The Relationship Of Student Achievement To Prinicpals' Self-reported Use Of The Four Frame Theory

Donna Poniatowski

University of Central Florida

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
https://stars.library.ucf.edu/etd/1058
THE RELATIONSHIP OF STUDENT ACHIEVEMENT
TO PRINCIPALS’ SELF-REPORTED USE OF
THE FOUR FRAME THEORY

By

DONNA PONIATOWSKI
B.S. University of Central Florida, 1981
M.A. University of Central Florida, 1996

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the Department of Educational Research, Technology, and Leadership
in the College of Education
at the University of Central Florida
Orlando, Florida

Summer Term
2006

Major Professor: Rosemarye Taylor
This study was developed to provide information about the relationship of principals’ use of Bolman and Deal’s (1991) four frame model of leadership to student achievement. The collection and analysis of student Florida Comprehensive Assessment Testing (FCAT) data over a 2 year period served as a measure to indicate whether or not an increase in reading mean scale score occurred from 2004 to 2005. Comparative analysis of both sets of data using multiple regressions was used to determine if there was a relationship between the self-reported leadership orientations of the principals and student achievement. In addition, the study was intended to contribute to the quantitative data produced concerning the use of the four frames, multi-framing and reframing by elementary and secondary leadership.

Principals in this study were surveyed concerning their use of the structural, human resource, political and symbolic frames of leadership using the Leadership Orientations (Self) instrument constructed by Bolman and Deal (1990). The only restriction concerning usability of the returned survey was that the principal had to be at the same school during the 2004 and 2005 school years. Of the 52 surveys returned, 42 (73%) formed the population for this study.

This study found that the human resource frame was used most often but that 59% of the elementary teachers and 93% of the secondary teachers multi-framed on a regular basis. The study also found that that the use of the political frame and symbolic frame has increased.
The self-reported data indicated no difference in effectiveness as a leader or as a manager, unlike previous data which indicated that leaders and managers worked from different frames to effect organizational policies. The analysis of data also indicated that there was no difference in frame use between elementary and secondary principals.

The data indicated no relationship between the principals’ frame usage and student achievement as measured by increases in FCAT Reading mean scale scores for the years 2004 and 2005. The implications of this finding are that there are other variables than use of the four frame model that contribute to an increase in FCAT mean scale scores. These emergent factors within and without the organization that is the public school system transcend what the data show in this case.

Based on the findings of this study and supported by the literature review, it appears that school organizations could benefit leadership practice and possibly student achievement by providing training in the political and symbolic frames. It might also be perceived from the data, which indicated no relationship between principals’ frame usage and student achievement, that leadership might begin to foster awareness of how successful principals’ identify emergent patterns in the system. This ability to guide the diverse and constantly changing educational landscape toward positive adjustments in the system may be best served by those who are most adept at multi-framing and reframing to ensure student achievement.
ACKNOWLEDGMENTS

I want to thank my extraordinary husband, Charlie, for being my best cheerleader and for reminding me that the attainment of any worthy goal involves dedication and focus and sometimes sacrifices of the personal moment. Thank you to my children for their support, encouragement and love, as well as the many hours of conversation built around one issue or another that I was studying at the moment. I also want to acknowledge the influence of a very special person in my life, my uncle, who set the stage for my career in education by being the very best example of a dedicated teacher and outstanding leader that anyone could possibly have. Thank you for always being there for me.

I thank my committee members, Dr. Rosemarye Taylor, Dr. Ken Murray, Dr. Lee Tubbs and Dr. Jack Stout for their support and encouragement as well as their insight and editorial guidance. I especially want to thank Dr. Taylor for her encouragement and confidence in me from the time I started this endeavor as a doctoral student to the closing pages of this paper. An exemplar of excellence, she encourages others to excel.

Finally, to the members of Friday choir practice: thanks for the fellowship—it helped me through the many challenges that I had to face alone when writing this paper.
# TABLE OF CONTENTS

LIST OF TABLES .............................................................................................................. x

CHAPTER 1 PROBLEM STATEMENT AND DESIGN COMPONENTS .......... 1

Introduction ..................................................................................................................... 1

Problem Statement .......................................................................................................... 4

Delimitation of the Study ................................................................................................. 4

Limitations of the Study ................................................................................................... 4

Assumptions ..................................................................................................................... 5

Definition of Terms ......................................................................................................... 5

Significance of the Study .................................................................................................. 7

Conceptual Framework ................................................................................................... 7

Research Questions ......................................................................................................... 12

Population ...................................................................................................................... 12

Data Analysis and Instrumentation ................................................................................. 13

Organization of the Study ............................................................................................... 14

CHAPTER 2 REVIEW OF LITERATURE ................................................................. 15

Introduction ................................................................................................................... 15

Historical Overview and Description of Frames .......................................................... 19

The Structural Frame .................................................................................................... 19

The Human Resource Frame ......................................................................................... 21

The Political Frame ....................................................................................................... 23

The Political Frame and Conflict ................................................................................. 26
LIST OF TABLES

Table 1 FCAT Reading Achievement Levels Scale Scores.............................................. 51
Table 2 Professional and Personal Demographics of Principals (N=42)......................... 56
Table 3 Respondents by Level and Gender (N=42)......................................................... 58
Table 4 Frequencies and Percentages of Principals and Years of Experience (N = 42)... 59
Table 5 Leadership Behavior Responses (N=42)* .......................................................... 61
Table 6 Four Frame Analysis (N=42)* ........................................................................... 62
Table 7 Leadership Style Responses (N=42)* ............................................................... 63
Table 8 Overall Frame Usage (N = 42)* ....................................................................... 66
Table 9 Comparison of Frame Usage (N = 42)* ............................................................ 67
Table 10 Comparison of Dimension Usage of Each Frame (N = 42)* ......................... 69
Table 11 Frame Usage Comparison (N=42)* ................................................................. 70
Table 12 Leader and Manager Effectiveness Percentages (N = 42)* ......................... 71
Table 13 Leader and Manager Effectiveness Comparison (N = 42) ............................ 72
Table 14 Comparison of School Number to Frame Use and Difference in Mean Scale  
    Scores ..................................................................................................................... 75
Table 15 Comparison of Difference in Mean Scale Score to Frame Use (N = 42) ....... 76
Table 16 The Relationship of Frame Use to FCAT Reading Mean Scores.................... 76
CHAPTER 1
PROBLEM STATEMENT AND DESIGN COMPONENTS

Introduction

Leadership has traditionally been held accountable for job performance in managing and leading public school organizations. However, the traditional parameters for accountability are changing from the more structural management style of an organization that enforces rules and regulations pertaining to how a building is maintained and how teachers and staff are evaluated. Leadership now includes promoting positive outcomes in teacher performance and student achievement (Waters, Marzano, & McNulty, 2003). Accountability in the 21st century focuses on the ability of a leader to understand the systems of organizations from both its cultures and its behaviors and to devise strategies for student achievement based on this awareness (Deal & Kennedy, 1999).

Deal and Kennedy (1999) point out that culture (behavioral patterns) and strategy (ideas for competing successfully) cannot be thought of as separate entities. For example, the public school organization is experiencing change at an almost exponential rate. Diversity in the form of various cultures and perceptions of the public school system mandates that leadership develop cognitive decision-making strategies that fit decision to changing circumstances (Bolman & Deal, 1997).

The federal government via the No Child Left Behind Act of 2001 (NCLB) and the states promote school performance reports such as the Florida Comprehensive
Assessment Test (FCAT) as a way to promote accountability and education reform. The school organization accepts the rationale of having performance reports mandated by government at face value, but fails to address other more basic factors that may affect student achievement. Politics and symbolism expressed in the culture of the school are not addressed by NCLB or FCAT. Fetler (1994) points out that those leadership theories such as Bolman and Deal’s provide a framework that help to explain these political and symbolic roles. The four frames are: (1) structural, (2) human resource, (3) political and (4) symbolic, (Bolman & Deal, 1997).

The structural frame works mostly with organizational concerns that involve management/labor relations, rules and regulations and policies and procedures. It operates best when there is a stable, well-defined and legitimate hierarchy of authority (Bolman & Deal, 1997).

The human resource frame in the public school organization has as its cornerstone shared leadership, employee growth, student growth and achievement and flexibility. The “family” approach encourages the teachers and the students to feel as though they are working as members of a team whose contributions are valued (Lunenburg & Ornstein, 2000).

The political frame works from necessity in holistically envisioning the framework of the public school system. It operates from the premise of conflict as inevitable, but not necessarily bad, as the organization competes for power and scarce resources. The leaders who use this frame may be perceptive in identifying “emergent behaviors” and quickly and efficiently establishing new courses of action commiserate with agendas being advocated at the time (Bolman & Deal, 1997). However, politics with
its shifting agendas often based on personal political expediency may cause fluctuations in the organization that result in a morphing of the learning organization that may or may not advance student achievement through best practice methodologies (Cutright, 2001; Mansueto, 1999).

The symbolic frame is concerned with the stories and symbols of the organization. Public schools with their mascots, colors and traditions are excellent examples of organizations that use this frame. Each school uses its symbols and culture to identify itself as expressly unique in the overall system (Deal & Kennedy, 1982). This frame has anthropological roots. Successful transitions include identifiable rituals and ceremony in addition to generating new traditions and rites (Campbell, 1988; Davidson, 1996).

Each of the four frames provides a lens through which a leader may increase perspective and identify patterns for positive response to changing circumstances. The public school system is more than the sum of its parts and therefore must be studied with various lenses in order to identify the patterns that create emergent factors within and without the organization, i.e., those factors that create a culture for that learning organization that transcend what the data show (Bar-Yam, 2000; Davies, 2004; Mossberg, 1994; Organisation for Economic Co-operation and Development (OECD), 2003). The recognition of emergence as part of the toolkit for resourceful leadership is highly important in reframing for development of effective programs for successful student achievement. Leadership must understand that the paradigm shift to outcome accountability requires more versatility in the resolution of the problems of the diverse clientele that they serve (Bolman, Johnson, Murphy & Weiss, 1990).
Problem Statement

In this study, 58 public school principals from a central Florida public school district were surveyed to provide some insight into the relationship, if any, of principals’ use of Bolman and Deal’s Four Frames Theory to student achievement. The study was done to indicate the extent to which using the four frames, reframing and multi-framing impacted student achievement on FCAT reading scores over a two year period from 2004 to 2005. The four frames of leadership and the concepts of reframing and multi-framing are used in this discussion to determine principals’ self-orientation in using the frames (Bolman and Deal, 1997).

Delimitation of the Study

1. The data were limited to 58 elementary and secondary (middle and high school) principals in one central Florida school district during the 2005 and 2006 school years.

2. Responses from participants were obtained via use of one survey instrument disseminated through the school district’s courier system.

Limitations of the Study

1. The Florida Comprehensive Assessment Test (FCAT) questions and resulting student data is limited to Florida students thus limiting the scope of the analysis to one state.
Assumptions

1. It is assumed that the principals surveyed understood the terminology of the instrument.

2. It is assumed that the principals surveyed were honest and accurate in their responses to the items contained within the survey instrument.

3. It is assumed that the public school students answered the FCAT questions to the best of their ability.

Definition of Terms

1. **Frame**—a basic set of ideas that enable an understanding of how other ideas and concepts of leadership and organizational systems can be interpreted and assigned meaning. The four frames (structural, human resource, political and symbolic) identified by Bolman and Deal (1997) will be the lenses through which leadership and its relationship to achievement will be viewed.

2. **Structural Frame**—goal oriented, manages the external environment through specialized roles and formal relationships and uses an organized and analytic approach to solving problems (Bolman & Deal, 1991b).

3. **Human Resource Frame**—focuses on the relationship between individuals and organizations (Bolman & Deal, 1997) and utilizes shared leadership, employee growth and flexibility (Lunenburg & Ornstein, 2000).

4. **Political Frame**—focuses on power and strategy, not necessarily resolution of all conflict which inevitably emerges because of limited resources, a desire for autonomy and a difference in goals (Bolman & Deal, 1997; Green, 2001).
5. **Symbolic Frame**—focuses on the culture of an organization and the symbols adopted by that culture (Deal & Kennedy, 1999) and is often expressed as being tribal, inspirational, charismatic and motivated more by myths and theater than by rules and authority (Lunenburg & Orstein, 2000).

6. **Multi-framing**—Multiple, simultaneous and flexible uses of the four frames by leaders in understanding and adapting to changes in the organization (Bolman & Deal, 1997).

7. **Reframing**—the ability of a leader to adjust frames to the situation and so provide “lenses” that help order experience and provide a broader perspective when making decisions (Bolman & Deal, 1997).

8. **Leadership Orientations (Self) Survey Instrument**—Survey instrument designed by Bolman and Deal (1990) as a quantitative measure of the behaviors and styles of leaders based on the four frames.

9. **Leadership Behaviors**—term used in the Leadership Orientations (Self) survey instrument to identify and rate on a scale of one to five the behavioral and leadership trends of the principals (Bolman & Deal, 1990).

10. **Leadership Style**—term used in the Leadership Orientations (Self) survey instrument to rate the skills of the principals on a scale from one to four (Bolman & Deal, 1990).

11. **Dimensions**—eight item frame measures (sub-scales) within each of the four frame constructs that also appear in a consistent sequence to measure whether or not the participant indicates traits that are analytical, supportive, powerful, inspirational, organized, participative, adroit and/or charismatic.
12. Florida Comprehensive Assessment Test (FCAT)—mandatory statewide tests given in certain grades to public school students to determine their achievement levels in reading, math and science.

Significance of the Study

This study was developed to determine if there is a relationship to principals’ use of the four frame theory of leadership and to improvements in student achievement. This study contributes to the quantitative data produced concerning the use of Bolman and Deal’s four frames of leadership (Bolman & Deal, 1997) by elementary and secondary leadership. This study also contributes to the quantitative data measuring the relationship of four frame usage to student achievement. In addition, analysis of results could indicate areas of leadership behaviors or styles study needed in principal preparation programs that could enhance instructional and organizational effectiveness. This could lead to more students achieving proficiency in academics as well as leading to higher level achievement scores.

Conceptual Framework

The ability of leaders in public school organizations to successfully assume the multiple tasks of the 21st century, including responsibility for student achievement, is of paramount importance in graduating a public that can succeed in an increasingly competitive global marketplace (Waters, Marzano & McNulty, 2003).

The Leadership Orientations (Self) survey instrument developed by Bolman and Deal (1997) was used as a quantitative measure for assessing the principals’ use of the
four frames of leadership and for providing insight into the relationship of principals’ use of the Four Frame Theory (Bolman & Deal, 1997) to student achievement. In addition, the eight dimensions of leadership, two for each frame, that are embedded in the Leadership Orientations (Self) questionnaire served to clarify perceived behaviors and styles of leaders based on the four frames: structural, human resource, symbolic and political.

In the past, educators have instinctively known that school leadership makes a difference in student achievement. As early as the 1970s, there has been discussion of anecdotal evidence that curricular leadership which stressed outcome via student achievement was one of the defining characteristics of successful schools with high performing students. However, until the late 1990s there was a dearth of quantitative evidence supporting this intuitive knowledge of the importance of leadership to student achievement (Waters, Marzano & McNulty, 2003).

On the other hand, there have been many studies and much discussion of desired leadership behaviors and styles based on the ability of principals to utilize the four frames of leadership (Bolman & Deal, 1997). Research examples that have used Bolman and Deal’s Leadership Orientation (Self) survey instrument provide valid and reliable quantitative evidence that leaders who are proficient in using the four frames, multi-framing and reframing are the most successful in maintaining the function of their organization. However, there is little data to show the relationship of public school principals’ use of the four frames to student achievement. A proficient school leader should not only be able to successfully maintain and perhaps increase the public schools organizational presence in a potentially competitive market, but also fulfill the intentions
specific to that organization which, in the case of public schools, is first and foremost, student achievement.

The public school, as an organizational system, has as its primary function the education of the public. Academic achievement is of highest priority in this system. Public schools need leaders who are experts in educational leadership, including instructional leadership, who can work in all four frames, multi-frame or reframe as the need arises (Bolman & Deal, 1997). Public schools need leaders who can exercise their power of position to influence teachers and others in a positive way to achieve the purpose of educating the public to their highest potential (Leithwood, Jantzi & Steinbach, 1999). The data show, however, that most leaders operate from the structural and human resource frame (Bolman & Deal, 1991b; Bolman, Deal & Granell, 1995; Bolman & Granell, 1999; Mosser & Walls, 2002; Rivers, 1996). Influence is power and, by nature, political. It is increasingly important for the public school leaders to exhibit political acumen. It is also increasingly necessary to work from the symbolic frame to support entrenched traditional values of the school while moving forward in constructive change to adopt new symbols and traditions associated with a changing focus based on standards and accountability that lead to higher student achievement and wide-spread student success.

For example, Bolman and Deal (1991b) used the Leadership Orientation Survey (Self) to determine frame use as an indicator of effectiveness as a manager and leader of four diverse populations. Three of the populations consisted of educators from the United States and Singapore and the fourth population was drawn from the corporate sector. The results of the study indicated that most education administrators in Singapore and the
corporate leaders used the structural frame most often while the educators in the United States used the human resource frame most often. The political frame was used more than the symbolic frame which was used infrequently. The study also indicated that the four populations did not use the concept of multi-framing very often (Bolman & Deal, 1991b).

A study by Rivers (1996) indicated that principals in the Central Florida region used the human resource frame most often followed by the structural, symbolic and political frames, which indicated consistency with Bolman and Deal’s quantitative research (1991b). However, Rivers (1996) and other researchers such as Bensimon (1987), Pavan and Reid (1991) and Harlow (1994) established the use of multi-framing in over half of the respondents, unlike Bolman and Deal (1991b) whose study indicated that only 6% of the respondents in the United States used multi-framing in the sense of all four frames. Rivers (1996), was more in accord with Suzuki (1994) and Durocher (1995) who reported a larger percentage of leaders advocating the use of multiple frames for effective leadership.

This shift toward more usage of the four frames and multi-framing seems to have coincided with the emphasis placed on student achievement resulting from various conferences such as the 1989 domestic summit on education led by President George H. W. Bush and from learning initiatives such as Project 2061(1985). Policies growing out of the 1989 summit prompted the federal government to exert more influence in shaping educational policy which has resulted in a trend toward more standardized curricula and standardized national testing. The 2061 Project was conceived in 1985 and in 1993 the landmark book, *Benchmarks for Science Literacy* was published with emphasis on inquiry and thinking skills rather than reliance upon rote memory. These two events
provided the foundation for building the No Child Left Behind Act of 2001 (NCLB). NCLB includes the ideas of standardized curricula and standardized testing from the 1989 summit. In addition, it incorporates the Project 2061 (1993) benchmark concept as well as this group’s emphasis on inquiry and thinking skills as basic to successful student achievement and successful performance on national and state standardized tests.

