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Second-order Change Leadership Behaviors Of Principals Of Urban Elementary Schools And Student Achievement In 2010

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SECOND-ORDER CHANGE LEADERSHIP BEHAVIORS
OF PRINCIPALS OF URBAN ELEMENTARY SCHOOLS
AND STUDENT ACHIEVEMENT IN 2010

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the School of Teaching, Learning, and Leadership
in the College of Education
at the University of Central Florida
Orlando, Florida

Fall Term
2012

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ABSTRACT

The focus on specific principal leadership behaviors that positively impact student achievement has become more and more pronounced since the inception of the No Child Left Behind Act of 2001. Recently, researchers have begun to focus on a more dramatic type of change as a method for improving student achievement in schools. Marzano, Waters, and McNulty (2005) conducted a meta-analysis of more than 5,000 studies and identified seven leadership behaviors that related to improved student achievement and were viewed as second-order in nature. In many cases, second-order change was needed (a) to accomplish the student achievement improvements necessary to attain Adequate Yearly Progress (AYP) and (b) to ensure that all students would read on grade level by 2014.

For this study, 66 principals from schools with fewer than 60% of students who qualified for free and reduced-price lunches from five urban Florida school districts completed an online survey, Principal Actions Survey (PAS), created to determine which of the seven leadership behaviors successful principals utilized in their schools. Principals were specifically asked to comment on those actions that they felt impacted student achievement and achievement of AYP. Principals consistently responded that they used the seven leadership behaviors, but the results from this study indicated very few statistically significant relationships or predictive relationships. The 66 principal responses were also compared to responses on the PAS of principals from urban Florida elementary schools with more than 60% of students who qualified for free and reduced-price lunches (La Cava, 2009). These comparisons indicated that principals of schools

with a higher level of poverty reported utilization of the seven leadership behaviors on a more frequent basis or with a higher success rate than principals at schools with lower poverty levels.

This dissertation is dedicated to my mother, Harriet Kearney.

ACKNOWLEDGMENTS

I would like to thank my dissertation committee for their support and guidance during the completion of this research study. My co-chairs, Dr. Rosemarye Taylor and Dr. Haiyan Bai, spent tireless hours reviewing my work and giving me advice. You challenged me to develop a research study and dissertation of which I am very proud. I have the utmost respect for each of you, and I appreciate you more than you know! I would also like to thank Dr. George Pawlas for his expertise with editing my paper and for inspiring me to strive for excellence as a school leader while genuinely caring about those for whom I am responsible. To Drs. Jeffery Kaplan and Sherron Roberts, it was truly my pleasure to work with you on this project. I appreciate the time and effort each of you dedicated to this research study. I thank Dr. Gonzalo La Cava for allowing me to utilize his survey and for volunteering to be a part of my committee. Additionally, I must thank Dr. Mary Ann Lynn for her assistance with this dissertation. I could not have accomplished this without the support and assistance of each of these truly amazing people!

Thank you to my staff at Choices In Learning. I have spent the past four years of my life with them and they are like family to me. I appreciate the support and prodding they provided as I survived my first years as a principal and the completion of this project. I must also thank my two homemade cohort groups, Laurel Robinson and Cindy Gardner and Dr. Daniel Windish and Michelle Robinson. You kept me afloat during this process and I definitely would not have made it this far without your words of

encouragement and your support. I am so thankful that we are colleagues and, more importantly, friends!

I decided to attend graduate school in pursuit of my doctoral degree at the provocation of a person who has been a great inspiration to me both personally and professionally. I owe Suzie Crook a debt of gratitude for her influence in my life. Thank you so much for all that you have meant to me as a mentor and friend.

Finally, I would like to acknowledge my friends that have become like family over the years. Elise Irlandi and Lisa Greene, you have been friends with me through good times and some bad ones and you have listened for countless hours about this dissertation. I love and appreciate you very much! The following people have supported me and cheered me on and I hope that they understand how much they mean to me: Tracie Ragland, Drs. Gina and Bryan Zugelder, and Jane Moore. Thank you for being there for me!

Without the love and support of a family I believe it would be nearly impossible to accomplish much, if anything at all. To my sister, Catherine, her daughter, Claire, and her husband, David, I thank you for being there for me now and always. I love you all! Above all, I thank my mother, Harriet, for always believing in me and for challenging me to be the best person I can be. Thank you seems so small, but it is truly heartfelt! I could never have accomplished this without your support and prayers. I love you very much, Ma!

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CHAPTER 1
THE PROBLEM AND ITS CLARIFYING COMPONENTS

Introduction

The focus on specific principal leadership behaviors that positively impact student achievement has become more and more pronounced since the inception of the No Child Left Behind Act of 2001.

> It is no longer enough for school leaders to implement promising reform efforts; they must now demonstrate improved academic performance for all students in their schools. Moreover, the NCLB legislation places the burden for improved academic achievement squarely on the shoulders of school principals, who, along with classroom teachers, are those 'closest to the customers' (i.e., the students). (Gentilucci & Muto, 2007, p. 219)

Recently, researchers have begun to focus on a more dramatic type of change as a method for improving student achievement in schools. According to Cuban (1988), first-order changes tend to come from outside the school setting and may be slight alterations that allow an existing organization to become more efficient and perhaps more effective. For second-order change, Cuban (1988) stated that some form of restructuring will typically occur and the participants and organization will experience more intense alterations. Waters, Marzano, and McNulty (2004) indicated that individuals can also experience change at varying levels regardless of the type. They stated that if a person's past experience or beliefs aligned with the change or innovation then that individual may feel as if first-order change has occurred. However, others who do not have the same

experiences or beliefs may perceive the same change or innovation as a second-order change. Marzano, Waters, and McNulty (2005) conducted a meta-analysis of more than 5,000 studies and identified seven leadership behaviors (knowledge of curriculum, instruction, and assessment; optimizer; intellectual stimulation; change agent; monitoring and evaluating; flexibility; and ideals and beliefs) that related to improved student achievement and were viewed as second-order in nature. La Cava (2009) and Taylor (2010) focused on these seven leadership behaviors or factors to determine which actions led to second-order change and ultimately to improvement in student learning. The current study was a replication of these two studies.

Although many researchers have focused on leader behaviors of school administrators, school leaders still struggle to help their students achieve at the expected levels. Federal and state legislators have instituted mandates that make leadership that brings about significant improvements in students' learning imperative for school principals. Schools that continue to perform below the established expectations may be subject to various punitive sanctions including replacement of staff and administration and possibly closure of the school (U.S. Department of Education, 2003). "Increasingly, superintendents are holding principals accountable for student achievement. Sixty-three percent of superintendents say the biggest part of how they evaluate principals is how successful they are at raising student achievement" (Kaplan, Owings, & Nunnery, 2005, p. 30). Therefore, more research linked to the actions principals take related to improvement in student learning is needed.

Statement of the Problem

For more than a decade, and particularly following the inception of the No Child Left Behind Act of 2001 (2002), national and state leaders turned their attention to educational accountability measures. In many cases, second-order change was needed (a) to accomplish the student achievement improvements necessary to attain Adequate Yearly Progress (AYP) and (b) to ensure that all students would read on grade level by 2014. Limited research has been conducted with Title I principals in the first decade of the 21st century (La Cava, 2009; Taylor, 2010) in regard to leadership behaviors that lead to successful implementation of second-order change by principals of urban schools. Thus, the researcher determined a need to investigate the leadership behaviors of principals in urban schools with fewer than 60% of students who qualified for free and reduced price lunches. This investigation permitted the further determination of any relationship between second-order change leadership behaviors of principals and the grade assigned to their urban elementary schools.

Purpose of the Study

The primary purpose of the study was to examine if a relationship existed between second-order change leadership behaviors of principals and the school grade assigned by the Florida Department of Education and achievement of Adequate Yearly Progress of urban elementary schools with fewer than 60% of students who qualify for free and reduced price lunches by. Another purpose of the study was to compare the findings in the present research to those of La Cava (2009) who investigated principal

behaviors at Title 1 elementary schools (with 60% or more students who qualified for free and reduced price lunches) in Florida using the Principal Action Survey (PAS). These comparisons should provide beneficial information for administrators and officials at the school district and state levels regarding second-order change leadership behaviors and their impact on student achievement at urban schools, in general.

Definitions of Terms

Adequate Yearly Progress (AYP) – The federal No Child Left Behind (NCLB) Act of 2001 (2002) requires that each state develop an approved plan to demonstrate AYP for all eligible students within a school and district. According to NCLB, schools and districts must continue to show appropriate progress towards the proficiency goals established by the state (Florida Department of Education, 2010).

A Nation at Risk – This report was produced in 1981 and was intended to describe the state of education in the United States.

Secretary of Education T. H. Bell created the National Commission on Excellence in Education on August 26, 1981, directing it to examine the quality of education in the United States and to make a report to the Nation and to him within 18 months of its first meeting. In accordance with the Secretary's instructions, this report contains practical recommendations for educational improvement and fulfills the Commission's responsibilities under the terms of its charter. (U. S. Department of Education, 1983)

Change Agent – Leaders identified as change agents are recognized for their ". . . willingness to temporarily upset a school's equilibrium" (Marzano et al., 2005, p. 44).

Florida Comprehensive Assessment Test (FCAT) – This test "is the primary measure of students' achievement of the Sunshine State Standards. Student scores are classified into five achievement levels, with 1 being the lowest and 5 being the highest" (Florida Department of Education, 2009).

The No Child Left Behind (NCLB) Act of 2001 – This act was signed into federal law on January 8, 2002, following its approval by the United States House of Representatives. NCLB is the reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA) and it provides guidance, requirements, and funding opportunities for families, schools/districts, and state departments of education. It also has an increased focus on accountability for students reaching certain levels of proficiency in reading each year and culminating with all students reading at or above proficiency by 2014 (U. S. Department of Education, 2004).

School grades – Florida public elementary schools earn grades based on their students' performance on the writing, reading, mathematics, and science Florida Comprehensive Assessment Tests. The criteria for earning each of the grades (A, B, C, D, or F) can be found on the Florida Department of Education website (Florida Department of Education, 2009).

Schools Facing Challenging Circumstances (SFCC) – Schools in this category are "schools in which 25 per cent of pupils, or less, achieve five or more grades A* to C at

GCSE. . . approximately eight per cent of secondary schools in England" (Harris &

Chapman, 2002, p. 10).

Conceptual Framework

More than 20 years ago, Cuban (1988) discussed the concept of change occurring

in two different manners. Changes of the first-order, according to Cuban, take the form

of slight alterations that enable an existing organization to become more efficient and

potentially more effective. However, the participants are not required to change in this

model. First-order change often comes in the shape of reform from outside of the

organization.

For second-order change, Cuban (1988) indicated that alterations to the

organization and the participants must take place, and restructuring occurs regularly.

"Second-order changes seek to alter the fundamental ways in which organizations are put

together" (Cuban, 1988, p. 342). Beginning in approximately 2000, federal and state

officials attempted to correct what ails public schools in America through many reform

initiatives that fell within the parameters of first-order change. Though some schools

have been successful in meeting the requirements of these reform initiatives, many have

continued to fail. Like Cuban, Marzano et al. (2005) indicated that second-order change

at the school level was essential for these struggling institutions to make the

improvements necessary for the success of their students. These concentrated and

dramatic changes, according to Marzano et al. (2005), will likely require leadership

behaviors that not all school leaders possess. As principals attempt to make structural,

cultural, and curricular changes in their organizations, they will need knowledge of skills and strategies used by other leaders who have a proven track record of success in similar schools.

Limited research focusing on these particular leadership behaviors does exist (La Cava, 2009; Taylor, 2010). These researchers advocated for further examination of second-order change leadership behaviors as tools that could provide more support for principals in both successful and struggling schools.

Leadership has been the topic of many research studies and articles over the past decades, and many theories of leadership exist (Cuban, 2004; Hallinger & Heck, 1996; Ross & Gray, 2006; Waters et al., 2004; Witziers et al., 2003). The requirements for school leaders, however, have changed dramatically. According to Fullan (2002), "Effective school leaders are key to large-scale, sustainable education reform" (p. 16), and many other researchers indicated their agreement with this concept. Fullan, Cuttress, and Kilcher (2005) added that many reform initiatives which have failed over the years did so due to a lack of understanding of the change process and the factors that drove this process. The authors presented eight forces for leaders to consider as they implement changes: (a) moral purpose, (b) building capacity, (c) change process, (d) cultures for learning, (e) cultures for evaluation, (f) leadership for change, (g) coherence making, and (h) trilevel development (Fullan et al., 2005). They posited that these forces were imperative in order to generate a long-lasting, effective change in the school setting. Eaker, DuFour, and DuFour (2002) shared their ideas for effective leadership, stating that school leaders must change or transform their school cultures in order to benefit all those

involved and ultimately improve student achievement. Many researchers, policy-makers, and district and state officials have suggested or mandated various educational reforms that have required diverse changes to the existing practices in education. According to Cuban (1988), these reforms fall into the first-order change category and although they may have been intended ". . . to alter the fundamental structures of schooling [they] met with little success" (p. 342). Marzano et al. (2005) argued that in order for the changes that must occur within schools to take place, school leaders must become aware of and be comfortable with implementing second-order change, or deep change. They believed that leadership behaviors that will enable school principals to be successful with this type and level of change are complex and require an adjustment of priorities. Marzano et al. (2005) wrote that deep change "alters the system in fundamental ways, offering a dramatic shift in direction and requiring new ways of thinking and acting" (p. 66).

<u>Research Questions</u>

The questions that guided the research study were:

1. To what extent, if any, does a relationship exist between the Principal Action Survey (PAS) scores of urban elementary principals of schools with fewer than 60% of students who qualify for free and reduced price lunches on the Principal Actions Survey and the Florida Department of Education school grade and achievement of AYP?

2. According to elementary principals, what leadership behaviors have influenced student achievement in their schools?

3. To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?

4. To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, and years as the principal at the school) and the leadership behaviors they believe influenced student achievement?

Methodology

A mixed-method research design was employed in conducting this study. In order to determine if a relationship existed between second-order change leadership behaviors and Florida school grades/AYP for urban elementary schools with fewer than 60% of students who qualify for free and reduced price lunches, data were collected from principals using the Principal Actions Survey (PAS) (Appendix A) and follow-up telephone interviews.

This mixed-method research design provided the researcher with quantitative data via the survey. Qualitative data were obtained via telephone interviews in which participants were afforded an opportunity to expand on their survey responses. Descriptive and inferential statistics were employed to analyze the data. Table 1 displays the research questions used to guide the study and the sources of data for each.

Population and Sample

For this study, the researcher targeted a sample of elementary school principals from the same six urban school districts in Florida that La Cava utilized in his 2009 study of principals from schools with 60% or more students who received free and reduced-price lunches. The districts were chosen based on criteria used by the Broad Prize for Urban Education in 2008. For this comparison study, the researcher selected 257 elementary school principals of schools with fewer than 60% of students who qualified for free and reduced price lunches from the same six urban districts. Based on an average of the response rates of previous studies (La Cava, 2009; Taylor, 2010), a response rate of approximately 50% was anticipated. The sample for the present study was comprised of 66 elementary school principals, a slightly smaller number than the 101 participants in the study involving principals of schools with 60% or more students who qualified for free and reduced-price lunches.

Table 1

Sources of Data for Research Questions

Research Question	Sources of Data
1. To what extent, if any, does a relationship exist between the scores of urban elementary principals of schools with fewer than 60% of students who qualify for free and reduced price lunches on the Principal Actions Survey and the Florida Department of Education school grade and achievement of AYP?	Principal Actions Survey Items 2-24 Florida DOE School Accountability Report
2. According to elementary principals, what leadership behaviors have influenced student achievement in their schools?	Principal Actions Survey Items 25, 26
3. To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?	Principal Actions Survey Items 2-24 La Cava (2009)
4. To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, and years as the principal at the school) and the leadership behaviors they believe influenced student achievement?	Principal Actions Survey Items 2-26, 27-31 Telephone Interviews

Instrumentation

Before beginning this study, the appropriate research applications were submitted to the University of Central Florida's Institutional Review Board. The research applications required by each of the six Florida school districts were also submitted to each district for approval. Following approval by each district (Appendix B) and the IRB

(Appendix C), principals of elementary schools with fewer than 60% of students who qualified for free and reduced price lunches in each of the six districts were asked to complete the Principal Actions Survey (PAS) developed by La Cava (2009) who also granted permission for the survey to be used in the present research (Appendix D). "Items were developed based on the seven factors related to second-order change identified by Marzano et al. (2005) through meta-analysis research" (Taylor, 2010, p. 5). Content validity for the leadership study was established through a review performed by doctoral students and expert faculty members at schools with 60% or more students who qualified for free and reduced-price lunches (2009). Both instruments have been administered to elementary school principals and have been found to be valid (La Cava, 2009).

Data Collection and Analysis

Survey data were collected with the assistance of an internet survey engine using a Likert-type instrument (PAS). An informed consent letter and the survey were sent to principals electronically via email (Appendix E). The letter included information about the study and instructions for completion of the survey. The survey was distributed to the principals of schools with fewer than 60% of students who qualified for free and reduced-price lunches via another email with the survey link provided (Appendix F). Three reminder emails were sent, as necessary, thanking the principals for their time and responses. The survey data were compiled and analyzed to determine which leadership behaviors principals indicated as positively influencing student achievement at their

schools. These findings were then merged with Taylor's Orange County data and compared with La Cava's (2009) findings to determine if any relationships or differences existed between the responses of: (a) urban Title 1 elementary principals whose schools had 60% or more students who qualified for free and reduced price lunches and (b) urban elementary principals with fewer than 60% of students who qualified for free and reduced price lunches.

Follow-up telephone interviews (Appendix G) based on Taylor's second-order change leadership behavior themes (2010) were also conducted with selected principals who participated in the online survey. Survey data from the principals of schools with fewer than 60% of students qualifying for free and reduced-price lunches were examined to determine factors based on the respondents' responses, and these factors were compared with those found in the Title 1 study (La Cava, 2009). Multiple regression procedures were utilized to determine if relationships existed between school grades/AYP, principal demographic variables, and second-order change leadership behaviors.

<p style="text-align:center;">Delimitations of the Study</p>

The study was delimited as follows:

1. The survey was distributed to urban elementary school principals of schools with fewer than 60% of students who qualified for free and reduced price lunches from five of the six urban school districts utilized in La Cava's Title 1 leadership (2009) study.

2. The study included only those elementary schools that received school grades from the Florida Department of Education.

3. The data for the study were collected via two sources: an on-line survey and phone interviews.

<center>Limitations of the Study</center>

There were several limitations that were considered in conducting the study.

1. Participation in the study was limited by the need to obtain approval of the six urban Florida school districts to conduct the study in the respective districts. Approval for one of the six school districts, St. Lucie County, was not obtained which limited the number of schools participating in the study.

2. Because participation in the study was voluntary, the number of participants was dependent on the number of elementary school principals who agreed to participate in the online survey and who subsequently completed the survey.

3. The qualitative results of the study were limited to data obtained from elementary school principals who agreed to participate in telephone interviews.

<center>Significance of the Study</center>

The challenges faced by urban school leaders, teachers, and students differ from those faced by non-urban schools (Cuban, 2004). La Cava (2009), recommended that a ". . . study should be conducted on second-order change leadership behaviors of non-Title 1

<center>14</center>

elementary, middle, and high school principals. . . ." (p. 116). This study was conducted

to provide information regarding urban elementary schools with fewer than 60% of

students who qualified for free and reduced price lunches and leader behaviors that

positively influenced student achievement. The study was intended to add to the body of

knowledge regarding second-order change leadership behaviors in urban elementary

schools and to broaden the research base regarding second-order leadership behaviors

which, may have been somewhat ignored (Taylor, 2010). It was the hope of the

researcher that urban school principals and district officials of all elementary schools,

regardless of poverty level, would find the results of this study useful as they work to

implement second-order changes at their sites and ultimately improve student

achievement.

Summary

This chapter provided an introduction to the problem of the study and a

clarification of its components. The purpose, definitions, and conceptual framework, and

methodology were addressed. Significance of the Study, delimitations, and limitations

were discussed. Reforms and accountability measures encountered by Florida public

school principals were briefly reviewed. These reforms have often met with failure; thus,

the need for principals who understand and are prepared to implement second-order

change was also explored.

Chapter 2 contains a review of the literature related to principal leadership

behaviors and change including a historical perspective of leadership theories and federal

mandates that have impacted schools and their leaders. Additionally, instructional

leadership, transformational leadership, leadership challenges, and second-order change

leadership behaviors and their impact on student achievement are also reviewed. The

methodology used to conduct the study, including the instrumentation and the statistical

processes utilized to analyze the research questions, is described in detail in Chapter 3.

The results from the surveys and analysis of the data are presented in Chapter 4. Finally,

a summary of the findings is reported in Chapter 5 along with implications for future

practice and recommendations for future research.

CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

The literature reviewed in this chapter was relevant to the investigation of leadership behaviors of elementary principals in urban schools and second-order change leadership behaviors of principals. The chapter has been organized to address (a) historical perspectives regarding leadership theories and their effectiveness along with the federal mandates and the impact they have had on education and school leaders, (b) instructional leadership, (c) transformational leadership, (d) leadership challenges, and (e) second-order change leadership behaviors and their impact on student achievement.

Historical Perspectives

Leadership has been discussed for centuries. Over the years, the case has clearly been made that effective leadership is integral for success of a school (Finnigan, 2010; Fullan, 2002; Marzano et al., 2005).

Witziers, Bosker, and Kruger (2003), based on their meta-analysis of leadership studies published from 1986 to 1996, concluded that principals had little or no effect on the achievement of students. According to Marzano et al. (2005), "This conclusion flies in the face of common sense and the experience of literally tens of thousands of principals in the United States who have effected dramatic improvements in the achievement of students in their schools" (p. 34). Based on their 2005 meta-analysis, Marzano et al. concluded that ". . . principals can have a profound effect on the

achievement of students in their schools" (p. 38). "Research shows that effective school leadership can substantially boost student achievement" (Waters et al., 2004, p. 48). In their study of direct effect models, Witziers et al. suggested that "leaders' practices can have effects on school outcomes and that these can be measured apart from other related variables" (p. 401).

