Perception of the use of Leadership Frames by Male and Female Superintendents in Texas by Subordinate Top Ranking School Administrators

C. Steven Kolb
Seton Hall University

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PERCEPTION OF THE USE OF LEADERSHIP FRAMES BY MALE AND FEMALE SUPERINTENDENTS IN TEXAS BY SUBORDINATE TOP-RANKING SCHOOL ADMINISTRATORS

BY

C. STEVEN KOLB

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Submitted in Partial Fulfillment of the Requirements for the Degree Doctor of Education
Seton Hall University

2009
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ABSTRACT

PERCEPTION OF THE USE OF LEADERSHIP FRAMES BY MALE AND FEMALE SUPERINTENDENTS IN TEXAS BY SUBORDINATE TOP-RANKING SCHOOL ADMINISTRATORS

C. Steven Kolb

The purpose of this study was to broadly examine and analyze gender differences in the leadership styles of Texas public school superintendents by analyzing their subordinates’ responses on Bolman and Deal’s (1991) Leadership Orientations (Other) survey. Approximately 25% (n = 484) of the high-ranking administrators within the 198 selected school districts in Texas assessed their superintendents’ use of Bolman and Deal’s four leadership frames by completing the survey.

The results of a series of one-way ANOVAs revealed that the respondents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The results of a series of two-way ANOVAs revealed that when the main effects of superintendent tenure, district setting, and district size were added to the model, the significant findings persisted for all four frames; when the main
effect of superintendent degree was added to the model, the significant findings persisted for the human resource, political, and symbolic frames; and when the main effect of age was added to the model, the significant findings disappeared. The results of a series of one-way ANOVAs indicated that the respondents' responses on the survey reflected no gender bias.

The main finding that the respondents rated their female superintendents significantly higher than they rated their male superintendents in the use of all four frames indicates that the respondents perceive female superintendents as more likely than are male superintendents to display the behaviors associated with effective leaders and managers.
ACKNOWLEDGEMENTS

This dissertation would not have been completed without the guidance and support of many individuals. I would like to convey my deepest appreciation to Dr. Elaine Walker, my mentor and teacher. She provided outstanding instruction to me throughout this dissertation process and to my cohort in both our research and statistics classes. Without her instruction, I would not have been able to complete this dissertation.

I would also like to thank Dr. Dan Gutmore for his instruction in my cohort’s first class at Seton Hall. His insight and comments regarding Bolman and Deal’s four frames led me to my dissertation topic.

I would like to thank both of my external readers. Both Dr. Tom Parks and Dr. Steven Jenkins have provided me with much needed support when things were going slow and I needed encouragement. They also provided pertinent feedback throughout the dissertation process.

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I would like to thank all of Cohort XI. You are the finest group of people of which I have ever had the privilege of being a part.
DEDICATION

To my wife, Staci, for her never-ending love, support, insight, encouragement, truthfulness, and commitment to me and to our children.

To my sons, Jase and Blake, for giving me a reason to be better than I truly am.

To my mother, Norma, who taught me to love life and people.

To my father, Harrol, who taught me patience.
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CHAPTER I

INTRODUCTION

Male and female superintendents alike often fall victim to the rigors of leadership. Unfortunately, there is no one leadership strategy appropriate for resolving all the complex situations that school superintendents face on a daily basis (Bolman & Deal, 2003; Israel & Kasper, 2004). Due to gender stereotypes embedded in our culture, male and female superintendents are often viewed differently by their constituents (Thompson, 2000). However, once hired, all superintendents, regardless of gender, face a multitude of challenges (Farson, 2002; Israel & Kasper).

As leaders, superintendents can use four leadership frames to comprehend and address the issues that arise within their school districts: (a) the structural frame, which emphasizes goals and roles; (b) the human resource frame, which emphasizes the interdependence between people and organizations; (c) the political frame, which emphasizes power, conflict, and the distribution of scarce resources; and (d) the symbolic frame, which emphasizes the
meaningful factors within organizations (Bolman & Deal, 1984, 1991, 2003). By understanding and using all four leadership frames, both male and female superintendents can acquire an expanded and rational perspective with which to view and address the complex problems and issues that they face within their school districts (Israel & Kasper, 2004).