As a result, working from more than one frame became necessary to determine the needs of the complex, diverse clientele that enters the public school organization. The academically challenged, the multi-cultural student using English as a second language, the minority student and low socioeconomic student with little self-esteem and the victim of gender inequities have special academic needs for ensuring achievement that are not necessarily the same needs at the same time. The constant monitoring and adjusting of these diverse needs for successful student achievement requires viewing these needs from more than one perspective or lens and also requires frequent reframing and multi-framing as the needs change (Bolman & Deal, 1997).

In addition to working from all four frames, educational leadership must be able to provide rationale for their decisions. The ability to use data driven analysis, especially the same set of data, for decision making in various arenas of student application to different circumstances has become an integral tool for today’s leader. However, emphasis placed on effective leadership that produces a school that is disciplined and well organized and the resulting logic that this efficiency provides the conditions for enhanced student achievement is often based on school effects research rather than data analysis. Hopkins (2005) states:

Empirical backing for a relationship between leadership and higher levels of student outcomes is often claimed and the school effects research is usually
cited in support. At one level this contention is self-evidently true. However, the correlational nature of the research evidence that is often cited in support inevitably masks the exact relationship between leadership and enhanced student learning (Hopkins, 2005, p.1).

In this study, principals’ orientations toward behavior and skills that utilize all four frames of leadership can be quantitatively measured and then compared to the growth in achievement scores of their students to determine the relationship based upon empirical evidence by means of data analysis.

Research Questions

1. Which of the four frames do principals report using at the elementary and secondary school levels?
2. To what extent is there a difference in frame dominance between elementary and secondary principals?
3. What difference exists between principals’ leadership effectiveness and managerial effectiveness?
4. What relationship exists between principals’ self reported frame use to increases in FCAT Reading mean scale scores for 2004 and 2005 school years?

Population

The population for this study is comprised of 58 public school principals in the 11th largest school district in Florida. The principals are assigned to 36 elementary, 11 middle, 9 high and 3 alternative schools in the Seminole County Public School District (http://www.scps.k12.fl.us). Only those principals who were at the same school for the
2004 and 2005 school years were considered for the data analysis. In addition, the FCAT population was comprised of 3rd, 8th, and 10th grade students in the same district with each school represented for the appropriate grade level and encompassing the two year period, 2004 and 2005.

Data Analysis and Instrumentation

Data were collected using the Leadership Orientation (Self) survey instrument (Bolman & Deal, 1990) as a quantitative measure of the perceived behaviors and styles of principals based on the four frames: structural, human resource, symbolic and political. The questionnaire has four parts. The first part consisted of a Likert type scale that rated the respondents answers concerning leader behaviors from 1 to 5 with 1= “Never” and 5 = “Always” as the highest rating. The second part consisted of six items in a forced choice ranking from 1 to 4 using descriptors such as 1= “least like you” and 4 = “best describes you”. This section described the respondent’s leadership style. Part 3 asked an overall rating of the participant’s effectiveness as a leader and manager. A request for demographic data was added to the original instrument as part 4 to obtain data specific to the principals being surveyed. In addition, Bolman and Deal (1991b) defined eight dimensions of leadership, two for each frame, which are embedded in the instrument. The eight dimensions served to clarify the management tendencies of the respondents. Permission has been granted the researcher to use the instrument by Dr. Lee Bolman (Appendix E). The survey instrument (Appendix A) and a cover letter (Appendix B) describing the parameters of the study were sent via inter-district courier to the 58 principals.
Data from the Reading Florida Comprehensive Assessment Test (FCAT), grades 3, 8 and 10 were compared with the Leadership Orientation (Self) survey results to determine the relationship, if any, between principals’ frame usage, reframing and multiframing to student achievement as measured by an increase in student scores for the 2004 and 2005 school years.

Organization of the Study

Chapter 1 of this study defines the problem, provides definitions pertinent to an understanding of the content of the study and sets forth delimitations, limitations, assumptions and significance of the study. Chapter 2 presents a review of literature and research related to the problem addressed in this study. Chapter 3 describes the methods and procedures used for collecting and analyzing data generated for this study. Chapter 4 presents an analysis of data. Chapter 5 summarizes the research, its implications, recommendations and suggestions for further research.
CHAPTER 2
REVIEW OF LITERATURE

Introduction

Leadership has always been a rather indescribable phenomenon that to this day cannot be adequately defined. Leadership itself is complex in that it is composed of relationships based on followers and their empowerment (or not), partnerships, networks and politics among other things (Bolman & Deal, 1997; Leithwood & Riehl, 2003). Leadership, like any other complex entity, has patterns of behavior that can identify its aspirants as to whom may be more capable of leading on a higher level by their ability to adapt to change and to envision self-organizing patterns (Abrahamson, 2004). In complex adaptive systems such as public schools, leaders must be able to identify patterns of behavior from the local to the federal level as having emergent properties that may be unexpected and potentially negative or positive depending upon the ability of leadership to understand the whole system rather than to concentrate solely upon the parts that are changing or causing change (Geelan, G., 2003; Marion & Uhl-bien, 2002; Fraser, 2001; Hemelrijk, 2002; Leithwood & Riehl, 2003; McMaster, 2003; Paarlberg, 2003; Schild-Jones, 1999).

Daggett (2000) stated, “The new rules for engagement in education include mandatory learning and accountability.” The federal and state accountability measures such as NCLB and FCAT have provided measurable standards for students. Currently there is no quantifiable federal or state set of standards by which to measure
accountability of principals in relationship to student achievement. The intent of this paper is to provide some insight into the relationship of principals’ uses of the Four Frame Theory and the concepts of reframing and multi-framing (Bolman and Deal, 1997) to determine if there is a relationship between use of the four frames, reframing and multi-framing to student achievement.

The public school system is experiencing change at an almost exponential rate. Diversity in the form of various cultures and perceptions of the public school system mandates that leaders develop cognitive decision-making skills and strategies that fit the decision to changing circumstances (Bolman & Deal, 1997). Schild-Jones (1999) points out that leaders must understand the complexities of the interaction of the various elements of the organization of the system as the transitioning from one culture to another occurs. As public schools move from a tradition without national or state mandated measurable standards for students and into a culture where accountability via student achievement is measured by standardized test scores such as FCAT, the principal becomes increasingly more responsible for creating a culture of learning and high achievement (Brown University, 2003).

In the case of public school education, legislative mandates such as Brown v. Board of Education have changed initial conditions in many cases. Brown brought equality into public education. The No Child Left Behind Act (NCLB) (2000) was passed to bring equity into the public classroom. However, because of its stance on charter schools, privatization and vouchers, this legislation is creating emergent properties that are very difficult to predict. Leaders in the 21st century have to be cognizant of patterns created by NCLB, identify the trend towards change and direct the change into a positive
reorganization for student achievement without disrupting the public school system as a means of bringing education to all children regardless of socioeconomic status or disability. The previous research data indicates that four frames of leadership in conjunction with the concepts of multi-framing and reframing as a model for complexity in the educational arena may prove indispensable as tools for the observant leader.

The research, both in the United States and abroad, points to versatility, flexibility and techniques of reframing for specific situations as essential for leaders in navigating the constantly changing marketplace and the problems these changes bring to maintaining organizations as vital and functioning entities (Bolman & Deal, 1991b; Bolman, Deal, & Granell, 1995; Bolman & Granell, 1999; Rivers, 1996; Mosser & Walls, 2002). Bolman and Deal describe an organizational system based on approaching management issues through combinations of structural, human resource, political, and symbolic frames (Bolman & Deal, 1984).

In addition to recognizing the need for flexible leadership, Bolman and Deal realized a need for adequate instruments to measure and provide insight into what methods successful leaders are using to construct reliable and efficient decisions. In 1990, Bolman and Deal designed the **Leadership Orientation Survey (Self and Other)** as a quantitative measure of the behaviors and styles of leaders based on the four frames. The two forms of the instrument were designed for leaders to rate themselves (Self) and for employees or other individuals to rate the leaders (Other) (Bolman & Deal, 1991b).

The **Leadership Orientation Survey (Self and Other)** has been used internationally and in the United States to identify behavioral and leadership trends of both educational and corporate managers and leaders (Bolman & Deal, 1991b; Bolman, Deal, & Granell,
One of the important results of analysis of the responses to this instrument is that the political frame of Bolman and Deal’s four frames was shown to be used least. Since the clarification and resolution of conflict fall primarily into the political frame, Bolman and Deal (1991b) have suggested that more training of leadership in the political frame is needed for gaining the broad perspective necessary for cognitive decision making.

The purpose of this literature review is threefold: (1) to provide a description and a brief historical overview of literature supporting the use of the Four Frame Theory, reframing and multi-framing (Bolman & Deal, 1997); (2) to provide research examples that have used the Bolman and Deal Leadership Orientation Survey (Self and Others); (3) to explore the possible relationship of principals’ use of the four frame model and the concepts of multi-framing and reframing to student achievement.

The literature review consists of seven parts. The first four parts provide a description and an overview of theoretical literature that relates to the crystallization of the four frames by Bolman and Deal. The first part deals with the structural frame, the second with the human resource frame, the third with the symbolic frame and the fourth with the political frame and the role of conflict within that frame. The fifth part addresses the concept of reframing and multi-framing and why a leader should be conversant with all four frames, moving among frames and using more than one frame at a time (Bolman & Deal, 1997). The sixth part consists of four examples of research that used the Leadership Orientation Survey (Self and Other) developed by Bolman and Deal (1990) and the highlights of the analysis of that research. The seventh part examines the need for principals to become more proficient in identifying positive behaviors of teachers and
students and then using and moving among all four frames and multi-framing in order to support student success in raising achievement levels.

**Historical Overview and Description of Frames**

**The Structural Frame**

The structural frame is goal oriented and geared toward managing the external environment through the development of specialized roles and formal relationships within the organization. This frame seeks to clarify lines of authority and focuses on logic and processes appropriate to solving problems by identifying the situation and formulating the task based on facts rather than emotion or personality (Bolman & Deal, 1991b, 1991c; http://web.cba.neu.edu/~ewertheim/leader/models.htm). The structural frame is useful in tracking and understanding the day-to-day activities of an organization as it synchronizes structure to environment, job and technology (Bolman & Deal, 1997). It may also prove useful under the ideal circumstances of little conflict, low uncertainty, a well developed understanding of cause-effect relationships and the knowledge that there is a stable, well-defined and legitimate hierarchy of authority (http://web.cba.neu.edu/~ewertheim/leader/models.htm). Problems arise when the structure does not fit the situation and some reframing may be necessary.

Bureaucratic structure was ushered into society with the industrial revolution. As population increased, organization of these workers into productive units for commerce became a top priority. In the early 1900s, industrial magnates sought the help of analysts such as Fredrick W. Taylor (1911, 1947) who coined the concept “scientific management.” This idea of “scientific management” was to set a time frame for each task
in order to elicit the maximum efficiency from the workers and, therefore, the maximum profit for the company. Other analysts such as Henri Fayol (1916), Lyndall Urwick and Luther Gulick (1937) expanded upon Taylor’s original ideas by initiating the training of workers for particular jobs, delegation of management controls and the assumption of responsibility that extended to the worker and the job that each did.

Max Weber (1947) lent his ideas to organizational structure by elaborating on the specialization factor, by setting a fixed division of labor, rules for management and workers to follow, a top-down hierarchy of control and jobs assigned on basis of qualifications instead of utilizing patronage and nepotism. There were many other contributors to the structural, bureaucratic frame, particularly after World War II when a resurgence of Weber’s ideas were promulgated by theorists such as Blau and Scott (1962), Hall (1963) and Perrow (1986). These theories explored relationships within organizational structure such as why one structure may be chosen over another and how structure impacted efficiency and morale of workers.

Mintzberg (1979) produced five models of organizational structure of which two could fit the definition of structural frame. One is “simple structure” which operates on only two levels; the supervisor and the supervised with the supervisor vested with authority. The other is the “machine bureaucracy” in which a hierarchy includes the strategic apex which makes the decisions, the management which implements the decisions but has leeway to input for local differences, followed by large numbers of workers. This style may still be found in the school setting with the superintendent and school board representing the strategic apex, the principals representing management, and the teachers and staff as workers.
The Human Resource Frame

The human resource frame focuses on the relationship between individuals and organizations (Bolman & Deal, 1997). While the cornerstone of the autocratic structural bureaucracy is the top-down hierarchy, the human resource frame has as its cornerstone, shared leadership, employee growth and flexibility (Lunenburg & Ornstein, 2000).

Leadership within a human resource frame recognizes that the people who make up organizations have needs, skills, prejudices and feelings drawn from interactions, not only from the work place, but also from life experiences outside the organization. Therefore, the leaders discern that the organization has a responsibility to provide diversity and creativity in tailoring the workplace to provide a way for people to share ideas and provide the energy necessary to do the job assigned (Bolman & Deal, 1997). As William McKnight of 3 M fame voiced, “Listen to anyone with an original idea, no matter how absurd it might sound at first” (Collins, J. & Porras, J., 1994).

This “family” approach encourages the workers to feel that they are contributing a valued service and are appreciated for their contribution as a member of the “team”, whether a school or a corporation (Lunenburg & Ornstein, 2000). Problems that may arise when using the human resource frame is abdication of responsibility by leadership or immaturity of the workforce in making decisions (Bolman & Deal, 1997; Hersey, 1984).

Person Centered Models have been around since the 1920’s and ushered in the human relations movement. For example, Elton Mayo conducted the “Hawthorne Studies” in Chicago and concluded that management should heed the value of worker
participation and the intrinsic satisfaction that resulted from identification with a group
process (Mayo, 1933). Rensis Likert (1961) wrote that successful management cared
about their employees, expected them to succeed at a high level and empowered them
through shared decision making.

One of the earliest proponents of aligning jobs with worker’s needs was
human resource frame but provides an integral part of the foundation for the human
resource frame as a model for organizations. McGregor used Maslow’s (1987) hierarchy
of needs, particularly the autonomy and self-actualization levels, for his foundation of the
Theory Y hypothesis that workers not only wanted to work but that they would prefer to
do a good job. McGregor’s concept that workers are motivated more by intrinsic rewards
than by extrinsic rewards is much like Herzberg’s (1966) hygiene and motivating factors
that have motivators dealing mostly with the work itself and the hygiene factors dealing
with the work context of the environment, pay and benefits. Hackman and Oldham
(1980), in turn, used Herzberg’s two factor theory of motivation as the foundation for
identifying three factors in flexible job design: workers must see their job as meaningful,
they must feel accountable for the product and they need and want proper feedback for
improvement. A study of workers in Philadelphia completed by Herzberg, Mausner and
Synderman (1967) found that job satisfaction and handling responsibility successfully
were directly related. William Ouchi’s (1981) model based on Japanese management
practices is called “Theory Z” and is characterized by interdependence, trust and
collective decision making.
The Systems Models of Deming (1988) and Senge (1990) stress shared vision, team learning and systems thinking. Senge’s systems theory (1990) brings the human resource frame into clarity when he advocates viewing schools as learning organizations. Senge suggests that an organization must be studied as a whole, taking into consideration the interrelationships of its members to the environment. Senge takes Deming’s (1986) ideas of Total Quality Management and applies them to education.

Nadler and Hibino (1994) promote “breakthrough thinking” in their concept of strategic planning from a systems viewpoint. Like Senge and Bolman and Deal, Nadler and Hibino move away from traditional Newtonian problem-solving (reductionism) and into an alternative approach that encourages holistic thinking for arriving at solutions that lend themselves to benefiting the entire organization and engendering the fewest residual problems as possible (Nadler & Hibino, 1994). This attitude and strategy is very important when applying solutions to complex systems such as public schools where the solution may often cause more problems than the original problem.

The Political Frame

There are five main concepts that characterize the political frame when discussing organizations (Bolman & Deal, 1991b, 1991c). First, organizations are viewed as coalitions of several interest groups that may or may not have the same agenda. This arrangement results in the various groups exerting political pressure to fulfill the tenets of their agenda which, in turn, creates confusing and often conflicting means of complying with an organization’s intentions. Secondly, the political frame presupposes “enduring differences” among the coalitions in terms of issues, values and perceptions which
prevent common goal-setting (Bolman & Deal, 1997). Instead, an “agenda for change” (Kotter, 1988) defines the direction of the organization and is based on the ability of the organization to envision and devise strategies that will promote the interests and direction necessary to maintain its integrity as an organization and fulfill the functions that it deems necessary. A third proposition of the political frame is that resources are limited and the politically astute will obtain the assets needed to function successfully. Fourth, differences in values and traditions of the members of the coalition as well as “scarce resources” promote conflict and ensure power as the most valuable of the resources. Last, the organization’s decisions are based on “bargaining, negotiation and position power” among the various coalition members (Bolman & Deal, 1997).

Another interesting way that the political frame diverges from the structural with emphasis on authority is that the political frame views authority as only one kind of power. In addition to position power, there are several other types of power that social scientists (French & Raven, 1959; Pfeffer, 1978) have discussed and described. For example, French and Raven’s (1959) definitive work “The Bases of Social Power” proposed five types of power: power of knowledge, power to reward, coercive power, power of position, and referent power based on the sheer force of personality. The power wielded by an alliance in getting the intentions of an organization fulfilled by building networks (Kotter, 1982), the power to make decisions affecting the organization (Lukes, 1974) and the power of knowing and understanding the organizational culture with its symbols and traditions (Pfeffer, 1992) are extensions to the list compiled by French and Raven in 1959.
The historical context of the political frame is not as rich in theorists as the structural or human resource frames. Bennis and Nanus (1985) for example, pointed out that the theorists associated with the human resource frame consistently overlooked politics and the power that is always associated with leading. Mintzberg (1989) pointed out that in years past, “…the literature of organization theory avoided such questions…” Kotter (1985) perused almost 20,000 pages of organizational textbooks and found a paucity of political information. Politics have always been a dimension within management (Baldridge, 1973; Frost, 1986; Morgan, 1986; Perrow, 1986) but not until the eighties did politics become acceptable to discuss as a part of management tactics (Bolman & Granell, 1999).

However, innovative, alternate approaches to the bureaucratic organization paved the way to identifying power as a means of directing and motivating members of an organization. For example, Amitai Etzioni (1975) included coercive power in his three categories of power along with utilitarian power (extrinsic reward) and normative power (intrinsic rewards). Lunenburg and Ornstein (2000) suggested that schools tend to be normative organizations and may become dysfunctional if coercive and utilitarian power is used very often.

Other theorists such as Bass (1981) remarked that decision making is often based on power’s sake rather than on valid concern. Mintzberg (1979, 1989) seemed to agree with this assessment by Bass when he wrote of “illegitimate” power being used to create dissention in order to usurp legitimate power. Problems within the political frame can stem from both these ideas. The inevitability of conflict in the political arena is a given, but overstating conflict without regard to collaboration is a limitation of this
frame. Using position power or personal charisma to gain one’s own end lurks in the shadowy corners of this frame as detrimental to achieving change in a positive and non-destructive way (http://www.canberra.edu.au/uc/lectures). When these problems occur, the political frame lives up to its metaphor of “jungle” (Bolman & Deal, 1997).