Prior to the publication of *A Nation at Risk* in 1983, administrators were typically viewed as managers deemed successful if a majority of parents were pleased and the school was safe and orderly (Hunt, 2008). Hunt described the early 1980s as a period in which "we seemed to be continually implementing new ideas and programs. School leaders were moving on to the next new idea before the last one had a fair chance to take hold" (p. 581).

The first movement following *A Nation at Risk* was the excellence movement. This movement focused mainly on improving conditions outside the classroom, e.g., calendars, time/schedules, and the system. During this time period, administrators were urged to focus more on leadership rather than management.

The second of these movements was concerned with restructuring, and the focus was on district level concerns and delegating more control to building leaders (Hunt, 2008). Innovation among teachers and administrators was encouraged and leaders were challenged to question the status quo. Along with these changes and flexibility at the school level came more accountability for schools.

The third and final movement, according to Hunt (2008) was related to standards. This movement, which continued at the time of the present study, also had its foundation

in *A Nation at Risk.* Hunt wrote, "Rather than emphasizing the results of mandates such as course requirements and teacher certification standards, the movement has focused on how well individual students and groups of students are able to perform academically" (p. 583).

This reform brought with it much hope and new legislation in the form of the Goals 2000: Educate America Act of 1994. Hunt (2008) described the legislation as calling "for all students to leave certain grade levels in school having demonstrated competency in English, mathematics, economics, the arts, history, and geography" (p. 583). Goals 2000 gave states an opportunity to apply for a part of more than $100 million from the federal government. This new focus on standards created a push for major school improvements and ultimately for performance assessments. Many educators saw this as a positive direction for education.

"When President Bush signed the No Child Left Behind Act in January 2002, some administrators believed that NCLB had hijacked the promise held within Goals 2000 and the overall standards movement" (Hunt, 2008, p. 584). School improvement efforts became concentrated on the areas assessed under the NCLB mandates so that schools could meet the federal adequate yearly progress (AYP) requirements based on subgroups of students.

These mandates brought about procedures for distributing certain groups of students in some districts that left concerned constituents wondering about the moral aspects of the process. Hunt (2008) described the effects of the law: "Some districts now 'write off' those students they perceive as having little hope of making AYP and focus

their efforts exclusively on the students with a real possibility of making AYP" (p. 584).

While the law's name indicates no one should be left behind, the AYP requirements have

motivated some schools and districts to do just that. Additionally, according to Finnigan

(2010), many schools that have been labeled as 'in need of improvement' due to the

accountability measures of the NCLB mandates have never been able to improve enough

to be removed from the list. Thus, though the intent of these legislative mandates may

indeed have been to improve student learning and, subsequently, the overall performance

of a school, this has not always been the outcome. Finnigan attributed this to several

factors including teacher efficacy and expectation and student motivation and

performance.

> As a result, a number of beliefs enter into whether teachers expect that their effort
>
> will lead to performance: whether the teacher believes that students are able to or
>
> can be motivated to learn (and that this will be measured on standardized tests);
>
> whether the teacher believes she can influence student learning; and whether she
>
> believes her colleagues can have the same influence in their own classrooms. (p.
>
> 164)

The fact that improvement relies on the motivation and ability level of others, i.e.,

students and colleagues, makes this a very daunting task for a teacher and one that may

lead to disillusionment rather than success. Fullan, Cuttress, and Kilcher (2005)

described the dilemma as follows: "The history of educational reform and innovation is

replete with good ideas or policies that fail to get implemented or that are successful in

one situation but not in another" (p. 54). Cuban (1988) had described the dilemma as

follows: "Despite the rhetoric of reform, basic ways of schooling children have been remarkably durable over the last hundred years" (p. 341). He further explained, "The last three decades offer many examples of first-order changes sponsored by state and federal laws. . . the reforms created new constituencies that could be easily monitored, but the changes seldom dented existing organizational structures" (p. 342).

Many people seem convinced that very little change has occurred in schools since the 1960s. Nolan (2007) did not agree: "Ironically, those who have studied the process of school change most closely suggest that exactly the opposite may be true. The problem has not been too little change, but too much change" (p. 3).

Instructional Leadership

According to the results from Finnigan's 2010 survey of more than 4,000 Chicago elementary teachers, "Instructional leadership encompasses a number of leadership areas relating to the principal's role in providing direction to the school--from articulating a vision, to setting high expectations and monitoring performance" (p. 166). Leithwood, Harris, and Strauss (2010) asserted that "there is a common core of leadership practices used by successful leaders in almost all contexts" (p. 15). The authors called for effective instructional leaders to include the following four components in their teaching and learning processes:

Create a widely agreed-on sense of direction for the organization;

Help develop the capacities of organizational members to move the organization

in that direction;

Redesign or restructure the organization to support people's work; and

Manage the 'technical core' of the organization. (p. 16)

Waters et al. (2004) addressed the importance of communication and understanding which changes are important, stating that

Effective leaders establish strong lines of communication with teachers and students. . . McREL researchers concluded that effective leaders understand which school changes are most likely to improve student achievement, what these changes imply for both staff and community, and how to tailor their leadership practices accordingly. (p. 49)

In their study of 39 eighth-grade students from three different school districts, Gentilucci and Muto (2007) emphasized the importance of understanding students' viewpoints. They warned that though studies have focused on how principal behaviors have affected the adults in a school,

Understanding how, from the point of view of students, such behavior influences academic success is essential if we wish to obtain a more comprehensive depiction of the relationship between the leadership behavior of principals and the academic achievement of their students. (p. 220)

Researchers have searched for a causal relationship between the variables principal behaviors and student achievement without much success. Gentilucci and Muto (2007) believed that it was imperative that students' thoughts and feelings about education and specifically learning be examined in order to determine which principal behaviors students found to be the most influential regarding their learning. Their study

focused on 39 eighth-grade students from three middle schools located in three different school districts. "It was clear from their narratives that students at all three schools believe effective principals can and do directly influence learning and academic achievement in their schools by engaging in certain student- and instructionally focused behaviors" (Gentilucci & Muto, 2007, p. 228). The students also listed actions including speaking to teachers, having an abundance of meetings, worrying about dress code violations, and announcing routine things as behaviors that were less effective because they were not directly tied to the students' learning.

Students indicated that principal visibility around campus was not enough, but that leaders must be available and approachable so that students felt comfortable speaking to them both formally and informally about personal and school matters. "Such approachability and affiliation communicated that principals were interested in students' personal academic challenges and successes, and students reported this motivated them to 'try harder' with their academic work" (Gentilucci & Muto, 2007, p. 229). Students also reported that frequent visits to classrooms were not as positively influential as those visits in which the principal stayed and interacted with them. Students mentioned that they were more focused and that behavior improved when the leader was present in the classroom. "During these times, principals who demonstrated high-influence instructional leadership behaviors walked around and quietly checked individual work, frequently giving advice, gentle correction, praise, and encouragement" (Gentilucci & Muto, 2007, p. 231). Students found these behaviors along with other teaching behaviors displayed by the principal to be highly effective as indicated by the researchers'

statement, "Students perceived that direct instructional behavior by their principals had the most powerful effect on their learning" (Gentilucci & Muto, 2007, p. 231).

Marzano et al. (2005) found, in their meta-analysis of more than 5,000 leadership studies/articles, that only 69 studies directly addressed the concept of leadership behaviors and their impact on student achievement. The result of their examination of the 69 studies was that a significant, positive correlation (.25) existed between these two variables, and from this analysis, the researchers recognized 21 specific leadership behaviors they call "responsibilities." The 21 responsibilities and their correlations (r) with student academic achievement follow:

1. Affirmation – Recognizes and celebrates accomplishments and acknowledges failures (r) .19

2. Change Agent – Is willing to challenge and actively challenges the status quo (r) .25

3. Contingent Rewards – Recognizes and rewards individual accomplishments (r) .24

4. Communication – Establishes strong lines of communication with and among teachers and students (r) .23

5. Culture – Fosters shared beliefs and a sense of community and cooperation (r) .25

6. Discipline – Protects teachers from issues and influences that would detract from their teaching time or focus (r) .27

7. Flexibility – Adapts his or her leadership behavior to the needs of the current situation and is comfortable with dissent (r) .28

8. Focus – Establishes clear goals and keeps these goals in the forefront of the school's attention (r) .24

9. Ideals/Beliefs – Communicates and operates from strong ideals and beliefs about schooling (r) .22

10. Input – Involves teachers in the design and implementation of important decisions and policies (r) .25

11. Intellectual Stimulation – Ensures faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school's culture (r) .24

12. Involvement in Curriculum, Instruction, and Assessment – Is directly involved in the design and implementation of curriculum, instruction, and assessment practices (r) .20

13. Knowledge of Curriculum, Instruction, and Assessment – Is knowledgeable about current curriculum, instruction, and assessment practices (r) .25

14. Monitoring/Evaluation – Monitors the effectiveness of school practices and their impact on student learning (r) .27

15. Optimizer – Inspires and leads new and challenging innovations (r) .20

16. Order – Establishes a set of standard operating procedures and routines (r) .25

17. Outreach – Is an advocate and spokesperson for the school to all stakeholders (r) .27

18. Relationships – Demonstrates an awareness of the personal aspects of teachers and staff (r) .18

19. Resources – Provides teachers with materials and professional development necessary for the successful execution of their jobs (r) .25

20. Situational Awareness – Is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems (r) .33

21. Visibility – Has quality contact and interactions with teachers and students (r) .20. (Marzano et al., 2005, pp. 42-43)

The authors did not claim that these behaviors had not been identified previously by other researchers, but they did stress the importance of school leaders knowing and using them in order to function effectively in their roles as principals (Marzano et al., 2005).

Effective school leaders also brought new ideas regarding teaching and learning into their schools and challenged teachers to innovate in their classrooms. These leaders were strategic with regard to financing the innovations and encouraged these changes (Finnigan, 2010). Hallinger and Heck (1996) noted in their analysis and review of 40 empirical leadership studies that they were led to believe that the school leader must maintain a focus on student achievement and learning. They recognized the importance of indirect leadership effects, stating, "The fact that leadership effects on school achievement appear to be indirect is neither cause for alarm nor dismay. As noted previously, achieving results through others is the essence of leadership" (p. 39). Arrowsmith (2004) concurred, "Learning-centered leadership includes leaders modeling

good teaching practice, monitoring teaching and learning and sustaining an educationally relevant dialogue with colleagues" (p. 33). Harris and Chapman (2002) expressed similar thoughts on leadership and achievement, "Many. . . were often quite modest about their own leadership, but there was strong evidence that leaders were values-driven, optimistic about children and developed a consistent instructional focus at all levels of the organization" (p. 12). The authors constructed these theories due to their research of schools facing special challenges in England. Gentilucci and Muto (2007), cautioned, "Even though instructional leadership is the espoused priority of principals, it is often shunted aside by the demands of day-to-day school management" (p. 219).

<u>Transformational Leadership</u>

Finnigan (2010) addressed the importance of transformational leadership in her statement, "However, it is the literature on 'transformational leadership' that provides insight into the role of the principal in the school change context" (p. 165). Researchers have established the idea that leaders who transformed their followers led them to a higher level of moral accountability and ultimately a state of motivation grounded in intrinsic rewards. These leaders used empathy, charisma, problem-solving, and intellectual stimulation to accomplish these transformations (Fullan, 2002, Sagnak, 2010; Waters et al., 2004).

For decades, researchers have proposed various leadership theories, behaviors or styles based on results of individual research showing effectiveness conducted in various school settings (Finnigan, 2010; Fullan, 2002; Harris & Chapman, 2002; Waters et al.,

2005). The importance of the principal has been recognized in much of this research.

Cistone and Stevenson (2000) summarized it well: "There is strong consensus that the

single most critical factor in creating and maintaining high-performing schools is the

leadership of the principal" (p. 435).

In their article founded on their examination of responses from more than 3,000

Ontario teachers, Ross and Gray (2006) discussed the characteristics of schools with

higher levels of transformational leadership, stating that "schools with higher levels of

transformational leadership had higher collective teacher efficacy, greater teacher

commitment to school mission, school community, and school-community partnerships,

and higher student achievement" (p. 798). They also explained the benefits of

transformational leadership for an organization in the following ways: "Transformational

leadership enhances an organization by raising the values of members, motivating them

to go beyond self-interest to embrace organizational goals, and redefining their needs to

align with organizational preferences" (p. 800). Sagnak (2010) further addressed this

aspect of transformational leadership following his study of 764 teachers from 50 Turkish

elementary schools, insisting in the following statement that the ethical side of leadership

could dramatically affect an organization: "In the absence of an ethical leader,

organizations lose their effectiveness and become soulless structures" (p. 1138). Fullan

(2002) spoke of transformational leadership in terms of cultural change, stating "Cultural

Change Principals display palpable energy, enthusiasm, and hope" (p. 17). He asserted

that "the single factor common to successful change is that relationships improve. If

relationships improve, schools get better. If relationships remain the same or get worse,

ground is lost" (p. 18).

Leaders, according to Larson (1991), must focus on empowering their teachers to

effect change on any scale. In Larson's (1991) study of successful small scale

innovation,

Teachers reported that their ideas [for change] came primarily from reading

journals and newsletters, having discussions with peers, and taking college

courses. Information (and the competence and autonomy to use it) was an

important form of power and vital to successful small-scale change. (p. 551)

Effective leaders who hope to support the change process must protect teachers so that

they can focus on their main objective--helping students learn successfully. "Teachers do

not find it rewarding to deal with discipline problems or building management. In

schools where they must tend to these matters, their creative energy is dissipated"

(Larson, 1991, p. 552). The effective principals from Larson's study, "engaged in

countless interventions with teachers--actions that influenced the use of an innovation. . .

[which] had considerable impact on the staff and the school" (Larson, 1991, p. 552).

Kelley, Thornton, and Daugherty (2005) examined relationships between

measures of leadership and school climate in 31 elementary schools. They cautioned

principals to be aware that their perception of themselves often did not match the

perceptions of their teachers and that this could lead to issues with the school's culture

and, in turn, with student achievement. Kelley et al. (2005) stressed the need for "skilled

leaders [to] correctly envision future needs and empower others to share and implement

that vision" (p. 17). They also elaborated that "situational leadership stresses that a principal's effectiveness is dependent upon the ability to analyze the competencies, abilities, and commitments of teachers with regard to the task at hand and then respond accordingly" (p. 23).

Finnigan (2010) found that principals in probation schools "are less likely to exhibit transformational leadership behaviors in the schools that need this the most" (p. 178). She also indicated that the principal must have high expectancy for both teachers and students within a school in order to facilitate change at the necessary level.

> The areas of leadership found to be associated with teacher motivation are (1) instructional leadership (having a vision and high expectations for the school and knowing how students learn); and (2) principal support for change (providing teachers with the resources they need and supporting them as they try new approaches. (Finnigan, 2010, p. 179)

In her study, teacher expectancy remained positive most often if the school in question was removed from the probationary status quickly perhaps giving teachers the impression that they were able to be effective and help children learn and be successful.

> In reporting on their study, Ross and Gray (2006) observed that
>
> . . . it may be defensible to hold principals accountable for student achievement if it can be demonstrated that principals influence achievement indirectly by creating the organizational conditions through which improved teaching and learning occur. This study provided evidence that principals have such influence

through their effect on teacher commitment and collective teacher efficacy. (p.

813)

They also asserted that "transformational leadership might contribute to collective teacher

efficacy" (p. 801). Principals can influence efficacy in many ways including helping

teachers make connections between their actions and student achievement, establishing

goals that are attainable, and assisting teachers with understanding of standards. Ross

and Gray (2006) viewed school principals as enhancing

. . . efficacy beliefs through persuasion (inspirational messages and affirmations

of teacher competence by sharing decision making), vicarious experience

(providing opportunities for teachers to observe each other's success), and by

reducing teacher stress (e.g., insulating teachers from district prescriptions). (p.

802)

Robinson, Lloyd, and Rowe (2008) conducted an empirical review of 27

published studies of leadership and its impact on student achievement. These researchers

used a compartmentalized approach in order to analyze and discern which aspects of

leaders' behaviors actually had the most impact on student achievement rather than

looking at the overall impact of leadership style. The researchers declared that "This is

an interesting finding, given other transformational leadership research indicating that

although it has an effect on staff attitudes, those effects do not usually follow through to

student outcomes" (Robinson et al., 2008, p. 655). The results from this analysis showed

that leaders following a transformational approach had a much smaller effect on student

learning and achievement. In some cases, the results were actually negative.

The leadership in the higher performing schools was reported by teachers to be,

among other things, more focused on teaching and learning, to be a stronger

instructional resource for teachers, and to be more active participants in and

leaders of teacher learning and development. (Robinson et al., 2008, pp. 657-658)

The authors advised readers to use caution when interpreting their results and stated that

delving into more specific leadership behaviors may provide better information regarding

impacts on student achievement. They also suggested that transformational leadership

had a notably smaller impact on student outcomes than instructional leadership.

Leadership Challenges

The challenges for urban school principals are many. Cistone and Stevenson

(2000), in describing the position, addressed the complexities. "The urban school

principalship is today an increasingly complex and demanding position. New conditions

and expectations in education and society are combining to create newly emerging

challenges and perspectives for the contemporary role of the principal" (p. 435). A

school is only one part of a much larger societal structure. The other parts of this

structure, though not directly influencing the school at all times, have an impact on its

overall functioning and effectiveness.

In their report based on their study of 160 Virginia school principals, Kaplan et al.

(2005) discussed what they termed "urban schools' extraordinary challenges for both

facilities management and instructional leadership" (p. 39) and the extent to which these

challenges "make it a less attractive work site for many professionals who have the skills,

resumes, and relationships to find employment in more affluent, higher-achieving schools" (p. 39). Leaders wishing to affect change must take these other elements into account. Still other groups or relationships exert influence and potentially pressure on a school and its leader. Some of these, according to Reilly (1996), include varied ancillary structures such as cliques within the school, real or imagined ill treatment by staff or parents, and acceptable norms of behavior. "*Ancillary structures* are formally organized systems contributing to, but not part of, the formal system: PTAs, textbook publishers, mental health organizations" (Reilly, 1996, p. 153).

Following interactions and conversations with school and district leaders from all over the world since 1980, Heifetz and Linsky (2004) commented on the importance of educators exercising adaptive leadership. Cistone and Stevenson (2000) indicated that "principals who were seen as most successful in the restructuring effort were interdependent with, rather than independent of, school-site staff, central office personnel, and relevant stakeholders" p. 437).

Leithwood et al. (2010) noted that "The reasons for school failure are almost as complex as are the reasons we are unable to turn around underperforming schools in vast numbers" (p. 25). Leithwood et al. (2010) believed that "social disadvantage" (p. 26) should not be used as an excuse for poor academic achievement. They did, however, acknowledge that it was "a powerful explanatory factor. . . [and] it remains the case that many failing schools are located in high-poverty contexts" (p. 26). Significant differences in achievement can be found between children from families in poverty and those who come from more affluent families, and although impoverished children have

begun to attain at higher academic levels, an achievement gap still exists (Leithwood et al., 2010).

Harris and Chapman, in their 2002 research, spoke to the demands on schools and the importance of the values of individuals.

> It is suggested that the demands that schools facing challenging contexts place upon leaders requires them to have a broad range of leadership approaches underpinned by a core set of values and a strong moral purpose. The findings from the research study highlight that effective leadership is defined and driven by individual value systems, rather than instrumental managerial concerns.
> (Harris & Chapman, 2002, p. 11)

They described the dilemma of school leaders as follows: "The main leadership task facing them is one of coping with unpredictability, conflict and dissent on a daily basis without discarding core values; Effective leaders in SFCC are, above all, people-centered" (Harris & Chapman, 2002, p. 12). These leaders combined collaboration and teamwork among peers and for leadership and decision making with a strong moral purpose in order to develop the most productive relationships possible. While they strove to maintain these positive relationships, they were not afraid to be firm and sometimes confrontational as necessary (Harris & Chapman, 2002).

The McREL researchers (Waters et al., 2004) stated that their meta-analysis led to the positive correlation between improvements in leadership and improvement in student achievement in most cases. They also found, however, "that leaders who displayed the very same leadership qualities had only a marginal--or worse, a *negative*--impact on

student achievement" (p. 50). They attributed this phenomenon to two factors: the focus of change and the order of change. The focus of change pertained to "whether or not leaders directed improvement efforts to correct targets which would tend to positively influence student achievement" (p. 50). The order of change pertained to the ability of leaders to adjust their behaviors appropriately based on their understanding of the need for various changes for which they were responsible. In other words, different change initiatives have varying magnitudes that these researchers dubbed first- and second-order changes, and each required a different leadership approach in order to result in success (Waters et al., 2004).

Heifetz and Linsky (2004) expounded on some of the problems associated with change and the need for stakeholders to adapt to change. They recommended finding an advocate for support in order to lessen the dangers and challenges of leadership. In many cases, this partnership strengthens leaders and their ideas and improves both.

Heifetz and Linsky (2004) also promoted the concept of keeping opponents close, as these individuals have the most to lose. Change is disruptive and can cause strife and turmoil in people's lives. As this occurs, opponents have little to gain by adhering to the innovation. Keeping them close may enable the leader to intervene with support or some other form of motivation in order to keep everyone on the right trajectory. "You need to respect and acknowledge the loss that people suffer when you ask them to leave behind something they have lived with for years. It is not enough to point to a hopeful future" (Heifetz & Linsky, 2004, p. 36). An effective leader must empathize with and affirm the loss that participants will undoubtedly experience as they move away from the familiar

status quo. That same leader must realize when it is time to assist those employees who are unable or unwilling to adapt to the innovation find a new position. "Your ability to accept the harsh reality of losses sends a clear message about your courage and commitment to seeing through the adaptive challenge" (Heifetz & Linsky, 2004, p. 36).

Finnigan (2010) added to this conviction regarding teachers stating that every effort must be made to recruit and retain high-quality educators with advanced degrees who believe that they can have an impact on their students and that all students can learn.

