
Electronic Theses and Dissertations, 2004-2019

2012

Strengths of Secondary School Principals in One Large Florida School District, and Achievement of Adequate Yearly Progress in 2010-2011

Kelly Noel Paduano
University of Central Florida



Part of the [Educational Leadership Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2004-2019 by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

STARS Citation

Paduano, Kelly Noel, "Strengths of Secondary School Principals in One Large Florida School District, and Achievement of Adequate Yearly Progress in 2010-2011" (2012). *Electronic Theses and Dissertations, 2004-2019*. 4672.

<https://stars.library.ucf.edu/etd/4672>



University of
Central
Florida

STARS
Showcase of Text, Archives, Research & Scholarship

STRENGTHS OF SECONDARY SCHOOL PRINCIPALS
IN ONE LARGE FLORIDA SCHOOL DISTRICT AND ACHIEVEMENT OF
ADEQUATE YEARLY PROGRESS
IN 2010-2011

by

KELLY NOEL PADUANO
B.S. University of Central Florida, 2002
M.S. University of Central Florida, 2006

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

Spring Term
2012

Major Professor: Rosemarye Taylor

© 2012 Kelly Noel Paduano

ABSTRACT

Increased accountability has led to increased pressure on administrators to meet AYP. By identifying strengths that are present in successful administrators, superintendents will be better equipped to make well-informed selections and administrators can target specific areas for professional growth.

This study used a self-assessment created from the Clifton StrengthsFinder Assessment to analyze the strengths of principals and the commonalities in those strengths based on (a) percentage of adequate yearly progress (AYP) achieved, (b) grade levels served (middle school or high school) and (c) community served (urban or suburban). It is important to note that community served is not meant to indicate the socio-economic status of a school, but instead whether schools reside within census defined urban areas.

It was found that there was a statistically significant difference in the ranking of principal strength of input based on the adequate yearly progress achievement of the school. There was also a statistically significant difference between the principals' ranking of both the strengths of communication and harmony based on grade level served and strengths of achiever and responsibility based on community served. While other strengths did not show statistically significant differences among various groups, their overall rankings are provided and discussed.

To my amazing family.

ACKNOWLEDGMENTS

I first want to thank my chair, Dr. Rosemarye Taylor, for your support and guidance over the past six years. Words cannot describe my gratitude for your support throughout my doctoral program. You have been my advisor in my schooling, career, and life. I would also like to thank the rest of my committee Dr. George Pawlas, Dr. Lee Baldwin, and Dr. Walter Doherty, for your patience, encouragement and knowledge over the past two years. I would also like to thank Dr. Mary Ann Lynn for her time and expertise in editing this study.

Throughout the study I was fortunate to have the support of my colleagues and principals. Thank you all for your flexibility and giving me that extra push when I got off track.

I would also like to thank my parents, Jim and Kathleen Loesch, for teaching me the importance of education and my sister, Katie Meyer, for supporting me in everything I do. You have always been my biggest cheerleaders.

Finally, I want to thank my amazing husband Mike and our loving daughter Kaley. You have both sacrificed so much to help me achieve my goal. I am excited to now have the opportunity to focus my time on our growing family. Welcome baby number two. I love you all very much.

TABLE OF CONTENTS

LIST OF FIGURES	ix
LIST OF TABLES	x
CHAPTER 1 THE PROBLEM AND ITS CLARIFYING COMPONENTS.....	1
Introduction.....	1
Conceptual Framework.....	2
Accountability in Education	2
No Child Left Behind Act of 2001	2
The Principal’s Changing Role in Accountability	3
Statement of Problem.....	5
Significance of Study.....	5
Purpose of the Study	6
Research Questions.....	7
Methodology.....	8
Study Population.....	8
Independent and Dependent Variables	8
Instrumentation	9
Data Collection	9
Data Analysis	10
Delimitations.....	11
Limitations	11
Operational Definitions.....	12
Summary.....	15
CHAPTER 2 REVIEW OF LITERATURE	16
Introduction.....	16
History of Accountability in Education	17
No Child Left Behind.....	19
Background of the Legislation.....	19
Intent of No Child Left Behind (NCLB).....	19
Stronger Accountability for Results.....	20
More Freedom for States and Communities	22
Proven Education Methods	22
More Choices for Parents.....	23
Implications of No Child Left Behind (NCLB).....	24
Florida’s A+ Plan.....	27
Changing Role of a Principal.....	29
Impact of Principals on School Success	31
Factors that Lead to a Principal’s Success	34
Studies on the Impact of Principals on School Success.....	34

Clifton StrengthsFinder.....	39
Summary	42
CHAPTER 3 METHODOLOGY	44
Introduction.....	44
Statement of the Problem.....	44
Research Questions	45
Population	45
Instrumentation	46
Delimitations.....	46
Limitations	47
Data Collection	47
Data Analysis	51
Summary	53
CHAPTER 4 ANALYSIS OF DATA	54
Introduction.....	54
Purpose of the Study	54
Research Questions.....	55
Demographics	55
Analysis of Data.....	58
Research Question 1	61
Research Question 2	68
Research Question 3	76
Summary	84
CHAPTER 5 DISCUSSION, CONCLUSIONS AND RECOMENDATIONS	85
Introduction.....	85
Statement of Problem.....	85
Data Collection	86
Limitations	87
Summary and Discussion of the Findings	88
Research Question 1	88
Research Question 2	91
Research Question 3	93
Findings.....	95
Implications for Practice.....	96
Recommendations for Future Research	97
Summary	98
APPENDIX A 30 THEMES SELF-ASSESSMENT.....	99
APPENDIX B COMMUNICATIONS WITH PARTICIPANTS	101

LIST OF REFERENCES 104

LIST OF FIGURES

Figure 1. Florida's School Grading Plan: 1999-2010 29

LIST OF TABLES

Table 1 <i>Florida’s Urbanized Areas According to Census 2000</i>	14
Table 2 <i>Adequate Yearly Progress (AYP) Status in Florida and the United States: 2007</i>	21
Table 3 <i>No Child Left Behind (NCLB) Categorical Funding</i>	22
Table 4 <i>Students Eligible for Tutoring and School Choice in Florida and the United States: 2008</i>	24
Table 5 <i>The Effect of Leadership on Academic Achievement by Grade Level</i>	33
Table 6 <i>Leadership Responsibilities and Their Correlation(s) with Student Academic Achievement</i>	36
Table 7 <i>Test-Retest Reliability of Clifton StrengthsFinder Themes</i>	41
Table 8 <i>Percentage AYP and Community Served for Participating Middle Schools</i>	49
Table 9 <i>Percentage AYP and Community Served for Participating High Schools</i>	50
Table 10 <i>Grade Level Served by Participants in the 2010-2011 School Year</i>	56
Table 11 <i>Community Served by participants in the 2010-2011 School Year</i>	57
Table 12 <i>Percent of AYP achieved in schools served by participants during the 2010-2011 school year</i>	58
Table 13	60
Table 14 <i>Kruskal-Wallis Results for Strength Identification by AYP Group (N = 34)</i>	64
Table 15 <i>Mean and Overall Rankings of Strengths by AYP Group in Alphabetical Order</i>	66
Table 16 <i>Mean and Overall Rankings of Strengths by AYP Group in Rank Order</i>	67
Table 17 <i>Mann-Whitney Results for Strength Identification by School Level (N = 34)</i> ..	70
Table 18 <i>Mean and Overall Rankings of Strengths Grouped by Level in Alphabetical Order</i>	72
Table 19 <i>Mean and Overall Rankings of Strengths Grouped by Level in Rank Order</i> ...	73

Table 20	<i>Rankings of Strengths by AYP Group for Principals Serving Middle Schools.</i>	74
Table 21	<i>Mean and Overall Rankings of Strengths by AYP Group for Principals Serving High Schools</i>	75
Table 22	<i>Mann-Whitney Results for Strength Identification by Community Size</i>	78
Table 23	<i>Mean and Overall Rankings of Strengths by Community Served Sorted Alphabetically</i>	80
Table 24	<i>Mean and Overall Rankings of Strengths by Community Served Sorted by Rank</i>	81
Table 25	<i>Mean and Overall Rankings of Strengths by Community Served for Middle Schools</i>	82
Table 26	<i>Mean and Overall Rankings of Strengths by Community Served for High Schools</i>	83

CHAPTER 1 THE PROBLEM AND ITS CLARIFYING COMPONENTS

Introduction

This study expands on Anderson's 2008 research which investigated strengths, as determined by the Clifton StrengthsFinder Assessment, of potential administrators who had been selected by their principals to be part of an Aspiring Leaders Program.

Anderson found the following strengths were most frequently selected by participants: (a) maximizer, 25.9%, (b) learner, 36.1%, (c) responsibility, 37.7%, (d) achiever, 37.8%, and (e) relator, 45.9%. He also found that participants had similar strengths despite the grade levels they served. This finding supported Anderson's hypothesis that principals looked for similar strengths in future administrators at all three levels.

Although Anderson (2008) identified strengths that principals sought in future administrators, he did not investigate strengths of principals themselves. In his recommendations for further research, Anderson wrote: "A study could be conducted analyzing the strengths as defined by the Clifton StrengthsFinder of those administrators at academically successful schools based on standardized test scores" (p. 115). This study addressed the strengths of principals and the commonalities in those strengths based on (a) percentage of adequate yearly progress (AYP) achieved, (b) grade levels (middle school or high school) served and (c) community served (urban or suburban). It is important to note that urban represents schools that reside within the census defined urban area's city limits. Community served is not meant to indicate the socio-economic status of a school.

Conceptual Framework

Accountability in Education

The passing of the No Child Left Behind Act of 2001 led to calls for accountability that created increased responsibilities for principals (Lyons & Algozzine, 2006). The federal government increased pressure on state legislatures who in turn pressed local governments and superintendents to improve school performance of America's youth. In response, local boards of education and superintendents looked to principals to improve student learning in their schools (Lyons & Algozzine). This movement led to transitioning from principals playing an administrative role to becoming more involved in curriculum, instruction, assessment and data analysis (Butler, 2008). In their examination of accountability and its impact on the role of the principal, Tucker and Coddling (2002) shared their view on the job of principal.

Why would anyone want the job of principal? Many school principals we know have the look these days of the proverbial deer caught in the headlights. Almost overnight, it seems they have been caught in the high beams of the burgeoning accountability movement. (p. 1)

No Child Left Behind Act of 2001

At the heart of every accountability discussion is the federal legislation known as the No Child Left Behind Act of 2001 (NCLB). According to the U.S. Department of Education, No Child Left Behind "is based on stronger accountability for results, more

freedom for states and communities, proven education methods, and more choices for parents” (Four Pillars of NCLB, 2004, para. 1).

Achievement of adequate yearly progress (AYP) was required as a part of the No Child Left Behind (NCLB) Act. For a school to make AYP, schools had to show annually that the total population and each of the eight identified student subgroups reach the annual proficiency target in both mathematics and reading. These subgroups include economically disadvantaged (ED) students, students with disabilities (SWD), English Language Learners (ELL), African American, American Indian, Asian, Hispanic, and White. Each year the percentage of students required to meet proficiency rises until 2014 when 100% of students are expected to be proficient in both areas (Assessment Literacy Glossary, n.d.). Schools that fail to achieve AYP over multiple years are faced sanctions and additional requirements for its district (Assessment Literacy Glossary).

The Principal’s Changing Role in Accountability

“A school principal’s job has never been tougher” (Butler, 2008, p. 67). School districts are looking for new ways to impact student achievement. One way, is through leadership. Marzano, Waters and McNulty (2005) showed that leadership is essential to a schools success. Gurr, Drysdale, and Mulford (2006) reported that the principal remains as one of the most important elements in determining the success of a school. Olson (2007) claimed that most schools that have made substantial gains in closing achievement gaps had highly effective principals, “even if research has yet to specify the precise mix

of leadership knowledge, skills, and behaviors linked to student-achievement gains” (p. 1).

Given that principals have been generally accepted as playing a key role in determining the success of schools, it is vital that the qualities that lead some principals to succeed more than others be understood. Gurr et al., (2006) conducted a study of 13 primary and secondary Australian schools. The study, which used open-ended questions and interviews to allow reflection, focused mainly ways the principal contributed to the success of the school. It was found that the qualities of the principal were universal and constant (Gurr, et al.). All of the principals displayed similar characteristics, including openness, honesty, empathy, flexibility, passion, and commitment. They were also seen as enthusiastic, highly motivated, persistent, determined, and assertive. The study conducted by Gurr et al. highlighted what others saw as strengths of the principal and showed the importance of the principal to the success of a school.

The Southern Regional Education Board (SREB) identified 13 elements deemed essential to quality leadership. Among these factors were: create a mission, set high expectations, encourage quality instruction, implement a caring environment, use data, keep focused, involve parents, seek support, and organize time and resources (as cited in Butler, 2008). Other researchers, however, questioned the validity of such measurements, citing that those characteristics that were effective in the past were not the same characteristics that were needed in the new age of accountability (Duke, Grogan, Tucker, & Heinecke, 2003).

Guskey (2007) argued that in this new age of accountability, leaders must be willing to ask questions to succeed. Principals and teachers alike need to be asking “Who is not learning?” and “What are they not learning and why?” Guskey claimed that leaders needed to look at every assessment and encourage teachers to discuss their results with each other on a regular basis. According to Guskey, this shared responsibility requires a new kind of leader, and that leaders need to learn to replace defensiveness with inquisitiveness.

Statement of Problem

Increased accountability has led to increased pressure on administrators to meet AYP. Principals who did not improve student achievement were removed and replaced with administrators who, it was hoped, can meet the ever increasing demands that accountability has created (Lyons & Algozzine, 2006). However, without adequate information outlining the strengths of successful administrators, the process of replacing administrators may have limited success in improving student achievement. By identifying strengths that are present in successful administrators, superintendents will be better equipped to make well-informed selections and administrators can target specific areas for professional growth.

Significance of Study

With increased pressure on schools and school boards, it is important to understand how and to what extent the principal of a school can influence adequate

yearly progress (AYP). The results of this study may be useful to school boards and district administrators. The findings may yield additional information that can be used in the recruitment and professional development of secondary school principals who are prepared to lead high achieving schools that make adequate yearly progress.

Purpose of the Study

Increased emphasis on school accountability has increased pressure on school-based administrators to improve student achievement, and adequate yearly progress (AYP) has been the measurement used by the federal government to determine school performance. Schools that do not meet a minimum of 80% AYP have faced corrective action from the State of Florida (Mapping Florida's educational progress, 2008). Schools that do not improve can be forced to close their doors, become charter schools, or terminate employees and start again with new staff members. Despite the enormous pressure on school districts to hire and promote the right leaders, the research on the qualities possessed by principals who have been successful in meeting AYP has been inadequate. The purpose of this study was to analyze the strengths of the targeted school district's principals and determine if there were commonalities based on (a) percentage of adequate yearly progress (AYP) achieved, (b) grade levels served, and/or (c) community served (urban, suburban or rural). It is important to note that urban represents schools that reside within the census defined urban area's city limits. Community served is not meant to indicate the socio-economic status of a school. Because no schools were

identified as rural, the study only addressed the first two categories of community served (urban or suburban).

The StrengthsFinder Profile, developed by the Gallup Organization, (Buckingham & Clifton, 2001) was used by the researcher to create the 30 Themes Self-Assessment (Appendix B). The 30 Themes Self-Assessment required that participant principals rank their 10 greatest strengths (as defined by the Clifton StrengthsFinder). Additional information including percentage of adequate yearly progress (AYP) achieved, grade levels served, and community served (urban or suburban) was collected via public records and the Florida Department of Education website.

Research Questions

The following research questions guided this study:

1. What, if any, are the differences between the self-identified strengths of principals based on the school's percentage of adequate yearly progress (AYP) in 2010-2011?
2. What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they serve (middle or high school)?
3. What, if any, are the differences between the self-identified strengths of principals based on the community they serve (urban or suburban)?

Methodology

This quantitative research study was conducted to investigate the self-identified strengths of principals serving in the targeted school district. It extended the research initiated by Anderson (2008) in which the researcher studied potential future administrators. By studying the strengths and talents of administrators who successfully met at least 80% AYP, it was anticipated that it would be possible to determine specific strengths common among successful administrators.