The Political Frame and Conflict

Conflict is defined by Putnam and Poole (1987) as an interaction between people who may perceive opposition to the goals and viewpoints that each may espouse. DiPaola and Hoy (2001) define conflict as individuals or groups that feel threatened. Kilman and Thomas (1978) discuss conflict as inevitable and propose that conflict can be used for needed change and innovation. Burns (1978) concurs that conflict can be positive or negative and Bolman and Deal (1995) in Leading with Soul connect the “gift of power” to conflict.

Mintzberg (1989) raises the question of how and why conflict arises and the consequences of conflict. Many school leaders avoid or try to eliminate conflict because of its perceived negative connotations. However, anytime there is a large and diverse group of people such as in our urban mega-schools, there is going to be conflict because of many factors such as varying beliefs, traditions and perceptions (Deutsch, 1991). Schools have to address the problem of conflict and potential conflicts every day because of divergent views (Owens, 2001). The two kinds of conflict, functional and dysfunctional, are analogous to positive and negative. Functional conflict develops into a win-win situation and the organization benefits from broadened perspectives and possible change (Putnam & Poole, 1987). Dysfunctional conflict, on the other hand, carries a win-lose attitude which negatively impacts the organization and leads to hostility (Owens, 2001). School principals
have to learn how to use their power in conflict situations in a functional way in order that the conflict occurring will not affect student achievement (Green, 2001).

Barge (1994) describes two types of conflict: context and content. He also lists five contexts in which conflict might occur: interpersonal or between individuals; intergroup or between two groups in the larger setting of the school; interorganizational or conflict between two organizations; intrapersonal or conflict within the individual; and intragroup or conflict within a specific group (Barge, 1994). Leaders in schools who avoid or suppress conflict may be reducing creativity and innovation (Dedreu, 1997). Conflict is the antidote for Groupthink when introduced into decision making (Janis, 1982).

Conflict emerges because of limited resources, a desire for autonomy and a difference in goals. Conflict management must begin with acknowledging the conflict (Owens, 2001). A Hewlett-Packard group manager said it best, “Don’t live with a problem—face it honestly and correct it” (Peters & Austin, 1985, p.372). A common problem in schools is that personnel do not want conflict to manifest itself and will prevent conflict from being openly discussed and resolved. A politically astute principal will form an advisory group to develop agendas and acknowledge issues of conflict. (Owen, 2001). Politically aware leaders understand that handling conflict in a collaborative manner promotes positive resolution more often than conflict handled in an authoritarian or competitive way.

There are many ways to manage conflict but diagnosing the situation is critical for resolution. A conflict has been managed when its cognitive barriers have been changed to agreement (Green, 2001). Cognitive and affective are the two types of conflict and each
has different end results for change. Cognitive tends to be more constructive while affective conflict tends to hinder constructive change and lead into destructive change. Another dimension of conflict called formalization also enables or hinders change depending upon whether it is coercive or enabling. A combination of cognitive and enabling tends to be constructive and, conversely, a combination of affective and coercive inhibits conflict resolution. For example, a principal may maximize constructive conflict by creating formalization (policy) that enables change (DiPaola & Hoy, 2001).

Bolman and Deal (1997) hold that conflict is critical to healthy organizations, that power is the crucial component and that the political perspective is the frame that doesn’t view conflict as negative or unusual. The political frame focuses on strategy, not necessarily resolution, of all conflict. Conflict can be managed by avoidance (not necessarily bad), smoothing over disagreements, bargaining in which both parties make concessions, power struggles in which the object is to win regardless of consequences to the other participant(s) and collaborative problem solving which is a win-win (Green, 2001). Successful conflict management and strategic planning is a necessary skill in this rapidly changing, diverse world whether in the corporate office or the school organization (Lunenburg & Orstein, 2000). As James Fisher, Jr. (1998) points out about the profiles in Tom Peters and Robert Waterman’s *In Search of Excellence* (1982), “what worked yesterday may not work today” (p.188).

Leaders in today’s public schools who want to bring about healthy change and establish a collective identity of student achievement in the system must be able to articulate to all the members why the system has to change and how to model for that
change so that there is positive reorganization for a culture of student academic success. Working from the political frame is a necessity when advocating for positive change.

The Symbolic Frame

The symbolic frame embodies both the culture of an organization and the symbols adopted by that culture that identify it as different and separate from other organizations and therefore, other cultures (Deal & Kennedy, 1982). Lunenburg and Orstein (2000) expressed the symbolic frame within organizations as being tribal or theatrical and as being motivated more by myths and theater than by rules and the authority of management.

On an organizational level, an analogy may be made to a family unit that may incorporate traditions of particular significance to that family but which no other family necessarily practices as important to their culture and traditions. Schools, including universities, have distinctive symbols and traditions, heroes and myths, initiation rites and “rules of the game” (Owens, 2001). Deal and Kennedy (1984) said it best, “Culture means the way we do things around here” (p.4).

Bolman and Deal (1991a) wrote that anthropology is one of the basic theoretical sources for the symbolic frame. The reason for this outlook is that coverage of symbolism and culture in organizational literature was sparse before the early eighties. The past twenty-five years have been a time of tumultuous change globally. Deal and Kennedy (1982) began to write of corporate culture and Peters and Waterman (1982) reassessed excellence. Several organizational theorists rediscovered Burns (1978) and his ideas of transforming leadership (Bass, 1985; Bennis & Nanus, 1985; Conger, 1989; Tichy & Cohen, 1997). Campbell (1988) wrote that ritual and ceremony are important in marking
transitions. Ann Locke Davidson (1996) in her book *Making and Molding Identity in Schools* expresses the need of educational anthropologists to move beyond explanations that stress differences in cultural behaviors to remolding school identities based on diversity of “shared cultures, experiences and interests, as well as membership in homogenous informal social cultures” (p.19).

The debate that organizations *have* cultures or organizations *are* cultures (Bolman & Deal, 1997) is a moot point when discussing the symbolic frame and the fact that organizations devise marketing strategies to promote a culture that consumers, workers and management will identify solely as belonging to that particular organization. For example, educational organizations share perceptions and beliefs as to the meaning of teaching. The culture can promote energy and innovation, caring and concern and achievement as basic belief systems, or it may promote lethargy, status quo and mediocrity as part of its cultural history (Owens, 2001). A corporate example is Southwest Airlines and its promotion of a culture of cooperation that goes beyond mere sharing. It promotes *happiness* and *humor* as a part of their caring (Deal & Kennedy, 1999, p.248). This organization’s culture is one of not only putting the customer first but of remembering that customer on a personal level by developing marketing strategies which become integrated into their culture as tradition such as mailing birthday greetings with “no strings attached” (Southwest Birthday Card, 2003). Any customer who rides with Southwest on a regular basis knows that funny songs and jokes are a part of their corporate “culture” just as much as their logo of the red, white and blue airplane is the symbol of their organization (Frieberg & Frieberg, 1998).
The symbolic frame does not promote rigidity and stagnation by using corporate myths, stories and ritual but fosters the use of these devices as examples to employees and customers of the “specialness” of their corporate family. The retention of positive myths, stories and traditions while creating new myths and adopting new traditions and symbols is important for successful leadership. This strategy maintains the continuity of the organization’s culture and reassures internal and external participants that internal cohesiveness is maintained and the new direction is one that increases strengths and enhances the “culture” of that organization (Bolman & Deal, 1997). Peters and Waterman (1982) analyzed the most successful organizations of the seventies and determined that all had strong cultures in which stories and rituals played a leading role in the company’s value and belief systems.

According to Lunenburg and Ornstein (2000), the problems associated with this frame could arise when symbols and ceremonies are no longer recognized as meaningful. Creating heroes from those who break the rules, rewarding failure (Peters & Austin, 1985) and disregarding traditions are other problems associated with this frame (Bolman & Deal, 2002).

The Concept of Reframing and Multi-Framing

An interesting explanation of the use of frames and the concept of reframing is made by Erving Goffman in his book Frame Analysis written in 1974 when he indicated that the aim of his book was “to try to isolate some of the basic frameworks of understanding available in our society for making sense out of events and to analyze the special vulnerabilities to which these frames of reference are subject” (p.10). Bolman and
Deal acknowledge Goffman’s legacy by citing him in their use of the term “frame” (Bolman & Deal, 1997). Bolman and Deal’s four frames as a guide to leadership behavior and style, and the subsequent necessity of reframing for the event, may also be said to derive from Goffman’s (1974) ideas of “breaking frame” (p.345). Goffman (1974) expressed that although “all frames involve expectations of a normative kind” (p.345), there are times in which a neglected frame can produce results where the habitual frame produces only confusion. The ability to recognize the utility of, and choose appropriately among, each of the four frames is at the center of the concept of reframing (Bolman & Deal, 1997).

The multi-cultural aspect of schools coupled with the dynamics of change from both the public and private sectors render a complex and often confusing arena that demands flexibility and versatility in its decision making. School leadership encounter ambiguous situations in which uncertainty, contradiction and conflict may accompany numerous episodes unfolding concurrently (Owens, 2001). For example, Bolman and Deal (1997) write that today’s organizations are typified by “complexity, surprise, deception, and ambiguity” (p.24). The list of ambiguities by Bolman and Deal (1997) read as a litany of modern schools:

We are not sure what the problem is. We are not sure what is really happening. We are not sure what we want. We do not have the resources we need. We are not sure who is supposed to do what (p.25).

Effectiveness of the leadership depends upon the cognitive ability to reframe and multi-frame for different events. No two participants assess an event in the same way which may give rise to conflict. Understanding that multiple realities are a part of each situation allows the successful leader to integrate and move between frames or multi-
frame as the circumstances warrant (Bolman & Deal, 1991c). The concept of reframing and multi-framing provides a leadership toolkit to develop the flexibility and vision that builds awareness of the dynamics of change and the options for maximizing successful decision-making (Bolman & Granell, 1999).

**Related Research Using the Leadership Orientation Survey (Self and Other)**

Bolman and Deal (1991b) used the Leadership Orientation Survey (Self) to determine frame use as an indicator of effectiveness as a manager and as a leader of four diverse populations. Three of the populations consisted of educators from the United States and Singapore and the fourth population was drawn from the corporate sector.

Two major differences became apparent as a result of this study. The first was that effectual management and effectual leadership did not utilize the same frames as lenses from which to effect strategy and tactics. Managers used the structural frame with its orientation toward rationality and data analysis more often while leaders used the symbolic and political frame more often. In addition, the data indicated differences in frame use within the four populations. The 229 school administrators from Singapore preferred the structural frame while the 140 school administrators along with the 145 higher education administrators from the United States indicated that they used the human resource frame most often. Although administrators from both the United States and Singapore used the political and symbolic frame as third and fourth choices, the Singapore educators used the symbolic and political frames more often than did their American colleagues. The multinational corporate population of 90 senior managers
exhibited a high orientation toward the structural frame. The human resource and political frames fell within the middle while the symbolic frame was used infrequently.

Bolman and Deal (1991b) also found that the populations surveyed did not use the concept of multi-framing very often. Three frames were used rarely and only 6% of the United States and 5% of the Singapore respondents used multi-framing in the sense of all four frames.

An analysis of the four frames to principals’ leadership orientations was prepared by Peggy Rivers in 1996. The Leadership Orientation Survey (Self) (Bolman and Deal, 1990) was used in this study comprising 123 principals in the Orange County School District, Florida. Twelve high school principals, 21 middle school principals, and 80 elementary school principals participated in the study.

Research indicated that more than one frame was used by 53.1% of the Orange County principals (Rivers, 1996). Multi-framing in the sense of four frames was reported by 28.3% of the population while use of three frames was indicated by 24.8% of the respondents unlike Bolman and Deal’s study (1991b) that indicated use of all four frames by only 6% of the United States educators.

High School principals used the multi-framing concept more than did the elementary or middle school principals. Fifty per cent of the high school principals reported use of four frames as compared to 38.1% of the middle school administrators and 22.5% of the elementary principals. Twenty-five per cent of the high school principals, 23.8% of the middle school principals, and 25% of the elementary school principals exhibited use of three frames.
All three sets of school principals connoted use of the human resource frame as the number one choice, followed by the structural, symbolic and political frames, which indicated consistency with Bolman and Deal’s quantitative research (1991b).

In contrast to the earlier work of Bolman and Deal (1991b) and other researchers such as Bensimon (1987), Pavan and Reid (1991), and Harlow (1994), the Rivers study (1996) established the use of multi-framing in over half of the respondents. Rivers’ research was more in accord with Suzuki (1994) and Durocher (1995) who reported a larger percentage of leaders advocating the use of multiple frames for effective leadership.

Bolman and Granell (1999) conducted a study of 788 Venezuelan managers using the Leadership Orientation Survey (Self) (Bolman and Deal, 1990). The purpose of the study was to gather data on the use of the four frames and the ability of the managers to choose appropriate frames. In addition, a comparative analysis of the results of the Venezuelan study and the earlier studies of Bolman and Deal (1991a, 1991b) was conducted to ascertain the relevance of Bolman and Deal’s questionnaire to Venezuelan culture.

The results from the Bolman and Granell (1999) research did concur with other cultures as supporting the use of the four frames and multi-framing as a reliable means of promoting effective management and leadership. The Venezuelan study group indicated a preference for the structural and human resource frames with the political and symbolic frames used infrequently which indicated consistency with Bolman and Deal’s (1991b) study. The senior managers (45-54 years) tended to form relationships (human resource frame) while still maintaining a structural focus. The junior managers tended to be
structural but utilized the political lens as a strategy more than did the senior managers. The data also verified that manager effectiveness is most often associated with the structural frame whereas effective leadership is consistent in its use of the political and symbolic frame. Research suggests that leadership make more consistent use of multi-framing than does management.

In addition, Bolman and Granell pointed out that some cultural differences do exist. For example, Venezuelan culture does not stress assertive behavior (political) and management technique does tend to autocratic (structural/bureaucratic) behavior more so than the American sample population. Data also indicated that educators from both the United States and Singapore population used symbolism more than the corporate samples from other cultures including Venezuela. This use of symbolism by educators was attributed to the context of the workplace.

Mosser and Walls (2002) used the *Leadership Orientation Survey (Other) (1990)* to determine whether or not the four frames and the concept of reframing should be taught as part of the graduate coursework for nurse leaders and chairpersons. The hypothesis stemmed from the rationale that the nursing teaching theater, including leadership roles, is part of the academic program and, as such, is also responsible for teaching best practices in contingency and situational leadership and management issues.

A study was designed to determine which leadership frames were being used by the nursing chairpersons and in what relationship to the organizational climate. The action taken for this task was to query the chairpersons of the North Atlantic Region of the American Association of Colleges for instructional faculty members who qualified as sample groups for the survey. As a result of this query, 253 responding faculty members
were given the Leadership Orientation Survey (Other) as one of three instruments to
determine if the nursing chairpersons were utilizing the four-framework method and in
what capacity these four frames were being used.

The results of this survey revealed that 60.5% of the chairpersons were perceived
as using leadership frameworks and 39.5% were perceived as using no framework for
leadership. Within the 60.5% of the chairs that were perceived as using Bolman and
Deal’s four frameworks, 16.6% used one frame, 12.6% used two frames, 9.2% used three
frames and 22.1% used four frames. The data show digression from Bolman and Deal’s
findings in 1991. The nursing faculty reported 31.3% of its leadership as using three
frames as opposed to less than 25% in the Bolman and Deal survey. Nursing chairpersons
used all four frames 22% of the time while Bolman and Deal only showed this use at 5%.
In addition, the nursing chairs used the structural frame 43.5% as contrasted with
approximately 60% in the Bolman and Deal sample population. Another difference was
the increase in the use of the symbolic frame by the nursing chairs. The nurses used this
frame 32.4% in contrast to a perceived 20% of use by Bolman and Deal’s sample
populations.

The nursing faculty indicated a preference for leadership that used all four frames,
three frames and two frames as opposed to single and no frame leadership. There are
several implications of this study by Mosser and Walls (2002). For example, because the
data indicated less use of the symbolic and political frames, chairs can now build
awareness in these frames based on the survey analysis that faculty perceived the use of
all four frames as being optimal for an effective leader. Also, the graduate program can
now educate potential nurse leaders in the use of the four frames and the concept of multi-framing.

Potential Use of Data Analysis in Each of the Four Frames and in Reframing

Effective leadership depends upon the cognitive ability to reframe events based on achievement data analysis leading to those events. Various data analysis strategies for identifying trends and thus advancing progress in student achievement may be employed for use by each of the four frames: structural, human resource, political and symbolic.

The structural frame is goal oriented. It is useful in tracking and understanding student achievement results from year to year. It is also useful for obtaining student data that may affect achievement results. This frame focuses on logic and processes appropriate to solving problems by identifying the situation and formulating the task based on facts presented without consideration of mitigating circumstances ((Bolman & Deal, 1991b, 1991c; (http://web.cba.neu.edu/~ewertheim/leader/models.htm). For example, this frame is useful in assigning reading levels and in choosing a reading program for those students who achieve at the various levels. However, this frame’s usefulness is not ideally appropriate for differentiating within the levels between multi-cultural students’ interpretation of words, gender differences in exposure to certain words or low socioeconomic or minority students’ access to the printed word in environments other than the public school system (http://web.cba.neu.edu/~ewertheim/leader/models.htm). This frame is more number centered than person centered (Bolman & Deal, 1991).
The human resource frame, on the other hand, focuses on the relationship between individuals (students) and the organization (public schools). In this case, the human resource frame approach to data analysis would be to use the data generated to obtain information based on the recognition that students who learn and achieve within the public school organization have differing needs, skills and life experiences outside the organization. Therefore, the score on a reading test that relegates the student to a particular level may have mitigating circumstances that may require attention before further achievement can occur. It is more person centered than number centered (Bolman & Deal, 1991).

The political frame is based on the political science model of varying agendas, enduring differences, limited resources, and position power for effective negotiation (Bolman & Deal, 1997). The “agenda for change” (Kotter, 1988) defines the direction of the organization and is based on the ability of the organization to envision and devise strategies that will promote the interests and direction necessary to maintain its integrity as an organization and fulfill the functions, i.e., student achievement, that it deems necessary. Therefore, the leadership might use the data, in a low achievement situation, to determine policies and reorganization strategies based on numbers of minorities and special groups to obtain more federal, state and local monies for upgrading to programs tested for validity to advance student achievement. Leaders who are politically aware may also use their position and/or coercive power to obtain an “academy” based on low achievement data to engage more and higher performing students as part of the school reorganization plan.
An astute political leader in a high performing school may use the achievement data to promote that organization’s policies and programs as effective in promoting high achievement. This leader establishes his power of knowledge, his power to reward and his referent power to build networks for limited resources that maintain the above average student achievement levels (French & Raven, 1959; Pfeffer, 1978; Kotter, 1982).

In addition, educational leaders have to learn how to use their power in conflict situations in a functional way in order that the conflict will not affect student achievement (Green, 2001). Successful conflict management and strategic planning is a necessary skill in this rapidly changing, diverse world whether in the corporate office or the school organization (Lunenburg & Orstein, 2000). As James Fisher, Jr. (1998) points out about the profiles in Tom Peters and Robert Waterman’s *In Search of Excellence* (1982), “what worked yesterday may not work today” (p.188).