> A more concerted effort toward ensuring that probation schools are led and supported by high-quality principals will lead to motivated teachers and, as a result, increase the likelihood that *all* students, including poor and minority students in urban districts, receive the high-quality education they deserve. (p. 182)

<div align="center">Principal Preparation</div>

Although the number of licensed principals could potentially meet the needs of school districts, these same principals would not necessarily have the knowledge and training essential to success in the 21st century educational arena (Kaplan et al., 2005; Peterson, 2002). As stated by Peterson (2002),

> School districts in the United States are currently facing a critical shortage of well-trained principals. This is occurring just as many are realizing the central role of principals in the implementation of better teaching practices that will produce increased learning for all students. (p. 229)

Houle (2006) noted "the increasing challenges facing public school principals have been well documented in the literature. Furthermore, special attention has been given to the issues that face principals in urban settings" (pp. 143-144).

Cistone and Stevenson (2000) described "the sharply different social, economic, and political conditions that characterize urban and non urban schools" (p. 435) which contributed to differing skills required of urban principals. Educational leaders, according to Cistone and Stevenson (2000), must be aware of and trained in knowledge management, a relatively new concept for organizations. In the educational arena, "knowledge management may be defined as the collection of knowledge on best educational practices or lessons learned, the sharing and understanding of those practices and lessons so that they can be used, and the adaptation and application of those practices and lessons for the purpose of intervention or innovation" (Cistone & Stevenson, 2000, p. 438). Effective implementation of this management system would require certain technological, behavioral, organizational and cultural changes that would more than likely require training for the school leader. "Most important, as a knowledge manager, the principal must lead in the development of a learning-centered strategic plan with knowledge management at the core of the school's culture and structure" (Cistone & Stevenson, 2000, p. 439). They described the professional development academy developed in Miami-Dade County to help prepare individuals who aspire to become principals. "It is understood that those who successfully complete the program will have significantly enhanced their candidacy for appointment to a principalship in the school system" (Cistone & Stevenson, 2000, p. 441).

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Robinson, Lloyd, and Rowe (2008) divided leadership behaviors into five dimensions based on their meta-analysis of 27 published studies of leadership and its impact on student achievement. The first of the five was a focus on setting goals and expectations.

> In the context of goal setting, this means that what leaders and leadership researchers need to focus on is not just leaders' motivational and direction-setting activities but on the educational content of those activities but on the educational content of those activities and their alignment with intended student outcomes. (Robinson et al., 2008, p. 660)

This specific focus on goals and expectations has been shown to have a very strong impact on student achievement. The second dimension for principal leaders focused on the individual's ability to plan strategically in order to align resources with the instructional goals and expectations for the school. The researchers warned, however, that more research was necessary in order to make the best recommendations for this area. The third dimension encompasses four interrelated subdivisions with which leaders in high-performing schools are actively involved: (a) discussion of how instruction influences learning, (b) review of the curriculum and instructional plan, (c) observation of teachers and feedback to assist them with improvements, and (d) monitoring of students' progress with systematic data (Robinson et al., 2008). The fourth leadership dimension was defined as "both promoting and participating because more is involved than just supporting or sponsoring other staff in their learning. The leader participates in the

learning as leader, learner, or both" (Robinson et al., 2008, p. 663). The fifth dimension concerns the learning and school environment as orderly and supportive.

> Instructional leadership also includes creating an environment for both staff and students that makes it possible for important academic and social goals to be achieved. In an orderly environment, teachers can focus on teaching and students can focus on learning. (Robinson et al., p. 664)

This study led Robinson and her colleagues to state that when teachers in high-performing schools tended to view their principals as knowledgeable about instruction and solicited advice from them more often, these leaders had more influence over the type of teaching occurring in their buildings. They also found that leaders who were quick to identify and resolve conflict were more often those in the high performing schools.

> The comparison between instructional and transformational leadership showed that the impact of the former is three to four times that of the latter. The reason is that transformational leadership is more focused on the relationship between leaders and followers than on the educational work of school leadership, and the quality of these relationships is not predictive of the quality of student outcomes. (Robinson et al., 2008, p. 665)

Although the authors were quick to reiterate that relationships within the school must be built on trust, loyalty, and collegiality, these relationships must focus on improving instruction and pedagogy in order to impact student achievement in the most impactful

manner. In order to meet all of these needs, principals will need much more structured

and ongoing training before and during their tenure as school leaders.

Witziers et al. (2003) found, in their study of direct effect models, that "principals

should have high expectations of teachers and student achievement, supervise teachers,

coordinate the curriculum, emphasize basic skills, and monitor student progress" (p.

401). They also noted that principals impact student achievement through the behaviors

they exhibit routinely and that these behaviors establish important connections between

the instructional climate and the organization of the school. Another factor that the

researchers included in their report concerned shared leadership and culture. They

elaborated in regard to the characteristics of such cultures and principals' responsibilities

for them:

> Collegiality, 'empowered' teachers, collaborative planning, and continuous
>
> improvement efforts characterize such cultures. One of the main tasks of school
>
> principals is to help create a working environment in which teachers collaborate
>
> and identify with the school's mission and goals. (Witziers et al., 2003, p. 403)

Many researchers have indicated the need for clear expectations regarding

principal leadership standards and the need to help principals find coherence among the

many programs and innovations they are expected to implement (Houle, 2006; Jackson &

Kelley, 2002; Kaplan et al., 2005; Peterson, 2002). These researchers also recommended

ongoing, long-term professional development for pre-service and current school

administrators rather than one-day workshops. It is important to provide a forum through

which principals may interact with other leaders to reflect on effective and ineffective

practices. Principals should have frequent feedback from effective evaluation tools that impact their professional growth and development (Kaplan et al. 2005). Principals from one study reported that they felt concerned about their ability to lead effectively (Houle, 2006). It is critical that principal development and training become a focus for district and state entities in order to provide pre-service and current principals with the support they need to be effective leaders in the nation's schools.

<center>Second-Order Change Leadership</center>

Many researchers have focused on an individual's openness to change as an essential attribute for these leaders (Fullan, 2002; Klecker & Loadman, 2000). In order to implement change effectively, a principal, serving as a change agent, must be willing to disrupt a school's equilibrium at least temporarily (Marzano et al., 2005). Sun, Creemers, and de Jong (2007) discussed the requirements of organizations, stating, "Organizations need to be highly adaptable and capable of change if they want to prosper in a fast-paced, competitive, and unpredictable world" (p. 98).

Reilly (1996) spoke to the difficulties for educational institutions:

Education, meeting some but not all criteria for an open social system, has not developed the capacity to respond to environmental change with second-order modifications. Since education does not control the mechanisms necessary to establish its objectives, it has not developed the capacity to regulate its behavior to achieve the objectives established by its external controlling systems. (p. 182)

<center>41</center>

Reilly (1996) also believed that this condition had led to repeated failures of educational reforms and it must be altered so that true improvements may be made. The necessary changes must be made with input from professionals in the field including teachers and other school-based staff who must regularly implement the mandates that often require structures or funds that are not present or attainable. Much earlier, Cuban (1988) spoke to the demands on leadership, noting that "Without a strong push from outside the school, second-order reforms are tough to adopt--and even harder to implement" (Cuban, 1988, p. 344).

Reilly (1996) concluded that third-order changes, i.e., reorganization of schools and school systems, must occur in order to meet the needs of children. This reorganization of schools and school systems, according to Reilly (1996), must occur so that school personnel may focus on establishing an environment based on how children learn.

> Just as second-order change is necessary to modify those aspects of the current educational system so that improved learning can be achieved by students, the development of third-order change is necessary to cause the changes necessary in the education structure and governance control mechanisms to ensure that learning improvements will continue. (p. 212)

Based on their 2005 meta-analysis, Marzano et al. (2005) found that 7 of their 21 identified responsibilities appeared to be more directly related to second-order change. Thus, they suggested that those seven responsibilities should be considered as priorities for principals in leading second-order change initiatives.

1. Being knowledgeable about how the *innovation* will affect curricular, instructional, and assessment practices and providing conceptual guidance in these areas (Knowledge of Curriculum, Instruction, and Assessment - KCIA).

2. Being the driving force behind the new *innovation* and fostering the belief that it can produce exceptional results if members of the staff are willing to apply themselves (Optimizer).

3. Being knowledgeable about the research and theory regarding the *innovation* and fostering such knowledge among staff through reading and discussion (Intellectual Stimulation).

4. Challenging the status quo and being willing to move forward on the *innovation* without a guarantee of success (Change Agent).

5. Continually monitoring the impact of the *innovation* (Monitoring/Evaluating).

6. Being both directive and nondirective relative to the *innovation* as the situation warrants (Flexibility).

7. Operating in a manner consistent with his or her ideals and beliefs relative to the *innovation* (Ideals/Beliefs). (Marzano et al., 2005, pp. 70-72)

The authors cautioned that first-order change leaders must remain focused on all 21 responsibilities and that those involved in second-order change must stress the seven listed above in order to have the greatest success. "Additionally, the leader might have to endure the perception among some staff members that behavior relative to 4 [Culture, Communication, Order, & Input] of the 21 responsibilities has eroded" (Marzano et al., 2005, p. 75).

Nolan (2007) posited that although sustaining successful change is a difficult and arduous task, there are certain constructs that may assist leaders with its initiation and support.

> Too often, change initiators, who themselves have had ample opportunity to think through the initiative, to relate it to what they already do and know, and to commit themselves to it fully, deny that opportunity to others. Professional development in the form of coaching, problem solving, and collaborating with other implementers is critical during implementation in order to ensure a deep understanding of and commitment to the initiative on the part of participants, typically teachers, who are most directly responsible for implementation. (Nolan, 2007, p. 4)

Laying this type of a foundation will directly support the implementation as it progresses through inevitable difficulties. Nolan (2007) also expressed the belief that focusing teachers' efforts towards the impact the initiative could have on their students would ultimately produce much better results than focusing on the innovation itself. It is imperative that the innovations be monitored for success during the implementation in order to validate its future use.

Nolan's (2007) final principles for successful change targeted the inevitable questions and resistance that will arise. He suggested that confronting these things with a plan will enable the educational leader to avoid many uncomfortable and unproductive situations through which an individual may be attempting to undermine the initiative. In many cases, resisters who wish to point out all of the deficiencies or issues with an

innovation in order to derail it may inadvertently provide a vehicle through which potential downfalls can proactively be addressed and avoided. Nolan (2007) cautioned, "It is also important to listen to resistance because sometimes resisters are right. Some innovations are bad ideas" (p. 7).

Larson (1991) observed two rural Vermont schools over a five-year period and indicated the importance of examining schools that are doing well in order to learn from them and to implement similar processes in struggling schools.

> Critics of education are calling for more 'second order' change - the type that requires new goals, new organizational structures, new curricular designs, and new ways of teaching. . . . While second-order change remains a commendable goal, we cannot ignore the existence of the organizations we already have while we are working toward it. (p. 551)

Waters et al. (2004) asserted that "what some will experience as a first-order change others may experience as a second order change" (p. 51). The researchers argued that the reason for this variance in perception of change was a result of what the participants have experienced in the past--those that feel the change or innovation aligns with what they currently believe or implement will experience first-order change, but others will not.

> If leaders fail to understand or acknowledge that some changes are second-order for some or all of their stakeholders, they may struggle to get support for the successful implementation of these changes. As a result, their initiatives may fail to improve student achievement. (Waters et al., 2004, p. 51)

Regardless of its immediate success, a change innovation may fail if the leader who effectively orchestrated it leaves the school. As stated by Hargreaves and Fink (2004), "Sustainable leadership must be a shared responsibility". Leithwood et al. (2010) added to this belief, addressing the fragility of improvement as follows: "In particular, improvement can be exceptionally fragile, and changes do not always last. Increasingly, sustainability is seen as critically important to all improvement efforts, and to achieve this, capacity building is central" (p. 81).

Klecker and Loadman (2000) found, in their study of 168 Ohio principals, that the female principals "recognized the benefits of school change to a higher degree than did the male principals and they reported a higher level of agreement with the actions they were willing to take to facilitate the changes" (p. 223). Kruger, Witziers, and Sleegers (2007) also found, through their empirical review of previously conducted research, that "Gender appears to be an important variable in this respect. Research shows that women are stronger instructional leaders than their male colleagues. They carry out more instructional activities and spend more time on instructional matters than men" (p. 2).

Due to the findings of these researchers, "Leadership is no longer proposed as having a direct influence on learning outcomes, but as having an indirect influence through the way it has an impact on instructional organization and culture" (Kruger et al., 2007, p. 3). In the model presented in Kruger et al.'s report, the principal takes on characteristics that strategically shape leadership behaviors. These behaviors must be intentional and focused on affecting student achievement. "The principal's actions intentionally directed towards affecting the instructional organization and climate are

called principal's strategies" (Kruger et al., 2007, p. 3). The researchers cautioned that the vision of principals, particularly associated with experiences and convictions, will impact the strategies they use and ultimately the school's climate and student learning. "The principal's role in establishing a strong school climate and instructional organization appeared to be precisely the area that strongly predicts school effectiveness" (Kruger et al., 2007, p. 5). The authors elaborated further:

> It appears that if a school principal is more engaged in instructional activities, this has a significant and positive impact on teachers' perceived quality of the school organization, while again this latter variable has a positive impact on perception of the school culture. (Kruger et al., 2007, p. 14)

Regardless of its immediate success, a change innovation may fail if the leader who effectively orchestrated it leaves the school (Hargreaves & Fink, 2004). Leithwood et al. (2010) discussed the difficulties in improving failing schools: "Turning 'failing' schools around is a prominent focus of contemporary educational policy. Turning schools around is different from 'simply' improving them" (p. 22). This difference, according to Leithwood et al. (2010) makes it necessary for turnaround principals to arm themselves with a very specific set of skills and strategies in order to have a positive and lasting effect on student achievement.

Table 2

Review of the Literature Subsection Summaries and Authors

Subsection Summary of Findings	Authors
Historical Perspectives. The focus of school leadership has changed over time from management to instruction and improvement based on accountability (NCLB). The case has clearly been made that effective leadership is integral for success of a school.	Finnigan (2010); Fullan (2002); Marzano et al. (2005); Witziers et al. (2003); Waters et al. (2004); Hunt (2008); Fullan et al. (2005); Cuban (1988); Nolan (2007)
Instructional Leadership. School district administrators should attempt to hire educators with advanced degrees for principal positions. Too much of an administrator's time can quickly become focused on managing the school rather than on the more important tasks related to improving instruction and achievement.	Finnigan (2010); Leithwood et al. (2010); Waters et al. (2004); Gentilucci & Muto (2007); Marzano et al. (2005); Hallinger & Heck (1996); Arrowsmith (2004); Harris & Chapman (2002)
Transformational Leadership. The researchers found that transformational leadership can positively impact teachers' efficacy and efforts to change. However, they suggested that transformational leadership had a notably smaller impact on student outcomes than did instructional leadership.	Finnigan (2010); Fullan (2002); Sagnak (2010); Waters et al. (2004); Harris & Chapman (2002); Cistone & Stevenson (2000); Ross & Gray (2006); Larson (1991); Kelley et al. (2005); Robinson et al. (2008)
Leadership Challenges. The challenges for urban school principals are many and higher levels of poverty influence achievement. An understanding of the change process and attainment of advanced degrees would be beneficial for school leaders.	Cistone & Stevenson (2000); Kaplan et al. (2005); Reilly (1996); Heifetz & Linsky (2004); Leithwood et al. (2010); Harris & Chapman (2002); Waters et al. (2004); Finnigan (2010)
Principal Preparation. Principals must be involved in long-term professional development both before and during their tenure as administrators.	Kaplan et al. (2005); Peterson (2002); Houle (2006); Cistone & Stevenson (2000); Robinson et al. (2008); Witziers et al. (2003); Jackson & Kelley (2002); Kaplan et al. (2005)
Second-Order Change Leadership. Leaders must understand the impact of change on their followers. Specific leader responsibilities or actions have a greater impact on student achievement than do others. Gender was found to impact the effectiveness of a school leader.	Fullan (2002); Klecker & Loadman (2000); Sun et al. (2007); Marzano et al. (2005); Reilly (1996); Cuban (1988); Nolan (2007); Larson (1991); Waters et al. (2004); Hargreaves & Fink (2004); Leithwood et al. (2010); Kruger et al. (2007)

Summary

This chapter presented a review of the literature and research related to principal leadership behaviors including a historical perspective of leadership theories and federal mandates that impact schools and their leaders. Additionally, instructional leadership, transformational leadership, leadership challenges, and second-order change leadership behaviors and their impact on student achievement were reviewed. The methodology used for the study, the instrumentation, and the statistical processes utilized to analyze the research questions to determine if relationships exist between leadership behaviors and student achievement exist will be detailed in Chapter 3. Chapter 4 includes the results from the surveys and analysis of the data. Finally, Chapter 5 presents a summary of the findings along with implications for practice and recommendations for future research.

CHAPTER 3
METHODOLOGY

Introduction

This chapter contains an explanation of the process used to gather quantitative and qualitative data from principals of schools with fewer than 60% of students who qualified for free and reduced-price lunches in five urban Florida school districts for this study. A survey instrument (PAS), designed by La Cava (2009), was utilized to gather data regarding change leadership behaviors from the principals of schools within the five urban school districts. Follow-up telephone interviews were also conducted using Taylor's Second-Order Change Principal Protocol (2007) making this a mixed-methodology study. The method for analysis of the data is also examined. The sections found within this chapter are: (a) Statement of the Problem, (b) Population and Sample, (c) Research Questions, (d) Instrumentation, (e) Data Collection, (f) Data Analysis, (g) and Statistical Procedures.

Statement of the Problem

The main purpose of this study was to examine second-order change leadership behaviors of principals and the Florida Department of Education grade assigned to their urban, elementary schools with fewer than 60% of students qualified for free and reduced lunches, and to examine if a relationship between these two variables exists. This study includes comparisons with those of La Cava (2009) in which he examined the same variables for principals at Title 1 elementary schools (with 60% or more students who

qualified for free and reduced-price lunches) in the same Florida school districts using the Principal Action Survey (PAS). These findings should prove beneficial for schools, school districts, and state level officials as they strive to improve student achievement.

Population and Sample

The sample of elementary school principals was selected from 257 non-Title 1 Florida elementary schools located in the same six urban school districts studied by La Cava (2009). Each school district had principal representatives chosen for the study: Broward County Public Schools, 60; Duval County Public Schools, 39; Hillsborough County Public Schools, 52; Orange County Public Schools, 71; Pinellas County Public Schools, 32; and St. Lucie County Public Schools, 3. Determination of non-Title 1 status, including schools with a percentage of less than 60% of students qualifying for free and reduced lunches, was based on information found in the Florida Department of Education's School Accountability Report. The principals' email addresses for each school district were located through a search of the district's web page. Taylor (2010) provided the Orange County Public Schools' data from prior research conducted as a comparison study to La Cava's 2009 research.

Research Questions

The questions that guided the research were:

1. To what extent, if any, does a relationship exist between the scores of urban elementary principals of schools with fewer than 60% of students who qualify

for free and reduced price lunches on the Principal Actions Survey and the

Florida Department of Education school grade and achievement of AYP?

2. According to elementary principals, what leadership behaviors have

   influenced student achievement in their schools?

3. To what extent, if any, do these leadership behaviors differ from those found

   by La Cava (2009)?

4. To what extent, if any, does a relationship exist between principals'

   professional demographics (age, gender, highest degree earned, and years as

   the principal at the school) and the leadership behaviors they believe

   influenced student achievement?

Instrumentation

Principal Actions Survey (PAS)

The Principal Actions Survey (PAS) created by La Cava (2009) was used to

collect data from the principal participants after permission for its use was received from

the author (Appendix D). La Cava developed the PAS with a particular focus on the

seven factors indicated in the research of Marzano, Waters and McNulty (2005)

regarding second-order change leadership behaviors. During the Title 1 leadership study,

the PAS was reviewed by professors and doctoral students at the University of Central

Florida for content validity and reliability (La Cava, 2009). Taylor also utilized the PAS

in order to collect data from Orange County principals of schools with fewer than 60% of

students who qualified for free and reduced-price lunches in 2010 and made minor revisions to the original survey's response scale based on results and the responses of participants. The resulting survey (Appendix A) used in this study has been administered to elementary school principals and found to be valid (La Cava, 2009; Taylor, 2010). Validity and reliability of the survey were determined through a field test comprised of University of Central Florida professors and doctoral students in the Educational Leadership program (La Cava, 2009) and was reinforced through Taylor's data collection (2010).

The Principal Action Survey (PAS), comprised of 31 questions, began with a Yes/No statement of consent to participate. Respondents who replied with a "Yes" to the statement were then given access to the online survey. Those who responded with a "No" were thanked for their time and did not receive access to the survey. Items 2 through 22 of the PAS asked respondents whether or not they agreed or disagreed (using a four-point Likert-type scale of Strongly Agree, Agree, Disagree, or Strongly Disagree) with their use of specific leadership behaviors found to indicate second-order change within a school setting. Items 23 and 24 gave principals an opportunity to respond regarding their school's assigned grade and AYP status. Items 25 and 26 provided a chance for an open-ended response concerning which behaviors the principal believed had the greatest impact on student achievement for all students and for those students within the AYP subgroups as determined by the No Child Left Behind Act (2002). Items 27 through 31 gathered demographic information related to the principal including gender, time at school, age, ethnicity, and level of education.

Structured Telephone Interviews

The final statement on the PAS provided participants with an opportunity to provide their contact information if they wished to participate in a follow-up telephone interview with the researcher. A total of eight principals initially indicated that they would be willing to complete the telephone interview by marking "Yes" and by providing their contact information for the current study. The researcher attempted to contact these eight principals via email, and three principals responded with a contact telephone number. Two follow-up emails were sent in an attempt to reach non-responding principals for telephone interviews, but these attempts proved unsuccessful. A total of three telephone interviews were conducted during May 2011.

Taylor's Second-Order Change Principal Protocol (2007) (Appendix G) was utilized to gather additional data from the principals via the telephone interview. This scripted instrument provided the researcher with exactly what to say/ask of the participant. After sharing a general overview of the anticipated used of the data with the prospective participants (Section I), the researcher asked the potential participants if they would still like to participate. Within Section II, the seven factors determined by the research of La Cava (2009) and Taylor (2010) were each followed by three to five items that, when answered, provided an understanding of the innovation, its design and ultimately, its implementation and evaluation. Participants were asked to describe any structural or organizational changes made to support the innovation in Section III. Telephone interview data from Taylor's 2010 study were not included in the analysis for

this current study. Both the current study and Taylor's 2010 study employed Taylor's

Second-Order Change Principal Protocol (2007) script for the telephone interviews.

