* (1), 82- 136.

Harter, S. (2012). Self-perception profile for children: Manual and questionnaires. Retrieved from: file:///Users/iharris/Downloads/Self-Perception%20Profile%20for%20Children%20(4).pdf

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses related to achievement.* New York, NY: Routledge.

Hoffmann, L. (2012). Computer science and the three r's. *Communications Of The ACM, 55* (10), 17-19.

House, R. J., & Podsakoff, P. M. (1994). Leadership effectiveness: Past perspectives and future directions for research.

Institute for Digital Research and Education (2016). SPSS statistical computing workshop: Moderation and mediation using the Process macro. Retrieved from: http://www.ats.ucla.edu/stat/spss/seminars/process_macro/process_training.htm

Invernizzi, M., Meier, J., & Juel, C. (2004). Phonological awareness literacy screening: Technical reference. The Rector and The Board of Visitors of the University of Virginia, 29-41. Retrieved from: http://datacenter.spps.org/uploads/sotw_pals_tech_ref_for_grades_1-3_2.pdf

Judge, T. A., Bono, J.E., Ilies, R., & Gerhardt, M. (2002). Personality and leader-ship: A qualitative and quantitative review. *Journal of Applied Psychology, 89*, 428-411.

Judge, T. A., Erez, A., Bono, J. E. & Thoreson, C. J. (2002). The core self-evaluation scale: Development of a measure. *Personnel Psychology, 56*, 303-331

Judge, T. A., & Hurst, C. (2007). Capitalizing on one's advantages: Role of core self-evaluations, *Journal of Applied Psychology*, *92* (5), 1212-1227.

Judge, T. A. (2009). Core self- evaluations and work success. *Current Directions in*

Psychological Science, *18*(1), 58-62.

Judge T. A. & Kammeyer-Mueller J. (2011). Implications of core self-evaluations for a changing organizational context. *Human Resource Management Review*. *21*, 331-341.

Judge, T. A. & Long, D. M. (2012). Individual differences in leadership. In D.V. Day & J. Antonakis (Eds.) *The nature of leadership* (pp. 179-217). Los Angeles, CA: Sage.

Judge, T. A. & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, *89*(5), 755-768.

Judge, T. A., Woolf, E. F., Hurst, C., & Livingston, B. (2008). Leadership. In Barling (Ed) *Organizational behavior handbook* (pp. 334-352) Retrieved from: http://www.timothy-judge.com/5124-Barling-Ch18.pdf

Kammeyer- Mueller, J. D, Judge, T.A., & Scott, B.A. (2009). The role of core self-evaluations in the coping process. *Journal of Applied Psychology, 94* (1) 177-195.

Katz, M. S. (1976). A history of compulsory education laws. No. 75. Bicentennial Series. Bloomington, IN: Phi Delta Kappa Education Foundation.

Keeping kids in school: What research tells us about preventing dropouts. (2007). Retrieved from the Center for Public Education website:

http://www.centerforpubliceducation.org/Main-Menu/Staffingstudents/Keeping-kids-in-school-At-a-glance/Keeping-kids-in-school-Preventing-dropouts.html

Kilty, K. M. (2015). Fifty years later: Access to education as an avenue out of poverty, *Journal of Poverty, 19*(3), 324-329

Kuchinke, K. (1999). Workforce education faculty as leaders: do graduate-level university instructors exhibit transformational leadership behaviors? *Journal of Vocational Education Research, 24*(4), 209-25.

Ladner, M., LeFevre, A. T., & Lips, D. (2010). Report card on American education: Ranking state k-12 performance, progress, and reform. Retrieved from: http://www.alec.org/docs/2010-report-card_finalcopycondensed.pdf

Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An inte- gration of transformational and instructional leadership. *Educational Administration Quarterly, 39*(3), 370-397.

Marzano, R. J., Pickering, D.J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: McREL.

Mayers, A. (2013). *Introduction to statistics in SPSS in psychology: Multivariate Analyses.* New York, NY: Pearson PLC

Menchaca, V. D., & Ruiz-Escalante, J. A. (1995). Instructional strategies for migrant students. ERIC Digest. Charleston, WV: ERIC Clearinghouse on Rural Education

and Small Schools. Retrieved from: http://www.ericdigests.org/2001-3/migrant.htm

Midgley, C., Feldlaufer, H., & Eccles, J. S. (1989). Change in teacher efficacy and student self-and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology, 81,* 247–258. Retrieved from: http://rcgd.isr.umich.edu/garp/articles/midgley89.pdf

Money, J. (2014). Study: Pygmalion effect links teacher expectations to student success. Retrieved from: http://blogs.edweek.org/teachers/teaching_now/2014/10/pygmalion_effect_links_teacher_expectations_to_student_success.html

Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self- efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38,* 30–38.