Bolman and Deal (1991a) wrote that anthropology is one of the basic theoretical sources for the symbolic frame. Campbell (1983) wrote that ritual and ceremony are important in marking transitions. Public school leaders must understand how to “…maintain an image of accountability and responsiveness…” while negotiating a new social order complete with new rituals and ceremony (Bolman & Deal, 1997).

Educational leadership might use data to market a reorganized school culture that students, teachers and management may identify solely as belonging to that particular organization. The retention of positive myths, stories and traditions while creating new stories and adopting new traditions and symbols is important for successful leadership. This strategy maintains the continuity of the organization’s culture and reassures internal and external participants that internal cohesiveness is maintained and that the new
direction is one that increases strengths and enhances the “culture” of that organization (Bolman & Deal, 1997). Change from a culture of low achievement and low expectations for students (and teachers) to a culture of high achievement and high expectations can be accomplished best by utilizing achievement data to formulate a new direction that may still retain the positive myths, traditions and stories of that organization while emphasizing new strategies for student achievement.

Bolman and Deal’s acknowledgement of Goffman (1974) as a model for the use of the word “frame” as well as the concept of reframing is well warranted. Goffman’s (1974) idea of “breaking frame” meant that if the established frame is not working, then less used frames for making sense of events must be utilized. The ability to recognize which of the four frames might be more appropriate to use at a given time is at the center of the concept of reframing (Bolman & Deal, 1997).

Leaders must be capable of analyzing data for patterns that may enable them to organize for both large and small projects, encompassing yearly plans as well as daily plans for student achievement. This requires that leadership work from all four frames simultaneously (multi-frame) for ongoing projects, work independently in one frame or another for weekly or daily projects and reframe as data, circumstances and priorities change (Owens, 2001).

Orienting Leadership Practices Toward Student Achievement Outcomes

Principals have historically been acknowledged as the change mediator for public schools in any reorganization process (Rivers, 1996). However, in today’s restructuring efforts toward the outcome based achievement expectations from students, principals not
only have to be able to understand and promote effective classroom practices for student achievement but they must be able to modify and adapt their own leadership practices to adequately reflect the magnitude of change needed to effect that outcome (Waters, et al., 2003). Sheppard (1996) points out that instructional leadership for student achievement must also include consideration of other variables such as school culture which may directly affect teacher behaviors:

The narrow definition (of instructional leadership) focuses on instructional leadership as a separate entity from administration. In the narrow view, instructional leadership is defined as those actions that are directly related to teaching and learning—observable behaviors such as classroom supervision. In the broad view, instructional leadership entails all leadership activities that affect student learning (Sheppard, 1996, p.326).

The concept of the 21st century educational leader as change agent with flexibility i.e., the ability to view changing circumstances and patterns of reorganization through the lenses of all four frames of leadership lends expertise to the meaning of accountability through student achievement (Sizer, 1992). Bolman and Deal (1993) support the premise that leadership behaviors and skills can be taught. Florida instituted the Preparing New Principals Program in 1986 in response to the data that show that leadership skills can be taught (Rivers, 1996). If this study should support a positive relationship between the use of the four frames of leadership and student achievement, then effective practices for enhancing student achievement can be taught. The plasticity of most non-empirical research based on individual viewpoint can then be re-focused on elevating student achievement by trained leadership working with teachers and community to build a culture of student achievement even during times of change and reorganization (Hopkins, Ainscow & West, 1994).
CHAPTER 3

METHODS AND PROCEDURES

Introduction

The purpose of this chapter is to describe the methodology and procedures used in determining the self-reported leadership orientations of public school principals in a central Florida school district and the relationship of these leadership orientations to student achievement. Data collection and analysis of self-reported survey data served to identify principals’ perceptions of their leadership and management styles based on their usage of four frames: structural, human resource, political and symbolic. The collection and analysis of Florida Comprehensive Assessment Testing (FCAT) reading data over a 2-year period, 2004 and 2005, were used to identify student achievement in each of the principals’ schools. Comparative analysis of both sets of data was used to determine if there was a relationship between the Leadership orientations of the principals and student achievement.

Problem Statement

This study was developed to determine if there is a relationship of principals’ use of the four frame theory of leadership to improvements in student achievement. This study also served to contribute to the quantitative data produced concerning the use of Bolman and Deal’s four frames of leadership (Bolman & Deal, 1997) by elementary and secondary (middle and high school) principals as well as providing quantitative data measuring the difference, if any, in frame usage of this study as compared to frame usage
reported by Bolman and Deal (1992b). Another part of the study was to determine if frame use was related in any way to effectiveness as a leader and as a manager. In addition, analysis of results could indicate areas of leadership behaviors or styles that may indicate a need for principal preparation programs that could enhance instructional and organizational effectiveness. This could lead to more students achieving proficiency in academics as well as leading to higher level achievement scores on FCAT and other standardized assessment tests.

**Research Questions**

The following questions were generated based on the literature review for this study:

1. Which of the four frames do principals report using at the elementary and secondary school levels?
2. To what extent is there a difference in frame dominance between elementary and secondary principals?
3. What difference exists between principals’ leadership effectiveness and managerial effectiveness?
4. What relationship exists between principals’ self reported frame use to increases in FCAT Reading mean scale scores for 2004 and 2005 school years?
Population

The population for this study was comprised of 58 public school principals in the 11th largest school district in Florida. The principals were assigned to 36 elementary, 11 middle, 9 high and 3 alternative schools (http://www.scps.k12.fl.us). In addition, the FCAT population was comprised of 3rd, 8th and 10th grade students in the same district with each school represented for the appropriate grade level and encompassing the two year period, 2004 and 2005.

Data Collection

The survey instrument (see Appendix A), a cover letter (see Appendix B) that explained the study, and a numbered plain white envelope were placed into an inter-district courier envelope and sent to the 58 public school principals on February 1, 2006. The letter requested that the self administered survey, upon completion, be placed in the numbered white envelope and sent back through inter-district mail without the principal’s name or the name of the school on either the white envelope or the courier envelope by February 13th. In addition to the principals’ completed questionnaires as a source of data, student achievement data on reading as measured by the 2004 and 2005 FCAT reading scores for each school were retrieved from the Florida Department of Education (www/fl DOE.org) and Seminole County Public Schools Informational Technology Department.

The stricture for usability of the questionnaire was whether or not the principal had been at the same school for the 2004 and 2005 school year. The first mailing yielded
29 responses from the 58 principals surveyed for a 50% return rate with 24 usable and 5 unusable responses.

A second and differently worded cover letter (see Appendix C), a second copy of the survey instrument and a numbered white envelope were placed in a courier envelope with similar instructions for anonymous return and sent to those principals who had not responded upon first request. This mailing was sent February 24th with a March 14th return date. The second return yielded 15 responses with 13 usable and 2 unusable responses. These two mailings consisted of 44 responses for a return rate of 76% of which 37 were usable (64%).

In order to establish greater validity for the study, a third mailing was done in tandem with an email reminder. This third mailing yielded 8 responses with 5 usable and 3 unusable responses. The total number of responses from the 3 mailings was 52 for a 90% return rate with 42 usable responses (73%).

Data on the FCAT Reading mean scale scores of each school were collected for the two year period of 2004 and 2005. These data for 3rd, 8th and 10th grade student reading mean scale scores for the schools surveyed were obtained from the Florida Department of Education site and the Seminole County Public Schools Informational Technology Department.

Instrumentation

Data were collected using the Leadership Orientations (Self) survey instrument developed by Bolman and Deal (1990) as a measure of the usage of the four frames of leadership: structural, human resource, political and symbolic. Only the self-rated version
of the two versions of the Leadership Orientations questionnaire was used. The Leadership Orientations (Others) was not used in this study. Both versions consist of three sections for measuring usage of the four frames and also for the use of multi-framing.

Section I employs a Likert type scale of 1 to 5 (1 = “never”; 2 = “occasionally”; 3 = “sometimes”; 4 = “often”; and 5 = “always”) to determine respondent’s self-administered rating of how often each behavior item was true. The items are listed in a specific sequence for each frame. The structural items are 1, 5, 9, 13, 17, 21, 25 and 29. The human resource items are 2, 6, 10, 14, 18, 22, 26 and 30. The political frame is denoted by the items 3, 7, 11, 15, 19, 23, 27 and 31. The symbolic frame is represented by the items 4, 8, 12, 16, 20, 24, 28 and 32. The 8 items comprising each of the leadership frames are further sub-divided into rating scales that have a consistent sequence. Each frame has 2 sub-scales called dimensions. The structural frame is subdivided into the “analytic” and “organized” dimension. The analytic items are 1, 9, 17, and 25 and the organized dimension is indicated by the items 5, 13, 21 and 29. The human resource frame is made up of the “supportive” dimension which are items 2, 10, 18 and 26 and the “participative” which are represented by items 6, 14, 22 and 30. The political frame includes items 3, 11, 19 and 27 for the “powerful” dimension and items 7, 15, 23 and 31 for the “adroit” dimension. The symbolic frame is characterized by the “inspirational” items 4, 12, 20 and 28, and the “charismatic” items 8, 16, 24 and 32.

Six forced-choice items make up Section II of the Leadership Orientations (Self) survey instrument. The respondents rank order their leadership style with descriptors 1 to 4 (1 = “least like you”; 4 = “best describes you”) with the options under each item
arranged in the same sequential pattern of structural frame represented by the “a” option; human resource frame as the “b” option; political frame as the “c” option; and the symbolic frame as option “d”. Unlike the Likert type scale in which the respondent may self-select only for the high end of the scale (“4”s and “5”s, thus creating a “halo effect”), the forced-choice scale does not permit self selection of only the high options for each item. Both rating scales have advantages and disadvantages but the use of the forced-choice items in tandem with the Likert type rating scale provide a more balanced measurement of frame usage than either would provide if used alone (Bolman & Deal, 1992b).

Section III is an overall rating of the leadership orientations of the respondents. This section has two one-item measures: effectiveness as a leader and as a manager. The respondents are asked to compare themselves to others (in this study, principals). A Likert type scale of 1 to 5 is used for rating responses and is related to a percentage value. Numerical values were as follows: 1 = Bottom 20%; 3 = Middle 20%; and 5 = Top 20%.

Demographic information specific to the respondents of this study compose Section IV of the Leadership Orientations (Self) questionnaire. The five questions are designed to provide information pertaining to gender, school site, total number of complete years as a principal, total number of years as principal at the current school (and a choice question if the principal had been at the current school for only one year)—total number of years at the 2004 and 2005 school. If a questionnaire showed that the principal had not been at the current or former site during the 2 year period from which the FCAT Reading data were drawn, then the survey was not used as part of the data set for this study. A box for additional comments was incorporated into the demographic section.
The Leadership Orientations (Self) survey instrument is indicated to have a high reliability and was piloted tested with Harvard graduate students in the College of Education in 1988 and 1989 (Bolman & Deal, 1990). In addition, Bolman, Deal (1991b, 1992b) and others (Bolman, Deal & Granell, 1995; Bolman & Granell, 1999) have tested the instrument internationally. Regression analysis was used to demonstrate the validity of the instrument by Bolman and Deal and the reliability statistics may be found at http://www.bloch.umkc.edu/classes/bolman/new_page_1.htm.

Data Analysis

The computer software, SPSS, version 12.0 for Windows was used for input and analysis of data generated by the Leadership Orientations (Self) questionnaire and the 2004 and 2005 FCAT Reading mean scale score data compiled from 3rd, 8th and 10th grades. Analyses of the data for leadership behaviors, leadership styles, overall rating of effectiveness as leader and as manager and demographics were reported using frequencies, percentages, range, mean score and standard deviation scores. For the purposes of this study, when analyzing the FCAT Reading data to determine a relationship, if any, to the principals’ use of the four frames, the dependent variable was FCAT Reading mean scale score and the independent variables were the four frames: structural, human resource, political and symbolic.

For the analysis of the participant’s responses to Section I of the Leadership Orientations (Self) survey instrument, the variables were the 32 leadership behaviors and the numerical values for each item. A Likert type scale was used with the following values: 5 = “always”; 4 = “often”; 3 = “sometimes”; 2 = “occasionally”; 1 = “never”. For
the analysis of the responses on Section II of the survey, the variables were the six items with four choices each (a, b, c, d) for a total of 24 variables denoting leadership styles with the descriptors converted to the following numerical values: 4 = “best describes you”; 3 = “next best”; 2 = “not much like you”; 1 = “least like you”. For the overall rating of Section III, the 2 variables were “leader” and “manager” and the percentages given were converted to a Likert type scale as follows: 5 = Top 20%; 4 = Near Top 20%; 3 = Middle 20%; 2 = Near Bottom 20%; 1 = Bottom 20%. A mean scale score was calculated for each construct by totaling each respondent’s score for each item and dividing the sum by the number in each construct, which, overall, was in the range of 8 to 40 points.

The students’ FCAT Reading mean scale scores for the years 2004 and 2005 were obtained from the Florida Department of Education site and the Seminole County Public Schools Informational Technology Department. The difference in the 2004 and 2005 FCAT Reading mean scale scores were computed for each principal’s school and then used to determine whether an increase in the FCAT reading mean scale score had occurred. The resulting data were used to indicate if there was a relationship of student achievement, as shown by an increase in FCAT Reading scale scores from 2004 to 2005, to principals’ frame use. The student scores were rated on five achievement levels with 5 being the highest and 1 as the lowest reading level. The FCAT scale scores range from 100 to 500 and were the same for each grade level (and content area). The scale scores for the FCAT reading achievement levels for 3rd, 8th and 10 grades can be seen in Table 1.
Data Analysis for Research Question 1

Research Question 1 was generated to determine which of the four frames those principals reported using at the elementary and secondary (middle and high school) levels. A mean score, standard deviation of the mean, range, percent and frequency were run for each of the items found in Section I and II and also for each of the frames. An independent t-test was used to determine which of the four frames principals reported using at the elementary and secondary levels. An independent 2-sample t-test was performed to compare the two dimensions within each frame. An alpha level of .05 was used to determine significance of all the data analyses.

Table 1
FCAT Reading Achievement Levels Scale Scores

<table>
<thead>
<tr>
<th>Grade</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>100 - 258</td>
<td>259 - 283</td>
<td>284 - 331</td>
<td>332 - 393</td>
<td>394 - 500</td>
</tr>
<tr>
<td>5</td>
<td>100 - 255</td>
<td>256 - 285</td>
<td>286 - 330</td>
<td>331 - 383</td>
<td>384 - 500</td>
</tr>
<tr>
<td>8</td>
<td>100 - 270</td>
<td>271 - 309</td>
<td>310 - 349</td>
<td>350 - 393</td>
<td>394 - 500</td>
</tr>
<tr>
<td>10</td>
<td>100 - 286</td>
<td>287 - 326</td>
<td>327 - 354</td>
<td>355 - 371</td>
<td>372 - 500</td>
</tr>
</tbody>
</table>

Data Analysis for Research Question 2

Research Question 2 sought to determine if a difference existed in the dominant frames between elementary and secondary (middle and high school) principals. A mean score, standard deviation of the mean, range, percent and frequency were run for each of the frames. Because of the low numbers involved in the middle and high schools, an
independent 2-sample t-test was run with the grouping variables as elementary (1) and secondary (2). Equal variances were assumed. An alpha level .05 was used to determine significance.

Data Analysis for Research Question 3

Research Question 3 was generated to determine if there was a difference in principals’ self-rated scores for leadership effectiveness and managerial effectiveness. A mean score and standard deviation was calculated for each comparison and an independent samples t-test and an analysis of variance was run to determine significance. Equal variance was assumed and the alpha level was .05.

Data Analysis for Research Question 4

Research Question 4 sought to determine if there was a relationship of frame use to student achievement as measured by increases in FCAT Reading mean scale scores of students in grades 3, 8 and 10 for the years 2004 and 2005. A multiple regression (ANOVA) was used to determine any significant relationship between the use of the four frames by principals and an increase in FCAT reading scores, indicating student achievement. A series of analyses was done with the four frames as the independent variables and the difference in mean scale scores to show increase or no increase in mean scores over the two year testing period as the dependent variable. An alpha level of .05 was used to determine significance of the data analysis.
Summary

Chapter 3 described the methods and procedures used in implementing this study to investigate principals’ use of the Four Frame Theory, reframing and multi-framing by elementary and secondary (middle and high school) principals (Bolman & Deal, 1990). A questionnaire, Leadership Orientations (Self), (Bolman & Deal, 1990), was sent to 58 principals in a central Florida public school district. Three mailings yielded a 90% return rate of which 73% were usable for data analysis. This chapter includes the statement of the problem, the population, the research questions and the statistical procedures required for analysis of the data.

Chapter 4 addresses the four research questions. The statistical analyses of these questions are presented in tabular form and accompanied by descriptive narrative. Chapter 5 includes a summary and discussion of the results of this study, conclusions, implications for implementation and recommendations for further research.
CHAPTER 4

ANALYSIS OF THE DATA

Introduction

This study was developed to provide information about the relationship of principals’ use of Bolman and Deal’s (1991) four frame model to student achievement. In addition, the study was intended to contribute to the existing body of knowledge concerning leadership practices relative to student achievement. This study focused on four research questions:

1. Which of the four frames do principals report using at the elementary and secondary school levels?

2. To what extent is there a difference in frame dominance between elementary and secondary principals?

3. What difference exists between principals’ leadership effectiveness and managerial effectiveness?

4. What relationship exists between principals’ self reported frame use to increases in FCAT Reading mean scale scores for 2004 and 2005 school years?

Participants in the quantitative study were surveyed concerning their use of the structural, human resource, political and symbolic frames of leadership (Bolman & Deal, 1991). A survey instrument developed and tested for validity by Bolman and Deal was
Chapter IV has been divided into two sections. The first section contains an analysis of the population and demographic characteristics. The second section focuses on the analysis of data generated by the respondents’ answers relative to each of the research questions asked in this study.

Population and Demographic Characteristics

Data were generated by a population of 58 public school principals in the 11th largest school district in Florida. The principals are assigned to 36 elementary, 12 middle and 10 high schools in their district. Only those principals who were at the same school for the 2004 and 2005 school year were considered for the data analysis. In addition, the FCAT population was comprised of 3rd, 8th and 10th grade students in the same district with each school represented for the appropriate grade level and encompassing the two year period, 2004 and 2005.

Of the 58 survey forms disseminated, 52 were returned (90%) of which 42 (73%) were usable. A final tabulation of the usable surveys provided the data analysis for the respondents’ demographic characteristics. The questionnaire contained 5 demographic questions. Question 1 provided institutional information pertaining to the school level (elementary, secondary) of the principals surveyed. Questions 2, 3 and 4 (gender, total number of years as principal and total number of years as principal of the current school) provided personal and professional information. Question 5 offered a choice question if the principal had not been at the current school for three years (total number of years as
principal of the 2004 and 2005 school). The surveys of those principals who had not been at the same school for the 2004 and 2005 testing periods were not used for this study.

Table 2 presents the demographic data generated via analysis of frequencies and percentages. Table 3 provides additional information concerning respondents’ levels and gender. Respondents were also provided a space on the instrument for comments. A list of these comments can be found in Appendix G. The list also includes comments written as an extended response to their choice of answer on the questionnaire.