Study Population

The targeted school district consisted of 176 traditional schools and 24 charter schools serving more than 180,000 students. The district was made up of a variety of races with 63% White, 29% Black, 1% Native American, 5% Asian American, and 34% Hispanic (Student Enrollment Summary, 2011). The population in this study was comprised of all of the secondary (middle and high school) principals from the 17 high schools and 33 middle schools in the targeted school district during the 2010-2011 school year. Elementary schools and non-traditional schools in the targeted school district were excluded from the study.

Independent and Dependent Variables

The independent variables in the investigation were the strengths and talents of the administrator as determined by the self-assessment. The dependent variables were

grade levels, community served, and percentage of AYP achieved during the 2010-2011 school year.

Instrumentation

In order to determine the strengths of the principals, each participant completed a 30 Themes Self-Assessment that was developed by the researcher based on the Gallup Organization's Clifton StrengthsFinder, an online program designed to measure talent and recognize areas where the greatest opportunity for building individual strengths (Lopez, et al., 2005). These strengths were not specific to education but were developed for use across various industries. Many of the principals were familiar with the Clifton StrengthsFinder Assessment as it had been provided to all administrators in the targeted school district a few years prior. The 30 Themes Self-Assessment, which asks principals to rank their ten greatest strengths, is presented in Appendix A.

Other sources of data were the Florida Department of Education and the targeted school district's websites. These sites yielded additional data regarding the number of years principals had been at their current school, current and previous school grades, AYP data, and community demographic data.

Data Collection

In September 2010, all secondary principals within the targeted school district received a letter inviting them to participate in the study. The first letter was sent via email with a link to the online self-assessment questionnaire. A few days later, a follow-

up email was sent as a reminder. Those who did not complete the survey within three weeks received a third email asking them once again to complete the online assessment. For those who did not respond to the third request, the researcher sent a fourth, and if necessary, a fifth and final reminder request. Copies of all communications with participants are contained in Appendix B.

Data Analysis

As a first step in the analysis of the data, each participant was identified as serving a middle (grades 6-8) or high school (grades 9-12) and as serving an urban or suburban school. It is important to note that urban represents schools that reside within the census defined urban area's city limits. Community served is not meant to indicate the socio-economic status of a school. Participating principals were also placed in three AYP categories: (a) principals whose school met at least 80% AYP in 2010-2011, (b) principals whose school met between 70%-79% AYP in 2010-2011, and (c) principals whose school met less than 70% AYP in 2010-2011. While less principals fell into the first group than the other two, it was important to keep the top tier of principals at 80% or higher, as the Florida Department of Education, Bureau of School Improvement has determined that schools that do not make 80% AYP may face sanctions and corrective action (Florida Differentiated Accountability, 2011). Finally, principals' self-identified 10 greatest strengths, in the 30 Themes Self-Assessment, were entered in rank order into SPSS, the statistical software used to analyze the data.

These data were analyzed to establish if there was a difference between principal strengths and percentage of students at their school having achieved AYP. In addition, statistical analyses were performed to determine if there was a difference in the strengths of principals serving urban and suburban schools, and if there was a difference in strengths of principals serving middle and high school students.

Delimitations

The study was delimited by the following:

1. The study was delimited to secondary (middle and high) school principals in the targeted school district. Elementary principals were excluded.
2. The study was delimited to traditional middle and high school principals within the targeted school district. Principals in non-traditional schools, i.e., Alternative and Charter Schools, were excluded.
3. Adequate yearly progress data were delimited to data collected for all traditional middle and high schools within the targeted school district whose principals participated in this study.

Limitations

The factors that could limit the validity of this research include:

1. The principals' strengths could be influenced by what participants believed to be a correct answer.

2. Because the population for this study was limited to the targeted school district, its generalizability may be limited.

Operational Definitions

Adequate Yearly Progress: Determined by the No Child Left Behind (NCLB) Act of 2001, adequate yearly progress is the minimum performance level that must be achieved by schools and school districts annually.

Clifton StrengthsFinder: The Clifton StrengthsFinder is an online program designed to measure talent and recognize areas where the greatest opportunity for building individual strengths (Lopez, Hodges & Harter, 2005). The web-based assessment contains 180 self-descriptors listed as pairs which are grouped into 34 themes. Each participant has their top five themes identified in order to highlight their strengths (Anderson, 2008).

No Child Left Behind (NCLB): In January 2002, NCLB was introduced and signed into law by President George W. Bush. It was the federal legislation that reauthorized a number of programs aimed at improving schools by: “increasing the standards of accountability for states, school districts and schools, providing parents more flexibility in choosing which schools their children will attend, measuring student progress through standardized tests, and promoting an increased focus on reading” (Academic collaborative environment, para. 9)

Urban: The Census Bureau classifies all housing units, population, and territory located within an urbanized area as urban (U.S. Census, 2003). The city of Orlando is the

only urbanized area, as defined by the 2010 census, in the targeted school district and therefore only schools located within the census defined urban area's city limits were classified as urban in this study. Urban does not mean to indicate the socio-economic status of the school or the community it serves. Table 1 lists the census defined Urban Areas in Florida.

Suburban: Suburban is defined as any schools that reside outside of the census defined urban area's city limits, but still serve and reside within a metropolitan area. For the purposes of this study, all schools that are not residing within the census defined urban area's city limits were identified as suburban.

Rural: Because the targeted county is not identified as a rural county, no area within the targeted county was identified as rural (U.S. Census, 2003). Therefore, for the purposes of this research, no schools were identified as rural.

High School: High School is defined as serving students in grades 9-12.

Middle School: Middle School is defined as serving students in grades 6-8.

Table 1

Florida's Urbanized Areas According to Census 2000

Urbanized Area (UA)	Population (2000)	Population Density
Bonita Springs--Naples, FL	221251	1472.9
Brooksville, FL	102193	1220.5
Cape Coral, FL	329757	1719.1
Daytona Beach-Port Orange, FL	255353	2248.6
Deltona, FL	147713	1649.9
Fort Walton Beach, FL	152741	1582.2
Gainesville, FL	159508	2059.0
Jacksonville, FL	882295	2149.2
Kissimmee, FL	186667	1782.1
Lady Lake, FL	50721	1014.8
Lakeland, FL	199487	1654.1
Leesburg--Eustis, FL	97497	1373.0
Miami, FL	4919036	4407.4
North Port--Punta Gorda, FL	122421	1369.6
Ocala, FL	106542	1197.7
Orlando, FL	1157431	2554.0
Palm Bay--Melbourne, FL	393289	1789.8
Panama City, FL	132419	1302.3
Pensacola, FL	321875	1477.3
Port St. Lucie, FL	270774	1602.0
St. Augustine, FL	53519	1545.9
Sarasota--Bradenton, FL	559229	2067.8
Tallahassee, FL	204260	1793.7
Tampa--St. Petersburg, FL	2062339	2570.6
Titusville, FL	52922	1679.1
Vero Beach--Sebastian, FL	120962	1484.9
Winter Haven, FL	153924	1477.7
Zephyrhills, FL	53979	1309.2

Note: Adapted from U.S. Census Bureau, March 2003. Because copyright protection is not available for any work of the United States Government (Title 17 U.S.C., Section 105), prior consent was not needed to reproduce.

Summary

This chapter presented an overview of the study in which the problem and its clarifying components have been introduced. The conceptual framework was briefly explained in regard to the principal's role in accountability and the need to improve student achievement in American schools. The methods and procedures that were used to conduct the study, including the data collection and analysis procedures, have also been introduced.

Chapter 2 contains a review of the literature. The methodology used in the study and the analysis of data are presented in Chapters 3 and 4, respectively. Chapter 5 contains a summary and discussion of findings, implications for practice, and recommendations for future research.

CHAPTER 2 REVIEW OF LITERATURE

Introduction

This chapter presents a review of the literature and related research. It has been organized to provide background information on what is meant by the term accountability when used in reference to education and to trace the history and requirements of the various legislative measures that have led to increased accountability in Florida schools. Also reviewed is the role of the principal and previously identified strengths and skills associated with effective principals. Research was also conducted to determine the reliability and validity of the StrengthsFinder Assessment used to create the survey for this research study.

The literature review was conducted using multiple sources including (a) The University of Central Florida's libraries and online database searches including ERIC, PsychLit, and Dissertation Abstracts; (b) the U.S. Department of Education and Florida Department of Education on-line search engines, and (c) the researcher's professional library. In addition, the reference sections of each of the studies found through database searches were also reviewed.

In review of the literature and related research, empirical research related to principal strengths and adequate yearly progress was quite limited. In an effort to adequately support the research questions, the search was widened to include leadership characteristics and traits as well as any measure of success including standardized testing, surveys, interviews, etc. While there was a plethora of educational leadership books and

articles addressing personal opinions, there was a lack of empirical research on the subject. Marzano, Waters, and McNulty (2005) addressed this irony: “In spite of the relative paucity of empirical studies on school leadership, books recommending leadership practices for educational administrators abound” (p. 6).

In the review of research related to the survey instrumentation, there was little information regarding the reliability or validity of the instrument. The only two pieces of research that addressed the accuracy of the Clifton StrengthsFinder were A Technical Report On The Clifton StrengthsFinder With College Students and The Clifton StrengthsFinder Research Frequently Asked Questions. Both were created by the same Gallup Organization which created the StrengthsFinder Instrument.

History of Accountability in Education

School leaders often view accountability with a bit of contempt. Guskey (2007) wrote that leaders see accountability as a “loathsome political monster. It wields a carrot of rewards in one hand and the club of sanctions in the other” (p. 1). Over the years, accountability in schools took on increasing importance, not only in the United States, but around the world (Feng, Figlio, & Sass, 2010). Such accountability systems were meant to ensure that all students had an opportunity to acquire a quality education and that schools were held accountable for providing it (Hamilton, Stecher, & Klein, 2002).

During the cold war in the 1950s, schools were viewed as an integral part of the nation’s defense. With this came some of the first serious public concerns for education (Bracey, 2002). The concern was that the public schools were not producing enough

quality mathematicians, engineers and scientists. When the Russians launched Sputnik in 1957, the public felt their concerns had been validated. The consensus was that the country was not keeping up, and the educational system was to blame (Rudalevige, 2003).

In 1965, President Lyndon Johnson made efforts to halt poverty with the establishment of the Elementary and Secondary Education Act (Rudalevige, 2003). Then, in 1983, Ronald Reagan's administration released, *A Nation at Risk*, (Rudalevige). This report, which was referred to as the paper Sputnik by Bracey (2002), once again called into question the education of America's youth.

The accountability movement did not gain momentum until 1989 when an educational summit was held in Virginia. Then President George H. W. Bush and each of the governors established academic goals for public schools (Rudalevige, 2003). In 1991, voluntary national testing tied to standards was added to what was known as President Bush's America 2000 proposal. Although Congress never passed legislation making President Bush's proposal the law, the interest generated led to President Clinton's Goals 2000 which encouraged states to develop academic standards by providing grants (Rudalevige).

It was the reauthorization of the Elementary and Secondary Education Act in 1994 that would require states develop content and performance based standards for K–12 schools and “signaled a nationwide commitment to standards-based reform” (Rudalevige, 2003, p. 2). The legislation allowed Congress to accept the idea of adequate yearly progress, which became the cornerstone of federal accountability (Rudalevige). It

became an obligation that states make “continuous and substantial progress toward the goal of academic proficiency for all students,” (p. 2) but there were no deadlines or consequences for those who did not comply. Despite these shortcomings, the 1994 reauthorization once again set the stage for the accountability systems of the 21st century and began the process of establishing standards in most states (Rudalevige).

No Child Left Behind

Background of the Legislation

The passing of No Child Left Behind (NCLB) Act in 2002 placed academic achievement and accountability at the top of the political agenda for school reform. No Child Left Behind was passed by the United States Congress in February of 2002 and represented a “sweeping reauthorization of the Elementary and Secondary Education Act” (Rudalevige, 2003, p. 2). When NCLB was signed into law, the president authorized an increase of more than 24% in federal funding to states (National Conference of State Legislatures, 2004). This funding was meant to ensure district participation (Ladner, Lips, & Heritage, 2009) and it came with a record increase of federal mandates and standards (Rudalevige, 2003).

Intent of No Child Left Behind (NCLB)

NCLB was designed to improve the education of children by recognizing unsuccessful schools and taking appropriate corrective action (Guskey, 2007).

Specifically, NCLB was intended to reduce the disparity in achievement between students from traditionally underperforming demographics (Four Pillars, 2004) and their higher achieving counterparts. It also provided the opportunity for students who attended low performing schools to transfer to higher performing schools.

According to the U.S. Department of Education, there were four pillars that articulated No Child Left Behind's intent. They were (a) stronger accountability for results, (b) more freedom for states and communities, (c) proven education methods, and (d) more choices for parents (Four Pillars).

Stronger Accountability for Results

The goal of NCLB was to close the achievement gap and ensure that all students, even the disadvantaged, were academically proficient. This was to be achieved by providing transparency in the way of annual report cards for schools and districts and providing support and taking corrective action in the schools that were not achieving. If schools continued a pattern of non-achievement and did not make adequate yearly progress (AYP), drastic changes would be made to the operations of the school after five years (Four Pillars, 2004). Reproduced in Table 2 are data on (a) schools making adequate yearly progress, (b) schools in need of improvement, and (c) schools in restructuring in Florida and the United States in 1998.

Table 2

Adequate Yearly Progress (AYP) Status in Florida and the United States: 2007

Schools	Florida	%	United States	%
Total schools	3,766	100.0%	98,905	100.0%
Schools making adequate yearly progress	1,082	28.7%	64,546	65.3%
Schools in need of improvement	1,001	26.5%	10,676	10.8%
Schools in restructuring	462	12.3%	2,302	2.3%

Note: Adapted from Mapping Florida’s Progress, 2008, United States Department of Education, p. 1. All publications issued by the U.S. Department of Education (ED) and all information available on ED's website are in the public domain. These publications and information may be reproduced for non-commercial purposes without prior consent.

While Table 3 shows that only one-third of Florida schools were making AYP as compared to 70% of schools throughout the United States, it does not explain that the standards vary among states. Although the major components of adequate yearly progress were determined by the Federal government, states had some latitude (Guskey 2007). Under NCLB, each state was to establish systems of accountability by setting standards, assessing students, creating a baseline, and setting proficiency levels across the state (Sanzo, Sherman, & Clayton 2011). In other words, states determined what was considered proficient. In Florida, proficiency was defined as earning a level 3 (out of 5 possible levels) in both the mathematics and reading components and a level 4 (out of 6 possible levels) in the writing component of the Florida Comprehensive Assessment Test (FCAT).

More Freedom for States and Communities

No Child Left Behind Act included flexibility by authorizing states to transfer federal funding to any one of the programs (Four Pillars, 2004). This gave flexibility to both states and school districts when deciding how to use federal funds. Districts could now use these funds for hiring teachers, teacher training, professional development or even increasing teacher pay. Table 3 displays the categorical funding available through NCLB legislation (Anderson, 2008).

Table 3

No Child Left Behind (NCLB) Categorical Funding

Name	Focus
Title I	Achieving Equality Through High Standards and Accountability
Title II	Improving Teacher Quality
Title III	Moving Limited English Proficient Students to English Fluency
Title IV	Promoting Parental Options and Innovative Programs
Title V	Safe Schools for the 21 st Century

Note: Adapted from Anderson, 2008, p. 23.

Proven Education Methods

With the introduction of No Child Left Behind, new emphasis was placed on using scientifically proven practices. To support this, funding was allocated to train teachers in these practices and a What Works Clearinghouse was created where teachers

and administrators could go to see the effectiveness of various programs based on grade and subject area (Four Pillars, 2004).

More Choices for Parents

One of the more controversial pieces of the NCLB legislation was that of choice. Under NCLB, parents were given the option for their children to attend better performing school if their current school failed to meet the established standards for a second year. In addition, students from low-income families were also eligible for tutoring, after-school school care, and summer services at the district's expense (Four Pillars, 2004). Table 4 displays the number of students in Florida and the United States who were eligible for tutoring and school choice and those who took advantage of these opportunities. Florida's percentage (16.5%) of participating students who accessed tutoring assistance exceeded the national percentage (14.5%). Very small percentages of students (2% in Florida and 2.2% in the U. S.) opted to take advantage of the opportunity to change to a better performing school.