<center>Data Collection</center>

Prior to the beginning of this study, the required research applications and

paperwork were completed and submitted for review by the University of Central

Florida's Institutional Review Board (IRB). The instruments used in this study, the

Principal Actions Survey (PAS) (La Cava, 2009) and the Second-Order Change Principal

Protocol (Taylor, 2010), were included in the submission. Following receipt of the IRB's

approval (Appendix C), the required documents were completed and submitted to each of

the five school districts for their approval to conduct the research (Appendix B). The

data from Orange County Public Schools had been collected by Taylor prior to this study.

Although the researcher completed an application for approval from St. Lucie County

Public Schools, the school district officials did not respond and therefore the three

schools from this county were not included in the research.

Initial contact with principals was made during February of 2011 via email and

included the informed consent letter (Appendix E) and each district's approval letter

(Appendix B). Pinellas County Public Schools also required that the Request for School

Principal Agreement to Conduct Research in School (Form A) be sent to principals

(Appendix B). This first letter introduced the purpose of the study to potential

participants and informed them of their rights, any possible risks associated with

participation in the study, and contact information for the researcher and the UCF

<center>55</center>

advisor. The second email letter (Appendix F) included the link to the survey (PAS) and each participant's unique login and password known only to the researcher in order to guarantee anonymity. The second emails were sent approximately a week after the initial email contacts. As participants logged in to complete the online survey, they were automatically redirected to a screen where they gave their informed consent in order to continue to the survey page.

To facilitate completion of the survey and compilation of the data, the survey instrument (PAS) was housed online at www.surveyhelpers.com. The data for this study were housed and collected online at www.surveyhelpers.com. Taylor's 2010 data, collected from Orange County Public Schools' principals, were merged with the data from the current study. A total of three reminder emails were sent to principals between April and June of 2011. Reminders were not sent during the Florida Comprehensive Achievement Test administration during the month of March. Following the data collection period, a total of 66 principals from 5 school districts had responded for an overall return rate of 25%.

Data Analysis

The researcher employed a mixed-method research design in order to examine if a relationship existed between second-order change leadership behaviors and Florida school grades for urban elementary schools with fewer than 60% of students who qualified for free and reduced-price lunches. The researcher intended to compile and analyze data from the on-line PAS survey to analyze if the same factors found for the

study of Title 1 principals (La Cava, 2009) were also present in the current research.

Factors found in Taylor's data of schools with fewer than 60% of students who qualified

for free and reduced-price lunches were merged with the current data, and the combined

data factors were compared with La Cava's findings to ascertain if a relationship existed

between the responses of urban school principals with 60% or more poverty and those

with less than 60% poverty. Florida school grade data and percentages of students

receiving free and reduced-price lunches for each school were gathered from the School

Accountability Report (2009-2010) available on the Florida Department of Education

website. Data from the on-line survey, the Florida Department of Education website, and

the telephone surveys were compiled using a Microsoft Excel spreadsheet.

Following are the statistical procedures used in the data analysis for each research

question. In analyzing the data, an alpha level of 0.05 was applied for inferential

statistics.

Research Question 1

To what extent, if any, does a relationship exist between the scores of urban
elementary principals of schools with fewer than 60% of students who qualify for free
and reduced price lunches on the Principal Actions Survey and the Florida Department of
Education school grade and achievement of AYP?

Data were analyzed using an independent *t*-test. The total score from the PAS

served as the dependent variable. Whether or not the school made AYP was the

independent (grouping) variable. School grade data were also analyzed utilizing a Mann-

Whitney test due to the skewed number of schools' receiving A grades versus B grades as

assigned by the FLDOE (58 schools received an A and only eight received a B).

Research Question 2

According to elementary principals, what leadership behaviors have influenced student achievement in their schools?

Responses to items 25 and 26 on the PAS were compiled and categorized according to Taylor's (2010) nine leader action themes in order to make conclusions about leader behaviors and their impact on student achievement.

Research Question 3

To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?

One-way analyses of covariance (ANCOCVAs) using leadership behavior factors were used to analyze data to answer this question. Each factor determined by La Cava (KCIA, Change Agent, Optimizer, Ideals/Beliefs, Intellectual Stimulation, Flexibility, and Monitoring/Evaluating) served as a dependent variable. The Title 1 principal group vs. the group of principals from schools with fewer than 60% of students who qualified for free and reduced-price lunches served as the independent variables. Degree achieved and years of experience served as control variables. These variables were used to evaluate whether respondents in each of the study groups held differing beliefs about their leadership behaviors.

Research Question 4

To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, years as the principal at the school) and the leadership behaviors they believe influenced student achievement?

To analyze data to answer Research Question 4, a series of hierarchical multiple regressions were performed. The first set of regressions utilized the seven leadership factors presented by La Cava (2009) and served as the dependent variables. The second set of regressions utilized the leadership factors determined by Taylor (2010) and also served as the dependent variables. The independent variables were added in two blocks with the base block featuring personal demographics as follows: white/non-white for ethnicity, male/female for gender, and less than 50/more than 50 for age. Relationship, or lack thereof, was determined, and significance was indicated as appropriate. The second block added professional demographics: master's degree/higher degree for degree and less than 4 years/4-6 years/7 or more years for time as principal at the school.

Telephone Interview Data Analysis

The telephone interview data were analyzed for common themes among principals based on the responses given during the interviews. The responses and themes were then compared with the seven factors utilized by both La Cava (2009) and Taylor (2010).

Table 3 contains summary information for the four research questions. The research questions, sources of data and procedures used in the analysis are summarized in the table.

Table 3

Research Questions, Sources of Data, and Analysis of Data

Research Question	Sources of Data	Analysis
1. To what extent, if any, does a relationship exist between the scores of urban elementary principals of schools with fewer than 60% of students who qualify for free and reduced price lunches on the Principal Actions Survey and the Florida Department of Education school grade and achievement of AYP?	Principal Actions Survey Items 2-24 Florida DOE School Accountability Report	Independent *t*-test for AYP Mann-Whitney test for school grade
2. According to elementary principals, what leadership behaviors have influenced student achievement in their schools?	Principal Actions Survey Items 25, 26	Exploration of principal comments utilizing Taylor's (2010) themes
3. To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?	Principal Actions Survey Items 2-24 La Cava (2009)	One-way ANCOVAs using La Cava's (2009) factors
4. To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, and years as the principal at the school) and the leadership behaviors they believe influenced student achievement?	Principal Actions Survey Items 2-26, 27-31 Telephone Interviews	Hierarchical multiple regressions

Summary

The research design and methodology utilized for this study have been provided in this chapter. The procedures that were used in finalizing the population and the sample were also presented. In order to gather the quantitative data, the researcher received permission to administer La Cava's Principal Action Survey (PAS) (2009) which participants completed online. Gathering of qualitative data was accomplished through follow-up telephone interviews conducted with respondents who agreed to the process at the culmination of the online survey. Taylor's (2010) Second-Order Change Principal Protocol was the instrument used for the telephone interviews. Data analysis and statistical procedures were also described in Chapter 3. Chapter 4 will include the results of the statistical procedures for each of the research questions. A discussion of the findings, implications for school leaders, and recommendations for future research will be presented in Chapter 5.

CHAPTER 4
ANALYSIS OF DATA

Introduction

The purpose of this study was to investigate relationships between second-order change leadership behaviors and student achievement of urban schools with less than 60% free and reduced-price lunch students. Analysis was completed using a mixed-methods approach. Examined were (a) the targeted second-order change leadership behaviors of the principal, (b) Florida Department of Education school grades, (c) and federal No Child Left Behind adequate yearly progress (AYP) results for the school.

The results of the data analysis including descriptive statistics are presented in this chapter. Additionally, each of the four research questions was analyzed using the aforementioned statistical processes for the quantitative portion of the study and the complementary analysis of the qualitative survey questions and follow-up telephone interviews. The qualitative data were considered to further enhance the results of the study and clarify which, if any, second-order change leadership behaviors were believed to significantly impact student achievement.

The questions that guided the research study were:

1. To what extent, if any, does a relationship exist between the scores of urban elementary principals of schools with fewer than 60% of students who qualify for free and reduced price lunches on the Principal Actions Survey and the Florida Department of Education school grade and achievement of AYP?

2. According to elementary principals, what leadership behaviors have influenced student achievement in their schools?

3. To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?

4. To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, and years as the principal at the school) and the leadership behaviors they believe influenced student achievement?

Data for each research question were categorized according to the themes or factors determined previously by La Cava (2009) and Taylor (2010) to complete the statistical analysis. Responses from the PAS were transferred into a Microsoft Excel spreadsheet and the sorted data were analyzed using the SPSS 16.0 program. Results of this analysis are presented for each of the research questions.

The final component evaluated in Chapter 4 included information and comparisons from the telephone interview data. These interviews were conducted and reviewed in order to explore principals' perceptions of the leadership behaviors that they believe impacted student achievement and to consider additional themes or factors.

Data Preparation Concerns

To examine some of the research questions presented in the current study, it was necessary to utilize data collected by La Cava (2009) with the author's permission. Questions on the Principal Actions Survey (PAS) for this study provided the respondent

with a 4-point Likert-type scale response including the options (a) strongly agree, (b) agree, (c) disagree, and (d) strongly disagree. La Cava's PAS provided a neutral response option of neither agree nor disagree for a 5-point Likert-type scale. Due to this difference for responses, La Cava's data were re-categorized to align with the 4-point scale, and any neutral response items were omitted. By removing the neutral response, Taylor (2010) believed the responses on the PAS would provide a more reliable indication of the respondents' feelings about their leadership behaviors.

Descriptive Statistics

The sample of elementary school principals for this study was selected from 257 elementary schools with less than 60% free and reduced lunch student populations located in the same six urban school districts studied by La Cava (2009). A total of 66 principals responded and completed the online survey for a response rate of 25%. A series of demographic questions were asked of the respondents in order to provide more information about those participating in the study. Principals were asked to provide other information regarding their professional demographics as well. Various demographic data about the respondents are presented in Tables 4-6.

Table 4

Degree Attained by Respondents (N = 66)

Principal Response	*n* (%)	Male *n* (%)	Female *n* (%)
Master's Degree	39 (59%)	6 (15%)	33 (85%)
Specialist Degree	10 (15%)	3 (30%)	7 (70%)
Doctoral Degree	17 (26%)	3 (18%)	14 (82%)
Total	66 (100%)	12 (18%)	54 (82%)

Table 5

Years as Principal at Current School (N = 66)

Years	*n* (%)	Male *n* (%)	Female *n* (%)
Less than 1 year	10 (15%)	3 (30%)	7 (70%)
1-3 years	11 (17%)	4 (36%)	7 (64%)
4-6 years	27 (41%)	4 (15%)	23 (85%)
7-9 years	9 (13.5%)	1 (11%)	8 (89%)
10+ years	9 (13.5%)	0	9 (100%)
Total	66 (100%	12 (18%)	54 (82%)

Table 6

FLDOE Assigned School Grade and Adequate Yearly Progress (AYP) of Participating Schools (N = 66)

| | | Male | Female |
Principal Response	*n* (%)	*n* (%)	*n* (%)
A Grade	58 (88%)	8 (14%)	50 (86%)
B Grade	8 (12%)	4 (50%)	4 (50%)
Total	66 (100%)	12 (18%)	54 (82%)
AYP Met	29 (44%)	5 (17%)	24 (83%)
AYP Not Met	37 (56%)	7 (19%)	30 (81%)
Total	66 (100%)	12 (18%)	54 (82%)

Note. FLDOE = Florida Department of Education

Data Analysis for Research Question 1

To what extent, if any, does a relationship exist between the scores of urban elementary principals of schools with fewer than 60% of students who qualify for free and reduced-price lunches on the Principal Actions Survey (PAS) and the Florida Department of Education school grade and achievement of AYP?

This research question was addressed with 2 different statistical tests for school grade and for achievement of AYP. The school grade portion of this question was addressed using a Mann-Whitney test due to the heavy skewness of the responses. Of the 66 respondents, 58 reported acquisition of an A grade and 8 reported B grades. A nonparametric Mann-Whitney test seemed a better option than a parametric *t*-test for this

aspect of the question. The descriptive statistics for this procedure are displayed in Table 7.

Table 7

Mann-Whitney Test for Overall Leadership Behaviors by School Grade (N = 66)

School Grade	n	M_r
B	8	29.63
A	58	34.03

Note. $Z = -0.61$, $p = .54$.

The Mann-Whitney test results, $Z = -0.61$, $p = .54$, indicated that there was no statistically significant difference between the mean ranking of the overall leadership score on the PAS for principals of schools with FLDOE assigned grades of A or B. Though there was not a statistically significant difference between the two, the mean rankings for principals at the A schools ($M_r = 34.03$) were higher than those for the principals at the B schools ($M_r = 29.63$), which was of educational importance.

The AYP portion of this question was examined using an independent *t*-test. The dependent variable was the total score on the PAS and the grouping (independent) variable was whether the school met the NCLB requirements for achievement of AYP or not. Table 8 presents the descriptive statistics referencing scores on the PAS and achievement of AYP.

Table 8

Descriptive Statistics for Overall Principals Action Survey (PAS) Scores and Adequate
Yearly Progress (AYP) (N = 66)

AYP Met	*M*	*SD*	95% CI	
			LL	*UL*
No (*n* = 37)	3.56	0.29	3.47	3.60
Yes (*n* = 29)	3.63	0.22	3.55	3.72

Note. *t*(64) = -1.03, *p* = .31. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Of the 66 principals who responded to the survey, 37 (56%) of the principals'
schools did not meet the requirements for achievement of AYP and 29 (44%) met these
requirements. The test, *t*(64) = -1.03, *p* = .31, illustrated that there was no statistically
significant difference between the principal leadership scores on the PAS for schools that
met AYP and those that did not meet AYP. The mean overall scores for principals who
met AYP (*M* = 3.63, *SD* = 0.22) were slightly higher than the scores of those who did not
meet AYP (*M* = 3.56, *SD* = 0.29) which was of educational importance.

<u>Data Analysis for Research Question 2</u>

According to elementary principals, what leadership behaviors have influenced student achievement in their schools?

The PAS included two open-ended response items that addressed this question. For the first item (25), principals were asked to report the leadership behaviors that they attributed to improving student achievement at their schools. Principal comments were organized as closely as possible to Taylor's (2010) nine Leader Action Themes. The data are presented in Table 9 with duplicated responses listed only one time.

The responses from the 66 principals consistently focused on the first seven of Taylor's leader action themes and were repeated using slight variations of the comments shown in Table 10. Two of the themes, family engagement and political environment, were only mentioned by two and three of the principals respectively and the theme of strategizing for consistency was mentioned by only a few of the respondents and were also the least identified in the original study (Taylor, 2010).

Open-ended responses were also required for PAS item 26 regarding leader actions that impacted achievement of AYP subgroups such as economically disadvantaged, special education, and English language learners. Respondents spoke of general subgroups for the most part but some principals listed certain subgroups specifically. Specific responses are displayed in Table 10. One principal reported that the special education subgroup was the only AYP group present at the school, and yet another principal reported that the school did not have any AYP subgroups.

Table 9

Principal Actions Survey (PAS) Action Theme Analysis (N = 66)

Leader Action Theme	PAS Sample Responses to Item 25
1. School culture is focused on learning.	Classroom walkthroughs and feedback Differentiated instruction built into master schedule High expectations Positive learning environment Continuous reinforcement of essential skills Research-based programs Open and honest communication Accountability for staff for student achievement
2. Decisions are made for student learning.	Expect data-driven instruction Small group instruction, after school tutoring FCIM Levels of intervention built into each grade
3. Intellectual growth is stimulated.	Promoting learning w/in all staff Everyone expected to learn and grow Providing and monitoring differentiated professional development to my staff
4. Leader is personally invested in change.	Attends meetings/conferences Frequent data reviews with teachers Inspect what I expect – models best practices as needed Attend weekly PLC meetings/faculty meetings Mini book studies/articles/research shared Keeping staff aware of new and best practices
5. Collaboration and results from it are expected.	Conferences twice a month providing opportunities for sharing best practices Professional Learning Communities
6. Leaders strategize for consistency.	Empower teachers to take leadership roles Teachers teach with fidelity
7. Support and decision-making is based on data.	Target students with different needs and apply remedies/ AYP subgroups Monitoring student data and making adjustments to curriculum Quarterly data chats; Data collection and analysis Examine multiple data sources to determine strengths/weaknesses Purchasing of resources to meet needs
8. Families are engaged in student learning.	Data chats with parents Promote parental involvement
9. Leaders influence through political environment.	Building strong relationships and communicating openly and often; Building trust and rapport with each teacher; I support and treat my staff with respect.

Note. The source of Leader Action Themes was Taylor, 2010, pp. 7-9.

Table 10

Student Subgroups' Adequate Yearly Progress (AYP) Reported by Principals (N = 66)

Response	*n* (%)
Special Education (ESE)	7 (11%)
English Language Learners (ELL)	4 (6%)
Economically Disadvantaged (ED)	1 (2%)
Black	1 (2%)
None	1 (2%)
General	52 (77%)

Responses to the open-ended PAS item 26 were grouped according to Taylor's (2010) nine Leader Action Themes and are displayed in Table 11. Duplicated responses were listed only one time. Regardless of principal responses concerning how best to achieve AYP, most of the schools in the study (37) did not meet AYP expectations. Only 29 of the schools (N = 66) did meet NCLB AYP expectations.

Table 11

Principal Actions Survey (PAS) Action Theme Analysis (N = 66)

Leader Action Theme	Sample Comments for Achievement of AYP
1. School culture is focused on learning.	Promoted belief that all students can learn Time on task Classroom walkthroughs Focusing on every child individually High expectations Research-based programs Accountability for staff for student achievement
2. Decisions are made for student learning.	Focus on appropriate resources Created an effective ESOL program with differentiated instruction Remove barriers so 99% of time is spent teaching Co-teaching situations especially for EMH students Place struggling students with strong teachers Small group instruction, after school tutoring
3. Intellectual growth is stimulated.	Goal setting for teachers Teacher training/mentoring Providing professional development
4. Leader is personally invested in change.	Shared AYP challenges and ideas to meet these Conferences with teachers Coach teachers
5. Collaboration and results from it are expected.	Collaborative way of work/PLCs Providing opportunities for sharing best practices Providing time for grade levels to meet with one another
6. Leaders strategize for consistency.	Monitor for student engagement
7. Support and decision-making is based on data.	Teachers confident in reading data/making instructional decisions Students set individual goals Target students with different needs and apply remedies Data chats with economically disadvantaged and ESE students Awareness of student in each AYP subgroup Data binders divided by subgroup Purchasing of resources to meet needs
8. Families are engaged in student learning.	Data chats with parents Promote parental involvement
9. Leaders influence through political environment.	Positive relationships/interactions with teachers, staff and students.

Note. The source of Leader Action Themes was Taylor, 2010, pp. 7-9.

<u>Data Analysis for Research Question 3</u>

To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?

In order to compare the overall PAS scores of principals of urban elementary schools with 60% or higher poverty (La Cava, 2009) to those of principals of urban elementary schools with less than 60% poverty, the responses from La Cava's 2009 study were re-categorized from a 5-point Likert-type scale with a neutral response option to the same 4-point Likert-type scale used for the current study. Any neutral response scores from the initial study were omitted from the statistical processes for this study in order to include only those scores with a similar scale.

As shown in Table 12, this question was examined using a series of one-way analyses of covariance (ANCOVAs) utilizing La Cava's factors (2009). Each factor served as a variable with the group of 60% or more poverty as the dependent variable and the group of less than 60% poverty as the independent variable. Degree attained and years of experience served as the control variables due to prior research which has indicated that these two factors may be related to differences in leadership behaviors. Due to the relatively small size of the sample, all seven of the factors were not used as control variables in order to avoid possible instability in the model. These statistical procedures were used to examine any differences in subject responses from study to study.

Respondent's level of degree attained was represented by a dichotomous variable which reflected either a master's degree or a higher-level degree (specialist or doctoral degree). Years of experience as principal of the current school were grouped into

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categories of less than 4 years, 4-6 years, and more than 6 years and were reflected by dummy variables of less than 4 years and more than 6 years. The 4-6 years group was indicated when both of the dummy variables were set to zero in order to avoid redundancy. La Cava's (2009) factors, Knowledge of Curriculum, Instruction and Assessment (KCIA), Change Agent, Optimizer, Ideals/Beliefs, Intellectual Stimulation, Flexibility, and Monitoring/Evaluating, served as variables.

Table 12

Principals' Actions Survey Factor Analysis

Second-Order Change Leadership Factors	Survey Items
1. Knowledge of Curriculum, Instruction, & Assessment (KCIA)	10, 17, 21
2. Optimizer	4, 6, 8, 20
3. Intellectual Stimulation	7, 12, 22
4. Change Agent	2, 3, 9, 13
5. Monitoring & Evaluating	16, 19
6. Flexibility	5, 11
7. Ideals & Beliefs	14, 15, 18

Note. The source of Second-order change leadership factors was La Cava (2009).

Knowledge of Curriculum, Instruction and Assessment

Because it is necessary to determine if multicollinearity is present when using a covariate, this was addressed for each of the factors. For the KCIA factor, no significant interaction effects between either covariate with the independent variable were detected, so the ANCOVA was completed. Additionally, Levene's test, $F_{(1, 150)} = 0.43$, $p = .51$, was not significant, and homogeneity was assumed. The ANCOVA results, $F_{(1, 147)} = 1.80$, $p = .18$, indicated that no significant variation in responses were present between the study groups regardless of poverty level. As shown in Table 13, only 1.2% of the variability in KCIA ($\eta^2 = .012$) could be explained by the study group. When the effect size was less than .10, Cohen (1992) found this to limit practical significance.

Table 13

Analysis of Covariance Results: Difference in Knowledge of Curriculum, Instruction, and Assessment by Study Group (N = 152)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	1.80	.012	.18
Degree	1	0.48	.003	.49
Experience < 4 Years	1	0.69	.005	.41
Experience > 6 Years	1	0.93	.006	.34
S within-group error	147	(0.11)		

Note. Value enclosed in parentheses represents mean square error. S = subjects. Experience represents time as principal at current school.
*p < .05. **p < .01.