Table 2
Professional and Personal Demographics of Principals (N=42)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>27</td>
<td>64.3</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>35.7</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>24</td>
<td>57.1</td>
</tr>
<tr>
<td>Males</td>
<td>18</td>
<td>42.9</td>
</tr>
<tr>
<td>Complete years as a Principal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years</td>
<td>4</td>
<td>9.5</td>
</tr>
<tr>
<td>3-5 years</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>6-10 years</td>
<td>17</td>
<td>40.5</td>
</tr>
<tr>
<td>11-15 years</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>16-20 years</td>
<td>4</td>
<td>9.5</td>
</tr>
<tr>
<td>21+ years</td>
<td>4</td>
<td>9.5</td>
</tr>
<tr>
<td>Complete years as Principal of your current 2004 and 2005 school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years</td>
<td>4</td>
<td>9.5</td>
</tr>
<tr>
<td>3-5 years</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>more than 5 years</td>
<td>32</td>
<td>76.2</td>
</tr>
</tbody>
</table>
Of the 42 respondents, 27 (64.3%) were elementary principals and 15 (35.7%) were secondary. Of the respondents, the number of total female principals was 24 (57.1%) and the number of total male principals was 18 (42.9%). Only principals who had been at the same school for the years 2004 and 2005 had usable surveys. For 2 complete years as principal, there were 4 (9.5%) responses. For 3-5 years as principal, there were 6 (14.3%) responses. For 6-10 years as principal, there were 17 (40.5%) responses. For 11-15 years as principal, there were 7 (16.7%) responses. For 16-20 years as principal, there were 4 (9.5%) responses and for 21+ years as principal there were 4 (9.5%). Overall, there were 10 (23.8%) principals who had less than 5 years experience and 76.2% who had more than 5 years experience.

Table 3 provides information as to respondents’ level and gender. Of the total number of respondents whose surveys were usable, 24 were female and 18 were male. Of the female respondents, 20 (74.1%) reported being at the elementary level and 4 (26.7%) reported being at the secondary level. At the secondary level, there were 2 females (28.6%) of 7 total respondents for middle school. and 2 females (25%) of 8 high school level respondents. Of the male respondents, 7 (25.9%) reported being at the elementary level and 11 (73.3%) reported being at the secondary level. At the secondary level, 5 (71.4%) of 7 respondents were at the middle school level and 6 (75%) of 8 respondents were at the high school level.

Table 4 provides an analysis of the elementary and secondary principals and their total years of experience including the FCAT Reading test dates, years 2004 and 2005. Of the 42 respondents, 27 (64.3%) were elementary principals and 15 (35.7%) were secondary principals. The elementary principals’ reported the following data: 4 (9.5%)
with 2 years experience; 3 (7.1%) principals with 3-5 years experience; 8 (19.1%) principals with 6-10 years experience; 7 (16.7%) principals with 11-15 years experience; 3 (7.1%) principals with 16-20 years experience and; 2 (4.8%) principals with 21 plus years experience. The 15 secondary principals contributed 35.7 percent of the total responses to the demographic item “years of experience”. The experience of the secondary principals was 1 (2.4%) principal with 2 years experience; 2 (4.8%) principals with 3-5 years experience; 6 (14.2%) principals with 6-10 years experience; 1 (2.4%) principal with 11-15 years experience; 2 (4.8%) principals with 16-20 years of experience and; 3 (7.1%) principals with 21 plus years of experience.

Table 3
Respondents by Level and Gender (N=42)

<table>
<thead>
<tr>
<th>Level</th>
<th>Female (N=24)</th>
<th>Male (N=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Elementary</td>
<td>20</td>
<td>74.1</td>
</tr>
<tr>
<td>Secondary*</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>*Middle</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>High</td>
<td>2</td>
<td>25.0</td>
</tr>
</tbody>
</table>
Table 4  
Frequencies and Percentages of Principals and Years of Experience (N = 42)

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>27</td>
<td>64.3</td>
</tr>
<tr>
<td>Two</td>
<td>4</td>
<td>9.5</td>
</tr>
<tr>
<td>Three to five</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>Six to ten</td>
<td>8</td>
<td>19.1</td>
</tr>
<tr>
<td>Eleven to fifteen</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>Sixteen to twenty</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>Twenty-one +</td>
<td>2</td>
<td>4.8</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>35.7</td>
</tr>
<tr>
<td>Two</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Three to five</td>
<td>2</td>
<td>4.8</td>
</tr>
<tr>
<td>Six to ten</td>
<td>6</td>
<td>14.2</td>
</tr>
<tr>
<td>Eleven to fifteen</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Sixteen to twenty</td>
<td>2</td>
<td>4.8</td>
</tr>
<tr>
<td>Twenty-one+</td>
<td>3</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Research Question 1

Which of the four frames do principals report using in the elementary and secondary school levels?

Research question 1 was generated to obtain respondents’ perceptions of their leadership behavior from their answers to the first 32 items of Part I of the Leadership Orientations Survey (Self) and to determine which of the four frames principals reported using at the elementary and secondary (middle and high school) level. Table 5 presents the mean score, standard deviation of the mean and range of responses of the respondents for each item on the survey as well as a mean score for each frame. Each of the items
were placed into one of the four frames based on Bolman and Deal’s consistent frame sequence (1990): structural items 1, 5, 9, 13, 17, 21, 25 and 29; human resource items 2, 6, 10, 14, 18, 22, 26, and 30; political items 3, 7, 11, 15, 19, 23, 27 and 31 and; symbolic items 4, 8, 12, 16, 20, 24, 28 and 32. The Likert type scale consisted of five choices: (1) “never”, (2) “occasionally”, (3) “sometimes”, (4) “often” and (5) “always”.

Of the 32 items, item 10, “high sensitivity and concern for others” found in the human resource frame had the highest mean score of 4.50. Item 7, “skillful and shrewd negotiator” found in the political frame had the lowest mean score of 3.81. The human resource frame had the highest set of mean scores (4.50 to 4.29). The second highest set of mean scores was found in the structural frame (4.38 to 4.07). The symbolic frame had mean scores ranging from 4.43 to 3.83. The political frame had the lowest set of mean scores ranging from 4.33 to 3.81. The four frames had responses ranging from 2-5. The smallest range of responses (4-5) occurred in the human resource frame (item 6, building trust). The human resource frame and the structural frame had no responses for “occasionally” (2). There were no responses for “never” (1) in any of the frames.

The human resource frame had the highest total mean score of 4.40. The structural frame was next with a total mean score of 4.29. The symbolic frame was next with a total mean score of 4.18 followed by the political frame with a total mean score of 4.11. The human resource frame showed a standard deviation of .504 for item 6 “build trust with collaboration”. The standard deviation for the human resource frame “consistent, helpful” (.526) was the same as the structural item 1 “think clearly’ (.526) and the political item 3 “mobilize people and resources” (.526). The greatest variation within the human resource frame was between item 6 (.504) and item 14 (.596)
Table 5  
Leadership Behavior Responses (N=42)*

<table>
<thead>
<tr>
<th>Numbered Items with Frame</th>
<th>Mean</th>
<th>S.D.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structural Frame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Think very clearly</td>
<td>4.33</td>
<td>.526</td>
<td>3-5</td>
</tr>
<tr>
<td>5. Emphasize planning and clear time lines</td>
<td>4.31</td>
<td>.604</td>
<td>3-5</td>
</tr>
<tr>
<td>9. Logical analysis and careful thinking</td>
<td>4.36</td>
<td>.533</td>
<td>3-5</td>
</tr>
<tr>
<td>17. Approach problems with facts and logic</td>
<td>4.38</td>
<td>.539</td>
<td>3-5</td>
</tr>
<tr>
<td>21. Accountability and measurable goals</td>
<td>4.31</td>
<td>.643</td>
<td>3-5</td>
</tr>
<tr>
<td>25. Pay extraordinary attention to detail</td>
<td>4.07</td>
<td>.640</td>
<td>3-5</td>
</tr>
<tr>
<td>29. Strong, clear structure and chain of command</td>
<td>4.33</td>
<td>.650</td>
<td>3-5</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Human Resource Frame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. High support and concern for others</td>
<td>4.48</td>
<td>.552</td>
<td>3-5</td>
</tr>
<tr>
<td>6. Build trust with collaboration</td>
<td>4.45</td>
<td>.504</td>
<td>4-5</td>
</tr>
<tr>
<td>10. High sensitivity and concern for others</td>
<td>4.50</td>
<td>.552</td>
<td>3-5</td>
</tr>
<tr>
<td>14. Foster high participation in decision making</td>
<td>4.29</td>
<td>.596</td>
<td>3-5</td>
</tr>
<tr>
<td>18. Consistent, helpful, responsive to others</td>
<td>4.33</td>
<td>.526</td>
<td>3-5</td>
</tr>
<tr>
<td>22. Listen and receptive to others’ ideas</td>
<td>4.40</td>
<td>.587</td>
<td>3-5</td>
</tr>
<tr>
<td>26. Recognize good work</td>
<td>4.38</td>
<td>.582</td>
<td>3-5</td>
</tr>
<tr>
<td>30. Highly participative manager</td>
<td>4.40</td>
<td>.587</td>
<td>3-5</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Political Frame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Mobilize people and resources</td>
<td>4.33</td>
<td>.526</td>
<td>3-5</td>
</tr>
<tr>
<td>7. Skillful and shrewd negotiator</td>
<td>3.81</td>
<td>.804</td>
<td>2-5</td>
</tr>
<tr>
<td>11. Unusually persuasive and influential</td>
<td>4.07</td>
<td>.808</td>
<td>2-5</td>
</tr>
<tr>
<td>15. Deals with organizational conflict</td>
<td>4.05</td>
<td>.697</td>
<td>2-5</td>
</tr>
<tr>
<td>19. Gains support from influential people</td>
<td>4.33</td>
<td>.526</td>
<td>3-5</td>
</tr>
<tr>
<td>23. Politically sensitive and skillful</td>
<td>3.98</td>
<td>.680</td>
<td>3-5</td>
</tr>
<tr>
<td>27. Develops supportive alliances</td>
<td>4.19</td>
<td>.594</td>
<td>3-5</td>
</tr>
<tr>
<td>31. Succeed with conflict and opposition</td>
<td>4.16</td>
<td>.679</td>
<td>2-5</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Symbolic Frame—total mean score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Inspire others to do their best</td>
<td>4.40</td>
<td>.544</td>
<td>3-5</td>
</tr>
<tr>
<td>8. Highly charismatic</td>
<td>3.83</td>
<td>.881</td>
<td>2-5</td>
</tr>
<tr>
<td>12. Inspiration to others</td>
<td>4.10</td>
<td>.759</td>
<td>2-5</td>
</tr>
<tr>
<td>16. Imaginative and creative</td>
<td>3.85</td>
<td>.963</td>
<td>2-5</td>
</tr>
<tr>
<td>20. Communicates strong vision and mission</td>
<td>4.33</td>
<td>.612</td>
<td>3-5</td>
</tr>
<tr>
<td>28. Generates loyalty and enthusiasm</td>
<td>4.43</td>
<td>.590</td>
<td>3-5</td>
</tr>
<tr>
<td>32. Influential role model of values and aspirations</td>
<td>4.31</td>
<td>.563</td>
<td>3-5</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Not every respondent completed every item on the survey.*
“foster high participation in decision making”. The greatest variation within the structural frame was between item 1 “think clearly” and item 29 (.650) “clear structure and chain of command”. The greatest variation within the political frame was between item 3 (.526) “mobilize people and resources” and item 11 (.808) “unusually persuasive and influential”. The greatest variation within the symbolic frame was item 4 (.544) “inspire others” and item 16 (.963) “imaginative and creative”. The greatest variation overall was between item 6 (.504) “build trust” in the human resource frame and item 16 (.963) in the symbolic frame “imaginative and creative”.

Table 6
Four Frame Analysis (N=42)*

<table>
<thead>
<tr>
<th>Frame</th>
<th>t</th>
<th>DF</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>.867</td>
<td>40</td>
<td>.391</td>
</tr>
<tr>
<td>Human Resource</td>
<td>-.074</td>
<td>40</td>
<td>.941</td>
</tr>
<tr>
<td>Political</td>
<td>-.132</td>
<td>36</td>
<td>.895</td>
</tr>
<tr>
<td>Symbolic</td>
<td>-.289</td>
<td>39</td>
<td>.774</td>
</tr>
</tbody>
</table>

*Note: Not every respondent completed every item on the survey.

Table 6 values assumed equal variances with an alpha of .05. There is no statistically significant difference in use of structural frame (t = .867; p = .391), human resource frame (t = -.074; p = .941), political frame (t = -.132; p = .895) and symbolic frame (t = -.289; p = .774) by the principals. A non-parametric Mann Whitney also indicated no statistically significant difference in use of frames. (See Appendix H)
<table>
<thead>
<tr>
<th>Frame &amp; Item</th>
<th>Level</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>Level</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Structural</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a Analytic skills</td>
<td>Elementary</td>
<td>26</td>
<td>2.38</td>
<td>1.134</td>
<td>Secondary</td>
<td>14</td>
<td>2.29</td>
<td>1.134</td>
</tr>
<tr>
<td>2a Technical Expert</td>
<td></td>
<td>26</td>
<td>1.50</td>
<td>.990</td>
<td>13</td>
<td>1.23</td>
<td>.599</td>
<td></td>
</tr>
<tr>
<td>3a Make good decisions</td>
<td></td>
<td>26</td>
<td>2.96</td>
<td>1.113</td>
<td>14</td>
<td>2.86</td>
<td>1.113</td>
<td></td>
</tr>
<tr>
<td>4a Attention to detail</td>
<td></td>
<td>26</td>
<td>2.27</td>
<td>.962</td>
<td>14</td>
<td>2.29</td>
<td>1.139</td>
<td></td>
</tr>
<tr>
<td>5a Clear, logical thinking</td>
<td></td>
<td>27</td>
<td>3.32</td>
<td>.163</td>
<td>14</td>
<td>3.21</td>
<td>.699</td>
<td></td>
</tr>
<tr>
<td>6a An analyst</td>
<td></td>
<td>24</td>
<td>2.58</td>
<td>.974</td>
<td>13</td>
<td>2.08</td>
<td>.862</td>
<td></td>
</tr>
<tr>
<td><strong>Human Resource</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1b Interpersonal skills</td>
<td></td>
<td>27</td>
<td>3.43</td>
<td>.879</td>
<td>14</td>
<td>3.43</td>
<td>.879</td>
<td></td>
</tr>
<tr>
<td>2b Good listener</td>
<td></td>
<td>26</td>
<td>3.08</td>
<td>1.017</td>
<td>13</td>
<td>3.38</td>
<td>.768</td>
<td></td>
</tr>
<tr>
<td>3b Coach and develop people</td>
<td></td>
<td>26</td>
<td>2.73</td>
<td>.874</td>
<td>14</td>
<td>2.86</td>
<td>.949</td>
<td></td>
</tr>
<tr>
<td>4b Concern for people</td>
<td></td>
<td>26</td>
<td>3.00</td>
<td>1.058</td>
<td>15</td>
<td>3.14</td>
<td>.949</td>
<td></td>
</tr>
<tr>
<td>5b Caring and support for others</td>
<td></td>
<td>26</td>
<td>2.96</td>
<td>.871</td>
<td>14</td>
<td>3.50</td>
<td>.855</td>
<td></td>
</tr>
<tr>
<td>6b A humanist</td>
<td></td>
<td>25</td>
<td>3.24</td>
<td>.970</td>
<td>13</td>
<td>3.31</td>
<td>.947</td>
<td></td>
</tr>
<tr>
<td><strong>Political</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1c Political skills</td>
<td></td>
<td>26</td>
<td>1.58</td>
<td>.809</td>
<td>14</td>
<td>1.64</td>
<td>1.082</td>
<td></td>
</tr>
<tr>
<td>2c Skilled negotiator</td>
<td></td>
<td>25</td>
<td>2.40</td>
<td>.957</td>
<td>13</td>
<td>2.15</td>
<td>.689</td>
<td></td>
</tr>
<tr>
<td>3c Build strong alliances</td>
<td></td>
<td>26</td>
<td>1.96</td>
<td>1.216</td>
<td>14</td>
<td>2.00</td>
<td>1.109</td>
<td></td>
</tr>
<tr>
<td>4c Success in conflict</td>
<td></td>
<td>27</td>
<td>2.78</td>
<td>1.155</td>
<td>14</td>
<td>2.86</td>
<td>.949</td>
<td></td>
</tr>
<tr>
<td>5c Tough and aggressiveness</td>
<td></td>
<td>25</td>
<td>1.48</td>
<td>.770</td>
<td>14</td>
<td>1.43</td>
<td>.756</td>
<td></td>
</tr>
<tr>
<td>6c A politician</td>
<td></td>
<td>24</td>
<td>1.58</td>
<td>.881</td>
<td>13</td>
<td>1.62</td>
<td>.870</td>
<td></td>
</tr>
<tr>
<td><strong>Symbolic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1d Motivates and excites</td>
<td></td>
<td>26</td>
<td>2.65</td>
<td>.846</td>
<td>14</td>
<td>2.64</td>
<td>.846</td>
<td></td>
</tr>
<tr>
<td>2d Inspirational leader</td>
<td></td>
<td>27</td>
<td>3.11</td>
<td>.786</td>
<td>13</td>
<td>3.23</td>
<td>.832</td>
<td></td>
</tr>
<tr>
<td>3d Energize and inspire others</td>
<td></td>
<td>26</td>
<td>2.54</td>
<td>1.104</td>
<td>14</td>
<td>2.29</td>
<td>1.204</td>
<td></td>
</tr>
<tr>
<td>4d Charisma</td>
<td></td>
<td>25</td>
<td>2.12</td>
<td>1.166</td>
<td>14</td>
<td>1.79</td>
<td>1.188</td>
<td></td>
</tr>
<tr>
<td>5d Imagination and creativity</td>
<td></td>
<td>25</td>
<td>2.32</td>
<td>1.069</td>
<td>14</td>
<td>1.86</td>
<td>.535</td>
<td></td>
</tr>
<tr>
<td>6d A visionary</td>
<td></td>
<td>27</td>
<td>2.78</td>
<td>1.080</td>
<td>13</td>
<td>3.00</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>
Table 7 presents an analysis of the responses of the elementary and secondary
principals to Section II of the survey in which they responded to 6 forced-choice
questions by ranking 4 descriptors using a Likert type scale (1,2,3,4) ranging from “most
like you” (4) to “least like you” (1). The 4 options under each item corresponded to each
of the 4 frames. The “a” option for each of the 6 items represented the structural frame.
The “b” option for each of the 6 items represented the human resource frame. The “c”
option for each of the 6 items represented the political frame and the “d” option for each
of the 6 items represented the symbolic frame.

An independent samples t-test was conducted to compare the scores of elementary
and secondary principals and their use of the four frames of leadership. Equal variances
were not assumed. According to the Levene’s Test for Equality of Variance, the
significance level for item 5, “leadmosd” (p = .001), was less than .05. There was no
significant difference in the scores for elementary and secondary principals and their use
of the four frames. Results of the independent t-test for Equality of Means can be found
in Appendix G.