Table 4

Students Eligible for Tutoring and School Choice in Florida and the United States: 2008

Descriptor	Florida		United States
	# Eligible	% Participation	% Participation
Tutoring	428,268	70,457 (16.5%)	529,627 (14.5%)
Choice	762,724	14,905 (2.0%)	119,988 (2.2%)

Note. Adapted from the Mapping Florida’s Progress, 2008, United States Department of Education, p. 1. All publications issued by the U.S. Department of Education (ED) and all information available on ED's website are in the public domain. These publications and information may be reproduced for non-commercial purposes without prior consent.

Implications of No Child Left Behind (NCLB)

NCLB required that states create accountability systems by formulating standards, and setting proficiency. Schools that did not meet these levels of proficiency, known as adequate yearly progress (AYP) for two or more years could experience a series of interventions and sanctions. Sanctions could include the loss of funding and reconstitution of the school (Sanzo, et al, 2011).

Schools were required to make adequate yearly progress (AYP) not only as a whole school but also in each of the following eight student subgroups: White, Black, Hispanic, American Indian, Asian, Economically Disadvantaged, English Language Learners (ELL), and Students with Disabilities (SWD). AYP was achieved by either reaching the annual proficiency target in both mathematics (80% in 2011) and reading (79% in 2011) or by reducing the percentage of students not on target by 10% each year until 100% of students were on target in the year 2014 (Mintrop & Trujillo, 2005).

Although some schools were able to meet these requirements, those that did not were subject to a three-stage intervention process: improvement, corrective action and restructuring. Improvement was entered when a school failed to attain AYP for two consecutive years. Schools in this stage went through a self-reflective process to make improvements from within the school (Mintrop & Trujillo, 2005). They were able to receive support from district resources and could hire outside consultants to aid in the process.

The second stage of AYP intervention was corrective action. Schools that were placed under corrective action were those that continued to not make AYP for at least three consecutive years. In this stage, the district role intensified. The district was to provide more support and make more instructional decisions, including the removal of staff as they saw fit (Mintrop & Trujillo, 2005). Such schools received additional support and technical assistance, but being labeled as a school in need of corrective action resulted in a stigma which caused some parents to reevaluate where they lived in order to provide their child with the best possible education (Ylimaki, Jacobson & Drysdale, 2007).

The final stage of the AYP intervention process was restructuring, and schools that continued to not make AYP after four years entered this stage. Under restructuring, there were several options, one of which included that the schools would be reconstituted, resulting in the removal of the vast majority of the staff and administration (Mintrop & Trujillo, 2005). Other options included a school being taken over by the state, turned into

a charter school, or being privatized. As Mintrop and Trujillo stated, “A school that fails to improve for five consecutive years ceases to exist in its original form” (p. 1).

Another NCLB requirement was that states had to publically report the standardized test scores at the school, district, and state level for the total population and each of the eight student subgroups. This was accomplished for the first time in 2003, allowing parents, and community members to see clearly the populations of students who were not making learning gains (Rudalevige, 2003). As a result, schools had to learn to function in an environment of standardized testing, accountability, and public visibility (Ylimaki et al., 2007). “It is no longer enough for school leaders to implement promising reform efforts. They must demonstrate improved academic performance for all students in their schools” (Rudalevige, p. 219).

The new legislation allowed schools to take great strides in addressing the needs of the underserved students in the nation’s schools. According to Barth (2006), groups that had long been ignored such as minorities, English language learners, and special education students, were now being identified and their performance monitored.

Despite all the good that came from NCLB, hardships should also be noted (Barth, 2006). In addition to the federally imposed consequences, schools that faced higher levels of accountability could also face higher levels of teacher turnover (Feng et al., 2010). Some teachers were insulted by the new focus on educators role teach to the test. This was not what teachers believed their mission to be when they entered the profession (Barth).

Barth (2006) also noted the additional burden on the principal of the school by stating, “When the superintendent is getting heat from the state department, he doesn't call the teachers, the parents, or the kids. He calls the principal” (para. 8). Barth saw this resulting in principals placing additional pressure on teachers. According to Mintrop and Trujillo (2005), increased pressure only exacerbated teacher commitment issues, and low performing schools found themselves staffed by the least experienced teachers. This made student growth even more difficult to achieve and led to an increased rate of principal turnover (Mintrop & Trujillo).

Florida's A+ Plan

As stated in a 2001 report from the Florida Department of Education, Florida's A+ Plan was created to ensure that students in a Florida public school could demonstrate a year's worth of growth every year, and no student would be left behind (Florida Department of Education, 2001). The objective of the plan was to “raise student achievement to world-class levels” (Florida Department of Education, 2005, p. 1)

The Florida A+ Plan was approved in 1999 and revised in 2006 (McCullers & Bozeman, 2010). It required that all students, grades three through 10, take curriculum based tests and that a letter grade be assigned to each school based on student achievement. In order to determine whether students were learning and to comply with the legislation, the State of Florida administered the Florida Comprehensive Assessment Test (FCAT) to students in grades 3 through 10. Prior to this time, the FCAT was only administered to students in grades 4, 8, and 10 (Florida Department of Education, 2001).

In 1999, every school was assigned a letter grade (Florida Department of Education, 2001). Schools that received As or improved a letter grade received rewards, and low performing schools were issued sanctions and received outside assistance. That assistance was not always welcomed by school leaders as it often created a stigma (Ylimaki et al., 2007). Schools earned an F if less than 60% of students scored at level 2 (of 5) or above in reading and mathematics, and fewer than 50% of students scored at level 3 (of 6) or above in writing (Florida Department of Education, 2005).

Since 1999, the program has evolved. With the introduction of NCLB in 2001, the focus shifted, and schools were evaluated not only on achievement levels but on the learning gains of individual students (Florida Department of Education, 2009). In 2005, The Florida A+ plan was expanded to require that all student scores be considered in the calculation of school grades. This included English Language Learners (ELL) and Exceptional Student Education (ESE) students. In 2007, FCAT science scores, the learning gains of students in the lowest quartile of mathematics, and students' scores from retakes of the 10th grade FCAT were added to the school grades formula (Florida Department of Education, 2009). Finally, in 2010, several other factors including graduation rate, percentage of students in accelerated coursework, and college readiness were added to the calculation of high school grades (Florida Department of Education, 2009). Figure 1 illustrates the progression of Florida's school grading plan from 1999 to 2010.

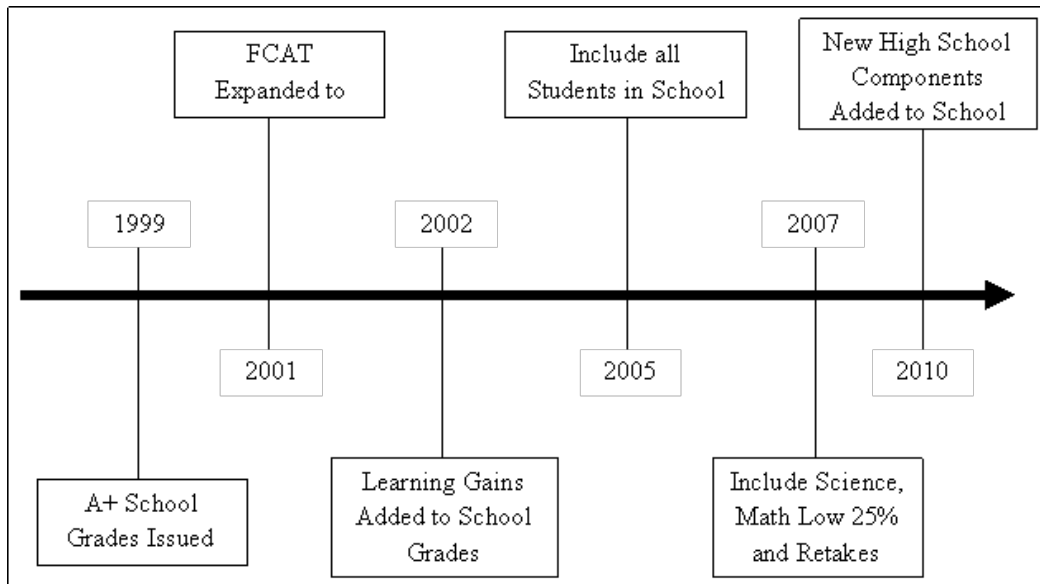


Figure 1. Florida's School Grading Plan: 1999-2010

Note. Adapted from Florida Department of Education, 2009.

Changing Role of a Principal

The role of the school principal constantly transforms. It must flex to the everchanging demands from “new laws, new demographics, and new expectations on the part of parents, faculty, and central office” (Barth, 2006, para. 2). The demands on the 21st century principal are vastly different from the demands of even the late 1990s. For many career principals, the work in 2011 is a completely different kind of work than they ever had anticipated. It is a kind of work that many school leaders do not feel comfortable with and would never have chosen (Elmore, 2005). In the 1980s, when many of the current administrators were hired, the principal was seen as the “learned” not the “learning.” Barth (2006) reported that “If you didn’t know the answer to a question as the principal of a school, you faked it” (para. 11). A principal was “forbidden to not

know" (Barth, para. 11). In contrast, however, Guskey (2007) wrote that because of the drastic changes that have occurred over the career of a principal, being humble and willing to ask questions is the only way to survive. To be an effective leader, principals must "learn to replace personal defensiveness with professional inquisitiveness" (p. 32). Lashway (2000) explained the new challenges facing principals in a slightly different way:

Clearly, accountability is not just another task added to the already formidable list of the principal's responsibilities. It requires new roles and new forms of leadership carried out under careful public scrutiny while simultaneously trying to keep day-to-day management on an even keel. A challenge akin to changing the tires on a moving vehicle. (p. 4)

Despite the radical changes in the role of the principal, there have also been constants. In 2011, principals were, for the most part, responsible for hiring and supervising staff, budgeting for the school, and were ultimately in charge of the learning. This continuity of responsibility may have provided principals with a distraction from the larger issues that they felt less comfortable handling (Elmore, 2005). Though the demands on school leaders have dramatically changed, the actual practices of school leaders have remained fairly static. Unfortunately, many school leaders have continued to focus on managerial duties despite the dramatic changes in the conditions under which schools operate. Elmore (2005) called this the default culture and believes that atomization is still the prevailing culture of public schools.

Impact of Principals on School Success

It would be difficult to find anyone in the field of education who does not believe that school principals play a critical role in the success of a school. “Teachers and students know this from personal experience, and decades of research have consistently found positive relationships between principal behavior and student academic achievement” (Cotton, 2003, p. 1). Cotton (2003) echoed the view of many educational researchers. Marzano et al., (2005) wrote, “The traditions and beliefs about leadership in schools are no different than those regarding leadership in other institutions. Leadership is considered to be vital to the successful functioning of many aspects of a school” (p. 5).

Leithwood (2008) noted that it has been shown time and again that principals have a significant impact on student achievement, and Marzano et al. (2005) observed that the principal was central to the success of a school. In fact, according to Gurr, Drysdale and Mulford (2006), “the principal remains as an important and significant figure in determining the success of a school” (p. 389). As the ultimate decision makers, they are responsible for the vision, culture, and management of a school. Leithwood, Day, Sammons, Hopkins, & Harris (2006) went so far as to comment that no school has ever made a dramatic improvement in student achievement without a gifted leader. The former Secretary of the U.S. Department of Education, Richard Riley, highlighted the importance of the principal when he said:

[The principalship] is a position that is absolutely critical to educational change and improvement. A good principal can create a climate that can foster

excellence in teaching and learning, while an ineffective one can quickly thwart the progress of the most dedicated reformers (as cited by Anderson, 2008, p. 22).

This is further illustrated in U.S. Senate Committee Report on Equal Educational Opportunity of 1977:

In many ways the school principal is the most important and influential individual in any school. He or she is the person responsible for all activities that occur in and around the school building. It is the principal's leadership that sets the tone of the school, the climate for teaching, the level of professionalism and morale of the teachers, and the degree of concern for what students may or may not become. The principal is the main link between the community and the school, and the way he or she performs in this capacity largely determines the attitudes of parents and students about the school. If a school is a vibrant, innovative child-centered place, if it has the reputation for excellence in teaching, if students are performing to the best of their ability, one can almost always point to the principal's leadership as the key to success. (as cited in Marzano et al., 2005, p. 6)

Marzano et al. (2005) conducted a meta analysis of "69 studies involving 2,802 schools, approximately 1.4 million students, and 14,000 teachers and computed the correlation between leadership behavior of a principal and the average academic achievement of students to be .25" (Marzano et al., 2005, p. 10). The correlation was explained as follows:

Assume a principal is hired into a district and assigned to a school in the 50th percentile in the average achievement of its students. Also assume that the

principal is at the 50th percentile in leadership ability. We might say that we have an average principal at an average school. . . . But now, let's increase that principal's leadership ability by one standard deviation- from the 50th percentile to the 84th percentile. . . . Our correlation of .25 indicates that over time we would predict the average achievement of the school to rise to the 60th percentile. (Marzano et al., p. 10)

In addition to studying the impact of principal leadership on student academic achievement, Marzano et al. (2005) also looked at whether the impact on student achievement was different when serving different grade levels. Though there were “no hard and fast conclusions,” (p. 37) there was a slight change among grade levels served with the principal's effect student achievement in elementary schools and for schools serving students grade K-12 the principal's effect was the lowest. Table 5 illustrates this point:

Table 5

The Effect of Leadership on Academic Achievement by Grade Level

Level of School	Average <i>r</i>	Number of Studies	Number of Schools
Elementary	.29	36	1,175
Middle School/Junior High	.24	6	323
High School	.26	9	325
K-8	.15	7	277
K-12	.16	6	499

Note: Adapted from School leadership that works: From research to results, p. 11

Factors that Lead to a Principal's Success

Most schools that have made substantial gains in closing achievement gaps have had a highly effective principal (Olson, 2007). Though Olson expressed his belief that leadership plays an important role in the 21st century world of accountability, he also thought that the precise qualities of a successful leader were yet to be determined. As Cotton (2003) observed that early research on the principal's impact on student academic achievement "began and ended with the finding that a relationship exists" (p. 57).

Donmoyer (1985) explained the lack of research in this area as follows:

Recent studies of schools invariably identify the principal's leadership as a significant factor in a school's success. Unfortunately, these studies provide only limited insight into how principals contribute to their school's achievement.

(p. 31)

Studies on the Impact of Principals on School Success

Marzano et al. (2005, p. 6) found only 69 studies that examined the relationship between building leadership and student academic achievement in his research spanning the last 35 years. Each of the studies met the following criteria. They (a) involved k-12 students, (b) involved schools within the United States or closely mirrored schools within the United States, (c) examined the relationship between the leadership of the principal and student academic achievement either directly or indirectly, (d) used standardized test scores to measure academic achievement, (e) reported effect sizes in correlation form (Marzano, 2005, p. 6). The meta-analysis showed correlations between building

leadership and academic achievement of students as a whole (.25) and also when categorized by 21 leadership responsibilities. Table 6 shows the correlation based on each of the 21 leadership responsibilities measured in Marzano et al.'s meta-analysis.

Table 6

Leadership Responsibilities and Their Correlation(s) with Student Academic Achievement

Responsibilities	The extent to which the principal...	Average r
Affirmation	Recognizes and celebrates school accomplishments and acknowledges failures	0.19
Change agent	Willing to and actively challenge the status	0.25
Contingent rewards	Recognizes and rewards individual	0.24
Communication	Establishes strong lines of communication with teachers and among students	0.23
Culture	Fosters shared beliefs and a sense of community and cooperation	0.25
Discipline	Protects teachers from issues and influences that detract from teaching time	0.27
Flexibility	Adapts leadership behavior to the needs of current situation	0.28
Focus	Establishes clear goals which are kept in forefront of the school's attention	0.24
Ideals and beliefs	Communicates and operates from strong ideals and beliefs about schooling	0.22
Input	Involves teachers in the design and implementation of important decisions	0.25
Intellectual Stimulation	Ensures that faculty and staff are aware of and discuss the most current theories and practices	0.24
Involvement with CIA	Is directly involved in the design and implementation of curriculum, instruction and assessment (CIA) processes	0.20
Knowledge of CIA	Is knowledgeable about current curriculum, instruction and assessment (CIA) processes	0.25
Monitoring/Evaluating	Monitors the effectiveness and impact of school practices on student learning	0.27
Optimizer	Inspires and leads new and challenging	0.20
Order	Establishes a set of standard operating procedures	0.25
Outreach	Is an advocate and spokesperson for school to all stakeholders	0.27
Relationships	Demonstrates an awareness of the personal aspects of teachers and staff	0.18
Resources	Provides teachers with necessary materials and professional development	0.25
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	0.33
Visibility	Has quality contact and interaction with parents and community	0.20

Note: Adapted from Marzano, R., Waters, T., & McNulty, B. (2005). *School leadership that works: From research to results*. Association for Supervision and Curriculum Development.