Superintendents can use these four leadership frames separately or in conjunction to create a schema by which to address the problems within their school districts. The use of leadership frames and reframing is a complex activity that requires artistry and skill (Bolman & Deal, 2003). As such, the use of these frames separately or in conjunction broadens a superintendent’s repertoire of decision-making possibilities (Bolman & Deal, 1991).

By using leadership frames, superintendents can increase clarity, develop an appropriate diagnosis of problems, create new treatment options, and determine the best course of action (Israel & Kasper, 2004). The ability to use these leadership frames effectively takes time, knowledge, and wisdom (Bolman & Deal, 1991, 2003; Israel & Kasper). However, because of tenures that are often brief (Bourisaw & Dana, 2006; Peckham, 2007; Vogt, 2007; Whittle,
as cited in Marzano & Waters, 2007), many male and female superintendents do not have the opportunity to hone their skills in the use of the four leadership frames.

Unfortunately, all superintendents begin to be evaluated immediately after being hired. A superintendent's evaluation is not performed solely by members of the board of trustees but by every stakeholder in the school system and community (Farson, 2002). New superintendents usually enjoy relatively short grace periods, as they must begin making decisions and addressing people, problems, and issues almost immediately.

Paul Houston (as cited in Gewertz, 2006), the executive director of the American Association of School Administrators, reported that many stakeholders within a community lie in wait to undermine the newly selected superintendent. Houston contended that it is not gender or race that ultimately derails a new superintendent but rather an inability to make connections with influential constituents.

Although superintendents spend most of their time taking care of run-of-the-mill problems, they are ultimately judged and evaluated by the decisions that they
make (Farson, 2002). A superintendent’s particular leadership style can upset many stakeholders (Stabile, 1998). Farson cautioned new superintendents that their words and actions will be closely scrutinized. If they move too quickly or make too many changes, they could be viewed as uncaring, cold, and selfish, whereas if they move too slowly and/or cautiously, they could be seen as weak or lacking courage. Stabile (1998) warned that if the school and community are unhappy with the superintendent, they will act much like an immune system attempting to fight off a virus; they will attack, isolate, and attempt to remove the superintendent from office.

Due to these factors, it comes as no surprise that the tenure for most superintendents is brief. This fact is highlighted when the tenure of school superintendents is compared to those of CEOs and other leaders of private corporations. Whittle (as cited in Marzano & Waters, 2007) reported that over the past 20 years, the average tenure of Kansas City, Missouri school superintendents has been 1.4 years and that of Washington D.C., superintendents has been 2.2 years. During this same 20-year period, General Electric has had only two CEOs and Federal Express,
Microsoft, and Dell have each had only one leader each. As the national average for a superintendent’s tenure is only 5.5 years, it is clearly shorter than that of most nonschool leaders (Marzano & Waters; Peckham, 2007; Vogt, 2007). Moreover, Bourisaw and Dana (2006) reported that the average tenure for women superintendents is even shorter than that of male superintendents.

Although male and female superintendents face many of the same problems, they also face specific problems related to their gender. The greatest obstacles for female superintendents could be the same barriers that preclude other women from the position. Female superintendents make up a small portion of the total number of superintendents in the United States. In 1992, only 6.6% of the nation’s superintendents were women, a figure that rose to 15% in 2000 and to 18% in 2005 (Gewertz, 2006; Grogan, 2005; Vogt, 2007). Even though the number of female superintendents has increased dramatically over the past 25 years, men continue to hold 82% of all superintendent positions. Moreover, despite the fact that the number of female superintendents in the United States pales in comparison to that of male superintendents, women are even
less likely to serve in nonschool leadership positions. Only 2% of the CEOs of Fortune 500 companies are women (Eagly & Carli, 2007).

The number of women in the superintendency has increased 11% since 1993 (Grogan, 2005). Although this increase may appear substantial, it does not make the superintendency more representative of the gender distribution in other educational positions. Women make up (a) 72% of all public school educators, (b) 83% of all elementary teachers, (c) 56% of all elementary principals, and (d) 57% of all central office administrators (Glass, 2000; Hodgkinson & Montenegro, 1999, as cited in Grogan, 2005; Institute Of Educational Sciences, 2007). As these data show, women are underrepresented in the role of superintendent but not that of principal (Vogt, 2007). This phenomenon could be a result of differences in leadership styles and/or cultural barriers. The difference in the proportions of female superintendents and female principals may lie in the fact that the board of trustees hires superintendents whereas superintendents hire principals.