Participants with student populations of 60% or more poverty (La Cava, 2009) scored higher on the KCIA factor ($M = 3.62$, $SE = 0.04$) than did those in the current study group who had less than 60% poverty in the school population ($M = 3.54$, $SE = 0.04$) when controlling for degree and years of experience as a principal at the current school. This difference, displayed in Table 14, was not statistically significant, but may be educationally important.

Table 14

Descriptive Statistics: Difference in Knowledge of Curriculum, Instruction, and Assessment by Study Group (N = 152)

			95% CI	
Study Group	*M*	*SE*	*LL*	*UL*
More than 60% poverty (*n* = 86)	3.62	0.04	3.54	3.69
Less than 60% poverty (*n* = 66)	3.54	0.04	3.46	3.62

Note. Covariates evaluated at Degree = 1.59, Experience < 4 Yrs = 0.43, Experience > 6 Yrs = 0.23. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Change Agent

A one-way analysis of covariance (ANCOVA) was also performed for this factor, because no significant interaction effects were determined between the covariate and the independent variable. Although homogeneity of variance, Levene's test ($F_{(1, 152)} = 7.38$, *p*

= .01), could not be assumed due to the significance of Levene's test, the ANCOVA was

still performed due to its robustness with groups of generally equal size. Due to this

variation, the results for this factor were interpreted with caution. No statistically

significant difference for the Change Agent factor between the study groups' participants

was detected, $F_{(1, 149)} = 1.59$, $p = .21$, and this would likely have been the case regardless

of the assumption of homogeneity of variance. Practical significance was, again, limited

according to Cohen (1992) ($\eta^2 = .011$) because only 1.1% of the variability in responses

for the Change Agent factor could be explained by the study group. The results of the

analysis for the Change Agent factor are presented in Table 15.

Table 15

Analysis of Covariance Results: Difference in Change Agent by Study Group (N = 154)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	1.59	.011	.21
Degree	1	4.23*	.028	.04
Experience < 4 Years	1	0.17	.001	.68
Experience > 6 Years	1	0.25	—	.88
S within-group error	149	(0.09)		

Note. Value enclosed in parentheses represents mean square error. S = subjects. Experience
represents time as principal at current school.
*p < .05. **p < .01.

As revealed in Table 16, respondents from the 60% or greater poverty sample scored higher for the Change Agent factor (*M* = 3.75, *SE* = 0.03) than did those in the current study group, whose student populations had less poverty (*M* = 3.69, *SE* = 0.04) when controlling for degree and years of experience at current school. This difference was not statistically significant, but may be educationally important.

Table 16

Descriptive Statistics: Difference in Change Agent by Study Group (N = 154)

			95% CI	
Study Group	*M*	*SE*	*LL*	*UL*
More than 60% poverty (*n* = 88)	3.75	0.03	3.69	3.81
Less than 60% poverty (*n* = 66)	3.69	0.04	3.62	3.76

Note. Covariate evaluated at Degree = 1.58, Experience < 4 Yrs = 0.43, Experience > 6 Yrs = 0.23. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Optimizer

For the Optimizer factor, another one-way analysis of covariance was used to explore differences between responses of principals from schools with 60% or more poverty (La Cava, 2009) and those from schools with less than 60% poverty. No significant interaction of effects between the covariate and the independent variable were

found, and Levene's test, $F_{(1, 154)} = 0.77$, $p = .38$, was not significant. Thus, homogeneity

was assumed, and the ANCOVA was completed. The ANCOVA results displayed in

Table 17 showed a statistically significant difference in the responses regarding

Optimizer between the principals of schools with 60% or greater poverty (La Cava, 2009)

and the responses of the principals of schools with less than 60% poverty, $F_{(1, 151)} = 7.12$,

$p = .01$. The principals from the more impoverished schools had higher scores for the

Optimizer factor than did those from the less impoverished schools. Practical

significance was slightly higher but still limited (Cohen, 1992) for this factor ($\eta^2 = .045$),

indicating that 4.5% of the variability in the responses related to being an Optimizer

could be explained by the study group.

Table 17

Analysis of Covariance Results: Difference in Optimizer by Study Group (N = 156)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	7.12**	.045	.01
Degree	1	0.06	—	.81
Experience < 4 Years	1	0.86	.006	.36
Experience > 6 Years	1	0.53	.004	.47
S within-group error	151	(0.08)		

Note. Value enclosed in parentheses represents mean square error. S = subjects. Experience represents time as principal at current school.
*p < .05. **p < .01.

The means of the responses for questions relating to being an Optimizer were also statistically significantly higher for the principals of schools with 60% or more poverty (La Cava, 2009) ($M = 3.76$, $SE = 0.03$) than for those in schools with less than 60% poverty ($M = 3.64$, $SE = 0.04$) when controlling for degree attained and years of experience at the current school. These results are displayed in Table 18.

Table 18

Descriptive Statistics: Difference in Optimizer by Study Group (N = 156)

			95% CI	
Study Group	*M*	*SE*	*LL*	*UL*
More than 60% poverty (*n* = 90)	3.76	0.03	3.70	3.82
Less than 60% poverty (*n* = 66)	3.64	0.04	3.56	3.71

Note. Covariate evaluated at Degree = 1.57, Experience < 4 Yrs = 0.42, Experience > 6 Yrs = 0.22. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

The themes included when analyzing the data for the Optimizer factor were: soliciting input from staff when making decisions, believing that teachers can have an impact on students' achievement, acknowledging different points of view when making decisions, and believing that all academic initiatives at the school impacted academic achievement. The results of this analysis indicated that the beliefs of the urban elementary school principals of schools with 60% or greater poverty (La Cava, 2009)

differed significantly from those of the principals from schools with less than 60%

poverty. The response percentages of the other three items associated with the Optimizer

factor were very similar across both studies indicating that principals, regardless of the

school's poverty level, responded with one of the affirmative options with similar rates as

displayed in Table 19.

Table 19

Response Analysis for Optimizer

Survey Statement	More than 60% poverty (2009)[a]	Less than 60% poverty
4. I acknowledge different points of view when making difficult decisions	100%	100%
6. I believe that all academic initiatives implemented at my school will improve academic achievement.	92%[b]	89%
8. I expect teachers to assist students in achieving academically and intervene when needed.	99%	100%
20. I solicit input from staff when making change.	97%	98%

[a]Percentage (%) of principals who responded to the statement with 'strongly agree' or 'agree'
[b]Five (5%) percent of principals in the study responded with the neutral option for this statement.

Ideals/Beliefs

A one-way analysis of covariance (ANCOVA) was performed for this factor

because no significant interaction effects were determined between the covariate and the

independent variable. Although homogeneity of variance could not be assumed due to

the significance of Levene's test ($F_{(1, 155)} = 10.16$, $p = .002$), the ANCOVA was still

performed due to its robustness with groups of generally equal size. Due to this

variation, the results for this factor were interpreted with caution. No statistically

significant difference in the responses for the factor Ideals/Beliefs were revealed between

participants in either group regardless of poverty level, $F_{(1, 152)} = 3.03$, $p = .08$. As shown

in Table 20, only 2% ($\eta^2 = .02$) of the variability in Ideals/Beliefs could be attributed to

the study group which, again, revealed limited practical significance (Cohen, 1992).

Table 20

Analysis of Covariance Results: Difference in Ideals/Beliefs by Study Group (N = 157)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	3.03	.020	.08
Degree	1	0.07	—	.79
Experience < 4 Years	1	4.77*	.030	.03
Experience > 6 Years	1	1.60	.010	.21
S within-group error	152	(0.09)		

Note. Value enclosed in parentheses represents mean square error. S = subjects. Experience
represents time as principal at the current school.
*$p < .05$. **$p < .01$.

The principals in the group of principals of schools with 60% or greater poverty

(La Cava, 2009) scored higher ($M = 3.76$, $SE = 0.03$) for the factor Ideals/Beliefs than

those principals from the lower poverty group ($M = 3.67$, $SE = 0.04$) when controlling for

degree attained and for years of experience at the present school. As shown in Table 21, the difference was not statistically significant but may be of educational importance.

Table 21

Descriptive Statistics: Difference in Ideals/Beliefs by Study Group (N = 157)

			95% CI	
Study Group	*M*	*SE*	*LL*	*UL*
More than 60% poverty (*n* = 91)	3.76	0.03	3.70	3.82
Less than 60% poverty (*n* = 66)	3.67	0.04	3.60	3.75

Note. Covariate evaluated at Degree = 1.55, Experience < 4 Yrs = 0.43, Experience > 6 Yrs = 0.22. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Intellectual Stimulation

When completing the test for multicollinearity for this factor, a significant interaction effect was discovered between degree attained and study group. Thus, the results will be interpreted with caution. Levene's test, $F_{(1, 144)} = 0.53$, $p = .47$, was not significant, and homogeneity was assumed. Similarly, for most of the previously examined factors, no statistically significant difference between responses for the higher poverty group and responses of the lower poverty group concerning Intellectual Stimulation ($F_{(1, 141)} = 3.52$, $p = .06$) were found. Again, the practical significance was

limited (Cohen, 1992) with 2.4% ($\eta^2 = .024$) of the variability in Intellectual Stimulation

explained by the study group. The results of this analysis are displayed in Table 22.

Table 22

Analysis of Covariance Results: Difference in Intellectual Stimulation by Study Group (N = 146)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	3.52	.024	.06
Degree	1	0.76	.005	.39
Experience < 4 Years	1	0.15	.001	.70
Experience > 6 Years	1	0.06	--	.81
S within-group error	141	(0.15)		

Note. Value enclosed in parentheses represents mean square error. S = subjects. Experience represents time as principal at the current school.
*$p < .05$. **$p < .01$.

For Intellectual Stimulation, the participants from schools with 60% or greater

poverty (La Cava, 2009) scored higher ($M = 3.55$, $SE = 0.04$) than did the participants in

schools with less than 60% poverty ($M = 3.43$, $SE = 0.05$) when controlling for years of

experience at the present school. As shown in Table 23, this was not a statistically

significant difference but may indicate educational importance.

Table 23

Descriptive Statistics: Difference in Intellectual Stimulation by Study Group (N = 146)

			95% CI	
Study Group	*M*	*SE*	*LL*	*UL*
More than 60% poverty (*n* = 80)	3.55	0.04	3.46	3.64
Less than 60% poverty (*n* = 66)	3.43	0.05	3.34	3.53

Note. Covariate evaluated at Experience < 4 Yrs = 0.42, Experience > 6 Yrs = 0.25. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Flexibility

This factor was also addressed using a one-way analysis of covariance (ANCOVA). When testing for multicollinearity, no significant interaction effects were determined between the covariates with the independent variable. Homogeneity of variance was examined through Levene's test, $F_{(1, 157)} = 2.37$, $p = .13$, but the result was not significant and homogeneity was assumed. As displayed in Table 24, the result of the ANCOVA, $F_{(1, 154)} = 35.52$, $p < .001$, indicated a statistically significant difference between principal responses from schools with 60% or greater poverty and those of the principals of schools with less than 60% poverty for the Flexibility factor. Additionally, a substantial 18.7% ($\eta^2 = .187$) of the variability in Flexibility could be explained by the study group.

Table 24

Analysis of Covariance Results: Difference in Flexibility by Study Group (N = 159)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	35.52**	.187	< .001
Degree	1	2.57	.016	.11
Experience < 4 Years	1	0.36	.002	.55
Experience > 6 Years	1	0.69	.004	.41
S within-group error	154	(0.17)		

Note. Value enclosed in parentheses represents mean square error. *S* = subjects. Experience represents time as principal at the current school.
p < .05. ***p* < .01.

The mean score for Flexibility of the principals with 60% or greater poverty (*M* = 3.72, *SE* = 0.04) was significantly higher than the mean score for the principals with less than 60% poverty (*M* = 3.32, *SE* = 0.05) when controlling for degree attained and years of experience at the present school. The descriptive statistics for the Flexibility factor are contained in Table 25.

Table 25

Descriptive Statistics: Difference in Flexibility by Study Group (N = 159)

Study Group	*M*	*SE*	95% CI *LL*	95% CI *UL*
More than 60% poverty (*n* = 93)	3.72	0.04	3.63	3.80
Less than 60% poverty (*n* = 66)	3.32	0.05	3.22	3.42

Note. Covariate evaluated at Degree = 1.57, Experience < 4 Yrs = 0.43, Experience > 6 Yrs = 0.23. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Monitoring/Evaluating

The final factor was also analyzed through the use of an ANCOVA. When multicollinearity was tested, no significant interaction effects were revealed between the covariates and the independent variable. Although Levene's test ($F_{(1, 163)}$ = 5.03, *p* = .03) was significant and homogeneity of variance could not be assumed, the ANCOVA was conducted. The results for this factor were interpreted very carefully due to this issue. No statistically significant difference in Monitoring/Evaluating was found between respondents in either group regardless of poverty level, $F_{(1, 160)}$ = 1.02, *p* = .31. As shown in Table 26, only 0.6% (η^2 = .006) of the variability in this factor could be attributed to the study group which indicated limited practical significance (Cohen, 1992).

Table 26

Analysis of Covariance Results: Difference in Monitoring/Evaluating by Study Group (N = 165)

Source	df	F	η^2	p
More/Less than 60% poverty group	1	1.02	.006	.31
Degree	1	0.14	.001	.71
Experience < 4 Years	1	0.20	.001	.66
Experience > 6 Years	1	0.04	—	.85
S within-group error	160	(0.10)		

Note. Value enclosed in parentheses represents mean square error. *S* = subjects. Experience represents time as principal at the current school.
*p < .05. **p < .01.

     Although the participants in the higher poverty group (La Cava, 2009) scored higher for Monitoring/Evaluating (*M* = 3.84, *SE* = 0.03) than did those from the schools with less than 60% poverty (*M* = 3.79, *SE* = 0.04) when controlling for degree attained and for years of experience at the present school, the difference was not statistically significant but may indicate educational importance. The descriptive statistics for the Monitoring/Evaluating factor are displayed in Table 27.

Table 27

Descriptive Statistics: Difference in Monitoring/Evaluating by Study Group (N = 165)

			95% CI	
Study Group	*M*	*SE*	*LL*	*UL*
More than 60% poverty (*n* = 99)	3.84	0.03	3.77	3.90
Less than 60% poverty (*n* = 66)	3.79	0.04	3.71	3.86

Note. Covariate evaluated at Degree = 1.56, Experience < 4 Yrs = 0.42, Experience > 6 Yrs = 0.23. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Data Analysis for Research Question 4

To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, and years as the principal at the school) and the leadership behaviors they believe influenced student achievement?

In order to explore possible relationships for this research question, a series of 15 hierarchical multiple regressions were completed. The first set of seven regressions was completed using La Cava's (2009) seven leadership factors which served as the dependent variables. The second set of seven regressions was conducted with Taylor's (2010) modified leadership factors (based on the questions from the PAS used to create the scores for this factor) which also served as the dependent variables. One final regression was utilized for the overall variable (score on the entire PAS). Two blocks of independent variables were included for each of the regressions. The first block or model

was made up of the following personal demographics: gender (male or female), age (less than 50 years or more than 50 years old), and ethnicity (white or non-white). Each regression was completed using this first block of independent variables to examine if any significant relationships existed. The 15 regressions were run again with the addition of the following professional demographic block: experience (less than 4 years, 4-6 years, or more than 6 years as principal of the current school) and degree attained (master's degree or higher degree). Each of the demographic items was coded as a dichotomous unit with the following combinations: gender (0 = female, 1 = male), age (0 = less than 50, 1 = more than 50), ethnicity (0 = white, 1 = non-white), experience (0 = less than 4 years, 1 = more than 6 years), and degree (0 = master's degree, 1 = higher degree).

Knowledge of Curriculum, Instruction, & Assessment (KCIA)

Completion of the La Cava regression for this factor indicated that the first block of personal demographic variables did not have any significant predictive value for KCIA, $F(3, 62) = 1.22$, $p = .31$. There was only a small amount of variability of which 6% could be explained by the first block ($R^2 = .06$). The second block of professional demographics was then added, and the regression was completed again. Similarly, this second block of variables did not have a statistically significant predictive value for KCIA, $\Delta F(3, 59) = 0.68$, $p = .57$, and only an additional 3% of the variability could be explained by the second block ($\Delta R^2 = .03$). As shown in Table 28, none of the individual variables produced any statistically significant predictive values for KCIA. The final model:

KCIA = 3.58 – 0.18*(Gender) – 0.16*(Age) – 0.01*(Ethnicity) + 0.05*(Exp1) +

0.08*(Exp2) + 0.10*(Degree).

Table 28

Summary of Hierarchical Regression Analysis for Variables Predicting Knowledge of Curriculum, Instruction, and Assessment: La Cava Version (N = 66)

	Model 1			Model 2		
Variable	*B*	*SE B*	β	*B*	*SE B*	β
Constant	3.64	0.07		3.58	0.09	
Gender	-0.16	0.11	-.19	-0.18	0.12	-.22
Age	-0.13	0.09	-.19	-0.16	0.09	-.24
Ethnicity	0.00	0.10	—	-0.01	0.11	-.02
Exp1				0.05	0.10	.07
Exp2				0.08	0.10	.11
Degree				0.10	0.09	.16
R^2		.06			.09	
F for Δ in R^2		1.22			0.68	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

The regression for KCIA was performed again using Taylor's factor analysis and, as with the first regression, neither of the demographic variable blocks had any

statistically significant predictive value for the factor, $F(3, 62) = 0.70$, $p = .55$ and $\Delta F(3,$

$59) = 2.38$, $p = .08$. The first block of demographic variables accounted for 3% of the

variability ($R^2 = .03$), and the second block of professional demographic variables

explained an additional 10% of the variability for KCIA ($\Delta R^2 = .10$). Additionally, as

displayed in Table 29, the individual variable of degree attained was a statistically

significant predictor for KCIA, $p < .05$. The final model:

KCIA = 3.64 − 0.14*(Gender) − 0.24*(Age) − 0.03*(Ethnicity) + 0.12*(Exp1) +

0.06*(Exp2) + 0.32*(Degree).

Change Agent

After completing the initial regression for this factor, no statistically significant

predictive value for Change Agent was produced for the personal demographic block of

variables, $F(3, 62) = 0.65$, $p = .59$. A small amount (3%) of the variability for the factor

was explained by this first block of variables ($R^2 = .03$). The second block of

professional demographic variables did not produce an additional statistically significant

predictive value for the factor, $\Delta F(3, 59) = 0.37$, $p = .78$, and the variability for the factor

could only be attributed to an additional 2% ($\Delta R^2 = .02$) due to the addition of the

professional demographic block. As revealed in Table 30, examination of the individual

variables did not indicate any statistically significant predictive possibilities. The final

model:

Change Agent = 3.72 − 0.17*(Gender) − 0.09*(Age) − 0.05*(Ethnicity) + 0.10*(Exp1) +

0.05*(Exp2) + 0.04*(Degree).

Table 29

Summary of Hierarchical Regression Analysis for Variables Predicting Knowledge of Curriculum, Instruction, and Assessment: Taylor Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.75	0.11		3.64	0.13	
Gender	-0.05	0.16	-.04	-0.14	0.16	-.12
Age	-0.16	0.13	-.17	-0.24	0.13	-.26
Ethnicity	0.05	0.14	.04	-0.03	0.15	-.02
Exp1				0.12	0.14	.12
Exp2				0.06	0.14	.06
Degree				0.32	0.12	.33*
R^2		.03			.14	
F for Δ in R^2		0.70			2.38	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

Table 30

Summary of Hierarchical Regression Analysis for Variables Predicting Change Agent:
La Cava Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.76	0.08		3.72	0.09	
Gender	-0.14	0.11	-.16	-0.17	0.12	-.20
Age	-0.08	0.09	-.12	-0.09	0.09	-.14
Ethnicity	-0.02	0.10	-.02	-0.05	0.11	-.06
Exp1				0.10	0.10	.15
Exp2				0.05	0.10	.06
Degree				0.04	0.09	.06
R^2		.03			.05	
F for Δ in R^2		0.65			0.37	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

The Change Agent factor was examined with another regression and this, too, did not indicate a statistically significant predictive value for the factor with either block of demographic variables, $F(3, 62) = 0.04$, $p = .99$ and $\Delta F(3, 59) = 0.19$, $p = .91$. There was an extremely small amount of variability, 0.2% ($R^2 = .002$), explained by the first block of demographic variables and only an additional 1% ($\Delta R^2 = .01$) explained by the

inclusion of the professional demographic variables. As indicated in Table 31, none of

the individual variables produced any statistically significant predictive value. The final

model:

Change Agent = 3.86 – 0.02*(Gender) + 0.00*(Age) – 0.01*(Ethnicity) – 0.04*(Exp1) –

0.04*(Exp2) – 0.04*(Degree).

Table 31

Summary of Hierarchical Regression Analysis for Variables Predicting Change Agent: Taylor Version (N = 66)

Variable	Model 1			Model 2		
	B	$SE\ B$	β	B	$SE\ B$	β
Constant	3.83	0.06		3.86	0.08	
Gender	-0.03	0.09	-.04	-0.02	0.10	-.03
Age	-0.01	0.07	-.02	—	0.08	—
Ethnicity	-0.02	0.09	-.03	-0.01	0.09	-.02
Exp1				-0.04	0.09	-.06
Exp2				-0.04	0.09	-.07
Degree				-0.04	0.08	-.07
R^2		—			.01	
F for Δ in R^2		0.04			0.19	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

Optimizer

Completion of the regression for this factor indicated that the first block of personal demographic variables did not have any statistically significant predictive value for KCIA, $F(3, 62) = 0.37$, $p = .78$, and showed that there was only a small amount of variability for which 2% of this could be explained by the first block ($R^2 = .02$). The second block of professional demographics was then added, and the regression was completed again. Similarly, this second block of variables did not have a statistically significant predictive value for KCIA, $\Delta F(3, 59) = 0.14$, $p = .94$, and no extra variability could be explained by the second block (0.7% $\Delta R^2 = .007$). As shown in Table 32, none of the individual variables produced any statistically significant predictive values for Change Agent. The final model:

Optimizer = 3.66 − 0.01*(Gender) − 0.09*(Age) − 0.03*(Ethnicity) + 0.03*(Exp1) − 0.01*(Exp2) + 0.05*(Degree).