Other meta-analysis studies have produced similar results. Leithwood, Louis, Anderson and Wahlstrom (2004) found a correlation between student achievement and leadership between .17 and .22. They concluded that only classroom instruction played a greater role than leadership in its contribution to learning. They also identified three practices at the core of leadership: (a) setting direction, (b) developing people, and (c) redesigning the organization.

In a narrative review of the research on leadership and student achievement, conducted by Cotton (2003), she noted there were 25 categories behavior used by principals to affect student achievement.

1. Safe and orderly environment
2. Vision and goals focused on high levels of student learning
3. High expectations for student learning
4. Self-confidence, responsibility and perseverance
5. Visibility and accessibility
6. Positive and supportive climate
7. Communication and interaction
8. Emotional and interpersonal support
9. Parent and community outreach and involvement
10. Rituals, ceremonies, and other symbolic actions
11. Shared Leadership, decision making, and staff empowerment
12. Collaboration
13. Instructional Leadership

14. Ongoing pursuit of high levels of student learning
15. Norm of continuous improvement
16. Discussion of instructional issues
17. Classroom observation and feedback to teachers
18. Support of teacher' autonomy
19. Support of risk taking
20. Professional development opportunities and resources
21. Protecting instructional time
22. Monitoring student progress and sharing findings
23. Use of student progress for program improvement
24. Recognition of student and staff achievement
25. Role modeling (Cotton, 2003, pp. 67- 72)

Because her study was not quantitative, Cotton could not determine how much leadership directed impacted academic achievement. She did note in the following passage that principal leadership impacted student achievement indirectly:

While a small portion of the effect may be direct—that is, principals' direct interactions with students in or out of the classroom may be motivating, inspiring, instructive, or otherwise influential—most of it is indirect, that is mediated through teachers and others. (Cotton, 2003, p. 58)

Although most researchers have focused on the specific leadership practices of successful administrators, others have sought to identify commonalities in the personality

traits of principals. For example, in a qualitative study, Gurr et al. (2006) conducted a study of 13 primary and secondary Australian schools. He used open-ended questions and allowed the subjects to reflect on the principal's impact on the school's success. He found that principals displayed parallel personality traits, including honesty, openness, flexibility, commitment, empathy and passion (Gurr et al.). Similar traits were evident in the principals of successful high-poverty schools, including empathy, persistence, passion, and flexible thinking, (Ylimaki et al., 2007).

The Southern Regional Education Board (SREB) also contributed in this area by identifying 13 factors essential to good leadership. Among these factors were: create a mission, set high expectations, encourage quality instruction, implement a caring environment, use data, keep focused, involve parents, seek support, and organize time and resources (as cited in Butler, 2008). In Pittsburgh, a consortium determined six standards for school leaders including emphasizing vision, culture, and fostering relationships with the community (Samuels, 2008). As these traits and personality factors were identified, some states immediately began implementing new evaluations based on them, but others questioned the validity of such measurements. Duke, Grogan, Tucker, and Heinecke (2003) contended that such factors were outdated and were not the same characteristics that were needed in the new age of accountability.

Clifton StrengthsFinder

According to The Clifton StrengthsFinder Research FAQ's, The Clifton StrengthsFinder was developed using data from more than two million individuals

(Gallup, 2005). Using three decades of research on success in a variety of industry, Gallup created an instrument that uses data pairs to determine strengths. The user is presented with two descriptors and the participant must choose one that best describes him/her within 20 seconds or the system moves to the next pair (Gallup).

In A Technical Report on the Clifton StrengthsFinder with College Students, Schreiner found there to be a test-retest reliability of .70 when taken as a mean across the 34 themes (2006). With the highest possible reliability of 1.00, the researcher considered .70 reliable. Table 7 shows the reliability of each individual theme.

Table 7

Test-Retest Reliability of Clifton StrengthsFinder Themes

Clifton StrengthsFinder Theme	Test-Retest Reliability Estimate
Achiever	0.78
Activator	0.52
Adaptability	0.69
Analytical	0.76
Arranger	0.63
Belief	0.77
Command	0.67
Communication	0.75
Competition*	0.80
Connectedness*	0.75
Consistency	0.53
Context*	0.65
Deliberative	0.81
Developer	0.79
Discipline	0.84
Empathy	0.74
Focus	0.68
Futuristic	0.69
Harmony	0.62
Ideation	0.65
Includer	0.66
Individualization	0.60
Input	0.77
Intellection	0.80
Learner	0.78
Maximizer	0.55
Positivity	0.80
Relator	0.65
Responsibility	0.70
Restorative	0.70
Self-Assurance	0.65
Significance	0.65
Strategic	0.65
Woo*	0.78

Note: Adapted from Technical Report on the Clifton StrengthsFinder with College Students, 2006, Gallup, Inc., p. 10. Those with asterisks were not included in the 30 Themes Self-Assessment used in this study.

In The Technical Report on the Clifton StrengthsFinder with College Students, Schreiner acknowledged a significant gender or racial difference in the test-retest stability of some themes. “The most significant gender differences were in the themes of Achiever, Belief, Consistency, Developer, Discipline, Empathy, Harmony, Input, and Responsibility, where women scored higher than men, and in Ideation, where men scored significantly higher than women” (p. 8). The racial differences were less severe, but minorities tended to score higher of the Harmony, Significance, and Analytical themes and Caucasians scored higher on the themes of Self-Assurance, Adaptability, and Strategic Themes.

When measuring validity, Technical Report on the Clifton StrengthsFinder with College Students used construct validity. Construct validity looks at whether the scores on the measurement can be used to accurately understand people. Schreiner did this by correlating the students’ scores on the Clifton StrengthsFinder with that of two other instruments (the CPI-260 and the 16PF). The researcher analyzed the correlation of 137 predicted relationships between CSF theme scores and their counterparts on the *CPI-260* and *16PF*. Of the 137 predicted relationships, 128 were confirmed by significant correlation coefficients.

Summary

Chapter 2 provided a review of the literature and related research. It offered a historical view of the legislation that led to increased accountability in Florida schools and looked at its impact on schools. In addition, it reviewed the ever-changing role of the

principal, identifying the various characteristics, personality traits, and skills associated with student achievement and whether they have changed in light of new accountability standards. Finally, the review of literature offered insight into the Clifton StrengthsFinder, its creation, validity and reliability. Chapter 3 describes the methodologies used in this study for collecting and analyzing data. Demographic information and a description of the analyses of the data are provided in Chapter 4. Chapter 5 presents a final summary, findings, implications for practice, and recommendations for further study.

CHAPTER 3 METHODOLOGY

Introduction

The intent of this study was to provide insight on the differences of strengths and talents of middle and high school principals in the targeted school district based on the percent of AYP in 2010-2011. As highlighted in the review of literature, increased emphasis on school accountability has increased pressure on school-based administrators to improve student achievement and adequate yearly progress (AYP) (Lyons & Algozzine, 2006). Schools that do not improve can be forced to close their doors, become charter schools, or terminate employees and start again with new staff members. Despite the enormous pressure on school districts to hire and promote the right leaders, the research on the qualities possessed by principals who have been successful in meeting AYP has been inadequate.

Statement of the Problem

Increased accountability has led to increased pressure on administrators to meet AYP. Principals who have not improved student achievement have been removed and replaced with administrators who, it is hoped, can meet the ever increasing demands that accountability has created (Lyons & Algozzine, 2006). However, without adequate information outlining the strengths of successful administrators, the process of replacing administrators may be of limited success. This study has provided a foundation for understanding the strengths that are present in successful administrators. This work

along with follow-up studies may help superintendents make well-informed selections and provide current administrators with areas of growth.

Research Questions

The following research questions guided this study:

1. What, if any, are the differences between the self-identified strengths of principals based on the percentage of adequate yearly progress (AYP) earned in 2010-2011 school year?
2. What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they serve (middle or high school)?
3. What, if any, are the differences between the self-identified strengths of principals based on the community they serve (urban or suburban)?

Population

The population consisted of all the secondary school principals in the targeted school district. The targeted school district consisted of 176 traditional schools and 24 charter schools serving more than 180,000 students. The district was made up of a variety of races with 63% White, 29% Black, 1% Native American, 5% Asian American, and 34% Hispanic (Student Enrollment Summary, 2011). All traditional secondary school principals; specifically, 17 high schools and 33 middle school principals, were invited to participate in this study. Of those invited, 34 secondary school principals,

comprised of 20 middle school and 14 high school principals, participated. This response represented a participation rate of 68%. All participants were principals of traditional secondary schools in the targeted school district. No participating principals were disqualified from the study. Elementary school principals were excluded from the population as were principals of non-traditional, i.e. charter, alternative schools.

Instrumentation

The StrengthsFinder Profile, developed in 1999 by the Gallup Organization, was used to create a self-assessment. This self-assessment required that targeted school district principals rank their ten greatest strengths (as defined by the StrengthsFinder). Additional information including grade levels, population served (urban or suburban), and percentage adequate yearly progress were collected via public records and the Florida Department of Education website.

Delimitations

The study was delimited by the following:

1. The study was delimited to secondary (middle and high) school principals in the targeted school district. Elementary principals were excluded.
2. The study was delimited to traditional middle and high school principals in the targeted school district. Principals in non-traditional schools, i.e., alternative and charter schools, were excluded.

3. Adequate yearly progress data were delimited to data collected for all traditional middle and high schools in the targeted school district whose principals participated in this study.

Limitations

The factors that could limit the validity of this research include:

1. The principals' strengths could be influenced by what participants believed to be a correct answer.
2. Because the population for this study was limited to schools in the targeted district, its generalizability may be limited.

Data Collection

In September 2010, all secondary principals within the targeted school district received a letter inviting them to participate in the study. The first letter was sent via email with a link to the online self-assessment questionnaire. A few days later, a follow-up email was sent as a reminder. Those who did not complete the survey within three weeks received a third email asking them once again to complete the online assessment. For those who did not respond to the third request, the researcher sent a fourth, and if necessary, a fifth and final reminder request. Copies of all communications with participants are contained in Appendix B.

Additional data, including percentage of adequate yearly progress (AYP), were collected from the Florida Department of Education (FLDOE) website. Participating

principals were subsequently placed in three AYP categories: (a) principals whose schools met at least 80% AYP in 2010-2011, (b) principals whose schools met between 70% and 79% AYP in 2010-2011, and (c) principals whose schools met less than 70% AYP in 2010-2011. While less principals fell into the first group than the other two, it was important to keep the top tier of principals at 80% or higher, as the Florida Department of Education, Bureau of School Improvement has determined that schools that do not make 80% AYP may face sanctions and corrective action (Florida Differentiated Accountability, 2011) Each participant was also identified as serving in a middle or high school setting and as serving an urban or suburban school. These categorizations were determined based on data provided by the targeted school district's Office of Pupil Assignment. The data were the organized within an SPSS worksheet and analyzed through various statistical procedures to answer the three research questions stated above.

Each school whose principal participated in the study is listed in Tables 8 and 9, along with their school's percentage AYP earned in the 2010-2011 school year, community type, and grade level (middle or high school) served.

Table 8

Percentage AYP and Community Served for Participating Middle Schools

Middle School	2010-11 % AYP	Community Type
1	72	Suburban
2	92	Suburban
3	74	Suburban
4	72	Suburban
5	72	Suburban
6	85	Suburban
7	69	Urban
8	72	Urban
9	77	Suburban
10	77	Urban
11	69	Suburban
12	69	Suburban
13	69	Suburban
14	69	Suburban
15	64	Suburban
16	64	Suburban
17	69	Suburban
18	69	Suburban
19	72	Suburban
20	69	Suburban

Table 9

Percentage AYP and Community Served for Participating High Schools

	High School	2010-11 % AYP	Community Type
1		82	Urban
2		69	Suburban
3		69	Suburban
4		67	Urban
5		62	Suburban
6		77	Urban
7		72	Suburban
8		69	Suburban
9		92	Urban
10		74	Suburban
11		82	Suburban
12		67	Suburban
13		72	Suburban
14		77	Suburban

Data Analysis

Each of the three research questions was analyzed with an appropriate nonparametric statistical analysis that help demonstrate whether any differences in mean rank existed for any of the strengths between different values of the respective categorical variables pertinent to each individual research question. In the case of all three research questions, the dependent variables utilized were the individual principals' rankings for each of the 30 strengths. Because principals were asked to rank only their top 10 strengths, those qualities receiving the highest rank received a score of 10 points. For each subsequently lower rank, this score decreased down to one point, and if the strength went unranked for a particular principal, the strength received a score of zero points. Independent variables differed as per each research question.

For the first research question, "What, if any, are the differences between the self-identified strengths of principals based on the school's percentage of adequate yearly progress (AYP) in 2010-2011?" the ordinal AYP variable categorizing this value into groups of 80% or more, 70% to 79%, and less than 70% was utilized. To test for differences in frequency of each of the self-identified strengths, a Kruskal-Wallis test was used for each of the 30 strengths. These tests sought to locate differences in mean ranks among the three AYP groups. This procedure was utilized in order to identify if for each particular strength, more principals within one AYP group ranked the strength higher than those in the other AYP groups. Additionally, since multiple individual comparisons were made on the same set of data (one test for each of the separate but related strengths), a Bonferroni correction was applied on the $\alpha = .05$ significance level so that a more

conservative conclusion could be reached.

Regarding the second research question, "What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they serve (middle or high school)?" In order to determine differences in the self-identified strengths of principals based on grade level, either middle or high, a Mann-Whitney test was run. This test was selected for similar reasons as in the case of the first research question, but since there are only two groups involved with the independent variable, this test was a more appropriate choice. Once again, due to the multiple comparisons issue, a Bonferroni correction was applied on the $\alpha = .05$ significance level so that a more conservative conclusion could be reached.

The final research question asked, "What, if any, are the differences between the self-identified strengths of principals based on the community they serve (urban or suburban)?" This variable contained two levels of urban and suburban. Therefore, a Mann-Whitney test was selected. This analysis tested for differences in mean ranks between the principals' self-identified strengths in each of the two community groups, urban and suburban. This procedure was utilized to identify if for each particular strength, more principals ranked the strength higher in one community group than the other. As with the other two research questions, the Bonferroni correction was applied due to the repeated testing issue.

Summary

Chapter 3 was intended to clarify the collection and analyzing of data for this study. The research questions, population, instrumentation and data collection was explained and a detailed description of the procedures for data analysis was provided. Chapter 4 contains demographic information and a description of the analyses of the data. A final summary, findings, implications for practice, and recommendations for further research are provided in Chapter 5.

CHAPTER 4 ANALYSIS OF DATA

Introduction

Chapter 4 provides an analysis of data relevant to the three research questions addressed in this study as well as looking at the interaction between variables. The results are represented by accompanying tables. Chapter 5 provides conclusions, as well as recommendations for further research.

Purpose of the Study

Increased accountability has led to increased pressure on administrators to achieve AYP. Principals who have not improved student achievement have been removed and replaced with administrators who, it is hoped, can meet the ever increasing demands that accountability has created (Lyons & Algozzine, 2006). However, without adequate information outlining the strengths of successful administrators, the process of replacing administrators may be of limited success. This study has provided a foundation for understanding the strengths that are present in successful administrators. This work along with follow-up studies may help superintendents make well-informed selections and provide current administrators with areas of needed growth.

Research Questions

The following research questions guided this study:

1. What, if any, are the differences between the self-identified strengths of principals based on the percentage of adequate yearly progress (AYP) earned during the 2010-2011 school year?
2. What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they served (middle or high school)?
3. What, if any, are the differences between the self-identified strengths of principals based on the community they served (urban or suburban)?

Demographics

The following demographic information was collected from the thirty-four secondary principals that participated in this study: (a) school(s) served from 2010-2011 (b) percentage adequate yearly progress achieved each year (c) population served (urban or suburban).

Participants were placed into two categories based on the grade levels served: (a) middle school (grades 6-8) or (b) high school (grades 9-12). Of the 34 respondents, 59% (n=20) served middle school populations and 41% (n=14) served high school populations during the 2010-2011 school year.