Niell, J. (2016). Exploratory factor analysis: Survey research and design in psychology. Retrieved from: http://www.slideshare.net/jtneill/exploratory-factor-analysis

Niell, J. (2008). Writing up a factor analysis. Creative Commons Attribution. Retrieved from: http://www.bwgriffin.com/gsu/courses/edur9131/content/Neill2008_WritingUpAFactorAnalysis.pdf

Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis, 26*(3), 237-257.

Payne, R. K. (2005). *A framework for understanding poverty* (4th ed.). Highlands, TX: aha! Process.

Popp, P.A., Grant, W.G., & Stronge, J.H. (2011). Effective teachers for at-risk or highly mobile students: what are the dispositions and behaviors of award winning teachers? *Journal of Education for Students Placed at Risk, 16*: 275-291

Preacher, K.J. & Hayes A. F. (2004). SPSS SAS procedures for measuring indirect effects in simple mediation models. *Behavior, Research Methods, Instruments, & Computers, 36* (4), 717- 731.

Preacher, K.J., Rucker, D.D., & Hayes, A.F. (2007). Assessing moderated mediation hypotheses: theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*, 185–227.

Reardon, S. F., Yun, J. T., & Kurlaender, M. (2006). Implications of income-based school assignment policies for racial school segregation. *Educational Evaluation & Policy Analysis*, *28*(1), 49-75.

Reeves, D. B. (2008) Leadership and learning. The William Walker Oration, The Australian Council for Educational Leaders. *The ACEL Monograph, 43*, 3-21.

Repka, M. (2013). Enduring the damage: the effects of childhood poverty on adults. Chicago Policy Review. Retrieved from:

http://chicagopolicyreview.org/2013/11/27/enduring-damage-the-effects-of-childhood-poverty-on-adult-health/

Robinson, V.M. J., Lloyd, C.A., & Rowe, K.J. (2008). Leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly, 44*, 635-674.

Rockwell, S. (2006). Facilitating the fourth *r*: Resilience. *Kappa Delta Pi Record, 43*(1), 14–19. Retrieved from: http://www.tandfonline.com/doi/pdf/10.1080/00228958.2006.10516453

Ross, J.A. (2006) The reliability, validity, and utility of self-assessment. *Practical Assessment, Research, & Evaluation 11*, (10) 1-13.

Rumberger, R. W. (2013). Poverty and dropouts. American Psychological Association. Retrieved from: http://www.apa.org/pi/ses/resources/indicator/2013/05/poverty-dropouts.aspx

Sanders, W. L. & Horn, S. P. (1994) The Tennessee value-added assessment system (TVAAS): Mixed-model methodology in educational assessment. *Journal of Personnel Evaluation in Education, 8*, 299-311.

Schinkel, S., Van Dierendonck, D., & Anderson, N. (2004). The impact of selection encounters on applicants: An experimental study into feedback effects after a negative selection decision. *International Journal of Selection and Assessment,*

12, 197–205. Retrieved from: http://dx.doi.org/10.1111/j.0965-075X.2004.00274.x.

Schrieshiem, C. A. & Schrieshiem, J. F. (1980). A test of path-goal theory: The long and winding road. *The Leadership Quarterly, 7*, 317-321.

Semuels, A. (2014). A different approach to breaking the cycle of poverty. *The Atlantic*. Retrieved from: http://www.theatlantic.com/business/archive/2014/12/a-different-approach-to-breaking-the-cycle-of-poverty/384029/

Sinha, S. P. & Gupta, S. (2006). State self-esteem and causal attribution in reattribution training among self-worth protective students. *Journal of the Indian Academy of Applied Psychology, 32* (3), 145-151.

Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study. *Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

Tabachnick, B. G. & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Upper Saddle River, NJ: Pearson Education Inc.

Trochim, W. M. (2006). Types of reliability. Research methods knowledge base. Retrieved from: http://www.socialresearchmethods.net/kb/reltypes.php

Walls, C. A. (2003). Providing highly mobile students with an effective education. New York: ERIC Clearinghouse on Urban Education. Retrieved from: http://iume.tc.columbia.edu/i/a/document/15763_Digest_191.pdf

Watson, S. (2008). How public schools work. HowStuffWorks.com. Retrieved from: http://people.howstuffworks.com/public-schools.htm

Weisberg, D., Sexton, S., Mulhern, J., & Keeling, D. (2009). *The widget effect: Our national failure to acknowledge and act on differences in teacher effectiveness.* Retrieved from www.widgeteffect.org

Wise, B. (2010). The online learning imperative: a solution to three looming crises in education. *Education Digest, 76*(3), 52.

Wofford, J. C. & Liska, L. Z. (1993). Path-goal theories of leadership: A meta-analysis. *Journal of Management, 19*, 857-876.

Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11*, 57–67.

Zhu, W., Sosik, J.J., Riggio, R.E., & Yang, B. (2012). Relationship between transformational and active transactional leadership and followers organizational identification: The role of psychological empowerment. *Institute of Behavioral and Applied Management (186-212)*.