Table 32

Summary of Hierarchical Regression Analysis for Variables Predicting Optimizer: La Cava Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.67	0.07		3.66	0.09	
Gender	0.02	0.10	.02	-0.01	0.11	-.01
Age	-0.08	0.08	-.13	-0.09	0.08	-.14
Ethnicity	-0.02	0.09	-.02	-0.03	0.10	-.05
Exp1				0.03	0.10	-.04
Exp2				-0.01	0.10	-.01
Degree				0.05	0.09	-.08
R^2		.02			.02	
F for Δ in R^2		0.37			0.14	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

The regression for Optimizer was performed again for the second model with similar results to the first model. The first block of personal demographic variables did not have any statistically significant predictive value for Optimizer, $F(3, 62) = 1.04$, $p = .38$, and 5% ($R^2 = .05$) of the variability was attributed to the first block of demographics

for this factor. As was the case for the first model, the second block of professional

demographic variables did not add any statistically significant predictive value for

Optimizer, $\Delta F(3, 59) = 0.39$, $p = .76$, and only an additional 2% ($\Delta R^2 = .02$) of the

variability was explained by the second block of demographic variables. As shown in

Table 33, there was no indication of statistical significance for any of the individual

variables. The final model:

Optimizer = 3.61 – 0.15*(Gender) – 0.16*(Age) – 0.04*(Ethnicity) + 0.04*(Exp1) +

0.10*(Exp2) + 0.05*(Degree).

Table 33

Summary of Hierarchical Regression Analysis for Variables Predicting Optimizer: Taylor Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.66	0.08		3.61	0.09	
Gender	-0.14	0.11	-.16	-0.15	0.12	-.16
Age	-0.14	0.09	-.20	-0.16	0.09	-.23
Ethnicity	-0.04	0.10	-.04	-0.04	0.11	-.05
Exp1				0.04	0.11	.05
Exp2				0.10	0.11	.13
Degree				0.05	0.09	.07
R^2		.05			.07	
F for Δ in R^2		1.04			0.39	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

Ideals/Beliefs

Execution of the regression analysis for the Ideals/Beliefs factor indicated that the first block of demographic variables did not have a statistically significant predictive value, $F(3, 62) = 2.03$, $p = .12$. A moderate amount, 9% ($R^2 = .09$), of variability for the factor was attributed to the first block of variables. The addition of the second block did not add any statistically significant predictive value for the factor, $\Delta F(3, 59) = 0.32$, $p = .81$, and only a small extra amount, 2% ($\Delta R^2 = .02$), of variability was explained by the addition of the second block of demographic variables. As indicated in Table 34, no statistical significance was determined for any of the individual variables (Table 36). The final model:

Ideals/Beliefs = 3.74 − 0.12*(Gender) + 0.10*(Age) − 0.11*(Ethnicity) − 0.08*(Exp1) − 0.04*(Exp2) − 0.07*(Degree).

Table 34

Summary of Hierarchical Regression Analysis for Variables Predicting Ideals and Beliefs: La Cava Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.70	0.08		3.74	0.09	
Gender	-0.15	0.11	-.17	-0.12	0.12	-.14
Age	0.09	0.09	.13	0.10	0.09	.15
Ethnicity	-0.14	0.10	-.17	-0.11	0.11	-.14
Exp1				-0.08	0.11	-.10
Exp2				-0.04	0.11	-.05
Degree				-0.07	0.09	-.10
R^2		.09			.10	
F for Δ in R^2		2.03			0.32	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

The second batch of regressions were completed for the Ideals/Beliefs factor and led to similar conclusions. Both blocks of demographic variables did not have any statistically significant predictive value with regard to this factor, $F(3, 62) = 0.67$, $p = .58$ and $\Delta F(3, 59) = 0.72$, $p = .54$, and the amounts of variability for both blocks were the

same at 3% ($R^2 = .03$ and $\Delta R^2 = .03$) each. As can be observed in Table 35, no statistical

significance was found for the predictability of individual variables for the Ideals/Beliefs

factor. The final model:

Ideals/Beliefs = 3.65 – 0.16*(Gender) – 0.12*(Age) – 0.01*(Ethnicity) + 0.17*(Exp1) +

0.02*(Exp2) + 0.05*(Degree).

Table 35

*Summary of Hierarchical Regression Analysis for Variables Predicting Ideals and
Beliefs: Taylor Version (N = 66)*

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.70	0.09		3.65	0.11	
Gender	-0.10	0.13	-0.10	-0.16	0.14	-.16
Age	-0.12	0.10	-0.16	-0.12	0.11	-.16
Ethnicity	0.04	0.12	0.4	-0.01	0.13	-.01
Exp1				0.17	0.12	.21
Exp2				0.02	0.12	.02
Degree				0.05	0.10	.06
R^2		.03			.07	
F for Δ in R^2		0.67			0.72	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as
principal.
*p < .05. **p < .01.

Flexibility

The first model regression was conducted and produced similar results as with the other factors. Neither block of demographic variables for Flexibility showed any statistically significant predictive value, $F(3, 62) = 0.81$, $p = .49$ and $\Delta F(3, 59) = 0.64$, $p = .59$, and the amount of variability explained for the factor was small for both blocks, 4% ($R^2 = .04$) and 3% ($\Delta R^2 = .03$) respectively. The analysis shown in Table 36 shows that none of the individual variables had a statistically significant predictive value for Flexibility. The final model:

Flexibility = 3.27 + 0.05*(Gender) – 0.13*(Age) + 0.09*(Ethnicity) + 0.06*(Exp1) + 0.04*(Exp2) + 0.16*(Degree).

Table 36

Summary of Hierarchical Regression Analysis for Variables Predicting Flexibility: La Cava Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.33	0.10		3.27	0.12	
Gender	0.09	0.14	.08	0.05	0.16	.04
Age	-0.09	0.12	-.10	-0.13	0.12	-.15
Ethnicity	0.12	0.13	.12	0.09	0.14	.09
Exp1				0.06	0.14	.06
Exp2				0.04	0.14	.04
Degree				0.16	0.12	.18
R^2		.04			.07	
F for Δ in R^2		0.81			0.64	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

The second model's results indicated that the first block of personal demographic variables did not have a statistically significant predictive value for Flexibility, $F(3, 62) =$ 0.59, $p = .63$, and a small amount, 3% ($R^2 = .03$) of variability for Flexibility was explained by the first demographic block. The second block of variables did not provide an additional statistically significant predictive value for Flexibility, $\Delta F(3, 59) = 0.88$, p

= .46, and the additional amount of variability explained by the inclusion of the

professional demographic block of variables was also small at 4% more ($\Delta R^2 = .04$). As

shown in Table 37, there was no indication of statistical significance for any of the

individual variables. The final model:

Flexibility = 3.71 + 0.01*(Gender) – 0.12*(Age) – 0.07*(Ethnicity) – 0.05*(Exp1) +

0.09*(Exp2) + 0.07*(Degree).

Table 37

Summary of Hierarchical Regression Analysis for Variables Predicting Flexibility: Taylor Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.74	0.07		3.71	0.08	
Gender	-0.01	0.10	-.01	0.01	0.11	.02
Age	-0.09	0.08	-.15	-0.12	0.08	-.19
Ethnicity	-0.09	0.09	-.12	-0.07	0.10	-.10
Exp1				-0.05	0.09	-.07
Exp2				0.09	0.09	.13
Degree				0.07	0.08	.12
R^2		.03			.07	
F for Δ in R^2		0.59			0.88	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

Monitoring and Evaluation

After completing the initial regression for this factor, no statistically significant predictive value for Monitoring and Evaluation was produced for the personal demographic block of variables, $F(3, 62) = 0.72$, $p = .55$. A small amount (3%) of the variability for the factor was explained by this first block of variables ($R^2 = .03$). The

second block of professional demographic variables did not produce an additional

statistically significant predictive value for the factor, $\Delta F(3, 59) = 0.50$, $p = .69$, and the

variability for the factor could only be attributed to an additional 2% ($\Delta R^2 = .02$) due to

the addition of the professional demographic block. Examination of the individual

variables did not indicate any statistically significant predictive possibilities. The results

of the analysis are displayed in Table 38. The final model:

Monitoring and Evaluation = 3.85 + 0.03*(Gender) − 0.09*(Age) + 0.12*(Ethnicity) −

0.08*(Exp1) + 0.03*(Exp2) − 0.08*(Degree).

Table 38

Summary of Hierarchical Regression Analysis for Variables Predicting Monitoring &
Evaluation: La Cava Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.83	0.08		3.85	0.10	
Gender	-0.02	0.12	-.02	0.03	0.13	.03
Age	-0.01	0.09	-.14	-0.09	0.10	-.13
Ethnicity	0.08	0.11	.09	0.12	0.11	.14
Exp1				-0.08	0.11	-.11
Exp2				0.03	0.11	.04
Degree				-0.08	0.10	-.11
R^2		.03			.06	
F for Δ in R^2		0.72			0.49	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience
as principal.
*p < .05. **p < .01.

The Monitoring and Evaluation factor was examined with another regression and
this, too, did not indicate a statistically significant predictive value for the factor with
either block of demographic variables, $F(3, 62) = 1.42$, $p = .25$ and $\Delta F(3, 59) = 0.29$, $p =$
.83. There was a small amount of variability, 6% ($R^2 = .06$), explained by the first block
of demographic variables and only an additional 2% ($\Delta R^2 = .02$) explained by the
inclusion of the professional demographic variables. As shown in Table 39, none of the

individual variables produced any statistically significant predictive value. The final

model:

Monitoring and Evaluation = 3.36 – 0.04*(Gender) – 0.11*(Age) + 0.17*(Ethnicity) –

0.07*(Exp1) + 0.03*(Exp2) + 0.09*(Degree).

Table 39

Summary of Hierarchical Regression Analysis for Variables Predicting Monitoring &
Evaluation: Taylor Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.41	0.09		3.36	0.11	
Gender	—	0.14	—	-0.04	0.15	-.03
Age	-0.09	0.11	-.11	-0.11	0.11	-.14
Ethnicity	0.20	0.12	.21	0.17	0.13	.18
Exp1				0.07	0.13	.08
Exp2				0.03	0.13	.03
Degree				0.09	0.11	.11
R^2		.06			.08	
F for Δ in R^2		1.42			0.29	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience
as principal.
*p < .05. **p < .01.

Intellectual Stimulation

The first model regression was conducted and produced similar results to those of the other factors. Neither block of demographic variables for Intellectual Stimulation, $F(3, 62) = 0.42$, $p = .74$ and $\Delta F(3, 59) = 1.98$, $p = .13$, showed any statistically significant predictive value. The amount of variability explained for the factor was small for the first personal demographic variable block with 2% ($R^2 = .02$). There was a moderate amount of additional variability in Intellectual Stimulation, 9% ($\Delta R^2 = .09$), explained by the inclusion of the professional demographic variable block. Additionally, as shown in Table 40, the individual variable of degree attained was a statistically significant predictor for Intellectual Stimulation, $p < .05$. The final model:

Intellectual Stimulation = 3.32 − 0.18*(Gender) − 0.03*(Age) + 0.01*(Ethnicity) + 0.13*(Exp1) + 0.09*(Exp2) + 0.23*(Degree).

Table 40

Summary of Hierarchical Regression Analysis for Variables Predicting Intellectual Stimulation: La Cava Version (N = 66)

	Model 1			Model 2		
Variable	*B*	*SE B*	β	*B*	*SE B*	β
Constant	3.42	0.09		3.32	0.11	
Gender	-0.11	0.13	-.11	-0.18	0.14	-.18
Age	0.20	0.11	.03	-0.03	0.11	-.04
Ethnicity	0.70	0.12	.07	0.01	0.13	.01
Exp1				0.13	0.12	.15
Exp2				0.09	0.12	.10
Degree				0.23	0.10	.29*
R^2		.02			.11	
F for Δ in R^2		0.42			1.98	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*p < .05. **p < .01.

The second model regression was completed and indicated the following results. Neither block of demographic variables for Intellectual Stimulation showed any statistically significant predictive value, $F(3, 62) = 1.74$, $p = .17$ and $\Delta F(3, 59) = 0.82$, $p = .49$. The amount of variability explained for the factor was small for the first personal demographic variable block with 8% ($R^2 = .08$). There was a moderate amount of

additional variability in Intellectual Stimulation, 4% ($\Delta R^2 = .04$), explained by the

inclusion of the professional demographic variable block. Additionally, the individual

variable of gender was a statistically significant predictor for Intellectual Stimulation, $p <$

.05, as displayed in Table 41. The final model:

Intellectual Stimulation = 3.39 − 0.25*(Gender) + 0.04*(Age) − 0.06*(Ethnicity) +

0.08*(Exp1) + 0.05*(Exp2) + 0.13*(Degree).

Table 41

Summary of Hierarchical Regression Analysis for Variables Predicting Intellectual Stimulation: Taylor Version (N = 66)

Variable	Model 1			Model 2		
	B	*SE B*	β	*B*	*SE B*	β
Constant	3.45	0.08		3.39	0.10	
Gender	-0.22	0.12	-.23	-0.25	0.13	-.28*
Age	0.07	0.09	.10	0.04	0.10	0.50
Ethnicity	-0.03	0.11	-.04	-0.06	0.11	-.07
Exp1				0.08	0.11	.10
Exp2				0.05	0.11	.08
Degree				0.13	0.10	.18
R^2		.08			.11	
F for Δ in R^2		1.74			0.82	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*$p < .05$. **$p < .01$.

Overall PAS Score

The final regression that was completed included participants' overall scores on the PAS as the dependent variable. The independent variables were added in the same two blocks, personal demographics and professional demographics. After completing the regression analysis, no statistically significant predictive value for Overall PAS Score was deduced for the personal demographic block of variables, $F(3, 62) = 0.48$, $p = .70$. A small amount (2%) of the variability for the factor was explained by this first block of variables ($R^2 = .02$). The second block of professional demographic variables did not produce an additional statistically significant predictive value for the factor, $\Delta F(3, 59) = 0.43$, $p = .74$, and the variability for the factor could only be attributed to an additional 2% ($\Delta R^2 = .02$) due to the addition of the professional demographic block. As shown in Table 42, examination of the individual variables did not indicate any statistically significant predictive possibilities. The final model:

Overall PAS Score = 3.60 – 0.11*(Gender) – 0.08*(Age) – 0.01*(Ethnicity) + 0.05*(Exp1) + 0.04*(Exp2) + 0.07*(Degree).

Table 42

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Leadership Behaviors (N = 66)

	Model 1			Model 2		
Variable	B	SE B	β	B	SE B	β
Constant	3.63	0.06		3.60	0.07	
Gender	-0.08	0.09	-.12	-0.11	0.10	-.16
Age	-0.06	0.07	-.11	-0.08	0.07	-.15
Ethnicity	-0.01	0.08	.02	-0.01	0.09	-.01
Exp1				0.05	0.08	.09
Exp2				0.04	0.08	.07
Degree				0.07	0.07	.13
R^2		.02			.04	
F for Δ in R^2		0.47			0.43	

Note. Exp1 = less than 4 years of experience as principal. Exp2 = more than 6 years of experience as principal.
*$p < .05$. **$p < .01$.

Qualitative Analysis for Telephone Interviews

The final question on the PAS gave respondents an opportunity to participate in a follow-up telephone interview. A total of eight principals initially indicated that they would be interested in participating in the telephone interview by marking "Yes" and by providing their contact information. The researcher attempted to reach the eight

principals via email, and three principals sent their contact telephone numbers. Two

follow-up emails were sent in an attempt to reach non-responding principals for

telephone interviews, but these attempts proved unsuccessful. A total of three telephone

interviews were conducted during May 2011 utilizing Taylor's Second-Order Change

Principal Protocol (2007) (Appendix G). The researcher attempted to follow the

questions presented in the script, but many of the questions were answered during other

portions of the interview. Notes were taken during the interviews but recordings were

not made in order to protect the privacy of the participants. Principals' names were not

recorded in order to ensure anonymity. Following the interviews, the notes were

transcribed for significant statements in order to determine if any consistent or different

themes emerged based on the aforementioned seven factors (La Cava, 2009). The

demographic information for each of the principals is displayed in Table 43.

Each of the three principals interviewed indicated that research-based programs

were utilized at their schools. Two of the principals stated that the "innovations"

(Question 1 of the Interview Protocol) they were describing were district mandated

reading programs, and the other principal explained that hers could be described as an

"in-house innovation" concerning tutoring and intervention. All three principals

(Question 2 of the Interview Protocol) responded that they knew their innovations were

having a positive impact due, for the most part, to the monitoring and data that had been

accumulated due to district requirements for progress monitoring. The remainder of the

Interview Protocol was formatted with questions concerning each of the seven factors

utilized by both La Cava (2009) and Taylor (2010). The remainder of the analysis of the

telephone interviews has been organized around those seven factors.

Table 43

Descriptive Statistics for Telephone Interviews

	2009-2010	
Principal Demographics	School Grade	Adequate Yearly Progress
Principal A: Broward County	A	Did not meet
Gender: Female		
Race: White		
Degree Attained: Doctorate		
Years at School: 8		
Principal B: Hillsborough County	A	Met
Gender: Female		
Race: Hispanic		
Degree Attained: Doctorate		
Years at School: 4		
Principal C: Pinellas County	A	Did not meet
Gender: Female		
Race: White		
Degree Attained: Doctorate		
Years at School: 7		

Note: Data were obtained from responses to interview questions or PAS data.

Knowledge of Curriculum, Instruction, and Assessment (KCIA)

The school leaders who participated in the telephone interviews explained that the
innovations they were describing had made many positive impacts within the KCIA
factor. A summary of the comments for Section II, Question 1, is presented in Table 44.

Table 44

Interview Participant Responses for Knowledge of Curriculum, Instruction, & Assessment (KCIA)

How did the innovation affect curriculum, instruction, and assessment? Give an example of your work individually or in groups regarding the innovation.

Principal A:
- Data driven assessment model was used across the district so we morphed that into ours.
- Data doesn't lie. There's no guessing or estimates any more!
- I led tremendous amounts of PD and met with teachers. We did book studies.
- I had high expectations and continually tried to make a "way" out of "no way".
- We found that teachers tended to favor well-behaved students and had a tendency to inflate their achievement.

Principal B:
- Teachers became more aware of the standards and what was required of students.
- Originally we only had the teacher's word that students were improving. . . now our district uses a very specific formula to look at how students are progressing.
- We focused on fidelity to the program and instruction improved.
- I had constant dialogue with teachers and tutors, and I completed walk-throughs regularly.
- I had to examine what strategies teachers were actually using.

Principal C:
- The innovation made teachers more aware that the time spent on instruction was the most important factor in their day.
- Teachers began to discuss curriculum, instruction, and assessment with one another, and improvements were inevitable.
- I attempted to help teachers see the connections between assessment data and instruction during data meetings.
- I removed as many barriers as possible so that teachers could teach!

Optimizer

The principals involved in the telephone interviews expressed a strong belief that the innovation in question would work. When queried as to who provided the most leadership for implementation of the innovation, two of the three principals replied that though they had to provide leadership, they also had many teacher leaders who played an integral role in establishing an appropriate direction regarding the changes. The third principal indicated that she had provided most of the leadership for the innovation in question. The principals' comments are summarized in Table 45.

Table 45

Interview Participant Responses for Optimizer

Can you give examples of speaking positively about it (innovation)?   *How did you instill confidence in others that this innovation would yield results?*   *How were roadblocks and challenges identified and addressed?*

Principal A:
- All schools are doing similar activities and this gives teachers esteem and recognition for doing things a certain way.
- It's a big bonus to receive kudos for doing this.
- I spoke about it constantly. . . during PLC meetings, staff meetings, all the time.
- I used data from other schools who had piloted the same program. They had done really well and our demographic is similar. I tried to convince the staff that there was no reason we shouldn't expect equally great results!

Principal B:
- We fostered positive collaboration among teachers and got greater collegiality.
- We had some tough conversations but we worked it out well in the end.
- I shared celebrations of success publicly at staff meetings to promote the program.

Principal C:
- I discussed the reasons for the innovation and past successes that had been experienced when using it.
- Honestly, it was not presented as an option. It was something we were going to do.
- Buy-in was pretty quick because the staff members who innovated quickly had awesome results and others heard about this.
- Team leaders were utilized to help disseminate expectations and to answer questions or concerns.

Intellectual Stimulation

The three principals who were interviewed had all attained their doctoral degrees;

thus, a focus on continuous learning was obvious. However, it was interesting to note

that most of the responses to the questions related to this factor did not particularly focus

on the actual research tied to the innovation. The participants' responses are presented in

Table 46.

Table 46

Interview Participant responses for Intellectual Stimulation

Can you tell me about the research or theoretical background of the innovation?
How did professional staff learn about the theory and research behind it?
Give an example of you including it in your conversations, leading discussions,
or asking questions.

Principal A:
- I shared things with teachers at team meetings or staff meetings.
- Teachers were required to attend many district level professional development opportunities in order to learn about the innovation first hand.

Principal B:
- All of our curriculum and intervention programs are research based so this was pretty easy to do.

I had the reading coach at my school present some workshops on the research behind the program that was provided by our district.

Principal C:
- I truly acted like a cheerleader and pretty much went around singing its praises to anyone who would listen.
- One portion of the tutoring intervention was related to fluency. I shared Tim Rasinski's work and research with the staff in order to create buy-in and understanding.

Change Agent

When the participants in the telephone interviews were asked about the political

processes they used to move the innovation beyond the status quo, each one had very

individualized responses. One talked almost exclusively about parent training; another

spoke about building relationships with the staff and students. The final participant

incorporated processes that involved those inside and outside of the school. Their

feedback regarding this factor appears in Table 47.

Table 47

Interview Participant Responses for Change Agent

Give examples of you raising issues related to student achievement, sharing data, and providing comparisons of where the school/district was and where it needs to be. Can you think of a time when you demonstrated tolerance for ambiguity related to the innovation?