Of the 24 items, descriptor 1b, “interpersonal skills”, in the human resource frame
had the highest mean score with both elementary (M = 3.43, SD = .879) and secondary (M
= 3.43, SD = .879) principals. Item 5a, “clear, logical thinking” in the structural frame
had the second highest mean score overall and the highest in that frame for both
elementary (M = 3.32, SD = .163) and secondary (M = 3.21, SD = .699) principals. Item
5c, “success in conflict”, was the highest in the political frame for both elementary (M =
2.78, SD = 1.155) and secondary (M = 2.86, SD = .949) principals. Item 2d,
“inspirational leader” was the highest in the symbolic frame for both elementary (M =
3.11, SD = .786) and secondary (M = 3.23, SD = .832) principals. Overall, both elementary and secondary principals reported highest mean scores for the human resource frame (M = 3.07) followed by the symbolic frame (M = 2.59), structural frame (M = 2.50) and political frame (M = 1.96).

Table 8 presents an analysis of which frames were used overall by principals who responded to the survey. The frequency and percent usage of the four frames by the respondents were recorded. A mean score of 4.0 was used to indicate whether a frame was used regularly (“often” and “always”). “Four Frame” use indicated that a respondent had a mean score of 4.0 for all four frames and so used four frames regularly.

Table 8 indicates that there were 6 (14.3%) respondents who used one frame regularly. Within that group of 6 principals, 1 (2.0%) used the structural frame most often and 5 (12.0%) principals used the human resource frame most often. There were no principals (0.0%) who used only the political or symbolic frame regularly. There were 6 (14.3%) respondents who used two frames regularly. 5 (12%) principals used the structural and human resource frame regularly and 1 (2.0%) principal used the human resource and symbolic frame regularly. There were no principals (0.0%) who used the following two frames regularly: structural, political; structural, symbolic; human resource, political and; political, symbolic. There were 8 (19.0%) principals who used three frames regularly. Of the respondents, 2 (4.7%) used the structural, human resource, political regularly; 5 (11.9%) used the structural, human resource, symbolic regularly, and; 1 (2.4%) used the human resource, political, symbolic regularly. No (0.0%)
Table 8
Overall Frame Usage (N = 42)*

<table>
<thead>
<tr>
<th>Frames Used</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Frame</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>Structural</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Human Resource</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>Political</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Symbolic</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Two Frames</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>Structural, Human Resource</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>Structural, Political</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Structural, Symbolic</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Human Resource, Political</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Human Resource, Symbolic</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Political, Symbolic</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Three Frames</td>
<td>8</td>
<td>19.0</td>
</tr>
<tr>
<td>Structural, Human Resource, Political</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Structural, Human Resource, Symbolic</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>Structural, Political, Symbolic</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Human Resource, Political, Symbolic</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>All Four Frames</td>
<td>22</td>
<td>52.4</td>
</tr>
</tbody>
</table>

*Note: Not every respondent completed every item on the survey.

principals used the structural, political, symbolic frame regularly. There were 22 (52.4%) principals who used all four frames regularly.

Table 9 provides an analysis of frame usage for elementary principals as compared to secondary principals. The responses of the elementary school principals indicated that all used one or more frames regularly. There were 6 (22.2%) of the
elementary principals who used one frame regularly. There were 5 (18.5%) elementary
principals who used two frames regularly; 3 (11.1%) who used three frames regularly
and; 13 (48.2%) who used four frames regularly. Of the secondary principals’ responses
there were no (0.0%) principals who used one frame regularly. There was one (6.7%)
principal who used two frames regularly; 5 (33.3%) who used three frames regularly; and
9 (60.0%) who used four frames regularly.

Table 9
Comparison of Frame Usage (N = 42)*

<table>
<thead>
<tr>
<th># of Frames Used</th>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Elementary</td>
<td>6</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Two</td>
<td>Elementary</td>
<td>5</td>
<td>18.5</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Three</td>
<td>Elementary</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>5</td>
<td>33.3</td>
</tr>
<tr>
<td>Four</td>
<td>Elementary</td>
<td>13</td>
<td>48.2</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>9</td>
<td>60.0</td>
</tr>
</tbody>
</table>

*Note: Not every respondent completed every item on the survey.

Table 10 provides an overall analysis of the comparison of dimension usage of
each frame for both elementary and secondary principals. Dimensions consist of 8 item
frame measures (sub-scales) as defined in Chapter I. Mean scores and standard deviations
for each of the dimensions in each of the frames were generated by performing a paired
sample t-test. An alpha level of .05 was used to determine significance of all the data analyses.

The least variation overall from the norm was found in the “participative” ($M = 17.55, SD = 1.485$) dimension of the human resource frame. The greatest variance overall was found in the “charismatic” ($M = 16.22, SD = 2.455$) dimension of the symbolic frame.

For the four frames, the human resource frame displayed the least variation in dimensions: “supportive” dimension ($M = 17.69, SD = 1.689$) and “participative” dimension ($M = 17.55, SD = 1.485$). The structural frame displayed similar means as well: “analytic” dimension ($M = 17.14, SD = 1.601$) and “organized” dimension ($M = 17.21, SD = 1.616$). There was no significant difference within the human resource (t = .723; p = .474) and within the structural (t = -.408; p = .685) frames. The symbolic frame displayed the greatest variation in means: “inspirational” dimension ($M = 17.37, SD = 1.729$) and “charismatic” dimension ($M = 16.22, SD = 2.455$). There was a significant difference between the two dimensions, “inspirational” and “charismatic” (t = 4.327; p = .000) found in the symbolic frame. The political frame displayed variation in the “powerful” dimension ($M = 16.79, SD = 2.069$) and the “adroit” dimension ($M = 16.00, SD = 2.144$). There was a significant difference found in the political frame between the two dimensions, “powerful” and “adroit” (t = 3.434; p = .001).
Table 10
Comparison of Dimension Usage of Each Frame (N = 42)*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D</th>
<th>t</th>
<th>DF</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair One, Structural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analytic</td>
<td>17.14</td>
<td>1.601</td>
<td>-.408</td>
<td>41</td>
<td>.685</td>
</tr>
<tr>
<td>Organized</td>
<td>17.21</td>
<td>1.616</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair Two, Human Resource</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive</td>
<td>17.69</td>
<td>1.689</td>
<td>.723</td>
<td>41</td>
<td>.474</td>
</tr>
<tr>
<td>Participative</td>
<td>17.55</td>
<td>1.485</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair Three, Political</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powerful</td>
<td>16.79</td>
<td>2.069</td>
<td>3.434</td>
<td>37</td>
<td>.001</td>
</tr>
<tr>
<td>Adroit</td>
<td>16.00</td>
<td>2.144</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair Four, Symbolic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspirational</td>
<td>17.37</td>
<td>1.729</td>
<td>4.327</td>
<td>40</td>
<td>.000</td>
</tr>
<tr>
<td>Charismatic</td>
<td>16.22</td>
<td>2.455</td>
<td>4.327</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Not every respondent completed every item on the survey.

Research Question 2

Is there a difference in frame dominance between elementary and secondary principals?

Research Question 2 was generated to determine if there was a difference in the dominant frame usage between elementary and secondary principals. An independent 2-sample t-test was computed with equal variances assumed and an alpha level of .05 used to determine significance.

Table 11 lists the mean score, standard deviation, t value and significance (p) of both elementary and secondary principals for each of the four frames. An independent t-test compared the mean scores of elementary and secondary principals in all four frames: structural, human resource, political and symbolic. There was no significant difference in
scores for elementary ($M = 34.64$, $SD = 3.423$) and secondary ($M = 33.79$, $SD = 1.929$; $t = .434$; $p = .391$) principals in the structural frame. There was no significant difference in scores for elementary ($M = 35.21$, $SD = 2.672$) and the secondary ($M = 35.29$, $SD = 3.451$; $t = -.074$; $p = .941$) principals in the human resource frame. There was no significant difference in scores for elementary ($M = 32.73$, $SD = 4.229$) and the scores of secondary ($M = 32.92$, $SD = 3.502$; $t = -.132$; $p = .895$) principals in the political frame. There was no significant difference in the scores for elementary ($M = 33.46$, $SD = 3.236$; $t = -.289$; $p = .774$) principals in the symbolic frame. The independent t-test demonstrated that there was no overall frame dominance between elementary and high school principals.

Table 11
Frame Usage Comparison (N=42)*

<table>
<thead>
<tr>
<th>Elementary or Secondary</th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>DF</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>34.64</td>
<td>3.423</td>
<td>.867</td>
<td>40</td>
<td>.391</td>
</tr>
<tr>
<td>Secondary</td>
<td>33.79</td>
<td>1.929</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Resource</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>35.21</td>
<td>2.672</td>
<td>-.074</td>
<td>40</td>
<td>.941</td>
</tr>
<tr>
<td>Secondary</td>
<td>35.29</td>
<td>3.451</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>32.73</td>
<td>4.229</td>
<td>-.132</td>
<td>36</td>
<td>.895</td>
</tr>
<tr>
<td>Secondary</td>
<td>32.92</td>
<td>3.502</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symbolic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>33.46</td>
<td>4.212</td>
<td>-.289</td>
<td>39</td>
<td>.774</td>
</tr>
<tr>
<td>Secondary</td>
<td>33.85</td>
<td>3.236</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Not all respondents answered every item on the survey.
Research Question 3

What difference exists between principals’ leadership effectiveness and managerial effectiveness?

Table 12 presents data resulting from the self-rated responses of elementary and secondary principals relative to their perception of their effectiveness as a leader or as a manager (Section III of the survey) by ranking 5 descriptors using a Likert type scale (1,2,3,4,5) in which descriptor 5 represented 80% to 100% as “Top 20%”; 4 represented the “Next Top 20%” (60% to 79%); descriptor 3 as the “Middle 20%” (40%-59%) and descriptors 2 and 1 as the bottom 40% with descriptor 1 as “Bottom 20%.” Table 13 presents the comparison of the elementary and secondary principals’ responses to effectiveness as a leader and manager.

Table 12
Leader and Manager Effectiveness Percentages (N = 42)*

<table>
<thead>
<tr>
<th>Effectiveness</th>
<th>Middle 20%</th>
<th>Next Top 20%</th>
<th>Top 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>1</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Secondary</td>
<td>1</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>1</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Secondary</td>
<td>0</td>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note: Not all respondents answered every item on the survey.

The elementary principals responded to their self-rated effectiveness as a leader as follows: 1 (3.7%) response for the “Middle 20%”; 9 (33.3%) responses for the “Next Top 20%” and; 17 (63.0%) responses for the “Top 20%.” There were 0 (0.0%) responses
below the middle 20%. The elementary principals self-rated their effectiveness as a manager as follows: 1 (3.7%) in the “Middle 20%”; 9 (33.3%) responses for the “Next Top 20%” and; 17 (63.0%) responses for the “Top 20%.” There were 0 (0.0%) responses below the middle 20%.

The secondary principals self-rated their leader effectiveness as follows: 1((6.7%) in the “Middle 20%”; 2(13.3%) in the “Next Top 20%” and; 12 (80.0%) in the “Top 20%.” There were no responses below “Middle 20%”. The secondary principals rated themselves as managers as follows: 3(20.0%) in the “Next Top 20%” and 12 (80.0%) in the “Top 20%.” There were no responses below “Next Top 20%.

Table 13
Leader and Manager Effectiveness Comparison (N = 42)

<table>
<thead>
<tr>
<th>Effectiveness</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>27</td>
<td>4.63</td>
<td>.565</td>
<td>.156</td>
<td>.877</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>4.60</td>
<td>.632</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>27</td>
<td>4.63</td>
<td>.565</td>
<td>-.213</td>
<td>.832</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>4.67</td>
<td>.488</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An independent samples t-test was computed to determine significance. Equal variance was assumed and the alpha level was .05. There was no significant difference in scores for effectiveness as a leader for elementary (M =4.63, SD = .565) and secondary (M = 4.60, SD = .632; t = .156; p = .877) principals. There was no significant difference
in scores for effectiveness as a manager for elementary ($M = 4.63$, $SD = .565$) and secondary ($M = 4.67$, $SD = .488$; $t = -.213$; $p = .832$) principals. An Analysis of Variance was computed for the same data set using the same parameters ($p < .05$). The $p$ value of .877 was the same as the independent t-test values for no statistically significant difference in scores for effectiveness as a leader for elementary and secondary principals. The $p$ value of .832 was the same as the independent t-test value for no statistically significant difference in scores for effectiveness as a manager for elementary and secondary principals. The $p$ value of .373 for both leader and manager indicated no statistically significant difference in the two scores of effectiveness as a leader and effectiveness as a manager for middle and high school principals.

**Research Question 4**

Is there a relationship of self reported frame use to increases in student FCAT Reading mean scale scores for the 2004 and 2005 school years?

Research Question 4 was constructed to determine if there was a relationship between four frame usage by elementary and secondary principals and student achievement as measured by increases in student FCAT Reading mean scales scores at each principal’s school over a two year period from 2004 to 2005. A multiple regression was computed to determine if there was a relationship in principals’ scores for frame usage and an increase in mean score difference for the two year FCAT Reading testing period, years 2004 and 2005. Equal variances were assumed with an alpha of .05. The independent variables were the four frames: structural, human resource, political and symbolic. The dependent variables were the FCAT Reading mean score difference from
2004 to 2005 for each principals’ school. An alpha level of .05 was used to determine significance.

Table 14 presents the surveyed schools’ numbers along with the principal’s frame usage and FCAT Reading mean scale score difference. Table 15 presents a comparison of mean scale scores to principals’ frame use. Of the 42 respondents, 6 (14.3%) used one frame and had a mean scale score difference range of -13 to +4; 6 (14.3%) used two frames and had a mean scale score difference range of -16 to +3; 8 (19.0%) used three frames and had a mean scale score difference range of -1 to +5 and; 22 (52.4%) used four frames and had a mean scale score difference range of -20 to +22.

Table 16 presents the relationship of principals’ frame use to difference in mean scale scores using multiple regression (ANOVA). There was no significant relationship of self-reported frame use to student achievement as measured by an increase in years 2004 and 2005 FCAT Reading mean scale scores. Table 16 indicates that 1.2% of the adjusted variance in FCAT Reading scores is explained by least square regression of FCAT Reading scores on the four frames. Table 16 includes the Model Summary statistics reporting R Square (.029, 2.9%) and the Adjusted R Square (-.120, 1.2%). The Adjusted R Square was used in this study to reflect a “corrected” variance more indicative of the small sample (N = 42). The independent variables (four frames) explain approximately 1.2% of the variance in the dependent variable (2004 to 2005 mean score difference) which indicates no statistically significant (p = .938) difference. Table 16 also provides statistics for evaluation purposes concerning possible contribution to the variance of the FCAT Reading scores by each of the four frames. Although each frame
Table 14
Comparison of School Number to Frame Use and Difference in Mean Scale Scores

<table>
<thead>
<tr>
<th>School #</th>
<th>Frame Use</th>
<th>Difference MSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>-2</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>-13</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>-7</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>-5</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>-11</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>-16</td>
</tr>
<tr>
<td>12</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>16</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>4</td>
<td>-2</td>
</tr>
<tr>
<td>18</td>
<td>4</td>
<td>-3</td>
</tr>
<tr>
<td>19</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>22</td>
<td>4</td>
<td>-20</td>
</tr>
<tr>
<td>23</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>25</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>26</td>
<td>4</td>
<td>-9</td>
</tr>
<tr>
<td>27</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>28</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>29</td>
<td>4</td>
<td>-10</td>
</tr>
<tr>
<td>30</td>
<td>4</td>
<td>-2</td>
</tr>
<tr>
<td>31</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>32</td>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>33</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>34</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>35</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>36</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>37</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>38</td>
<td>4</td>
<td>-7</td>
</tr>
<tr>
<td>39</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>40</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>41</td>
<td>4</td>
<td>-6</td>
</tr>
<tr>
<td>42</td>
<td>4</td>
<td>-7</td>
</tr>
</tbody>
</table>
indicates no statistical significance insofar as a relationship of the four frames to increases in FCAT Reading means scale scores, a discussion of which frames as independent variables might have possibly contributed to the prediction of the dependent variable may be in order. The use of the frames, individually and collectively, indicated

Table 15
Comparison of Difference in Mean Scale Score to Frame Use (N = 42)

<table>
<thead>
<tr>
<th>Frame Use</th>
<th>N</th>
<th>%</th>
<th>MSS DifferenceRange</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Frame</td>
<td>6</td>
<td>14.3</td>
<td>-13 to + 4</td>
</tr>
<tr>
<td>Two Frames</td>
<td>6</td>
<td>14.3</td>
<td>-16 to + 3</td>
</tr>
<tr>
<td>Three Frames</td>
<td>8</td>
<td>19.0</td>
<td>-1 to + 5</td>
</tr>
<tr>
<td>Four Frames</td>
<td>22</td>
<td>52.4</td>
<td>-20 to +22</td>
</tr>
</tbody>
</table>

Table 16
The Relationship of Frame Use to FCAT Reading Mean Scores

<table>
<thead>
<tr>
<th>Test and Frame</th>
<th>$R^2$, Adjusted $R^2$</th>
<th>DF</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANOVA</td>
<td>.029</td>
<td>4</td>
<td>.938</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frame</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>-.238</td>
<td>.813</td>
</tr>
<tr>
<td>Human Resource</td>
<td>-.659</td>
<td>.516</td>
</tr>
<tr>
<td>Political</td>
<td>.028</td>
<td>.977</td>
</tr>
<tr>
<td>Symbolic</td>
<td>.661</td>
<td>.514</td>
</tr>
</tbody>
</table>

a. Independent variables: Structural, Human Resource, Political, Symbolic
b. Dependent variable: Years 2004 and 2005 Mean Score Differences FCAT Reading
no statistically significant relationship to increases in FCAT reading scores. The frames and their values are as follows: structural (t = -.238, p = .813); human resource (t = -.659, p = .516); political (t = .028, p = .977); symbolic (t = .661, p = .514).

Summary

Chapter IV presented an analysis of data obtained by using elementary and secondary principal’s responses to Bolman and Deal’s Leadership Orientations (Self) survey instrument and scores from the 2004 and 2005 student Reading FCAT. Personal and professional demographic data were analyzed and presented for input into the research questions. An analysis of each of the four research questions was conducted.

Responses from elementary and secondary principals were analyzed to determine which of the four frames of leadership were used on a regular basis. The human resource frame was used most often by the principals followed by the structural frame, the symbolic frame and the political frame. Analysis of the two dimensions within each of the four frames indicated similar results. The human resource frame was used most often followed by the structural frame, symbolic and political frame. The analysis indicated no statistically significant difference in leader/manager preferences based on use of the four frames for elementary and secondary principals. The analysis indicated no statistically significant difference in leader/manager preferences for middle and high school principals. The data show that both the elementary and secondary principal’s multi-frame and use three to four frames regularly. There was no significant difference in frame use between elementary and secondary principals. The analysis indicated no statistically
significant difference in the degree of frame use by elementary and secondary principals and Bolman and Deal’s reported test scores which were pilot tested as a baseline for the validity and reliability of the survey instrument. No statistically significant relationship was found between four frame usage and student achievement as measured by increases in years 2004 and 2005 FCAT Reading mean scale scores.