Table 10

Grade Level Served by Participants in the 2010-2011 School Year

School Level	n	%
Middle School (6-8)	20	59
High School (9-12)	14	41
Total	34	100

The participants were a strong representation of the schools within the targeted school district. In the 2010-2011 school year, there were 33 middle schools and 17 high schools. This is an overall participation rate of 68% (61% of middle schools and 82% of high schools).

Of the 34 participants, 21% (n=7) of them served an urban community and 79% (n=27) served a suburban community. None of the schools in targeted school district served rural communities. It is important to note that urban represents schools that reside within the census defined urban area's city limits. Community served is not meant to indicate the socio-economic status of a school. Table 11 provides information on the community served by the participants during the 2010-2011 school year.

Table 11

Community Served by participants in the 2010-2011 School Year

<u>Community Served</u>	<u>n</u>	<u>%</u>
Urban	7	21%
Suburban	27	79%
Total	34	100%

The 34 participants were also grouped into three categories based on the percent of AYP achieved during the 2010-2011 school year. The majority of the schools (47%, n=16) earned less than 70% of AYP. Of the remaining schools, 38% (n=13) of schools earned between 70% and 79% of AYP and 15% (n=5) of schools earned 80% of AYP or more during the 2010-2011 school year. While less principals fell into the first group than the other two, it was important to keep the top tier of principals at 80% or higher, as the Florida Department of Education, Bureau of School Improvement has determined that schools that do not make 80% AYP may face sanctions and corrective action (Florida Differentiated Accountability, 2011). Table 12 provides information on the percent AYP achieved by each of the schools served by participants.

Table 12

Percent of AYP achieved in schools served by participants during the 2010-2011 school year.

Percent AYP	n	%
80% or higher AYP	5	15%
Between 70% and 79% AYP	13	38%
Less Than 70% AYP	16	47%
Total	34	100%

Analysis of Data

This section was organized to discuss the three research questions that directed this study. The research questions are identified and then supported by a discussion of the data. The targeted school district data were included for some of the research questions along with data collected for the purpose of this study. This was done for comparison purposes.

Because the data were rank ordered, the data were analyzed using the Kruskal-Wallis and the Mann Whitney tests. In order to run such tests, each ranking was converted to a score. A strength that received no rank from the participant received a score of zero points, a strength that was ranked 10th received a score of one point, and a strength that was ranked first received a score of 10 points. These points were then sorted in ascending order for the entire data set. Each score was then given a new rank between 1 and 34, the number of participants. When ranks were tied, the middle value

was assigned to each of the tied ranks. Those ranks were then split into two or three groups, depending on the research question. For the question addressing AYP, the data were split into three AYP groups: (a) principals who served a school meeting at least 80% AYP, (b) principals who served a school meeting between 70%-79% AYP, and (c) principals who served a school meeting less than 70% AYP. For the questions addressing grade level or community group, the data were split into two groups: (a) principals serving middle schools, and (b) principals serving high schools, or (a) principals serving a suburban community, and (b) principals serving an urban community. The mean ranking was then determined for each grouping. Because of this process, the mean rank for any one particular community group could theoretically fall between 0 and 34. Because of ties and grouping, the actual mean ranks fell between 10 and 26. The process was done for each of the 30 strengths separately. Table 13 illustrates this process using the strength of achiever as an example.

Table 13

Ranking Process Used for the Strength of Achiever to Complete Statistical Analysis

Participant	Principals' Rank	Points	Complete Data Set Ranking		
			Overall	Middle School	High School
HS1	No Rank	0	7		7
HS2	No Rank	0	7		7
HS3	No Rank	0	7		7
MS1	No Rank	0	7	7	
MS2	No Rank	0	7	7	
MS3	No Rank	0	7	7	
MS4	No Rank	0	7	7	
MS5	No Rank	0	7	7	
MS6	No Rank	0	7	7	
MS7	No Rank	0	7	7	
MS8	No Rank	0	7	7	
MS9	No Rank	0	7	7	
MS10	No Rank	0	7	7	
HS4	10	1	16		16
MS11	10	1	16	16	
MS12	10	1	16	16	
MS13	10	1	16	16	
MS14	9	2	18	18	
MS15	8	3	20	20	
MS16	8	3	20	20	
MS17	8	3	20	20	
HS5	7	4	23		23
HS6	7	4	23		23
HS7	5	6	24		24
HS8	4	7	25		25
HS9	3	8	28		28
HS10	3	8	28		28
HS11	3	8	28		28
MS18	3	8	28	28	
HS12	1	10	32		32
HS13	1	10	32		32
HS14	1	10	32		32
MS19	1	10	32	32	
MS20	1	10	32	32	
	Sum of Ranks		595	286	309
	Mean Ranking		17.50	14.30	22.07

Note: Because the survey was anonymous, MS was used to denote principals serving middle schools and HS was used to denote principals serving high schools. Each was given a random number to differentiate between schools.

Research Question 1

What, if any, are the differences between the self-identified strengths of principals based on the percentage of adequate yearly progress (AYP) earned during the 2010-2011 school year?

Participants identified their 10 greatest strengths in rank order in the 30 Themes Self-Assessment. That data, along with the percent AYP achieved were compiled and entered into an SPSS spreadsheet. Because the data were ordinal and the sample size was small, normal distribution could not be assumed, therefore a non-parametric test was deemed most appropriate. Since there were more than two groups, the Kruskal-Wallis test was the most appropriate test to use for finding the difference in mean ranks of the self-identified principal strengths between those at schools in different AYP groups: 80% and above, 70%-79%, and below 70%.

Results for the tests are provided in Table 14. For each of the three groups, the mean rank for the test is provided. Groups with mean ranks with smaller values imply that the item received fewer points on average than did groups with mean ranks with larger values. For example, for achiever, there was a mean rank of 16.28 for the less than 70% group, which means it identified with less frequency among this group than in the 80% and above group, which came in with a mean rank of 19.50. Additionally, for each of the strengths, the result of the test is provided, with both the test statistic and level of statistical significance.

Although the level of significance for the study was set at $\alpha = .05$, in order to properly analyze all of the individual strengths it was necessary to engage in testing on a parallel set of 30 individual variables representing the strengths. This repeated testing can

lead to a Type I error (rejecting the null when it is true), so a Bonferroni correction was applied to the study's level of significance. Dividing the alpha level by 30 leads to a new study level of significance of $\alpha = .002$. For informational purposes, asterisks are still provided within the table to draw attention to any results meeting the $\alpha = .05$ and $\alpha = .01$ levels; however, this demarcation is purely informational.

Examining the results, one particular strength yielded a significant difference in identification between AYP groups. The Kruskal-Wallis test indicated that there was a significant difference in mean ranking for input among principals in different AYP groups, $\chi^2(2) = 13.86, p = .001$. Examining the mean rankings, principals in the greater than 80% AYP group gave a greater value to this variable ($M_r = 26.00, n = 5$) than did those principals in the 70%-79% group ($M_r = 15.50, n = 13$) or those in the less than 70% group ($M_r = 16.47, n = 16$).

Although none of the other strengths showed significant differences in mean ranking among AYP groups, principals serving schools achieving 80% or more AYP ranked achiever, activator, analytical, arranger, communication, deliberative, futuristic, harmony, ideation, individualization, input, relator, and strategic higher than the other two AYP groups. Those principals serving schools that earned between 70% and 79% AYP ranked the following strengths higher than the other two AYP groups: adaptability, consistency, discipline, empathy, intellection, maximizer, restorative, and significance and those who earned less than 70% AYP ranked belief, command, developer, focus, includer, learner, positivity, responsibility, and self-assured higher than the other two

AYP groups. Table 14 gives a summary of the Kruskal-Wallis results for each strength by AYP group and uses bold to identify which AYP group ranked each strength highest.

Table 14

Kruskal-Wallis Results for Strength Identification by AYP Group (N = 34)

Strength	AYP Group			χ^2	<i>p</i>
	$\geq 80\%$ (<i>n</i> = 5)	70%-79% (<i>n</i> = 13)	< 70% (<i>n</i> = 16)		
Achiever	19.50	18.23	16.28	0.55	.76
Activator	18.70	18.15	16.59	0.38	.83
Adaptability	19.10	19.35	15.50	3.90	.14
Analytical	25.00	17.31	15.31	3.94	.14
Arranger	20.10	18.88	15.56	1.85	.40
Belief	12.40	18.23	18.50	1.77	.41
Command	17.40	16.19	18.59	0.51	.78
Communication	19.50	16.19	17.94	0.50	.78
Consistency	13.50	18.42	18.00	1.74	.42
Deliberative	19.40	17.81	16.66	0.48	.79
Developer	16.10	15.31	19.72	1.70	.43
Discipline	13.00	19.54	17.25	2.62	.27
Empathy	16.30	19.77	16.03	1.59	.45
Focus	13.10	17.69	18.72	1.48	.48
Futuristic	18.70	17.58	17.06	0.16	.92
Harmony	19.60	17.23	17.06	1.09	.58
Ideation	22.10	16.81	16.63	2.84	.24
Includer	16.00	16.00	19.19	3.59	.17
Individualization	20.40	17.00	17.00	5.80	.06
Input	26.00	15.50	16.47	13.86	.001***
Intellection	16.00	18.54	17.13	1.15	.56
Learner	15.20	16.73	18.84	0.77	.68
Maximizer	15.70	18.27	17.44	0.30	.86
Positivity	15.10	16.19	19.31	1.51	.47
Relator	19.00	16.12	18.16	0.53	.77
Responsibility	12.10	14.69	21.47	5.36	.07
Restorative	14.10	20.42	16.19	2.49	.29
Self-Assured	12.00	17.12	19.53	3.20	.20
Significance	16.00	18.69	17.00	1.41	.50
Strategic	18.30	17.62	17.16	0.06	.97

Note. *df* = 2 for all tests.**p* < .05. ***p* < .01. ****p* < .002.

In addition to looking at the differences in rank score using the Kruskal-Wallis test, a simple mean of ranks was run for each of the AYP groups. The mean is a number between zero and 10 where 10 would represent every participant ranking the strength as one and zero would represent no participants ranking the strength in their top ten. Because of the small sample size several strengths had ties in overall rankings. Table 15 shows both the mean rank for each strength as well as the overall ranking in alphabetical order by strength. Table 16 shows the same information, but listed in rank order for each AYP group.

Table 15

Mean and Overall Rankings of Strengths by AYP Group in Alphabetical Order

Strength	$\geq 80\%$ AYP ($n = 5$)		70%-79% AYP ($n = 13$)		< 70% AYP ($n = 16$)	
	<i>M</i>	Overall Rank	<i>M</i>	Overall Rank	<i>M</i>	Overall Rank
Achiever	4.80	3.00	3.92	1.00	2.69	8.00
Activator	1.80	12.00	1.46	20.00	1.44	19.00
Adaptability	1.40	16.00	1.00	23.00	0.00	29.00
Analytical	6.60	1.00	3.92	1.00	2.81	7.00
Arranger	3.40	6.00	2.54	9.00	1.13	21.00
Belief	1.40	16.00	3.38	3.00	3.44	5.00
Command	2.20	9.00	1.69	17.00	2.50	12.00
Communication	3.60	5.00	2.69	8.00	3.63	2.00
Consistency	0.00	25.00	1.85	16.00	1.75	14.00
Deliberative	2.00	11.00	1.62	18.00	1.19	20.00
Developer	2.20	9.00	2.15	13.00	3.50	4.00
Discipline	0.00	25.00	2.38	12.00	1.50	17.00
Empathy	1.80	12.00	2.15	13.00	0.94	22.00
Focus	1.00	21.00	2.77	5.00	2.63	9.00
Futuristic	1.60	14.00	1.62	18.00	1.75	14.00
Harmony	1.20	19.00	0.23	26.00	0.25	27.00
Ideation	2.40	8.00	0.15	27.00	0.31	25.00
Includer	0.00	25.00	0.00	28.00	0.63	23.00
Individualization	0.20	24.00	0.00	28.00	0.00	29.00
Input	5.20	2.00	0.00	28.00	0.31	25.00
Intellection	0.00	25.00	0.54	24.00	0.44	24.00
Learner	1.60	14.00	2.54	9.00	3.25	6.00
Maximizer	0.60	23.00	1.92	15.00	1.50	17.00
Positivity	0.80	22.00	1.46	20.00	2.56	10.00
Relator	3.80	4.00	2.77	5.00	3.62	3.00
Responsibility	1.40	16.00	2.54	9.00	4.94	1.00
Restorative	1.20	19.00	2.77	5.00	1.94	13.00
Self-Assured	0.00	25.00	1.31	22.00	1.75	14.00
Significance	0.00	25.00	0.46	25.00	0.06	28.00
Strategic	2.80	7.00	3.15	4.00	2.56	10.00

Table 16

Mean and Overall Rankings of Strengths by AYP Group in Rank Order

≥ 80% AYP (n = 5)			70%-79% AYP (n = 13)			< 70% AYP (n = 16)		
Strength	M	Rank	Strength	M	Rank	Strength	M	Rank
Analytical	6.60	1	Achiever	3.92	1	Responsibility	4.94	1
Input	5.20	2	Analytical	3.92	1	Communication	3.63	2
Achiever	4.80	3	Belief	3.38	3	Relator	3.62	3
Relator	3.80	4	Strategic	3.15	4	Developer	3.50	4
Communication	3.60	5	Focus	2.77	5	Belief	3.44	5
Arranger	3.40	6	Relator	2.77	5	Learner	3.25	6
Strategic	2.80	7	Restorative	2.77	5	Analytical	2.81	7
Ideation	2.40	8	Communication	2.69	8	Achiever	2.69	8
Command	2.20	9	Arranger	2.54	9	Focus	2.63	9
Developer	2.20	9	Learner	2.54	9	Positivity	2.56	10
Deliberative	2.00	11	Responsibility	2.54	9	Strategic	2.56	10
Activator	1.80	12	Discipline	2.38	12	Command	2.50	12
Empathy	1.80	12	Developer	2.15	13	Restorative	1.94	13
Futuristic	1.60	14	Empathy	2.15	13	Consistency	1.75	14
Learner	1.60	14	Maximizer	1.92	15	Futuristic	1.75	14
Adaptability	1.40	16	Consistency	1.85	16	Self-Assured	1.75	14
Belief	1.40	16	Command	1.69	17	Discipline	1.50	17
Responsibility	1.40	16	Deliberative	1.62	18	Maximizer	1.50	17
Harmony	1.20	19	Futuristic	1.62	18	Activator	1.44	19
Restorative	1.20	19	Activator	1.46	20	Deliberative	1.19	20
Focus	1.00	21	Positivity	1.46	20	Arranger	1.13	21
Positivity	0.80	22	Self-Assured	1.31	22	Empathy	0.94	22
Maximizer	0.60	23	Adaptability	1.00	23	Includer	0.63	23
Individualization	0.20	24	Intellection	0.54	24	Intellection	0.44	24
Consistency	0.00	25	Significance	0.46	25	Ideation	0.31	25
Discipline	0.00	25	Harmony	0.23	26	Input	0.31	25
Includer	0.00	25	Ideation	0.15	27	Harmony	0.25	27
Intellection	0.00	25	Includer	0.00	28	Significance	0.06	28
Self-Assured	0.00	25	Individualization	0.00	28	Adaptability	0.00	29
Significance	0.00	25	Input	0.00	28	Individualization	0.00	29

Research Question 2

What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they serve (middle or high school)?

As the sample size was small and the data were ordinal, normal distribution could not be assumed. Therefore, a non-parametric test was deemed most appropriate. Since there were only two groups, the Mann-Whitney test was the most appropriate test to find the difference in mean ranks of the self-identified principal strengths between those at schools in the two different levels of interest, middle and high.

Results for the tests are provided in Table 17. As in the case of the Kruskal-Wallis test, for each of the two groups, the mean rank for the test is provided. A group with a smaller mean rank implies that the item received fewer points on average than did the group with the larger mean rank. Additionally, the result of the test is provided for each strength, with both the test statistic and level of statistical significance.