Principal A:
- We hold parent universities four times per year in order to get support from our parents.
- I'm very involved with SAC and PTA. They are hands-on people and very involved. They get the word out for me!
- I present ideas at team leader meetings every Monday and if they don't like my ideas they must come up with a comparable option.
- At the start of the year, I share our results for the FL school grade and for our subgroups. We set goals as a school PLC so that everyone knows where we're headed.
- I have a newsletter that I send out every 2 weeks and we have 4 websites that address things and get the word out.

Principal B:
- I attend data chats with my staff and provoke conversations about student achievement.
- It is imperative to have the buy-in of the teachers!

Principal C:
- I provided PLC focus questions to be used at each team meeting: What do we want students to understand and be able to do? How will we know if they have learned it? What will we do for those who have not? For those who have?
- I examine student data and then I have conversations with teachers, tutors, and support staff about individual student needs and how best to meet them.
- We provide everything for parents online so it is easy for them to access it.

Monitoring and Evaluating

Three questions in Section II of the interview protocol requested that principals discuss monitoring of results, evaluations, and walk-throughs or visits. All of the principals interviewed for the current study stated that monitoring the innovation and its results was one of the most important pieces in the process. The responses related to Monitoring and Evaluating can be found in Table 48.

Table 48

Interview Participant Responses for Monitoring and Evaluating

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What type of monitoring of results has taken place (formative/summative)?
What other monitoring or evaluations are planned?
Can you think of a time when you conducted walk-throughs or visits?

Principal A:
- Teachers use the included progress monitoring assessments for the new reading program. Data are tracked for each child.
- Our school has used DIBELs to track growth and discover areas of weakness.
- Classroom walk-throughs allow me to know what's going on. I can chat with teachers about rigor and relevance and we can work on making improvements.

Principal B:
- We use the district wide assessments and these are given pretty much quarterly.
- We are currently being trained on the Marzano model which is a new evaluation for us.

Principal C:
- We have data chats regularly at our school to discuss needs and to make changes to instruction.
- We use fluency records to track improvements for each child in all grades 1-5 and these are completed weekly.
- I try to walk through classrooms but it is a challenge to make time.

Flexibility

The next question in the interview protocol was used to elicit information

regarding the leader's ability or willingness to be flexible with regard to the innovation.

According to Marzano et al. (2004), "Being both directive and nondirective relative to the

innovation as the situation warrants" (p. 72) makes up the flexibility factor. The

principals' comments are displayed in Table 49.

Table 49

Interview Participant Responses for Flexibility

Provide me with examples of the following: being flexible during the design, implementation, or evaluation of the innovation and adjusting plans as needed. What protocols for evaluation were used or did discussions bog down?

Principal A:
- I'm definitely not as flexible with the data and I have to send in a report to the district. I can be a bit more flexible with the curriculum and I'm willing to listen. We are an A school so sometimes I say I only ask you to do what is absolutely essential and the rest we're not going to do and we're not going to tell anybody.
- I am a risk taker and I like change. As long as it's relevant and reasonable, I'll try it.

Principal B:
- Teachers came to me about the new reading program and after talking with them, I agreed that a change needed to be made so we made it.
- If the whole team agrees then we do it. Consensus rules.

Principal C:
- We review the data and make necessary adjustments based on that. We don't make change unless there's data to back it up!
- My teachers know they can try things and if it doesn't work then we'll try something else.
- I try to solicit teacher and staff input when it is appropriate or possible. With some of the programs, there's only one way. I try to be compassionate and have realistic expectations as we begin implementing something new.

Ideals/Beliefs

The final question for Section II of the interview protocol explored the leader's thoughts regarding consistency related to the innovation. The items presented in Table 50 include the principals' responses for the Ideals/Beliefs factor.

Table 50

Interview Participant Responses for Ideals/Beliefs

How was consistency in leadership related to the innovation obtained?   *What role did you play in achieving consistency?*   *How did you communicate regarding the innovation?*

Principal A:
- In order to achieve the highest results, we must be consistent with our implementation. Fidelity to the new reading program was monitored by doing walk-throughs.
- The district requirements have helped us to achieve and maintain consistency much more than we used to.

Principal B:
- Teachers were required to observe one another teaching the new program to help develop consistent implementation in all classrooms.
- I inspect what I expect. This is the only way to insure everyone is doing things the way you want them done.

Principal C:
- I am constantly discussing things with the staff to insure that we are all on the same page.
- I meet with teacher teams to get information out to them and to hear their feedback about how things are going.

Section III of the interview protocol provided an opportunity for the participants to tell about organizational decisions that enabled the leader to create new systems. The questions for this section included the following concepts: structural changes, position

changes, professional development, technology, and partnerships outside of the school with regard to the innovation. All of the principals interviewed shared that most of the changes related to the structure were dictated by the district, but that they did have the ability to make changes with regard to positions within their schools. Every principal spoke about professional development at both the district and school level, and they all had either implemented more technology or wished that they had the finances to do so. Only one of the three principals focused on building partnerships with parents and with district personnel to meet the needs within the school.

<div align="center">Summary</div>

An analysis of the data for each of the four research questions was presented in this chapter with both tabular displays and accompanying narratives. The qualitative telephone interview data were also analyzed and presented in this chapter. Chapter 5 will present a summary of the findings, implications for practice, and suggestions for future research.

CHAPTER 5
SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Introduction

The final chapter presents a brief review of the components included in this study

and summarizes the findings of the study. Also presented are conclusions and

implications for practice organized around each of the research questions. Finally,

recommendations for future research are offered.

Purpose of the Study

The primary purpose of this study was to evaluate what, if any, relationship

existed between second-order change leadership behaviors of principals and the grade

assigned to their urban elementary schools with fewer than 60% of students who qualify

for free and reduced price lunches by the Florida Department of Education. A secondary

purpose of this study was to compare the findings in the present research to those of La

Cava (2009) with regard to second-order change. La Cava examined principals at urban

Title 1 elementary schools (with 60% or more students who qualified for free and

reduced-price lunches) in Florida using the Principal Action Survey (PAS). This study

specifically examined seven of the 21 leadership responsibilities from the Marzano et al.

(2005) meta-analysis that La Cava (2009) found to be factors utilized by principals

exhibiting second-order change leadership behaviors.

Population

For this comparison study, the researcher targeted a sample of elementary school principals from the same six urban school districts in Florida that La Cava (2009) utilized in his research. The researcher selected 257 elementary school principals of schools with fewer than 60% of students who qualified for free and reduced-price lunches. The sample for this study included 66 elementary school principals, a slightly smaller number than the 101 participants in the La Cava study.

Methodology

This study was conducted using a mixed-method research design. In order to determine if a relationship existed between second-order change leadership behaviors and Florida school grades for urban elementary schools with fewer than 60% of students who qualify for free and reduced-price lunches, data were gathered from principals utilizing the Principal Actions Survey (PAS) (Appendix A) and follow-up telephone interviews.

This mixed-method research design provided the researcher with quantitative data via the survey. Qualitative data were obtained via telephone interviews in which participants were afforded an opportunity to expand on their survey responses. Descriptive and inferential statistics were performed to analyze the data.

Summary of the Findings

The intent of this study was to examine if relationships existed between second-order change leadership behaviors and schools' success based on their Florida

Department of Education assigned school grade and achievement of the No Child Left

Behind (NCLB) adequate yearly progress (AYP) requirements. A secondary intent was

to compare the findings in the current study with those of La Cava (2009). The resultant

data have added to the body of research available regarding second-order change

leadership behaviors of principals in urban elementary schools with more and less than

60% poverty. A summary and discussion of the findings, organized by research question,

follows.

Research Question 1

To what extent, if any, does a relationship exist between the scores of urban
elementary principals of schools with fewer than 60% of students who qualify for free
and reduced-price lunches on the Principal Actions Survey and the Florida Department of
Education assigned school grade and achievement of AYP?

The Florida school grade portion of this question was addressed using a Mann-

Whitney test. Although the test indicated that there was not a statistically significant

difference in the mean ranking of overall leadership behavior scores on the PAS between

principals at schools that received an A grade from the Florida Department of Education

and principals at schools that received a B grade, the mean rankings for leaders at the A

schools were higher than for those at the B schools. This variation in scores indicated

that the principals at the A schools responded favorably regarding their use of second-

order change leadership behaviors more often than those at the B schools. For the AYP

portion of this question, an independent t-test was conducted. The dependent variable

was the total score on the PAS, and the independent variable was whether or not the

school achieved AYP. Similarly, this test revealed that there was not a statistically

significant difference in leadership behavior scores on the PAS between principals at schools that met the requirements for AYP and those that did not. The mean scores for principals whose schools did meet AYP were slightly higher than for those principals whose schools did not meet AYP. The means fell within the agree to strongly agree range on the scale of strongly disagree to strongly agree, demonstrating that most respondents believed second-order change leadership behaviors included in the PAS impacted their students' achievement. Since all of the schools involved in the current study received grades of A or B, attributing a better result as far as the school grade to use of more second-order change leadership behaviors was somewhat challenging. In comparison, La Cava (2009) found "… that principals who had a higher mean on the Principal Actions Survey led A or B-rated schools according to the FLDOE…" (p. 112). Examination of the responses of principals involved in both of the studies related to student achievement at schools with more and less than 60% poverty revealed a trend of higher scores for the principals of schools with more poverty. The results from both studies, regardless of poverty status, would indicate that use of second-order change leadership behaviors can result in higher student achievement.

Research Question 2

According to elementary principals, what leadership behaviors have influenced student achievement in their schools?

The PAS provided two open-ended response items (25 and 26), and participants were asked to report the leadership behaviors that they believed had contributed to improving student achievement, overall and for subgroups, at their schools. Clearly, as

indicated by the responses to items 25 and 26 of the PAS, the principals of schools with less than 60% poverty believed that focusing on a culture of learning, decisions made for student learning, intellectual growth stimulation, personal investment in the change, collaboration and the resulting impact, and data-based decision making positively impacted their students' achievement.

Additionally, open-ended response item 26, dealing with AYP, revealed a focus on three subgroups: special education students, English language learners, and economically disadvantaged students. This could indicate that the principals felt it more difficult to meet the needs of these children than those in the other subgroups with regard to achieving AYP. One might also conclude that the school's population did not include the other subgroups. Regardless of which subgroups each school had, principal responses mainly focused on the following behaviors having a positive impact on student achievement: (a) focusing the culture on learning, (b) making decisions for student learning, and (c) collaborating, and making decisions based on data.

Although many of the principals provided similar responses for both items 25 and 26 on the PAS, with a common emphasis on seven of the Leader Action Themes, some variations arose regarding AYP subgroups. Only one principal mentioned high expectations as a focus for improving student achievement for AYP subgroups, and this school did meet AYP expectations according to the principal's response to item 24 of the PAS. This same principal indicated that the school only had one AYP subgroup (ESE). Thus, though the focus on high expectations could have had an impact on students' achievement, their AYP success may also be attributed to the lack of other subgroups on

which the school must focus. Another principal stated, "Inclusion has most positively

impacted the learning of our ESE group." That principal's school did not, however, meet

AYP as indicated by the response to item 24. Two principals' responses seemed to

indicate some frustration specifically with regard to the AYP expectations. One

principal, whose school did not meet AYP, responded, "We simply do not have enough

money or time to provide enough support," A second principal, whose school also did

not meet AYP, exclaimed, "Impossible to continue to meet that benchmark for certain

subgroups." Additionally, three other respondents mentioned concerns about resources

for meeting the needs of students in the various AYP subgroups. These responses signal

a very different need and concern that the responses regarding overall student

achievement did not indicate. School district personnel may want to consider the

possibility that changes need to occur to make gains in achievement possible for these

groups of students.

When comparing the results of the current study with those of Taylor (2010), one

main difference arose regarding influence through the political environment. Taylor

(2010) organized political environment entities into two categories. Examples of internal

political groups included: staff, students, families, school districts and foundations, and

teachers' unions. Examples of external political groups included: service clubs,

news/media, other educational institutions, professional organizations, government

officials and groups, and others. More of the current study participants mentioned

positive relationships and interactions with teachers and staff (internal school political

environment) and building strong relationships with all stake holders involved in the

school than did participants in Taylor's (2010) research. However, they did not mention influencing through the external political environment at the school district level as did the principals in Taylor (2010). Approximately 10% of the responses in the current study related to influencing through the political environment, but not in the same way as in the previous study. Although these slight variations existed, the responses aligned with Taylor's prior research (2010).

Research Question 3

To what extent, if any, do these leadership behaviors differ from those found by La Cava (2009)?

In order to compare the overall PAS scores of principals of urban elementary schools with 60% or greater poverty to those of urban elementary schools with less than 60% poverty, a series of one-way analyses of covariance (ANCOVAs) utilizing La Cava's (2009) factors were performed. Each factor served as a dependent variable. The study group (principals of schools with 60% or greater poverty (La Cava, 2009) vs. principals of schools with less than 60% poverty) served as the independent variable. Both degree attained and years as the principal at the current school (experience) served as the control variables in order to detect any differences in responses from one group to another.

For all but two of the factors, there was not a statistically significant difference in responses between the groups; however, the principals from the schools with more than 60% poverty did score higher for these factors than did the principals from the schools with less than 60% poverty. A statistically significant difference for the Optimizer factor

was found between the two study groups. The principals from schools with 60% or greater poverty (La Cava, 2009) had a significantly higher score for the PAS items related to Optimizer than did principals from schools with less than 60% poverty when controlling for degree attained and years of experience at the current school. Due to this variation, it can be concluded that principals of urban elementary schools with higher poverty utilized second-order change leadership behaviors relating to being an optimizer more frequently than did principals of urban elementary schools with lower poverty levels.

Further review of the data related to the Optimizer factor revealed a more specific reason for the variations that surfaced regarding the responses of principals from the current study on PAS item 6: "I believe that all academic initiatives implemented at my school will improve academic achievement." La Cava (2009) indicated that 92% of the principals of schools with 60% or more poverty strongly agreed or agreed with this statement. Conversely, only 89% of the 66 principals of schools with less than 60% poverty reported that they strongly agreed or agreed with this statement. Six principals responded that they disagreed and one strongly disagreed. Though one might expect, logically, that if leaders do not believe the school-wide academic initiatives will have a positive impact on student achievement, it is likely that they would not, and the school would suffer with regard to grade or meeting the AYP requirements. It is interesting to note that all of the schools of the seven principals who responded with either disagree or strongly disagree responses to PAS item six received a Florida Department of Education assigned A grade and three of the seven schools met the NCLB AYP expectations.

The second factor that was found to have a statistically significant difference between the group scores of principals from schools with 60% or greater poverty and group scores of principals from schools with less than 60% poverty was Flexibility. The principals from higher poverty schools scored significantly higher on Flexibility than did the other principals when controlling for degree attained and years of experience at their current schools. This difference in scores led to the conclusion that principals of urban elementary schools with 60% or greater poverty employed second-order change leadership behaviors relating to Flexibility more frequently or more successfully than did principals of urban elementary schools with less than 60% poverty. The reader should keep in mind that urban elementary school principals were not flexible related to the goals, but flexible on how to achieve the goals. A more thorough examination of the responses for participants from lower poverty schools on items related to the Flexibility factor led to the following information: 19 of the 66 respondents marked disagree as to item 5 and whether they performed walk-throughs of all teachers at least weekly, and 1 marked strongly disagree for this item. All of the responses for question 11 of the PAS as to whether they adapted to multiple situations were either agree or strongly agree. These were the only two items linked to the Flexibility factor so the variation can be attributed to the responses to the statement "I perform classroom walk-throughs of all teachers at least weekly," with which nearly a third of the current study participants disagreed. Of the 19 schools with principals who did not conduct weekly walk-throughs of all classes, 17 received an A grade but only six met AYP; two received a B grade and neither met

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AYP; the principal who strongly disagreed with this statement led a school that received

an A grade and met AYP.

<center>*Research Question 4*</center>

To what extent, if any, does a relationship exist between principals' professional demographics (age, gender, highest degree earned, and years as the principal of the current school) and the leadership behaviors they believe influenced student achievement?

This question was addressed with a series of 15 hierarchical multiple regressions.

The first series of seven regressions employed the leadership factors defined by La

Cava's (2009) study as the dependent variables. The second set of seven regressions

utilized Taylor's (2010) leadership factors as the dependent variables. Finally, a

regression using the overall score on the PAS was performed. The independent variables

were added in two blocks and were included for each of the regressions. The first block

or model was made up of the following personal demographics: gender (male or female),

age (less than 50 years or more than 50 years old), and ethnicity (white or non-white).

Each regression was completed using this first block of independent variables to examine

if any significant relationships existed. The 15 regressions were run again with the

addition of the following professional demographic block: experience (less than 4 years,

4-6 years, or more than 6 years as principal of the current school) and degree attained

(master's degree or higher degree). Each of the demographic items was coded as a

dichotomous unit with the following combinations: gender (0 = female, 1 = male), age (0

= less than 50, 1 = more than 50), ethnicity (0 = white, 1 = non-white), experience (0 =

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less than 4 years, 1 = more than 6 years), and degree (0 = master's degree, 1 = higher degree).

The results of the regressions indicated that, for the most part, the personal and professional demographics were not statistically significant predictors for any of the leadership factors. However, for La Cava's (2009) Intellectual Stimulation factor, degree attained was a statistically significant predictor of a higher score for this factor. Therefore, the conclusion can be made that principals who attained degrees above the Master's level focused more on the intellectual growth and stimulation of their staffs and themselves. Likewise, for the analysis utilizing Taylor's (2010) modified factors, Intellectual Stimulation had gender as a statistically significant predictor of a higher score on this factor, indicating that female principals in urban elementary schools with fewer than 60% of students who qualify for free and reduced-price lunches reported putting more emphasis or focus towards stimulating intellectual growth in themselves and their staff than did male principals. The examination of KCIA utilizing Taylor's (2010) modified factor also had statistical significance. For this factor, degree was again a significant predictor of a higher score for the Knowledge of Curriculum, Instruction and Assessment (KCIA) component. It can be concluded that principals who attained an advanced degree beyond the Master's degree may have a more thorough understanding of curriculum, instruction and assessment than those with only a Master's degree.

Follow-up Telephone Interviews

The final question on the PAS gave principals the option to participate in a follow-up telephone interview. A total of three telephone interviews were conducted during May 2011 using Taylor's Second-Order Change Principal Protocol (2007) (Appendix G). All three of the interviewees had attained their doctoral degrees, had been at their current school for at least four years, and were female. Two were white, and each participant represented a different school district involved in the study: Broward, Hillsborough, and Pinellas. All three of the principals' schools had received an A grade from the Florida Department of Education, and one of the three had achieved the requirements for AYP.

In examining the interview responses, it was clear to the researcher that these principals made certain that the school culture focused on student learning. They also concentrated their efforts on improving curriculum, instruction and assessment practices that were occurring in their schools. Additionally, all three were strong optimizers and showed this through their comments regarding the following: (a) stating that the innovation would succeed, (b) celebrating successes, and (c) expecting implementation of the innovation to occur through collaboration. The principals all focused on presenting various professional development opportunities to their staff in order to achieve the best results with the innovation. For these three school leaders, monitoring and evaluating were clearly taken very seriously, and they were directly involved in more than just the typical classroom walk-through. They kept track of assessments that were components of the new reading programs, of district-wide assessments, and they participated in data

chats with both teachers and families. Changes to instruction were made based on these data meetings and the results of the various assessments, and the principals found this effective. Finally, all three principals stated very clearly that consistent implementation of any innovation must occur in order to have the maximum success possible. They believed that monitoring implementation was the only way to achieve the desired outcome. After thorough examination of the responses for the quantitative PAS items, the qualitative PAS items, and the telephone interviews, the researcher was able to conclude that principals of urban schools with less than 60% poverty utilized the seven second-order change behaviors daily in their elementary schools. Based on the responses for this study, principal beliefs regarding second-order change leadership behaviors were consistent across both quantitative and the qualitative data. This triangulation of the data further emphasizes the belief that utilization of the seven second-order change leadership behaviors could result in higher student achievement in urban elementary schools with fewer than 60% of students who qualify for free and reduced-price lunches.

<u>Implications for Practice</u>

The two studies, upon which the current study was based, indicated that principals must reflect on their leadership practices in order to have success in this world of educational accountability and that utilizing the seven leadership factors would be beneficial (La Cava, 2009; Taylor, 2010). The current study reinforced this belief. Although statistical significance was not predominant in this study, the principals involved exhibited second-order change leadership behaviors in their daily practice.

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These behaviors are integral for success in the challenging settings of 21st century

schools. The review of the literature revealed the belief that principals must be involved

in long-term professional development both before and during their tenure as

administrators (Houle, 2006; Jackson & Kelley, 2002; Kaplan et al., 2005; Peterson,

2002; Robinson et al., 2008). Professional learning related to the behaviors and how best

to implement them may benefit leaders at any school and should be considered as school

district officials make decisions regarding continued learning for principals. Moreover,

the comparison of principals from schools with 60% or greater poverty to principals from

schools with less than 60% poverty led to the understanding that the principals at higher

poverty schools utilized the second-order change leadership behaviors more often and

potentially more successfully than did principals with fewer economically disadvantaged

students. This could be important for school district leaders as they consider mentoring

opportunities for principals so that more interaction can occur between leaders at schools

with varying levels of poverty.

The results from this study indicated that pursuit of an advanced graduate degree

might benefit principals specifically with regard to the Intellectual Stimulation and the

KCIA factors. Finnigan (2010) also indicated that school district administrators should

attempt to hire educators with advanced degrees for principal positions. Therefore,

school district officials should make attaining an advanced graduate degree as appealing

as possible for school leaders so that more will pursue this option. Their schools would

increase their potential to improve, and students would be the beneficiaries with

increased academic success.

An implied issue related to the study is that of time. The responses to the item asking about classroom walk-throughs and some of the open-ended responses seem to indicate that principals cannot find the time to be in classrooms. Additionally, Gentilucci and Muto (2007) indicated that too much of an administrator's time can quickly become focused on managing the school rather than on the more important tasks related to improving instruction and achievement. School district officials should establish goals for principals and guidance for them concerning how much of their day should be spent on specific activities and what those activities should look like. Feedback from the principals should be received and reviewed to alleviate any time consuming tasks that have little to no impact on student achievement so that the more important task of visiting classrooms regularly can occur. School districts should support their principals in the most effective manner possible in order to help leaders focus on student learning and teacher growth and development, thereby positively influencing achievement and school success.