The findings of the analysis are summarized and discussed in Chapter 5 as are conclusions, implications for practice and recommendations
CHAPTER 5

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Introduction

This study was developed to investigate possible relationships of the leadership practices utilizing the Four Frame Model of Bolman and Deal (1991b) to student achievement as measured by student Reading FCAT scores from the years 2004 and 2005. The study included a demographic profile of elementary and secondary principals who had at least two years experience at the same school during the years 2004 and 2005 (2003-04 and 2004-05 school year).

A summary and discussion of the results of the analysis of the four questions and the demographics are discussed in the first section followed by conclusions in the second section. Implications and recommendations for practice and for future research are included in sections 3 and 4 respectively.

Methodology

Population and Data Collection

The population for this study was comprised of 58 elementary and secondary (middle and high school) principals who had a minimum of 2 years experience in at the same school during the years of 2004 and 2005. The FCAT population consisted of 3rd,
8th and 10th grade students from each of the principals’ schools during the two years of 2004 and 2005.

The Leadership Orientations (Self) survey instrument (Appendix A) was first mailed to 58 principals via inter-district courier February 1, 2006, along with a cover letter (Appendix B) explaining the study. A second mailing of survey instrument and letter to the principals (Appendix C) was sent in late February. A third mailing (Appendix D) followed in mid-March. A final response rate provided 52 (90%) surveys with 42 (73%) as usable for the statistical analyses of data generated.

Instrumentation

The survey instrument used was Leadership Orientations (Self) by Bolman and Deal (1990) as a measure of the four frames of leadership defined as structural, human resource, political and symbolic. The survey consisted of three sections with a fourth section added for specific personal and professional demographic data of the principals who responded. The three sections of the survey that served to measure leadership qualities consisted of self-reported responses to Likert type scales. Section II was designed as 6 forced-choice items with 4 descriptors that the respondents had to place in rank order. This rank-order design was implemented as a form of checks and balances on Section I which was 32 items with a Likert type scale from 1-5 with 5 as the highest score on the scale. Therefore, it is possible that a respondent could self-report all 5s. Section II serves to offset the “halo” effect when respondents self-score Section I of the questionnaire unusually high. Section III measured the respondents’ effectiveness as leaders and managers. The scale was a Likert type scale from 1-5 with rankings in 20%
increments with 5 as “Top 20%” and 1 as “Bottom 20%”. There were two items in this section: (1) overall effectiveness as a leader and (2) overall effectiveness as a manager. The reliability and validity of this instrument has been tested on several occasions (Bolman & Deal, 1990; Bolman & Granell, 1999; Rivers, 1996). Reliability statistics on this instrument may be found at http:www.block.umkc.edu/classes/bolman/new_page_1.htm.

Data Analysis

The returned surveys were collected and each survey was designated a number that matched the principal’s school. The surveys were checked for usability based on respondents’ number of years at their 2004 and 2005 school. Data for each respondent was listed by number only and the statistical analysis was done using computer software SPSS 12.0 for Windows.

FCAT Reading data for years 2004 and 2005 were obtained from the Florida Department of Education (http://www.fldoe.edu). The FCAT Reading scores for 3rd (elementary), 8th (middle) and 10th (high) grades were collected. The mean scale scores for both years were recorded into the data set with the corresponding number that represented the respondent’s school. The difference in FCAT Reading mean scale scores was used as the dependent variable for Question 4 of this study.
Summary and Discussion of the Findings

Research Question 1

Which of the four frames do principals report using at the elementary and secondary school levels?

An analysis of frame usage for composite elementary and secondary principals indicate that multi-framing (use of four frames) was used over 52.4% of the time. Rivers’ (1996) study indicated all principals used multi-framing 28.3% of the time while Bolman and Deal’s (1991b) study showed rare use of multi-framing (approximately 6%) in the sense of all four frames. A later study of nursing chairpersons and their use of the Four Frame Model was done in 2002 by Mosser and Walls. The findings showed multi-framing 22% of the time which is more indicative of the findings of Rivers rather than Bolman and Deal. When multi-framing data for this study includes use of three frames as well as four frames, the findings show that principals used multi-framing over 75% of the time in contrast to Bolman and Deal (approximately 10%), Rivers (53%) and Mosser and Walls (31%).

There were percentage differences in frame use between elementary and secondary principals, particularly in the use of one frame. The elementary principals used one frame 22% of the time while the secondary principals showed no use of only one frame at a time. The elementary principals also showed higher use of two frames (18.5%) than the secondary principals (6.7%). Consequently, the secondary principals utilized three frames (33.3%) more often than did the elementary principals (11.1%) and four frames (60%) more often than elementary principals (48.2%). Overall, the elementary
principals used multi-framing about 59% of the time while the secondary principals used multi-framing approximately 93% of the time.

The high multi-frame use by secondary principals could be attributed to the rise of mega schools (3000-5000 members) in this area and the multiple problems and events arising daily and on-going which require working with diverse populations and diverse circumstances. The structural frame is largely used by secondary principals as a management frame for conducting the business associated with the physical plant and human resource movement on a daily basis while the human resource frame is used constantly in dealing with students, teachers, parents and leadership at other levels as well as the business and corporate community.

The use of the political frame is on the rise because principals are aware of the necessity of understanding the diversity of culture and how to solve problems proactively and positively within the diverse communities that make up the area of that school as well as the building itself. The secondary principals also have to vie for scarce resources for a larger population. In addition, secondary schools interact with the corporate and university entities for a variety of reasons including obtaining funding for programs and equipment and providing mentorships and internships for students and teachers. This county’s principals may be unusual in their political astuteness in maintaining their organizations’ functions in providing very high levels of academic achievement while increasing their organizations positive presence in the community.

Symbolic frame use is also rising as principals realize the need to maintain traditions and ceremony associated with that school. Traditions from senior picnics to induction ceremonies for students to the first day back breakfast for teachers are a way to
let all the members of the organization feel that they are part of a group, a “family” instead of being lost in the crowd. Traditional sports events such as the flag football game between juniors and seniors or the faculty and student basketball game are ways for students other than the varsity sports players to participate in school sports event and feel that they are recognized as individuals and as part of a group as well. All of these events contribute to the school experiencing minimum dysfunction due to unhappiness associated with possible anonymity in a large “business”. The secondary principals are expected, more than elementary principals, to be on site with encouragement and support for these many events.

Data from Section I of the Leadership Orientations (Self) survey indicated that elementary and secondary principals used the human resource frame most often followed by the structural frame, the symbolic frame and the political frame. This was consistent with both Bolman and Deal (1991b) and Rivers’ (1994) research.

Section II indicated that elementary and secondary principals used the human resource frame most often followed by the structural, political and symbolic. This order of frame use differs with other research (Rivers, 1996; Mosser & Walls, 2002). Rivers reported the order of use as human resource, structural, symbolic and political as did Mosser and Walls.

The analysis of dimensions indicated use of the “supportive” and “participative” dimensions within the human resource frame as used most followed by the structural frame with use of the dimensions “organized” and “analytic” in that order. The political frame was third choice with the dimension of “powerful” used more often than the dimension of “adroit”. The symbolic frame was used least with “inspirational” and
“charismatic” dimensions used in that order. It is interesting to note that secondary principals consistently work from three to four frames but do not largely think of themselves as inspirational or charismatic, both traits of the symbolic frame. Neither do they consider themselves “tough and aggressive” although the responses were high in “managing conflict well” which are traits found in the political frame,

Research Question 2

Is there a difference in frame dominance between elementary and secondary principals?

There was no difference found in frame dominance between elementary and secondary principals. Section I responses indicated that both elementary and secondary principals used the human resource frame as the dominant frame followed by the structural frame, the symbolic frame and the political frame as the least dominant frame which is consistent with prior research (Bolman & Deal, 1991; Rivers, 1996; Mosser and Walls, 2002).

Responses from Section II of the survey indicated use of the human resource frame as dominant for both elementary and secondary principals followed by use of the structural frame and then the political frame rather than the symbolic as in Section I and with the symbolic frame used least. This analysis was inconsistent and Bolman and Deal (1991), Bolman and Granell (1999) and Mosser and Walls (2002) and most importantly with Rivers (1996) in order of frame use for that section. Rivers’ study was an important comparison to this study because of the close proximity of the areas of study to each other with the same availability of university and corporate resources. However, the area
studied by Rivers was larger and more demographically diverse which may account for some difference. In addition, this study was conducted 10 years after Rivers’ study with increased exposure and awareness of the benefits of using the Four Frame Model.

The analysis of the human resource frame in Section II had the highest scores in the areas of working well with others, being a good listener and having concern for others. Both elementary and secondary principals were self-described as being humanists. These responses support the data generated in Section I of the survey which indicated “high sensitivity and concern for others” in the human resource frame as the first choice for both sets of principals. Mean scores were highly correlated between the two groups. For example, elementary and secondary principals had exactly the same mean (3.43) for interpersonal skills in the human resource frame. In addition, both elementary and secondary principals had the same mean (2.86) for the least used option (tough and aggressive) in the political frame. This response supports the response in Section I, “shrewd negotiator” in the political frame as being used least by principals surveyed.

Both sets of principals indicated that the structural frame was used most after the human resource frame. Within the structural frame, both sets of principals described themselves as being clear, logical thinkers which supports the highest responses from Section I, “thinks very clearly”. Both described themselves as inspirational leaders first in the symbolic frame with identical mean scores of 3.23. This supports the response in Section 1 by the principals that they “inspire others to do their best” along with “generates enthusiasm” as their highest scores in the symbolic frame.

The responses of the principals in this study place the use of the political frame before the use of the symbolic frame. This could possibly be attributed to the fast
growing diverse global population, the construction of new schools on a yearly basis which necessitates that principals compete for positions as well as material and human resources and the need to stay abreast of the latest techniques and equipment for providing the tools to teachers and students that will maintain high student achievement.

Research Question 3

What difference exists between principals’ leadership effectiveness and managerial effectiveness?

Section III of the survey supported multi-framing in the sense that there was no statistically significant difference in the responses for effectiveness as leader or manager. The responses indicated that the principals worked from both areas of leader and manager on an equal basis, re-framing and multi-framing as circumstances warranted. The elementary principals had exactly the same mean scores (4.63) for both effectiveness as a leader and as a manager. The secondary principals’ mean scores for both effectiveness as a leader and as a manager were closely correlated. There were no responses below the 80% level of effectiveness as a leader or as a manager for the secondary principals. This is not consistent with the Bolman and Deal (1991b) survey that indicated that leadership and management did not use the same lenses from which to effect strategy and tactics.

This increase in multi-framing by the principals in this study could possibly be attributed to several events. For example, the landmark study released by Bolman and Deal in 1991 found that leaders and managers did not utilize the same frames for effecting strategy. The managers worked more often from the structural frame (approximately 60% of the time) but leaders worked more often from the human resource
frame. At the time of Bolman and Deal’s study, the symbolic and political frames were used rarely. This study brought to the fore the need for corporate and educational leadership to learn to identify when to work from a specific frame, when to multi-frame and how to identify changes in circumstances that require reframing. The study also pointed out that many corporate and educational administrators were both managers and leaders and so needed to become more aware of the differences of the two when effecting policies and strategies for moving the organization forward. Consequently, it seems that 5 years later, Rivers’ study of principals indicated an increase in multi-framing from Bolman and Deal’s 6% to 53% and this study, 10 years after Rivers’ study, indicated an increase in multi-framing to over 75%.

Higher education in both the corporate and educational theater has included the Four Frame Model as part of their leadership and management strategies since the early to mid 1990s. The Central Florida area has been on the cutting edge of leadership theory and practice and, as a result, the leadership in this area is aware of Bolman and Deal’s four frames and are learning to use them skillfully. In addition, the Central Florida area in which both this study and the Rivers’ study was done, is a high technology corridor with high corporate and university input into educational practices. The results for multi-framing may not be as high if this study were done in a setting other than this area.

Research Question 4

Is there a relationship of self-reported frame use to increases in FCAT Reading mean scale scores for 2004 and 2005 school years?
No statistically significant relationship existed between frame use (independent variables: structural, human resource, symbolic and political) by principals to increases in FCAT Reading mean scale scores for the years 2004 and 2005 (dependent variable). A list of school numbers with the principal’s frame usage and FCAT Reading mean scale score differences was constructed to determine if there might be a difference in those principals that had negative differences in mean scale scores and those that had positive mean scale scores. There seemed to be no apparent discernible pattern in use of one frame or use of four frames in the mean scale score differences.

A second table was constructed to compare principals’ use of one frame, two frames, three frames or four frames to increases in FCAT Reading mean scale scores and to show range of these scores for each frame. Again, there was no discernable pattern as to whether or not working from more than one frame would help raise student achievement. The greatest range of FCAT Reading mean scale score differences were found in the category of four frame usage (-20 to +22). Range of least mean scale score differences were found in the use of three frames (-1 to +5). There were 16 of the 42 schools that showed a decrease in FCAT Reading scores from 2004 to 2005 from -1 to -20 and included users of one frame to four frames. There were 4 schools whose scores remained the same and also had users of one frame to four frames. There were 22 schools that showed an increase in FCAT Reading scores from 1 to 22 and those scores has users of one frame to four frames.

Next, an ANOVA was computed in which the principals’ frame usage was compared to the difference in FCAT Reading mean scale scores. An adjusted R Square was based on the smallness of the sample size. The adjusted R Square indicated that only
1.2% of the variance in FCAT Reading mean scale scores could be explained by principals’ frame use. This implies that there is some factor or factors other than frame that is contributing to the difference in FCAT Reading mean scores. These “emergent” factors within and without the organization that transcend what the data show (Bar-Yam, 2000; Davies, 2004; Mossberg, 1994; OECD, 2003) are difficult to identify.

For example, the demographics of the various schools may affect increases in FCAT Reading scores. Those schools with high populations of ESOL, ESE and low socioeconomic students may score lower or show less of an increase than schools that have fewer of these students. Length of time of the principal at that school, maturity of the teaching staff and other variables may have also contributed to the lack of relationship found in principals’ use of four frames and student achievement as measured by an increase in FCAT Reading mean scale scores from the testing year 2004 to the testing year 2005. Participation of parents and a culture of valuing education (or not) may play a role.

In addition, the increases that were identified in FCAT Reading mean scale scores from the testing year 2004 to the year 2005 might be attributed to several factors. There has been increased awareness of the need for incorporating reading strategies into the content areas along with the need for professional development to enable teachers to identify struggling readers as well as to implement scientifically proven reading strategies for increasing reading achievement since the implementation of the statewide Reading FCAT. Reading consultants, literacy coaches, summer reading programs at the schools for level 1 and level 2 readers based on results of individual FCAT Reading scores, school-wide FCAT Reading programs built into the school day such as silent reading and
Accelerated Reader, the CSR grant for classroom libraries and newspapers in education have all been a part of various principals’ strategies for raising FCAT Reading scores starting as early as the year 2000. It might be interesting to see which principals incorporate a variety of reading strategies in their schools and then make a comparison to an increase of student achievement using the FCAT Reading mean scale score differences as a measurement tool.

Conclusions

This study was conducted to determine if principals’ use of the four frames of leadership as defined by Bolman and Deal (1990) had a relationship to student achievement as measured by FCAT Reading mean scale scores for the two year testing period of 2004 and 2005. The focus of the study was twofold. Focus one was to determine which frames were used by principals and which frame was the dominant frame used. The corollary to that focus was to determine if there was a difference in frame use by elementary and secondary principals. The results of the principals’ responses to frame use were analyzed to serve as the independent variables for the second main focus which was to determine if frame usage and the ability to multi-frame had any relationship to student achievement as measured by FCAT Reading mean scale scores which became the dependent variable in the study. Based on a review of literature and the analyses of data generated by the study, the following conclusions were drawn:

1. It was concluded that principals who responded to this study use multi-framing on a regular basis. These results differ from those of Bensimon (1987), Bolman & Deal (1991a, 1991b) and Pavan & Reid (1991). These
results are similar to research conducted by Rivers (1994), Suzuki (1994), Durocher (1995), Bolman & Granell (1999) and Mosser & Walls (2002). This study reported that 59% of the elementary principals and 93% of the secondary principals multi-framed (use of 3 to 4 frames). This could be attributed to the fact that Bolman and Deal’s definitive study (1991b) heightened awareness of the need for leaders and managers to work from more than one frame and more than one frame at a time. The above cited research indicates a progression of increased multi-framing from the original research findings (1991b). There have been increased educational opportunities on the corporate and school level for leaders and managers to learn what the Four Frame Model is and to learn how to use the different frames for different circumstances. The rise in use of the symbolic and political frames could be a direct result of increased awareness that these are useful frames in which to move for certain circumstances. It is interesting to note that Rivers’ (1994) study had the closest parallel to results of this study. Both studies were generated in Central Florida where there is a strong influence of teaching to the four frames at the university level. In addition, there is strong collaboration between the university, corporate and public education sector in promoting leadership activities that create an awareness of the importance of multi-framing in today’s complex business and educational landscape. The personal gender data, however, indicated an interesting dichotomy that may be pursued in further study. There were more female principals
than males surveyed in this study. However, 74% of the females were elementary principals and the exact opposite held true for the secondary group in which 73% of the principals were male. Interestingly enough, only 59% of the elementary principals multi-framed as compared to 93% of the secondary principals who multi-framed. In addition to the other factors already discussed, some of this difference in multi-framing between elementary and secondary principals could possibly be attributed to the perception that males seem to be more comfortable in the political arena which has historically been male dominated.

2. There was no difference in frame dominance found between elementary and secondary principals. Both elementary and secondary principals used the human resource frame as the dominant frame. Section 1 supports that the principals in this study have a high support and concern for others, listen and include others in decision making, recognize good work and encourage collaboration through trust and participation. The findings of this study concerning dominant frame are consistent with the research of others (Bolman & Deal, 1991b; Rivers, 1996; Mosser & Walls, 2002).

3. There was no difference in this study between leader effectiveness and managerial effectiveness as measured by the principals’ self rated scores. The principals worked from both leader and manager on an equal basis, re-framing and multi-framing for changing circumstances. For example, the elementary principals had the same mean score for both leader and manager effectiveness. This is not consistent with prior research done by
Bolman and Deal (1991b) which indicated that leadership and management did not use the same lenses from which to effect strategy.

4. There was no relationship between self-reported frame use and student achievement as measured by increases in FCAT Reading mean scale scores. These findings are consistent with Guastella (2004) and Roberts (2004). This could possibly be attributed to the fact that there may be other variables that influence student achievement that are related to use of the four frames but not measured by the Leadership Orientations (Self) survey instrument.