The same Bonferroni correction for study significance level ($\alpha = .002$) applied to this test. Examining the results, no strengths yielded significant differences in identification between principals at different school levels at the conservative $\alpha = .002$ significance level. However, there were two areas that yielded significance at a lower significance level. Communication yielded significance at the $\alpha = .01$ significance level, $Z = -2.88$, $p = .004$. The Mann-Whitney test indicated that those at the high school levels ranked this strength as more important ($M_r = 23.11$, $n = 14$) than did those at the middle school level ($M_r = 13.58$, $n = 20$) and harmony yielded significance at the $\alpha = .05$

significance level, $Z = -2.13$, $p = .03$. The Mann-Whitney test indicated that those at the high school levels ranked this strength as more important ($M_r = 19.64$, $n = 14$) than did those at the middle school level ($M_r = 16.00$, $n = 20$).

Although none of the other strengths showed significant differences in mean ranking between school level groups, principals serving middle schools ranked the following higher than those serving high schools: achiever, activator, analytical, arranger, command, communication, harmony, ideation, input, intellection, maximizer, relator, responsibility, restorative, and self-assured. While the strengths of adaptability, belief, consistency, developer, deliberative, discipline, empathy, focus, futuristic, includer, individualization, leaner, positivity, significance, and strategic were ranked higher by principals serving high schools. Table 17 gives a summary of the Mann-Whitney results for each strength by school level and uses bold to indicate which grade level group ranked the strength highest.

Table 17

Mann-Whitney Results for Strength Identification by School Level (N = 34)

Strength	School Level		Z	p
	Middle School (n = 20)	High School (n = 14)		
Achiever	14.30	22.07	-2.31	.02*
Activator	16.98	18.25	-0.44	0.66
Adaptability	18.00	16.79	-0.63	0.53
Analytical	16.08	19.57	-1.04	0.30
Arranger	16.88	18.39	-0.54	0.59
Belief	19.00	15.36	-1.12	0.26
Command	17.15	18.00	-0.27	0.79
Communication	13.58	23.11	-2.88	.004**
Consistency	17.70	17.21	-0.19	0.85
Deliberative	18.68	15.82	-1.02	0.31
Developer	19.23	15.04	-1.28	0.20
Discipline	19.25	15.00	-1.58	0.11
Empathy	19.65	14.43	-1.81	0.07
Focus	19.08	15.25	-1.22	0.22
Futuristic	17.80	17.07	-0.26	0.79
Harmony	16.00	19.64	-2.13	.03*
Ideation	16.20	19.36	-1.37	0.17
Includer	17.73	17.18	-0.32	0.75
Individualization	17.85	17.00	-0.84	0.40
Input	17.23	17.89	-0.34	0.73
Intellection	16.90	18.36	-0.85	0.39
Learner	18.58	15.96	-0.83	0.40
Maximizer	16.65	18.71	-0.66	0.51
Positivity	19.73	14.32	-1.87	0.06
Relator	16.83	18.46	-0.52	0.60
Responsibility	17.20	17.93	-0.22	0.83
Restorative	16.98	18.25	-0.41	0.68
Self-Assured	17.43	17.61	-0.06	0.95
Significance	18.55	16.00	-1.49	0.14
Strategic	17.63	17.32	-0.09	0.92

*p < .05. **p < .01. ***p < .002.

In addition to using the Mann-Whitney test to determine differences in mean rank score, a simple mean of ranks was run for each of the grade level served. Again the mean is a number between zero and 10 where a perfect 10 would represent every participant ranking the strength as one and zero would represent no participants ranking the strength in their top ten. Table 18 shows both the mean rank for each strength as well as the overall ranking of each strength grouped by level served. Table 19 shows the strengths in rank order for each grade level group and for the overall sample group. Table 20 and 21 list the mean rank of strengths and overall rank of strengths grouped by AYP for middle schools and high schools respectively.

Table 18

Mean and Overall Rankings of Strengths Grouped by Level in Alphabetical Order

Strength	Overall ($N = 34$)		Middle School ($N = 20$)		High School ($N = 14$)	
	M	Rank	M	Rank	M	Rank
Achiever	3.47	3	2.10	12	5.43	1
Activator	1.50	20	1.25	22	1.86	13
Adaptability	0.59	24	0.65	24	0.50	26
Analytical	3.79	1	3.25	4	4.57	3
Arranger	2.00	13	1.95	13	2.07	11
Belief	3.12	6	3.60	1	2.43	9
Command	2.15	11	1.90	15	2.50	8
Communication	3.26	5	1.90	15	5.21	2
Consistency	1.53	17	1.60	19	1.43	16
Deliberative	1.47	21	1.95	13	0.79	22
Developer	2.79	8	3.40	3	1.93	12
Discipline	1.62	16	2.35	10	0.57	25
Empathy	1.53	18	2.15	11	0.64	23
Focus	2.44	10	3.00	7	1.64	15
Futuristic	1.68	15	1.90	15	1.36	17
Harmony	0.38	27	0.00	30	0.93	21
Ideation	0.56	25	0.25	28	1.00	18
Includer	0.29	28	0.40	25	0.14	28
Individualization	0.03	30	0.05	29	0.00	29
Input	0.91	23	0.85	23	1.00	18
Intellection	0.41	26	0.35	26	0.50	26
Learner	2.74	9	3.15	5	2.14	10
Maximizer	1.53	19	1.35	21	1.79	14
Positivity	1.88	14	2.75	8	0.64	23
Relator	3.32	4	3.05	6	3.71	4
Responsibility	3.50	2	3.50	2	3.50	5
Restorative	2.15	12	1.85	18	2.57	7
Self-Assured	1.32	22	1.55	20	1.00	18
Significance	0.21	29	0.35	26	0.00	29
Strategic	2.82	7	2.60	9	3.14	6

Table 19

Mean and Overall Rankings of Strengths Grouped by Level in Rank Order

Overall (<i>N</i> = 34)			Middle School (<i>N</i> = 20)			High School (<i>N</i> = 14)		
Strength	<i>M</i>	Rank	Strength	<i>M</i>	Rank	Strength	<i>M</i>	Rank
Analytical	3.79	1	Belief	3.6	1	Achiever	5.43	1
Responsibility	3.5	2	Responsibility	3.5	2	Communication	5.21	2
Achiever	3.47	3	Developer	3.4	3	Analytical	4.57	3
Relator	3.32	4	Analytical	3.25	4	Relator	3.71	4
Communication	3.26	5	Learner	3.15	5	Responsibility	3.5	5
Belief	3.12	6	Relator	3.05	6	Strategic	3.14	6
Strategic	2.82	7	Focus	3	7	Restorative	2.57	7
Developer	2.79	8	Positivity	2.75	8	Command	2.5	8
Learner	2.74	9	Strategic	2.6	9	Belief	2.43	9
Focus	2.44	10	Discipline	2.35	10	Learner	2.14	10
Command	2.15	11	Empathy	2.15	11	Arranger	2.07	11
Restorative	2.15	12	Achiever	2.1	12	Developer	1.93	12
Arranger	2	13	Arranger	1.95	13	Activator	1.86	13
Positivity	1.88	14	Deliberative	1.95	13	Maximizer	1.79	14
Futuristic	1.68	15	Command	1.9	15	Focus	1.64	15
Discipline	1.62	16	Communication	1.9	15	Consistency	1.43	16
Consistency	1.53	17	Futuristic	1.9	15	Futuristic	1.36	17
Empathy	1.53	18	Restorative	1.85	18	Ideation	1	18
Maximizer	1.53	19	Consistency	1.6	19	Input	1	18
Activator	1.5	20	Self-Assured	1.55	20	Self-Assured	1	18
Deliberative	1.47	21	Maximizer	1.35	21	Harmony	0.93	21
Self-Assured	1.32	22	Activator	1.25	22	Deliberative	0.79	22
Input	0.91	23	Input	0.85	23	Empathy	0.64	23
Adaptability	0.59	24	Adaptability	0.65	24	Positivity	0.64	23
Ideation	0.56	25	Includer	0.4	25	Discipline	0.57	25
Intellection	0.41	26	Intellection	0.35	26	Adaptability	0.5	26
Harmony	0.38	27	Significance	0.35	26	Intellection	0.5	26
Includer	0.29	28	Ideation	0.25	28	Includer	0.14	28
Significance	0.21	29	Individualization	0.05	29	Individualization	0	29
Individualization	0.03	30	Harmony	0	30	Significance	0	29

Table 20

Rankings of Strengths by AYP Group for Principals Serving Middle Schools

Strength	≥ 80% AYP (n = 2)		70%-79% AYP (n = 8)		< 70% AYP (n = 10)	
	M	Rank	M	Rank	M	Rank
Achiever	5.00	4	1.63	19	1.90	15
Activator	0.00	17	2.38	10	0.60	24
Adaptability	0.00	17	1.63	19	0.00	27
Analytical	6.00	2	4.00	1	2.10	13
Arranger	4.00	6	2.75	8	0.90	20
Belief	3.50	7	3.50	3	3.70	4
Command	5.50	3	0.13	24	2.60	9
Communication	3.00	9	1.50	21	2.00	14
Consistency	0.00	17	2.37	12	1.30	18
Deliberative	3.50	7	2.63	9	1.10	19
Developer	2.00	11	2.13	13	4.70	2
Discipline	0.00	17	2.88	7	2.40	11
Empathy	4.50	5	2.38	10	1.50	16
Focus	2.50	10	3.38	5	2.80	7
Futuristic	0.50	16	1.25	22	2.70	8
Harmony	0.00	17	0.00	25	0.00	27
Ideation	0.00	17	0.00	25	0.50	25
Includer	0.00	17	0.00	25	0.80	22
Individualization	0.50	16	0.00	25	0.00	27
Input	8.50	1	0.00	25	0.00	27
Intellection	0.00	17	0.00	25	0.70	23
Learner	1.50	13	3.75	2	3.00	6
Maximizer	1.00	15	2.00	14	0.90	20
Positivity	0.00	17	1.75	18	4.10	3
Relator	0.00	17	3.50	3	3.30	5
Responsibility	2.00	11	1.88	16	5.10	1
Restorative	0.00	17	1.88	16	2.20	12
Self-Assured	0.00	17	2.00	14	1.50	16
Significance	0.00	17	0.75	23	0.10	26
Strategic	1.50	13	3.00	6	2.50	10

Table 21

Mean and Overall Rankings of Strengths by AYP Group for Principals Serving High Schools

Strength	$\geq 80\%$ AYP ($n = 3$)		70%-79% AYP ($n = 5$)		$< 70\%$ AYP ($n = 6$)	
	<i>M</i>	Rank	<i>M</i>	Rank	<i>M</i>	Rank
Achiever	4.67	3	7.60	1	4.00	4
Activator	3.00	7	0.00	24	2.83	8
Adaptability	2.33	10	0.00	24	0.00	23
Analytical	7.00	1	3.80	5	4.00	4
Arranger	3.00	7	2.20	9	1.50	15
Belief	0.00	20	3.20	8	3.00	7
Command	0.00	20	4.20	3	2.33	12
Communication	4.00	4	4.60	2	6.33	1
Consistency	0.00	20	1.00	18	2.50	10
Deliberative	1.00	17	0.00	24	1.33	18
Developer	2.33	10	2.20	9	1.50	15
Discipline	0.00	20	1.60	15	0.00	23
Empathy	0.00	20	1.80	12	0.00	23
Focus	0.00	20	1.80	12	2.33	12
Futuristic	2.33	10	2.20	9	0.17	22
Harmony	2.00	13	0.60	20	0.67	20
Ideation	4.00	4	0.40	22	0.00	23
Includer	0.00	20	0.00	24	0.33	21
Individualization	0.00	20	0.00	24	0.00	23
Input	3.00	7	0.00	24	0.83	19
Intellection	0.00	20	1.40	17	0.00	23
Learner	1.67	15	0.60	20	3.67	6
Maximizer	0.33	19	1.80	12	2.50	10
Positivity	1.33	16	1.00	18	0.00	23
Relator	6.33	2	1.60	15	4.17	3
Responsibility	1.00	17	3.60	6	4.67	2
Restorative	2.00	13	4.20	3	1.50	15
Self-Assured	0.00	20	0.20	23	2.17	14
Significance	0.00	20	0.00	24	0.00	23
Strategic	3.67	6	3.40	7	2.67	9

Research Question 3

What, if any, are the differences between the self-identified strengths of principals based on the community they serve (urban or suburban)?

As the data were ordinal and the sample size was small, normal distribution could not be assumed, therefore a non-parametric test was deemed most appropriate. Because there were only two groups, the Mann-Whitney test was used to indicate differences in mean ranks of the self-identified principal strengths between principals at schools serving different community types, suburban and urban.

Results for the tests are provided in Table 22. As in the case of the other research questions, for each of the two groups, the mean rank for the test is provided. A group with a smaller mean rank implies that the item received fewer points on average than did the group with the larger mean rank. Additionally, the result of the test is provided for each strength, with both the test statistic and level of statistical significance.

The same Bonferroni correction for study significance level ($\alpha = .002$) applied to this test.

Examining the results, no strengths yielded significant differences in identification between principals at schools serving different community types at the conservative $\alpha = .002$ significance level. However, there were two areas that came close. Achiever yielded significance at the $\alpha = .05$ significance level, $Z = -2.42$, $p = .02$. The Mann-Whitney test indicated that those at the schools in urban communities ranked this strength as more important ($M_r = 25.36$, $n = 7$) than did those at the schools serving suburban communities ($M_r = 15.46$, $n = 27$). Responsibility also yielded significance at the $\alpha = .05$ significance level, $Z = -2.02$, $p = .04$. The Mann-Whitney test indicated that

those at the schools in suburban communities ranked this strength as more important ($M_r = 19.20$, $n = 27$) than did those at the schools serving urban communities ($M_r = 10.93$, $n = 7$).

Although the Mann-Whitney test showed no significant differences in mean ranking of any strengths other than achiever and responsibility, those principals who served suburban communities ranked the strengths of belief, command, consistency, developer, discipline, empathy, focus, futuristic, harmony, ideation, individualization, input, intellection, learner, maximizer, responsibility, and significance higher than those principals serving urban communities. While the principals serving urban communities ranked the strengths of achiever, activator, adaptability, analytical, arranger, communication, deliberative, includer, positivity, relator, restorative, self-assured, and strategic higher than those serving suburban communities. Table 22 gives a summary of the Mann-Whitney results for each strength by community served where the strengths are bolded to identify the community that ranked it highest.

Table 22

Mann-Whitney Results for Strength Identification by Community Size

Strength	Community Size		Z	P
	Suburban (n = 27)	Urban (n = 7)		
Achiever	15.46	25.36	-2.42	.02*
Activator	17.48	17.57	-0.03	.99
Adaptability	16.69	20.64	-1.68	.36
Analytical	17.06	19.21	-0.53	.62
Arranger	16.15	22.71	-1.93	.13
Belief	18.80	12.50	-1.60	.14
Command	17.67	16.86	-0.21	.87
Communication	16.93	19.71	-0.69	.53
Consistency	18.54	13.50	-1.61	.24
Deliberative	17.35	18.07	-0.21	.87
Developer	18.33	14.29	-1.01	.36
Discipline	18.00	15.57	-0.74	.59
Empathy	18.26	14.57	-1.05	.40
Focus	17.67	16.86	-0.21	.87
Futuristic	18.22	14.71	-1.03	.43
Harmony	17.89	16.00	-0.91	.68
Ideation	17.56	17.29	-0.10	.92
Includer	17.22	18.57	-0.65	.52
Individualization	17.63	17.00	-0.51	.61
Input	18.02	15.50	-1.07	.29
Intellection	17.89	16.00	-0.91	.36
Learner	18.48	13.71	-1.24	.21
Maximizer	18.15	15.00	-0.82	.41
Positivity	17.07	19.14	-0.59	.56
Relator	16.17	22.64	-1.69	.09
Responsibility	19.20	10.93	-2.02	.04*
Restorative	16.06	23.07	-1.86	.06
Self-Assured	16.63	20.86	-1.21	.23
Significance	17.89	16.00	-0.91	.63
Strategic	17.31	18.21	-0.23	.82

* $p < .05$. ** $p < .01$. *** $p < .002$.

In addition to using the Mann-Whitney test to determine differences in mean rank score, a simple mean of the ranks was run for each of the strengths by community served. As in the previous two research questions, the mean is a number between zero and 10 where 10 would represent every participant ranking the strength as one and zero would represent no participants ranking the strength in their top ten. Table 23 shows both the mean rank and overall ranking of each strength grouped by community served. Table 24 shows the strengths in rank order by community served. Table 25 and 26 list the mean rank and overall rank of strengths grouped by community served for middle schools and high schools respectively.