<p align="center">Recommendations for Future Research</p>

1. The review of the literature uncovered a need for future studies related to principals' perceptions of their use of leadership behaviors versus their teachers' perceptions of the same (Kelley, Thornton, & Daugherty, 2005).

2. According to La Cava (2009), it would be beneficial to conduct studies regarding second-order change leadership behaviors in additional states.

3. A more thorough examination of principals' personal and professional demographics should be conducted with regard to school success as determined by the state. Klecker and Loadman (2000) found that female principals tended to lead schools more successfully than did their male counterparts indicating a need for more examination of personal demographics of principals relative to their school's academic success.

4. Gentilucci and Muto (2007) found that classroom walk-throughs were much more influential when the principal interacted with the students in the classes by asking about their work or providing guidance about the assignment being completed. Research regarding principal leadership behaviors from the perspective of the students would prove beneficial for leaders of schools.

5. Due to the limited number of principal responses received for the current study, future qualitative studies involving more participants would potentially provide a more comprehensive understanding of the impact of specific principal leadership behaviors on student achievement.

6. Additionally, the review of the literature illustrated a potential need for studies related to third-order change in schools. Reilly (1996) stated that third-order changes, or reorganization of schools, should take place in order to improve schools and studies of this aspect of change should prove beneficial to state and district leaders.

Summary

The findings of this study add to the current body of knowledge and work of previous researchers concerning second-order change leadership behaviors. This study further enhanced the idea that these leadership behaviors are integral for success at the elementary school level for principals regardless of their school's poverty level. The final chapter of this study has included a brief review of the study's components and has also offered a summary of the findings. Chapter 5 also included implications for practice and recommendations for future research.

APPENDIX A
PRINCIPAL ACTIONS SURVEY

PRINCIPAL ACTIONS SURVEY (ON-LINE ADMINISTRATION)

1. I agree to the informed consent document on the email sent to me.
   - Yes
   - No
2. I expect and monitor implementation of current research- based curriculum.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
3. I clearly communicate to faculty and staff that all children are expected to make learning gains.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
4. I acknowledge different points of view when making difficult decisions.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
5. I perform classroom walk-throughs of all teachers at least weekly.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
6. I believe that all academic initiatives implemented at my school will improve academic achievement.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
7. I challenge the faculty and staff to review and implement current research.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

8. I expect teachers to assist students in achieving academically and intervene when needed.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
9. I make changes to the status quo.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
10. I provide feedback on performance after classroom walk-throughs.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
11. I adapt to multiple situations.
    - Strongly Agree
    - Agree
    - Disagree
12. Expect faculty and staff to attend conferences on effective schooling practices.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
13. I influence the attitudes and/or behaviors of the faculty and staff.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
14. I expect staff to adjust instruction based on student achievement data.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree

15. I expect consistency with evidence-based instruction.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
16. I meet with individual teachers to discuss student academic data.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
17. I communicate with teachers about essential instructional practices.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
18. I share research with faculty and staff through book talks and/or informal meetings.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
19. I have high expectations for all students to learn.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
20. I solicit input from staff when making change.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree
21. I Expect data- driven instruction.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree

22. I have knowledge of evidence-based instructional practices.
    - Strongly Agree
    - Agree
    - Disagree
    - Strongly Disagree

23. What was your school's FLDOE assigned grade in 2010?
    - A
    - B
    - C
    - D
    - F

24. Did your school achieve Adequate Yearly Progress (AYP) in 2010?
    - Yes
    - No

25. Please share your leadership practices that you attribute to improving student achievement at your school.

26. Which of your actions have impacted achievement of Adequate Yearly Progress subgroups such as economically disadvantaged, special education, and English language learners?

Principal Demographic Section

27. Gender

- Female
- Male

28. Time you served as principal at this school.

- less than 1 year
- 1-3 years
- 4-6 years
- 7-9 years
- 10+
- N/A

29. Age

- less than 30 years of age
- 30-39
- 40-49
- 50+

30. Ethnicity

- African American
- Asian
- Hispanic/Latino
- White
- Other, please specify

31. Your level of education (highest degree earned)

- Master's Degree
- Specialist Degree
- Doctorate Degree

If you would be willing to share more about changes you have brought about in your school please provide contact information. You will be contacted for a brief follow-up telephone interview in the next few weeks.
Name
School
Phone
Email

Thank you for completing the survey.

APPENDIX B
DISTRICT APPROVALS TO PARTICIPATE IN RESEARCH

dcps
Duval County Public Schools

January 19, 2011

Janet Kearney
404 Dorchester Square
Lake Mary, FL 32746

Dear Ms. Kearney:

Your request to conduct research in Duval County Schools has been approved. This approval applies to your project *A Study of Second-Order Change Leadership Behaviors of Principals of Urban Elementaries* in the form and content as supplied to this office for review. Any variations or modifications to the approved protocol must be cleared with this office prior to implementing such changes.

Participation in studies of this nature is voluntary on the part of principals, teachers, staff, and students. Our approval does not obligate any principal, teacher, staff member, or student to participate in your study. **A signed copy of this letter must accompany any initial contact with principals, teachers, parents, and students.**

Our approvals for research run through June 30th of each school year. If your research will extend beyond that date, you will have to resubmit an application at the appropriate time. You will be required to supply copies of signed consent and assent forms at that time. If there have been no changes to the approved protocol you may refer to the previously submitted paperwork.

The Chief Officer of Human Resources has advised that neither you nor your students/colleagues are to be in any Duval County Public School nor have any contact with students until you have gone through the fingerprinting process at DCPS. Please schedule an appointment with the Human Resources department and bring a copy of this approval letter with you to your appointment.

Upon completion of the study, it is customary to forward a copy of the finished report to the Office of Instructional Research and Accountability, 1701 Prudential Dr., rm. 327, Jacksonville, Florida 32207. This office also shall be notified, in advance, of the publication of any reports/articles in which Duval County is mentioned by name.

If you have questions or concerns, please don't hesitate to call me or Dawn Botkin at 390-2976.

Sincerely,

Timothy Ballentine
Executive Director
Instructional Research and Accountability

Hillsborough County
PUBLIC SCHOOLS
Excellence in Education

February 10, 2011

Ms. Janet Kearney
404 Dorchester Square
Lake Mary, Florida 32746

Dear Ms. Kearney:

The Hillsborough County Public School district has agreed to participate in your research proposal, *a Study of Second-order change leadership Behaviors of Principals of urban Elementary Schools*. **A copy of this letter MUST be presented to principals at each school to assure them your research has been approved by the district**. Your **approval number is RR10226**. You must refer to this number in all correspondence. Approval is given for your research under the following conditions:

1) Participation by the principal is to be on a voluntary basis. That is, participation is **NOT MANDATORY** and you must advise **ALL PARTICIPANTS** that they are not obligated to participate in your study.

2) Due to the volume of ongoing survey activity, your survey must occur AFTER the end of the school year. **You cannot request participation by any principal until AFTER JUNE 13, 2011.**

3) Confidentiality must be assured for all. That is, **ALL DATA MUST BE AGGREGATED SUCH THAT THE PARTICIPANTS CANNOT BE IDENTIFIED**. Participants include the district, principals, administrators, teachers, support personnel, students and parents.

4) Research **approval does not constitute the use of the district's equipment, software, email, or district mail service**. In addition, **requests that result in extra work by the district** such as data analysis, programming or assisting with electronic surveys, **may have a cost borne by the researcher.**

5) This approval **WILL EXPIRE ON 6/30/2011**. You will have to contact us at that time if you feel your research approval should be extended.

6) A copy of your research findings must be sent to us for our files and must be submitted to this department **BEFORE ANY DATA IS PUBLISHED IN ANY FORM.**

Good luck with your endeavor. If you have any questions, please advise.

Sincerely,

Theodore Dwyer
Manager of Evaluation
Assessment and Accountability

TD/dsr

ADMINISTRATION BUILDING
301 Fourth St. SW
P.O. Box 2942
Largo, FL 33779-2942
Ph. (727) 588-6000
Fax (727) 588-6202

SCHOOL BOARD OF
PINELLAS COUNTY, FLORIDA
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Lew Williams

Superintendent
Julie M. Janssen, Ed.D.

February 21, 2011

Janet M. Kearney
Principal
Choices in Learning Elementary Charter School
893 E. SR 434
Longwood, Florida 32750

Dear Ms. Kearney,

I received your reuest to conduct research in Pinellas County Schools. Your research proposal, "A Study of Second-Order Change Leadership Behaviors of Principlas of Urban Elementary Schools", Pinellas County proposal number #011011-02 has been approved.

This approval is based on the application submitted to this office for review. You may contact school's principals, and ask for their willingness to participate in this study. Provide the principal(s) with a copy of this letter and a copy of Form A. This permission letter does not obligate schools, teachers, students or parent to participate in your study; participation is entirely voluntary. Contact to schools for their participation in this study has to be done in consideration of local and state assessments or other school activities.

As a public school district, we have to comply with the "Jessica Lunsford Act." According to this law any person who has access to school property when students are present or has direct contact with students is required to meet Level 2 Screening requirements, please visit our website http://www.pcsb.org/emergency.html for fingerprinting procedures.

I also would like to reinforce our practice on momentary reward to school board staff and students; the school board staff may not be paid for work performed related to this study during working hours and students may not be rewarded money for participating in a study. All monetary rewards shall be given to school(s) participating in the study.

Please notify this office of any modifications made to this study prior to initiating your study.

If there are any questions or if additional information is needed, please contact our Research and Accountability department at 727-588-6253.

Best wishes for continued success.

Behrokh Ahmadi, Ph.D
Director Program Evaluation
Pinellas County Schools

BA/jr

Education for a Changing World   www.pcsb.org

APPROVAL EXPIRES THURSDAY, APRIL 12, 2012.

April 12, 2011

TO: All Elementary School Principals

FROM: Maria R. Ligas, Ph.D. MRL
           Institutional Review Board (IRB) Chair

VIA: Desmond K. Blackburn, Ph.D.
           Central Area Superintendent

SUBJECT: REQUEST TO CONDUCT RESEARCH FOR PROPOSAL #640 — A
           STUDY OF SECOND-ORDER CHANGE LEADERSHIP BEHAVIORS OF
           PRINCIPALS OF URBAN ELEMENTARY SCHOOLS

Staff has reviewed the research proposal, #640 — *A Study of Second-Order Change Leadership Behaviors of Principals of Urban Elementary Schools,* submitted by Janet Kearney, Doctoral Student at University of Central Florida, and approval has been granted for her and/or any member of the research team to contact you and request your participation.

The recently completed review involved school-and/or District-based staff. These steps were taken to determine if the proposed methods demonstrated reasonable promise of generating data/analyses that will accurately answer the main research questions of interest.

Your *participation* in this research project is *strictly voluntary*. To aid in your decision, Ms. Kearney has been instructed to share, with each selected school-based staff, a complete description of research activities, as well as all Approval Documentation. Based upon this information, each school-based staff would then be *asked to make a decision to participate or not* and *inform the requesting research parties of their decision at the time of their request.*

DKB/MRL/MAL:bt
Attachment

April 12, 2011

Ms. Janet Kearney
404 Dorchester Square
Lake Mary, FL 3274

Dear Ms. Kearney:

Thank you for submitting your research proposal, #640 — *A Study of Second-Order Change Leadership Behaviors of Principals of Urban Elementary Schools*, for consideration by the Broward County Public Schools (BCPS). Staff has reviewed your research proposal and approval has been granted to contact the Principals at the following Elementary Schools only:

Bayview	Everglades	Margate	Riverglades
Central Park	Flamingo	McNab	Riverside
Challenger	Floranada	Nob Hill	Sandpiper
Chapel Trail	Fox Trail	Norcrest	Sawgrass
Coconut Creek	Gator Run	Nova Blanche Forman	Silver Lakes
Coconut Palm	Griffin	Nova Dwight D. Eisenhower	Silver Palms
Cooper City	Harbordale	Panther Run	Silver Ridge
Coral Cove	Hawkes Bluff	Park Springs	Silver Shores
Coral Park	Heron Heights	Park Trails	Sunset Lakes
Country Hills	Hollywood Central	Pembroke Lakes	Tradewinds
Country Isles	Hollywood Hills	Peters	Tropical
Discovery	Indian Trace	Pines Lakes	Virginia S Young
Dolphin Bay	Lakeside	Plantation Park	Welleby
Eagle Point	Manatee Bay	Quiet Waters	Westchester
Eagle Ridge	Maplewood	Ramblewood	Winston Park
Embassy Creek			

This approval means that we have found your proposed research methods to be compatible with a public school setting and your research questions of interest to the school District. The expiration date on your proposal is *Thursday, April 12, 2012*. If you are unable to complete your research by the expiration date, you must submit an Annual Report/Request for Renewal, (http://www.broward.k12.fl.us/research_evaluation/IRB.Pdf), to the Research Services Department four weeks prior to the expiration date. If a renewal is granted, a Renewal Approval Letter and Memorandum will be issued.

Implementing your research, however, is a decision to be reached by the affected school-based staff on a *strictly voluntary basis*. To assist the school-based staff in their decision to participate, please outline the operational steps to be performed by staff at their school. Based upon this information, each school-based staff would then be *asked to make a decision to participate or not* and *inform you or the requesting research parties of their decision at the time of your/their request*. School-based staff have been instructed not to cooperate unless you provide both pieces of Approval Documentation.

The anticipated date for submitting an electronic copy of your research findings is *Monday, August 13, 2012*. If additional assistance is needed from our staff, **please contact me at 754-321-2500**.

Sincerely,

Maria R. Ligas, Ph.D.

MRL/MAL:bt
Attachments

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APPENDIX C
INSTITUTIONAL REVIEW BOARD APPROVAL

University of Central Florida Institutional Review Boar
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Janet M. Kearney**

Date: **January 13, 2011**

Dear Researcher:

On 1/13/2011, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	A STUDY OF SECOND-ORDER CHANGE LEADERSHIP BEHAVIORS OF PRINCIPALS OF URBAN ELEMENTARY SCHOOLS
Investigator:	Janet M Kearney
IRB Number:	SBE-11-07359
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 01/13/2011 09:55:44 AM EST

IRB Coordinator

APPENDIX D
PERMISSION TO USE PRINCIPALS' ACTIONS SURVEY

December 24, 2010

To: Janet Kearney

Permission is herby granted to use and adapt the Principals' Actions Survey in your

continued research.

I expect a standard scholarly citation to this item. I understand your dissertation will not

be commercially published. This permission is limited to the material and purpose stated.

Prior written permission is required for any additional uses.

Sincerely,

Gonzalo S. La Cava

APPENDIX E
PARTICIPANTS' INFORMED CONSENT

February 16, 2011

To: Elementary Principals
From: Janet Kearney
Principal, Choices In Learning Elementary Charter School
CC: [District Contacts]
Topic: Research on Second-Order Change Leadership Behaviors and Student
Achievement

Dear Principal:

This email is to invite you to participate in a 5 minute survey developed by Dr. Gonzalo
La Cava. The purpose of this research is to study the relationship between leader
behaviors for second order change as described by Marzano, Waters, and McNulty
(2005), and student achievement. Dr. La Cava studied this relationship with principals of
Title I schools and this study is for other principals. The district contact person has
already approved this study.

There are no perceived benefits, compensation, or anticipated risks for participating in the
study. Your participation is voluntary and you can withdraw at any time without penalty.
You will not be penalized for refusing to answer a question and your identity and all
responses will be confidential. Data and results will be reported in aggregate form and
not by individuals. Neither your school nor your name will be associated with any
responses.

Thank you for considering participation in this study. For security and confidentiality
each of you has been assigned a unique username and password. Please go to the link
http://www.surveyhelpers.com/RT3310/

Enter username(all capitals):   and password (upper and lower case):
By entering your username and password you are giving your informed consent to
participate in this study. If you would be willing to participate in a brief follow-up
telephone interview, please include your contact information so that someone may
contact you in the next few weeks. By including your contact information you are giving
your informed consent to participate in the telephone interview.

Information regarding your rights as a research volunteer may be obtained from:
Institutional Review Board (IRB)
University of Central Florida
12201 Research Parkway, Suite 501
Orlando, FL 32826
407.823.2901

If you have any questions please do not hesitate to contact me: janetkearney@aol.com, 407.924.1855 or 404 Dorchester Square, Lake Mary, FL 32746

You may also contact my committee chair, Dr. Rosemarye Taylor: rtaylor@mail.ucf.edu, 407.2823.1469 or UCF College of Education Suite 222.

Most sincerely,

Janet Kearney
Principal, Choices In Learning Elementary Charter School
Doctoral Candidate, UCF

APPENDIX F
EMAIL COMMUNICATIONS WITH PARTICIPANTS

February 16, 2011
To: Elementary Principals
From: Janet Kearney
        Principal, Choices In Learning Elementary Charter School
CC: [District Contact]
Topic: Research on Second-Order Change Leadership Behaviors and Student Achievement

Dear Principal:

This email is to invite you to participate in a 5 minute survey developed by Dr. Gonzalo La Cava. The purpose of this research is to study the relationship between leader behaviors for second order change as described by Marzano, Waters, and McNulty (2005), and student achievement. Dr. La Cava studied this relationship with principals of Title I schools and this study is for other principals. The district contact person has already approved this study.

There are no perceived benefits, compensation, or anticipated risks for participating in the study. Your participation is voluntary and you can withdraw at any time without penalty. You will not be penalized for refusing to answer a question and your identity and all responses will be confidential. Data and results will be reported in aggregate form and not by individuals. Neither your school nor your name will be associated with any responses.

Thank you for considering participation in this study. For security and confidentiality each of you has been assigned a unique username and password. Please go to the link
http://www.surveyhelpers.com/RT3310/
Enter username(all capitals):   and password (upper and lower case):
By entering your username and password you are giving your informed consent to participate in this study. If you would be willing to participate in a brief follow-up telephone interview, please include your contact information so that someone may contact you in the next few weeks. By including your contact information you are giving your informed consent to participate in the telephone interview.

Information regarding your rights as a research volunteer may be obtained from:
Institutional Review Board (IRB)
University of Central Florida
12201 Research Parkway, Suite 501
Orlando, FL 32826
407.823.2901

If you have any questions please do not hesitate to contact me: janetkearney@aol.com, 407.924.1855 or 404 Dorchester Square, Lake Mary, FL 32746

You may also contact my committee chair, Dr. Rosemarye Taylor: rtaylor@mail.ucf.edu, 407.2823.1469 or UCF College of Education Suite 222.

Most sincerely,

Janet Kearney
Principal, Choices In Learning Elementary Charter School
Doctoral Candidate, UCF

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APPENDIX G
TELEPHONE INTERVIEW PROTOCOL

Principal Telephone Interview Protocol

<u>Directions for administration:</u> Principals who responded affirmatively to the telephone interview will be contacted for a twenty minute question and answer session. The following questions will be posed to each principal interviewee. These questions are based on Rosemarye Taylor's (2010) Second-Order Change Principal Protocol.

<u>Say:</u> "My name is Janet Kearney and I am an elementary school principal and a doctoral candidate at the University of Central Fl. I am contacting you because you provided your contact information when you completed the Principal Actions Survey a few weeks ago. The primary purpose of this study is to determine if a relationship exists between second-order change leadership behaviors of principals and the grade assigned to their urban elementary schools by the Florida Department of Education. The researcher is not evaluating the innovation in question or its effectiveness in any way. This telephone interview will be completed to gather information on recurring practices that you feel have contributed to students' achievement. Participation in this interview is strictly voluntary and there are no risks, benefits, or compensation for participating in the study. You may withdraw at any time and will not be penalized for refusing to answer a question. Furthermore, all responses and individuals will remain confidential. The interview will take approximately 20-30 minutes to complete. Do you voluntarily agree to participate in this interview?"

If yes, proceed to question 1. If no, thank them for their time.

1. Describe the innovation and the role you played in the design, implementation, and evaluation.
2. How do you know it was successful? Data? Evidence?

Section II.

1. Knowledge of Curriculum, Instruction, and Assessment
    How did the innovation affect curriculum?
    1. How did the innovation affect instruction?
    2. How did the innovation affect assessment?
    3. Give an example of your work individually or in groups regarding the innovation?
2. Optimizer
    "Who provided the most leadership for implementation of the innovation?
    1. What role did you play in implementing the innovation?
       Can you give an example of speaking positively about it? Providing examples of other schools being successful?
    2. How did you instill confidence in others that this innovation would yield results? Provide examples of you voicing continued confidence in the innovation's success and impact.
    3. How were roadblocks and challenges identified and addressed?
3. Intellectual Stimulation
    Can you tell me about the research or theoretical background of the innovation?

1

1. How did professional staff learn about the theory and research behind it?
2. Give an example of you including it in conversations, leading discussions, or asking questions?

4. Change Agent

What political processes were used to move the innovation beyond the status quo?
2. Give an example of you raising issues related to student achievement?
3. Give an example of you sharing data.
4. Give an example of you providing comparisons of where the school/district was and where it needs to be?
5. Can you think of a time when you demonstrated tolerance for ambiguity related to the innovation?

5. Monitoring/Evaluating
1. What type of monitoring of results has taken place? Formative? Summative?
2. What other monitoring or evaluations are planned?
3. Can you think of a time when you conducted walkthroughs or visits?

6. Flexibility

1. Provide me with an example of your being flexible during the design, implementation, or evaluation of the innovation.
2. Provide an example of adjusting plans as needed.
3. What protocols for evaluation were used or did discussions bog down?

7. Ideals/beliefs

How was consistency in leadership related to the innovation obtained?
1. What role did you play in achieving consistency?
2. How did you communicate regarding the innovation?
3. What are examples of strategic questions that you asked when actions were not aligned with the core beliefs/expectations?

Section III. Organizational Decisions to Create New Systems

Implementing structures, reorganization, reporting, personal positions, instructional resources, and purchased services.
1. What structural changes were made?
2. Were any positions added or reassigned?
3. What professional development was purchased, funded, or organized?
4. What instructional resources or technology solutions were implemented?
5. Were partnerships established with partners outside of the school/district for mutual benefit?

Section IV. Interviewer's Conclusions. New Themes or Questions Related to Second Order Change

(Taylor, 2010)

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