**Implications and Recommendations for Practice**

The findings of this study indicated an increase in the use of multi-framing as related to past research. Although Section II of the Leadership Orientations (Self) indicated that use of the symbolic frame has now moved to the fourth most used frame for that specific section, the overall usage continues to place the symbolic frame as the third choice of frame with the political frame still used least. As resources for operating public schools become more scarce and having students identify with a public school becomes more necessary to obtain funds, then leadership, from necessity, must learn to use the symbolic and political frames equally well with the human resource and structural frames.

Based on the findings of this study and supported by the literature review, it is recommended that school organizations could improve leadership success by
providing more training in the political and symbolic frames with special emphasis on training female principals in the political frame.

It is recommended that universities teach all four frames with equal importance and depth of knowledge.

It is recommended that district level leadership as well as school based leadership review and upgrade skills relating to the use of these four frames with emphasis on use of the political and symbolic frame.

It is recommended that the selection process for deans and assistant principals include professional development in using the four frames, re-framing and multi-framing.

**Recommendations for Future Research**

The findings of this study were the result of the analysis of elementary and secondary principals’ responses to the *Leadership Orientations (Self)* survey instrument created by Bolman and Deal (1990). The findings generated new thoughts as to how this study could be used in conjunction with future studies.

1. The sample size for this study, though seemingly reliable, was small. This study could be expanded to include more participants.

2. This sample was taken from a region with several universities that include a doctorate in Educational Leadership and a corporate community that supports leadership activities. This study could be expanded to include other states in which there
are large rural areas that do not have easy access to a university system and few to no corporate support for leadership initiatives in the region.

3. This study could be replicated in urban areas that are experiencing difficulties in student achievement to determine if the non-relationship found of frame use to student achievement scores are a phenomenon of this area.

4. This study is self-reported. A study could be done with principals as “Self” and the teachers as “Other” (Leadership Orientations (Other) survey).

5. This study could be replicated in 5 years to observe any change in leadership practices concerning the use of the four frames and to determine if there is evidence that frame usage contributes to student achievement.

6. This study could focus on increases in FCAT Reading mean scale scores of students of various ethnicity and/or socio-economic groups rather than overall reading mean scale scores.

7. The study could be replicated using increases in FCAT Math mean scale scores and/or FCAT Science mean scale scores.

8. The study could include schools with diverse student achievement, locations, and demographics.
APPENDIX A

SURVEY INSTRUMENT
LEADERSHIP ORIENTATIONS (SELF) SURVEY

Please respond by February 13, 2006

This questionnaire asks you to describe your leadership and management styles.

I. Behaviors
You are asked to indicate how often each of the items below is true of you. Please use the following scale in answering each item.

You would answer “1” for an item that is never true, “2” for one that is occasionally true, “3” for one that is sometimes true of you, “4” for one that is often true of you and “5” for one that is always true of you.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>O</td>
<td>S</td>
<td>Of</td>
<td>A</td>
</tr>
</tbody>
</table>

1. Think very clearly. 1 2 3 4 5
2. Show high levels of support and concern for others. 1 2 3 4 5
3. Have exceptional ability to mobilize people and resources to get things done. 1 2 3 4 5
4. Inspire others to do their best. 1 2 3 4 5
5. Strongly emphasize careful planning and clear time lines. 1 2 3 4 5
6. Build trust through open and collaborative relationships. 1 2 3 4 5
7. Am a very skillful and shrewd negotiator. 1 2 3 4 5
8. Am highly charismatic. 1 2 3 4 5
9. Approach problems through logical analysis and careful thinking. 1 2 3 4 5
10. Show high sensitivity and concern for others’ needs and feelings. 1 2 3 4 5
11. Am unusually persuasive and influential. 1 2 3 4 5

98
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12.</td>
<td>Am able to be an inspiration to others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>Develop and Implement clear, logical policies and procedures.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14.</td>
<td>Foster high levels of participation and involvement in decisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15.</td>
<td>Anticipate and deal cleverly with organizational conflict.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16.</td>
<td>Am highly imaginative and creative.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>Approach problems with facts and logic.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>Am consistently helpful and responsive to others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19.</td>
<td>Am very effective in getting support from people with influence and power.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20.</td>
<td>Communicate a strong and challenging sense of vision and mission.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>Set specific, measurable goals and hold people accountable for results.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>Listen well and am usually receptive to other people’s ideas and input.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23.</td>
<td>Am politically very sensitive and skillful.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>See beyond current realities to generate exciting new opportunities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25.</td>
<td>Pay extraordinary attention to detail.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26.</td>
<td>Give personal recognition for work well done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27.</td>
<td>Develop alliances to build a strong base of support.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
28. Generate loyalty and enthusiasm.  1  2  3  4  5
29. Strongly believe in clear structure and a chain of command.  1  2  3  4  5

<table>
<thead>
<tr>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
</tr>
</tbody>
</table>

30. Am a highly participative manager.  1  2  3  4  5
31. Succeed in the face of conflict and opposition.  1  2  3  4  5
32. Serve as an influential role model of organizational aspirations and values.  1  2  3  4  5

II. Leadership Style
This section asks you to describe your leadership style. For each item, give the number “4” to the phrase that best describes you, “3” to the item that is next best, “2” to the item that is not much like you, and “1” to the item that is least like you.

<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>best describes you</td>
<td>next best</td>
<td>not much like you</td>
<td>least like you</td>
</tr>
</tbody>
</table>

1. My strongest skills are:
   ___a. Analytic skills
   ___b. Interpersonal skills
   ___c. Political skills
   ___d. Ability to motivate and excite

2. The best way to describe me is:
   ___a. Technical expert
   ___b. Good listener
   ___c. Skilled negotiator
   ___d. Inspirational leader

3. What has helped me the most to be successful is my ability to:
   ___a. Make good decisions
   ___b. Coach and develop people
   ___c. Build strong alliances and a power base
   ___d. Energize and inspire others

4. What people are most likely to notice about me is my:
   ___a. Attention to detail
   ___b. Concern for people
c. Ability to succeed in the face of conflict and opposition
d. Charisma

5. My most important leadership trait is:
a. Clear, logical thinking
b. Caring and support for others
c. Toughness and aggressiveness
d. Imagination and creativity

6. I am best described as:
a. An analyst
b. A humanist
c. A politician
d. A visionary

III. Overall Rating
Compared to other individuals that you have known with comparable levels of experience and responsibility, how would you rate yourself on:

1. Overall effectiveness as a leader. (Circle one)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom 20%</td>
<td>Middle 20%</td>
<td>Top 20%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Overall effectiveness as a manager. (Circle one)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom 20%</td>
<td>Middle 20%</td>
<td>Top 20%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IV. Demographic Information:
Please check appropriate responses.

1. School site:
   _______ Elementary   _______ Middle   _______ High

2. Gender:
   _______ Female   _______ Male

2. Total number of complete years as a Principal.
   _______ 1 year
   _______ 2 years
   _______ 3-5+ years*
   _______ 6-10 years
   _______ 11-15 years
   _______ 16-20 years
   _______ 21+ years

* If you have been a Principal for more than two years, please check the following:
1. Total number of complete years as Principal of your current 2005-06 school.
   _____ 1-2 years*
   _____ 3-5 years
   _____ more than 5 years

   *If you have been at your current school for only one year, please check the following:

2. Total number of complete years as Principal of your 2004-05 school.
   _____ 1 year
   _____ 1-3 years
   _____ more than 3 years

Thank you for taking the time to respond to this questionnaire.
Please place your completed questionnaire in the white envelope and return it to
D. Poniatowski, ESC, Curriculum Services
By February 13, 2006

Please write any additional comments you may want to share in the box below.

This survey is used and revised with the permission of Lee G. Bolman, Ph.D
University of Missouri, Kansas City
5100 Rockhill Road
Kansas City, Missouri 64110-2499
All rights reserved.
APPENDIX B

SURVEY COVER LETTER
February 3, 2006

Dear Principal,

We are writing to ask your help in a study to determine how Bolman and Deal's Four Frame Theory is used in meeting the demands of school reform in the area of student achievement in the continuously expanding role of the public school principal.

In order to increase the understanding of leadership and management styles, it is important that we receive your input as a professional educator. We are requesting that you voluntarily complete the Leadership Orientations (Sel) Survey instrument which was developed through the research of Dr. Lee Bolman and Dr. Terrence Deal. There are not anticipated risks for this study. You do not have to answer any question you do not wish to answer. You, as a participant, are not expected to answer every question or complete every task if it makes you uncomfortable. This survey should take between 10 and 15 minutes of your time. There is no compensation for completing this survey and you, as a research participant, will not benefit directly from this research. We appreciate your time and effort in helping with this project as we know how busy you are.

The survey has been coded to facilitate the response rate. You are not to sign the survey. Once your survey is returned, it will be matched with your number on the mailing list and your name will be deleted and never connected to your answers in any way. You will receive no further correspondence from me and all data will be considered anonymous. No reference to any school or individual will be made in this assessment analysis. Your answers are completely confidential and only group data will be analyzed. Please return the completed survey in the white business envelope provided to you for confidentiality. Place the white envelope in a Seminole County Public Schools courier envelope with only the name of your school in the "From:" address section. Please do not put your name on the courier envelope which is to be addressed to Donna Poniatowski, Educational Support Center, Curriculum Services, 400 Lake Mary Blvd, Sanford, Florida, 32773-7127, by February 13, 2006.

If you have any questions or comments about this study, we would be happy to talk to you. Our number at SCPS is 407 320 0368, or you can write to us at the address given in the above paragraph. Other contact information include the following: Dr. Rosemary Taylor, the supervisor of this study, at 407 823 1469 and Barbara Ward CIM, IRB Coordinator of the Institutional Review Board at the University of Florida, at 407 823 2901.

Thank you for your time and cooperation in helping us with this important research project. It is with great appreciation for your effort that we ask your assistance in making this research successful.

Sincerely,

Donna Poniatowski
UCF Ed.D. Candidate
February 24, 2006

Dear Principal,

As a doctoral student at the University of Central Florida, I am writing to you to request your participation in the Leadership Orientations (Self) Survey that was first sent approximately three weeks ago. I realize how busy all of you are with your duties, particularly FCAT right now. However, I believe the survey asks constructive, relevant questions that, when answered, may provide insight into successful leadership and student achievement. In addition, you are part of a select group of principals chosen to participate in this study. Your response, therefore, is valuable and important to maintaining the accuracy and credibility of this study. Please take a few minutes of your time to share those traits that you perceive are key to effective leadership behaviors.

I would be most appreciative if you would return the questionnaire in the white envelope provided in the courier envelope by March 8, 2006. Please remember that participation in this survey is voluntary. As a participant, if you do not feel comfortable in accurately providing an answer to a question(s), you may leave the answer blank. Your answers are completely confidential and only group data will be analyzed. When you return your completed questionnaire, your name will be deleted from the mailing list and never connected to your answers in any way. Completion of this survey has no compensation, no known risks, no known benefits to you personally except that of being part of a study that could possibly lead to identifying leadership behaviors conducive to student achievement.

If you have any questions or comments about this study, we would be happy to talk to you. Our number at SCPS is 407 320 0368, or you can write to us at this address: 400 E. Lake Mary Blvd, Sanford, Fl 32773. Other contact information include the following: Dr. Rosemarye Taylor, the supervisor of this study, at 407 823 1469 and Barbara Ward CIM, IRB Coordinator of the Institutional Review Board at the University of Florida, at 407 823 2901.

Thank you for your time and cooperation in helping us with this important research project. It is with great appreciation for your effort that we ask your assistance in making this research successful.

Sincerely,

Donna Poniatowski
APPENDIX D

THIRD LETTER
March 20, 2006

Dear Principals,

This is a gentle reminder that I have not received your completed Leadership Orientations (Self) questionnaire. I am sending a hard copy of the survey along with a white envelope via courier again today. Please do not sign the survey and do not place your name or the name of your school on the courier envelope. I place the questionnaires immediately into the stack of received questionnaires in numerical order and do not look at the list again. As soon as I receive the last responses as of Friday, March 24, 2006, I will destroy the list of schools matched to numbers. Your anonymity is assured. Only group data will be analyzed.

Thank you so much for responding to this last request for data. It is only with your assistance that this project can be successful.

Sincerely,

Donna Poniatowski
Science Specialist
UCF Doctoral Candidate

407 520 0368
APPENDIX E

LETTER OF REQUEST: PERMISSION TO USE LEADERSHIP ORIENATIONS

(SELF) SURVEY INSTRUMENT
September 27, 2005

Lee G. Bolman, Ph.D
University of Missouri- Kansas City
Kansas City, MO  64110

Dear Dr. Bolman:

I am a science specialist in the state of Florida and a doctoral student at the University of Central Florida.

I am requesting written permission to use and revise the Leadership Orientations (Self and Other) survey instrument that was developed by you and Dr. Terence Deal. This survey will be used to gather data about principals in Seminole County, Florida, for my dissertation.

At the conclusion of my research, I will be happy to send you the information I have gathered.

Thank you in advance. I look forward to hearing from you.

Sincerely,

Donna Poniatowski
181 Sunnytown Rd.
Casselberry, Fl  32707
(C) 407 529 5394
(H) 407 331 1821
(W)407 320 0368
Donna_Poniatowski@scps.k12.fl.us
APPENDIX F

PERMISSION TO USE LEADERSHIP ORIENTATIONS (SELF) SURVEY INSTRUMENT
September 29, 2005

Ms. Donna Poniatowski
181 Sunnytown Road
Casselberry, FL 32707

Dear Ms. Poniatowski:

Thanks for your interest in the Leadership Orientations instrument. I am pleased to offer you permission to use the instrument in your research, in return for your agreeing to the following conditions: (a) you agree to provide us a copy of your thesis and of any publication that reports data based on the instrument, and (b) you agree to provide, if we request it, a copy of your data file.

The instruments and Information about their use, including data on internal reliability, and a list of research using the Bolman and Deal Four Frames Model, can be found at:

http://bsbpa.umkc.edu/classes/bolman/leadership_research.htm

Best wishes in your research. Please let me know if you have additional questions.

Sincerely,

Lee Bolman
APPENDIX G

LIST OF PRINCIPAL COMMENTS
PRINCIPALS’ COMMENTS

1. This second section is very difficult— the way it is worded, “least like you” gives the perception that one does not possess this skill. However, it must be noted that for a principal to be successful, he/she must be proficient to excellent in the stated leadership styles. Therefore, ranking skills on leadership styles 1-4 makes it look like there is a wide gap between their skills/styles, when in reality they should be similarly ranked. Weakness in any of these areas equals a weak principal.

2. I really believe you have to use all 4 styles as a leader in various situations. My answers show that conflict in me—I see myself as using all 4 orientations.

3. humanist, analyst—rarely used terms except in the literature charisma—does anyone know what this is anymore?

I think an assistant principal should be rating the principals with this. I can’t see the forest for the trees!
APPENDIX H

MANN-WHITNEY TEST FOR FOUR FRAME ANALYSIS
MANN-WHITNEY TEST

Ranks

<table>
<thead>
<tr>
<th></th>
<th>Elem or Second</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>Elementary</td>
<td>28</td>
<td>22.25</td>
<td>623.00</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>14</td>
<td>20.00</td>
<td>280.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Resource</td>
<td>Elementary</td>
<td>28</td>
<td>20.95</td>
<td>586.50</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>14</td>
<td>22.61</td>
<td>316.50</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Elementary</td>
<td>26</td>
<td>19.37</td>
<td>503.50</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>12</td>
<td>19.79</td>
<td>237.50</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symbolic</td>
<td>Elementary</td>
<td>28</td>
<td>20.66</td>
<td>578.50</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>13</td>
<td>21.73</td>
<td>282.50</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test Statistics

<table>
<thead>
<tr>
<th></th>
<th>Structural</th>
<th>Human Resource</th>
<th>Political</th>
<th>Symbolic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>175.00</td>
<td>180.50</td>
<td>152.50</td>
<td>172.50</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>280.00</td>
<td>586.50</td>
<td>503.50</td>
<td>578.50</td>
</tr>
<tr>
<td>Z</td>
<td>-.563</td>
<td>-.416</td>
<td>-.110</td>
<td>-.267</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.573</td>
<td>.677</td>
<td>.912</td>
<td>.789</td>
</tr>
<tr>
<td>Exact Sig. [2*(1-tailed Sig.)]</td>
<td>.589&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.683&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.914&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.793&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

a. Not corrected for ties.

b. Grouping Variable: Elem or Second

Sample size for the elementary group is 28. The secondary group has a maximum sample size of 14. The non-parametric Mann-Whitney Test assumed equal variances with an alpha of .05. There is no statistically significant difference in the use of the structural frame, the human resource frame, political frame and symbolic frame (p>.05).
APPENDIX I

IRB APPROVAL LETTER
January 26, 2006

Donna Poniatowski
181 Sunnytown Rd.
Casselberry, FL 32707

Dear Ms. Poniatowski:

With reference to your protocol #05-3105 entitled, "The Relationship of Student Achievement to Principals' Use of the Four Frame Theory," I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office. **This study was approved on 1/25/06. The expiration date will be 1/24/07.** Should there be a need to extend this study, a Continuing Review form must be submitted to the IRB Office for review by the Chairman or full IRB at least one month prior to the expiration date. This is the responsibility of the investigator. **Please notify the IRB office when you have completed this research study.**

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board through use of the Addendum/Modification Request form. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur.

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

**Barbara Ward**
Barbara Ward, CIM
UCF IRB Coordinator
(FWA0000351, IRB00001138)

Copies: IRB File
Rosemarye Taylor, Ph.D.

BW:jm
APPENDIX J

IRB APPROVAL FORM
THE UNIVERSITY OF CENTRAL FLORIDA
INSTITUTIONAL REVIEW BOARD (IRB)

IRB Committee Approval Form

PRINCIPAL INVESTIGATOR(S): Donna Poniatowski  IRB #: 05-3105
Supervisor: Rosemary Taylor, Ph.D.

PROJECT TITLE: The Relationship of Student Achievement to Principals' Use of the Four Frame Theory

[ ] New project submission  [ ] Resubmission of lapsed project #
[ ] Continuing review of lapsed project #  [ ] Continuing review of #
[ ] Study expires:
[ ] Initial submission was approved by full board review but continuing review can be expedited
[ ] Suspension of enrollment email sent to PI, entered on spreadsheet, administration notified

Chair:

[ ] Expedited Approval

Dated: 1/25/2006
Cite how qualifies for expedited review: minimal risk and #7

[ ] Exempt

Dated: ________
Cite how qualifies for exempt status: minimal risk and _______

[ ] Expiration

Date: 1/24/2007

IRB Reviewers:

Signed: ____________________________
Dr. Sophia Dziegielewski, Vice Chair

Signed: ____________________________
Dr. Jacqueline Byers, Chair

Signed: ____________________________
Dr. Tracy Dietz, Designated Reviewer

Complete reverse side of expedited or exempt form

Waiver of documentation of consent approved
[ ] Waiver of consent approved
[ ] Waiver of HIPAA Authorization approved

NOTES FROM IRB CHAIR (IF APPLICABLE): Clarifications needed, first review Dec 14, 2005, 1st Dec 2005

__________________________
Daniele
LIST OF REFERENCES


Journal of Sociology, 49, 32-40.