Table 23

Mean and Overall Rankings of Strengths by Community Served Sorted Alphabetically

Strength	Suburban (<i>n</i> = 27)		Urban (<i>n</i> = 7)	
	<i>M</i>	Rank	<i>M</i>	Rank
Achiever	2.52	9	7.14	1
Activator	1.74	16	0.57	23
Adaptability	0.22	28	2.00	11
Analytical	3.56	2	4.71	3
Arranger	1.48	20	4.00	4
Belief	3.56	2	1.43	15
Command	2.22	11	1.86	12
Communication	3.15	4	3.71	6
Consistency	1.93	13	0.00	25
Deliberative	1.30	21	2.14	9
Developer	3.07	6	1.71	13
Discipline	1.78	14	1.00	18
Empathy	1.74	16	0.71	22
Focus	2.52	9	2.14	9
Futuristic	1.96	12	0.57	23
Harmony	0.48	25	0.00	25
Ideation	0.44	26	1.00	18
Includer	0.15	29	0.86	20
Individualization	0.04	30	0.00	25
Input	1.15	23	0.00	25
Intellection	0.52	24	0.00	25
Learner	3.15	4	1.14	16
Maximizer	1.63	19	1.14	16
Positivity	1.78	14	2.29	8
Relator	2.78	7	5.43	2
Responsibility	4.19	1	0.86	20
Restorative	1.67	18	4.00	4
Self-Assured	1.26	22	1.57	14
Significance	0.26	27	0.00	25
Strategic	2.78	7	3.00	7

Table 24

Mean and Overall Rankings of Strengths by Community Served Sorted by Rank

Strength	Suburban (<i>n</i> = 27)		Strength	Urban (<i>n</i> = 7)	
	<i>M</i>	Rank		<i>M</i>	Rank
Responsibility	4.19	1	Achiever	7.14	1
Analytical	3.56	2	Relator	5.43	2
Belief	3.56	2	Analytical	4.71	3
Communication	3.15	4	Arranger	4.00	4
Learner	3.15	4	Restorative	4.00	4
Developer	3.07	6	Communication	3.71	6
Relator	2.78	7	Strategic	3.00	7
Strategic	2.78	7	Positivity	2.29	8
Achiever	2.52	9	Deliberative	2.14	9
Focus	2.52	9	Focus	2.14	9
Command	2.22	11	Adaptability	2.00	11
Futuristic	1.96	12	Command	1.86	12
Consistency	1.93	13	Developer	1.71	13
Discipline	1.78	14	Self-Assured	1.57	14
Positivity	1.78	14	Belief	1.43	15
Activator	1.74	16	Learner	1.14	16
Empathy	1.74	16	Maximizer	1.14	16
Restorative	1.67	18	Discipline	1.00	18
Maximizer	1.63	19	Ideation	1.00	18
Arranger	1.48	20	Includer	0.86	20
Deliberative	1.30	21	Responsibility	0.86	20
Self-Assured	1.26	22	Empathy	0.71	22
Input	1.15	23	Activator	0.57	23
Intellection	0.52	24	Futuristic	0.57	23
Harmony	0.48	25	Consistency	0.00	25
Ideation	0.44	26	Harmony	0.00	25
Significance	0.26	27	Individualization	0.00	25
Adaptability	0.22	28	Input	0.00	25
Includer	0.15	29	Intellection	0.00	25
Individualization	0.04	30	Significance	0.00	25

Table 25

Mean and Overall Rankings of Strengths by Community Served for Middle Schools

Strength	Suburban (<i>n</i> = 17)		Urban (<i>n</i> = 3)	
	<i>M</i>	Rank	<i>M</i>	Rank
Achiever	1.41	19	6.00	2
Activator	1.29	21	1.00	17
Adaptability	0.35	26	2.33	11
Analytical	3.24	5	3.33	6
Arranger	1.82	16	2.67	10
Belief	3.65	4	3.33	6
Command	1.94	14	1.67	15
Communication	2.12	13	0.67	19
Consistency	1.88	15	0.00	20
Deliberative	1.76	17	3.00	9
Developer	3.82	2	1.00	17
Discipline	2.35	11	2.33	11
Empathy	2.53	7	0.00	20
Focus	2.88	6	3.67	5
Futuristic	2.24	12	0.00	20
Harmony	0.00	30	0.00	20
Ideation	0.29	27	0.00	20
Includer	0.12	28	2.00	14
Individualization	0.06	29	0.00	20
Input	1.00	23	0.00	20
Intellection	0.41	24	0.00	20
Learner	3.71	3	0.00	20
Maximizer	1.18	22	2.33	11
Positivity	2.53	7	4.00	4
Relator	2.47	9	6.33	1
Responsibility	4.12	1	0.00	20
Restorative	1.41	19	4.33	3
Self-Assured	1.53	18	1.67	15
Significance	0.41	24	0.00	20
Strategic	2.47	9	3.33	6

Table 26

Mean and Overall Rankings of Strengths by Community Served for High Schools

Strength	Suburban (<i>n</i> = 10)		Urban (<i>n</i> = 4)	
	<i>M</i>	Rank	<i>M</i>	Rank
Achiever	4.40	2	8.00	1
Activator	2.50	9	0.25	20
Adaptability	0.00	28	1.75	11
Analytical	4.10	4	5.75	3
Arranger	0.90	19	5.00	4
Belief	3.40	5	0.00	22
Command	2.70	8	2.00	9
Communication	4.90	1	6.00	2
Consistency	2.00	13	0.00	22
Deliberative	0.50	24	1.50	13
Developer	1.80	15	2.25	8
Discipline	0.80	20	0.00	22
Empathy	0.40	26	1.25	16
Focus	1.90	14	1.00	17
Futuristic	1.50	16	1.00	17
Harmony	1.30	18	0.00	22
Ideation	0.70	22	1.75	11
Includer	0.20	27	0.00	22
Individualization	0.00	28	0.00	22
Input	1.40	17	0.00	22
Intellection	0.70	22	0.00	22
Learner	2.20	11	2.00	9
Maximizer	2.40	10	0.25	20
Positivity	0.50	24	1.00	17
Relator	3.30	6	4.75	5
Responsibility	4.30	3	1.50	13
Restorative	2.10	12	3.75	6
Self-Assured	0.80	20	1.50	13
Significance	0.00	28	0.00	22
Strategic	3.30	6	2.75	7

Summary

Chapter 4 presented an analyzed the data provided by the results of the 30 Themes Self-Assessment and demographic information for each participant in the study. The three research questions provided the outline for the analysis. Chapter 5 provides a discussion, as well as findings, implications for practice, and recommendations for future research.

CHAPTER 5 DISCUSSION, CONCLUSIONS AND RECOMENDATIONS

Introduction

Chapter 5 provides the results of the study and discusses how the data presented in Chapter 4 relate to each of the three research questions. The chapter also reviews implications for practice, recommendations for future research, and provides concluding comments.

Statement of Problem

Increased accountability has led to increased pressure on administrators to meet AYP. Principals who did not improve student achievement were removed and replaced with administrators who, it was hoped, can meet the ever increasing demands that accountability has created (Lyons & Algozzine, 2006). However, without adequate information outlining the strengths of successful administrators, the process of replacing administrators may have limited success in improving student achievement. By identifying strengths that are present in successful administrators, superintendents will be better equipped to make well-informed selections and administrators can target specific areas for professional growth. The strengths in the self assessment were not specific to education but were developed for use across various industries. This study is important because it shows which of those strengths are possessed by successful administrators in a large Florida school district.

The following research questions guided this study:

1. What, if any, are the differences between the self-identified strengths of principals based on the school's percentage of adequate yearly progress (AYP) earned during the 2010-2011 school year?
2. What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they serve (middle or high school)?
3. What, if any, are the differences between the self-identified strengths of principals based on the community they serve (urban or suburban)?

Data Collection

In September 2010, all secondary principals within the targeted school district received a letter inviting them to participate in the study. The first letter was sent via email with a link to the online self-assessment questionnaire. A few days later, a follow-up email was sent as a reminder. Those who did not complete the survey within three weeks received a third email asking them once again to complete the online assessment. For those who did not respond to the third request, the researcher sent a fourth, and if necessary, a fifth and final reminder request. Copies of all communications with participants are contained in Appendix B.

Additional data, including percentage of adequate yearly progress (AYP), was collected from the Florida Department of Education (FLDOE) website. Participating

principals were subsequently placed in three AYP categories: (a) principals whose school met at least 80% AYP in 2010-2011, (b) principals whose schools met between 70% and 79% AYP in 2010-2011, and (c) principals whose school met less than 70% AYP in 2010-2011. While less principals fell into the first group than the other two, it was important to keep the top tier of principals at 80% or higher, as the Florida Department of Education, Bureau of School Improvement has determined that schools that do not make 80% AYP may face sanctions and corrective action (Florida Differentiated Accountability, 2011). Each participant was also identified as serving in a middle or high school setting and as serving an urban or suburban school. These categorizations were determined based on data provided by the targeted school district's Office of Pupil Assignment. Once collected the information was organized within an SPSS worksheet and various statistical procedures were used to analyze the data to answer the three research questions stated above.

Limitations

The factors that could limit the validity of this research include:

1. The principals' strengths could be influenced by what participants believed to be a correct answer.
2. Because the population for this study was limited to the targeted school district, its generalizability may be limited.

Summary and Discussion of the Findings

The following summary and discussion of the findings have been organized for each of the three research questions within this study.

Research Question 1

What, if any, are the differences between the self-identified strengths of principals based on the percentage of adequate yearly progress (AYP) earned during the 2010-2011 school year?

The first research question was answered by gathering the 10 greatest strengths, as perceived by the participant, in rank order. That data, along with the percent AYP achieved was compiled and entered into an SPSS spreadsheet. The Kruskal-Wallis test was used to indicate differences in mean ranks of the self-identified strengths among those principals' whose schools were in different AYP groups: 80% and above, 70%-79%, and below 70%.

When examining the results from the Mann Whitney test, input was the only strength that yielded significance in mean ranking based on AYP group. Principals who served schools earning greater than 80% AYP group gave a greater value to this strength than did those principals in either of the other two AYP groups. When looking at the overall ranking of strengths by AYP group, input was ranked second by principals who served schools in the greater than 80% school AYP group, last (28th) by the principals who served schools in the 70%-79% AYP group and 25th by the principals in the less than 70% AYP group.

Input was defined on the 30 Themes Self-Assessment as having a craving to know more; Like to collect and archive all kinds of information. According to Buckingham and Clifton (2001), someone who chooses input as one of their strengths is inquisitive and enjoys acquiring and compiling things and information, in case it proves valuable in the future.

Roland Barth (2006) acknowledged that the role of the school principal constantly transforms. It must flex to the everchanging demands from “new laws, new demographics, and new expectations on the part of parents, faculty, and central office” (Barth, 2006, para. 2). Hitting a moving target, such as AYP, requires knowing where the target is and where it is going next. When the demands, requirements, and rules change every year, a principal who enjoys learning and gathering information would have an advantage over those that are not acquainted to new demands in a timely manner. Guskey (2007) claimed that being humble and willing to ask questions is the only way to survive in education today. He added, to be an effective leader, principals must “learn to replace personal defensiveness with professional inquisitiveness” (p. 32).

This aligns with what Marzano, Waters, and McNulty (2005) found in a meta-analysis study on second order change. Marzano, et al. found that intellectual stimulation, which was defined as ensuring “faculty and staff are aware and discuss the most current theories and practices,” (p. 42) had an average correlation of .24 with student academic achievement. It is important to note that this is a correlation to academic achievement only and not first or second order change.

While the Mann Whitney test concluded that input was the only strength that was statistically significant based AYP grouping, there was a difference between simple mean ranks among the three AYP groups. Analytical was ranked first by the principal group who served schools achieving 80% or higher and the principals who served schools achieving 70%-79% AYP, while principals who served schools earning less than 70% AYP gave analytical an overall ranking of seven.

The 30 Themes Self-Assessment defined analytical as having the ability to think about all the factors that might affect a situation. This definition aligns with Marzano, Waters, and McNulty's (2005) definition of situational awareness, or being aware of the details and using the information to address problems, which had a correlation of .33. However, all of the 21 responsibilities were included as important to student achievement and therefore the correlations for all 21 range from .18.to .33 showing a very small difference among the 21 principal responsibilities (Marzano et al., 2005). Such research supports the findings of this study, which found that the principals who served high achieving schools (AYP of 80% or higher), ranked analytical as the most important strength.

Those principals serving schools with less than 70% AYP ranked responsibility or as defined in the 30 Themes Self-Assessment, the ability to take psychological ownership of what they say they will do, as the overall highest strength. In contrast, those principals serving schools earning between 70%-79% AYP ranked responsibility as ninth and those principals serving schools earning 80% or higher AYP ranked responsibility as 16th. The

review of literature did not produce any studies that found responsibility, or a similarly established quality, to impact student achievement.

Research Question 2

What, if any, are the differences between the self-identified strengths of principals based on the grade level configurations of the schools they serve (middle or high school)?

The data collected to answer the second research question was analyzed using a Mann-Whitney test to indicate differences in mean ranks of the self-identified principal strengths between those at middle schools and those at high schools.

The findings revealed no significant differences in mean ranking between school level groups at the $\alpha = .002$ significance level. However communication yielded significant differences in identification between principals at different school levels at the $\alpha = .01$ where the Mann-Whitney test indicated that those at the high school levels ranked this strength as more important than did those at the middle school level. When looking at the overall ranking, principals serving high schools ranked communication as second most important, while those serving middle schools gave it a ranking of 15. While there was no study indicating a greater need for communication in high schools, several studies cited the importance of communication and its link to academic achievement. Marzano, Waters, and McNulty (2005) in identifying correlations of 21 principal responsibilities correlated with student achievement found the correlation between communication and student achievement of $r = .23$. Cotton (2003), in her narrative review on leadership and student achievement, found communication to be one of the 25 categories that positively

affect student achievement.

The Mann-Whitney test also indicated yielded a significant difference at the $\alpha = .05$ significance level between grade level group rankings of harmony. The results indicated that those principals serving at the high school level ranked harmony as more important than principals serving at the middle school level. However, when looking at the overall ranking harmony was ranked as 21st by principals serving high schools and last (30th), by principals serving middle schools. While this produced a significant difference in means, both groups ranked this as one of the least important strengths. The 30 Themes Self-Assessment defined harmony as people who look for consensus and don't enjoy conflict. According to Buckingham and Clifton (2001), those who choose harmony as a strength, believe there is little to be gained from conflict. The review of literature did not uncover any research related to harmony and academic achievement.

When looking at the overall ranking of strengths, using a simple mean, principals serving high schools ranked achiever as the most important strength, while those serving middle schools ranked it significantly lower at 12th. The 30 Themes Self-Assessment defined achiever as someone who gets satisfaction from being busy and productive. While the literature did not establish a reason for the difference in middle and high schools rank of achiever, schools often have more students, more staff, and more activities, which could lead to a feeling of busyness.

In contrast, principals serving middle schools ranked belief as the most important strength, while those serving high schools ranked this strength at ninth. Belief is defined on the 30 Themes Self-Assessment holding on to core values that are unchanging. This

would be important to principals at all levels, as being able to hold on to core values is necessary when faced with outside pressures, political and otherwise.

The strengths of significance and individualization were ranked low by both principals serving middle schools and high schools. The 30 Themes Self-Assessment defined significance as wanting to be very important in the eyes of others. It could be speculated that this is not a quality usually aligned with careers in education. Individualization is defined as being intrigued with the unique qualities of each person. Individualization was ranked as 26th by middle school principals and last (29th) by high school principals. There was no research found to support either significance or individualism to be linked to student achievement.

Research Question 3

What, if any, are the differences between the self-identified strengths of principals based on the community they serve (urban or suburban)?

The third research question was answered using a Mann-Whitney test to indicate the differences in mean ranks of the self-identified principal strengths between those at schools serving suburban and urban schools. It is important to note that community served is not meant to indicate the socio-economic status of a school, but instead whether schools reside within census defined urban areas.

An examination of the results found that no strengths yielded significant differences in identification between principals at schools serving different community types. Although none of the strengths showed significant differences in mean ranking

between community types, two strengths, yielded significant differences at the conservative $\alpha = .05$ significance level.

The Mann-Whitney test indicated that those at schools in urban communities ranked achiever as more important than did those at the schools serving suburban communities. When looking at the overall rankings, principals serving urban communities ranked achiever as the most important strength, while those serving suburban ranked the strength as 9th most important. The 30 Themes Self-Assessment defined achiever as someone who gets satisfaction from being busy and productive. Both groups ranked this strength in their top ten, indicating that is of importance to both. However, the reason for one group ranking the strength higher than the other is unclear as there was no research found to support the idea that it is more valuable to an urban community than suburban community.

Responsibility also yielded significance at the $\alpha = .05$ significance level, where the Mann-Whitney test indicated principals at the schools in suburban communities ranked this strength as more important than did principals at the schools serving urban communities. When looking at the overall ranking of strengths based on community served, principals serving suburban communities ranked responsibility as the most important strengths, while principals serving urban communities ranked the responsibility as 20th. The reason for the significant difference in ranking between community types is unclear, as responsibility was defined on the 30 Themes Self-Assessment as taking psychological ownership of what they say they will do, a strength necessary when serving any community type.

Findings

This study investigated the strengths of secondary principals in the targeted school district during the 2010-2011 school year. The review of literature explained accountability at both the federal and state level, the role of the principal in school effectiveness, and the changes that have occurred due to increased accountability. Although very little statistical significance was found, the analyzed data revealed information that may help guide the selection and development of secondary school principals. Based on the review of literature, as well as the data collected from the participants of this study, the following conclusions were made:

1. Principals that served schools earning 80% or more AYP ranked the strength of input higher than did principals serving schools with less than 80% AYP. This aligned with Marzano, Waters and McNulty's findings of a correlation between intellectual stimulation and academic achievement.
2. Analytical was ranked as the most important strength by principals serving schools that achieved 80% or more AYP and by principals serving 70%-79% AYP (tied with achiever) while those principals serving schools earning less than 70% AYP ranked analytical as 7th. This aligned with Marzano, Waters and McNulty's findings of a correlation between situational awareness and academic achievement.
3. Although at a lower significance level ($\alpha = .01$ and $\alpha = .05$), principals that served high schools ranked both the strengths of communication and harmony higher than those principals serving middle schools.

4. Although at a significance level of $\alpha = .05$, principals serving urban communities ranked the strength of achiever higher than those principals serving suburban communities.
5. Although at a significance level of $\alpha = .05$, principals serving suburban communities ranked the strength of responsibility higher than those principals serving urban communities.

Implications for Practice

There is a need to identify the qualities and strengths that help principals lead schools to achieving AYP. With the continued increase in accountability for schools, school district leaders should continue looking for ways to determine whether the leaders they recruit have the strengths needed to thrive in the current world of accountability and reevaluate whether the current selection processes are adequately addressing present demands.

Through this study's findings, the following recommendations are made:

- 1) Hiring instruments should be developed that are aligned with the demands placed on principals for accountability.
- 2) Recruiting and selection processes should be reexamined to look for principals with the qualities that are correlated with academic achievement (i.e. analytical, input)
- 3) When moving principals to a new school site or hiring for a specific school site, attention should be paid to the community type (urban or suburban) that

is being served and whether the principal or applicant has the qualities that have shown to be successful in those community types.

- 4) Professional development programs for both principals and aspiring leaders need to be examined to determine if they develop the strengths needed to meet accountability standards.

Recommendations for Future Research

1. This study could be replicated using a different method for gathering data on principal's strengths, such as the Clifton StrengthsFinder Online assessment, or teacher surveys.
2. This study could be extended to include principals from a larger geographic data. This would give a larger population and sample size increasing the chance for statistical significance and generalizability.
3. This study could be extended to include principals from elementary schools. This would increase population and sample size as well as give an opportunity to determine differences between secondary and elementary schools.
4. This study could be replicated using a 360 degree evaluation. Principals could complete a self assessment tool, and could be evaluated by teachers, peers, and supervisors.
5. A longitudinal study could be conducted to look at those principals serving schools that maintain high levels of or increase academic success over time.
6. This study could be extended to look at the strengths of principals based on the

socioeconomic make up or free and reduced lunch rate of the school they serve.

Summary

Chapter Five presented a summary and discussion of the findings for each of the three research questions presented. Conclusions were offered based on both data reported in chapter 4 and the literature review in Chapter 2. These conclusions were followed by implications for practice and recommendations for future research.

APPENDIX A
30 THEMES SELF-ASSESSMENT

30 Themes Self-Assessment

Directions: Please read over the 30 themes listed below and rank the ten themes that most accurately describe your strengths.

- Achiever**-Get satisfaction from being busy and productive.
- Activator**-Can make things happen by turning thoughts into action; often impatient.
- Adaptability**-Prefer to “go with the flow.”
- Analytical**-Have the ability to think about all the factors that might affect a situation.
- Arranger**-Can organize, but they also have a flexibility
- Belief**-Have certain core values that are unchanging.
- Command**-Can take control of a situation and make decisions.
- Communication**-Find it easy to put their thoughts into words.
- Consistency**-Keenly aware of the need to treat people the same.
- Deliberative**- described by the serious care they take in making decision; Anticipates obstacles
- Developer**-Recognize and cultivate the potential in others.
- Discipline**-Enjoy routine and structure.
- Empathy**-Can sense the feelings of other people by imagining themselves in others’ lives
- Focus**-Can take a direction, follow through, and make the corrections necessary
- Futuristic**-Inspired by the future and what could be.
- Harmony**-Look for consensus; Don’t enjoy conflict
- Ideation**-Fascinated by ideas; find connections between seemingly disparate phenomena.
- Includer**-Show awareness of those who feel left out, and make an effort to include them.
- Individualization**-Intrigued with the unique qualities of each person.
- Input**-Have a craving to know more; Like to collect and archive all kinds of information.
- Intellection**-Characterized by their intellectual activity.
- Learner**-Have a great desire to learn and want to continuously improve.
- Maximizer**-Focus on strengths as a way to stimulate personal and group excellence.
- Positivity**-Have an enthusiasm that is contagious; Upbeat and can get others excited
- Relator**-Enjoy close relationships with others; satisfaction in working hard with friends to
- Responsibility**-Take psychological ownership of what they say they will do.
- Restorative**-Good at figuring out what is wrong and resolving it.
- Self-assurance**-Possess an inner compass that gives them confidence
- Significance** -Want to be very important in the eyes of others.
- Strategic** -Create alternative ways to proceed

Survey can be found at <http://www.surveymonkey.com/s/LMBBDCB>

Note: Adapted From Buckingham, M., & Clifton, D. (2001). Now discover your strengths. New York, New York: The Free Press.

APPENDIX B
COMMUNICATIONS WITH PARTICIPANTS

Dear Educator:

Thank you for taking the time to participate in this important study about leadership in Orange County Public Schools, related to the leadership qualities of principals and Adequate Yearly Progress. You are among approximately 50 school level principals who have been invited to provide input for this research. This study will contribute to understanding of the relationship between principals' strengths and Adequate Yearly Progress.

I will be available explain this research study to you. Whether or not you take part is up to you. You can agree to take part now and later change your mind. Whatever you decide it will not be held against you. Feel free to ask all the questions you want before you decide.

The study is confidential. The research you may take part in will consist of you ranking your ten greatest strengths in an online self-assessment. These strengths are based on the Clifton StrengthsFinder Themes. Viewing of any personally identifiable information will be limited to me, the researcher. There are no anticipated risks or benefits to participating in this study.

If you have any questions about this study, please contact me at kelly.paduan@ocps.net. My faculty advisor, Dr. Rosemarye Taylor, may be contacted by phone at (407) 823-1469 or by email at rtaylor@mail.ucf.edu. Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (IRB). Questions or concerns about research participants' rights may be directed to the UCF Institutional Review Board Office at the University of Central Florida, Office of Research and Commercialization,

12201 Research Parkway, Suite 501, Orlando, FL 32826-3246. The phone numbers are (407) 823-2901 or (407) 882-2276.

You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the researcher.
- You cannot reach the researcher.
- You want to talk to someone besides the researcher.
- You want to get information or provide input about this research.

I will be contacting you via email with a link and instructions on how to complete the online self-assessment. By clicking the link to the online self-assessment the participant is giving informed consent.

Thank you in advance for taking the time to participate.

Best Regards,

Kelly Paduano

Doctoral Candidate, University of Central Florida

Assistant Principal, Union Park Middle School

LIST OF REFERENCES

- Academic collaborative environment glossary. (n.d.). Academic collaborative environment. Retrieved from <https://sites.google.com/a/odu.edu/cs410fall09blue/>
- Anderson, Arthur R. (2008). Strengths and talents of potential administrators in Orange County Public Schools, Florida
- Assessment literacy glossary. (n.d.). School improvement in Maryland. Retrieved from http://mdk12.org/process/cfip/Assessment_Literacy_Glossary.html
- Barth, R. (2006). Q&A: The principals' center founder Roland Barth. (n.d.). Harvard Graduate School of Education | To prepare leaders in education Retrieved from http://www.gse.harvard.edu/news_events/features/2006/12/01_barthqa.html
- Buckingham, M., & Clifton, D. (2001). *Now discover your strengths*. New York, New York: The Free Press.
- Bracey, G. (2002). *The War Against America's Public Schools: Privatizing Schools, Commercializing Education*. Boston: Allyn & Bacon.
- Butler, K. (2008). Principal preparation programs. *District Administration*, 44(10), 66-68,. Retrieved from ERIC database.
- Cotton, K. (2003). *Principals and student achievement: what the research says*. Alexandria, Va.: Association for Supervision and Curriculum Development.
- Donmoyer, R. (1985). Cognitive anthropology and research on effective principals. *Educational Administration Quarterly*
- Duke, D., Grogan, M., Tucker, P., & Heinecke, W., (2003). *Educational leadership in an age accountability*. New York: State University of New York Press
- Elmore, R. (2005). Accountable leadership, *The Educational Forum*, Vol. 69 No.2, pp.134-42.
- Feng, L., Figlio, D., & Sass, T.R. (2010). School accountability and teacher mobility. NBER working paper 16070.
- Florida Department of Education (2001). Did you know – A+ Plan for education. Tallahassee, Florida. Retrieved October 5, 2004, from <http://www.myflorida.com/myflorida/government/governorinitiatives/aplusplan/youKnow.html>

- Florida Department of Education, (2005). Computer/business technology education specifications for the 2006-2007 Florida state adoption of instructional materials. Retrieved from http://www.fldoe.org/bii/instruct_mat/0607adoption/businessstech.pdf 2005
- Florida Department of Education. (2009). History of school grades. Retrieved from [http://schoolgrades.fldoe.org/pdf/0809/School Grades2009_11.pdf](http://schoolgrades.fldoe.org/pdf/0809/School_Grades2009_11.pdf)
- Florida's Differentiated Accountability Plan. (2011, June 1). Florida Department of Education Bureau of School Improvement. Retrieved from http://flbsi.org/pdf/Final_2011-2012_DA_Matrix.pdf
- Four Pillars of No Child Left Behind. (2004, July 1). *U.S. Department of Education*. Retrieved from <http://www2.ed.gov/nclb/overview/intro/4pillars.html>
- Gallup Organization (2005, March). The Clifton StrengthsFinder Research FAQs. http://media.gallup.com/PDF/TWYS/CSF_Research_FAQ.pdf
- Gurr, D., Drysdale, L., & Mulford, B. (2006, September 1). Models of successful principal leadership. *School Leadership & Management*, 26(4), 371-395. (ERIC Document Reproduction Service No. EJ743681) Retrieved from ERIC database.
- Guskey, T. (2007). Leadership in the age of accountability. *Educational Horizons*, 86(1), 29-34.
- Hamilton, L. S., Stecher, B. M., & Klein, S. P. (2002). *"Making sense of test-based accountability in education."* Santa Monica, CA: Rand.
- Ladner, M., Lips, D., & Heritage, F. (2009). How "No Child Left Behind" threatens Florida's successful education reforms. Backgrounder. No. 2226. *Heritage Foundation*, Retrieved from EBSCOhost.
- Lashway, L. (2000). Who's in charge? The accountability challenge. *Principal Leadership*, 1(3), 8-13.
- Leithwood, K. (2008). Characteristics of high-performing school districts: A review of empirical evidence Paper prepared for the College of Alberta School Superintendents.
- Leithwood, K., Day, C., Sammons, P., Hopkins, D., & Harris, A. (2006). Successful school leadership: what it is and how it influences pupil learning, National College for School Leadership. Retrieved from <http://www.nationalcollege.org.uk/index/docinfo.htm?id=21851>

- Leithwood, K., Louis, K.S., Anderson, S., & Wahlstrom, K. (2004). How leadership influences student learning. New York: The Wallace Foundation. Retrieved from <http://leadershiplinc.illinoisstate.edu/downloads/howleadershipinfluencesstudentlearning.pdf>
- Lopez, S. J., Hodges, T., & Harter, J. (2005). Clifton StrengthsFinder technical report: Development and validation. Princeton, NJ: The Gallup Organization.
- Lyons, J., & Algozzine, B. (2006, June 16). Perceptions of the impact of accountability on the role of principals. *Education Policy Analysis Archives*, 14(16), 1-19. (ERIC Document Reproduction Service No. EJ806035) Retrieved from ERIC database.
- Mapping Florida's educational progress. (2008). U.S. Department of Education. Retrieved from <http://www2.ed.gov/nclb/accountability/results/progress/fl.html>
- Marzano, R., Waters, T., & McNulty, B. (2005). *School leadership that works: From research to results*. Association for Supervision and Curriculum Development:
- McCullers, J. F., & Bozeman, W. (2010, June 10). Principal self-efficacy: The effects of No Child Left Behind and Florida school grades. National Association of Secondary School Principals Bulletin.
- Mintrop, H., & Trujillo, T. (2005). Corrective action in low performing schools: lessons for NCLB implementation from first-generation accountability systems. *Education Policy Analysis Archives*, 13(48), 1-30. Retrieved from EBSCOhost.
- National Conference of State Legislatures (2004). History of the federal role in education. Washington, D.C. Retrieved October 5, 2004, from <http://www.ncsl.org/programs/educ/NCLBHistory.htm>
- No Child Left Behind Act. (2001). U. S. Public Law 107-110. 107th Cong., 1st sess., 8 January 2002.
- Olson, L. (2007, December 12). Policy focus turning to principal quality. *Education Week*, 27(15), . (ERIC Document Reproduction Service No. EJ781574) Retrieved from ERIC database.
- Orange County Public Schools Office of Pupil Assignment, Schools Residing Within the City of Orlando, January 30, 2011.
- Rudalevige, A. (2003). *The politics of NCLB*. Retrieved from http://educationnext.org/files/ednext20034_62.pdf

- Samuels, C. (2008, April 30). Principals at the center: the Pittsburgh school district believes cultivating effective instructional leaders is the key to school improvement. *Education Week*, 27(35), 26-28. (ERIC Document Reproduction Service No. EJ794408) Retrieved from ERIC database.
- Sanzo, K. L., Sherman W., & Clayton J., (2011). Leadership practices of successful middle school principals. *Journal of Educational Administration* 49.1 31-45. ERIC. EBSCO. Web.
- Schreiner, L. (2005). A technical report on the Clifton StrengthsFinder with college students. Azusa Pacific University. Retrieved September 13, 2007 from http://www.apu.edu/strengthsacademy/downloads/validity_study.pdf
- Student Enrollment Summary. (2011, September 15). Orange County Public Schools Office of Pupil Assignment. Retrieved from <https://www.ocps.net/fs/governmental/pupil/Documents/Enrollment%20Summary%2009%2015%202011.pdf>
- Tucker, M., & Coddling, J. (2002). Preparing principals in the age of accountability. In M. Tucker & J. Coddling (Eds.), *The principal challenge: Leading and managing schools in an era of accountability* (pp. 1-42). San Francisco: Jossey-Bass. Retrieved from http://media.wiley.com/product_data/excerpt/76/07879644/0787964476.pdf.
- United States Department of Education (2008). Executive summary of NCLB. from <http://www.whitehouse.gov/news/reports/no-child-left-behind.html>
- U.S. census 2000 urbanized area and urban cluster information. (2003, March 6). *U.S. Census Bureau*. Retrieved from <http://www.census.gov/geo/www/ua/uauinfo.html#lists>
- Ylimaki, R., Jacobson, S., & Drysdale, L. (2007), "Making a difference in challenging, high-poverty schools: successful principals in the USA, England, and Australia", *School Effectiveness and School Improvement*, Vol. 18 No.4, pp. 361-81.