Many depict the barrier that women face when aspiring to the superintendency as a “glass ceiling.” However, Eagly
and Carli (2007) proposed that a "labyrinth" is a more fitting depiction of the barrier that women face. The authors argued that women do not face one final impenetrable barrier to the superintendency but rather a series of complex challenges throughout their careers that ultimately precludes them from the position.

Of the many factors implicated in the underrepresentation of women in the superintendency, the main factor could be the hesitancy of school boards to hire female superintendents (Glass, 2000). Bourisaw and Dana (2006) explained that as the gatekeepers to the superintendency, school boards alone determine who has access to this position. Women are often interviewed for the position of superintendent, but do not have a realistic opportunity to be chosen. The few women selected for the superintendency are often chosen to serve in rural school districts or in urban districts engulfed in failure.

Although previous researchers have found differences between the leadership styles of men and women, most of these differences were not found to be statistically significant (Barbuto, Fritz, Matkin, & Marx, 2007; Bolman & Deal, 1991; Thompson, 2000). Eagly, Karau, and Makhijani
(1995) reported that although there are gender differences in leadership styles, both men and women are equally effective leaders. This finding is important because it suggests that despite all the barriers that women face in obtaining a leadership position, once they have obtained the position, they are as effective as are their male counterparts. Based on this finding, Eagly et al. argued that neither sex posses a true leadership advantage over the other and that the fear that women cannot perform well in top leadership positions is unjustified.

The challenges related to the brevity of the tenure of both male and female superintendents as well as the underrepresentation of women in the superintendency did not arise overnight, and therefore cannot be resolved immediately. However, the information gleaned from this study may provide pertinent information that can be used to help address these two problems.

Purpose of the Study

Although both male and female superintendents face many of the same problems while in office, the obstacles that female superintendents face appear to be more powerful. Women in the superintendency only began to be
studied 20 years ago (Grogan, 2005). Edmunds (2008) reported, "Although there is a growing body of research on female superintendents, there is still a paucity of information on how female superintendents lead" (p. 2). In response to this paucity, Katz (2006) argued, "A greater body of research needs to be conducted with women to learn how they access, maintain, and thrive in their positions" (p. 2).

To help narrow this research gap, this study broadly examined and analyzed gender differences in the leadership styles of Texas superintendents based on their subordinates' responses on Bolman and Deal's (1991) four-frame Leadership Orientations (Other) survey. The goal of this study was to add to the existing body of knowledge of male and female leadership styles.

Women in the superintendency often lead in a manner different from that of their male counterparts (Grogan, 2005). Gaining greater knowledge of gender-related differences in leadership styles may aid in resolving the discrepancy between the number of male and female superintendents. As Katz (2005) explained,
Once we have a significant body of work investigating how women are faring in the role as superintendent, we can help to dispel the idea that if women aren’t in the position in large numbers, they must not be able to do the job. (p. 2)

Research Questions and Null Hypotheses

Research Questions

Research Question 1 (RQ₁). To what extent do Texas male and female public school superintendents differ in their use of Bolman and Deal’s four leadership frames as perceived by their high-ranking administrative subordinates?

Research Question 2 (RQ₂). When controls are introduced for superintendent tenure, school setting, school size, superintendent age, and superintendent degree, do the perceived gender differences of the superintendents persist?

Research Question 3 (RQ₃). To what extent are the perceived differences of Texas public school superintendents’ use of Bolman and Deal’s four leadership frames related to the gender of their subordinates?

Null Hypotheses

Null Hypothesis 1 (NH₁). No significant differences exist between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames.
Null Hypothesis 2 ($NH_2$). No significant differences exist between male and female superintendents' perceived use of each of Bolman and Deal's four leadership frames and the gender of their subordinates.

Significance of the Study

This study provided insight into gender differences in the use of leadership frames by Texas public school superintendents. The information gleaned from this study can be used to educate board and community members on the perceived leadership and management similarities and differences between male and female superintendents.

Many researchers have examined the use of leadership frames in various situations. However, few have specifically studied gender differences in frame use by public school superintendents in Texas, and these few studies have been small in scope. To narrow this research gap, the scope of this study was large. As such, it provides aspiring superintendents, educational departments, boards of trustees, and researchers with substantial information on the use of leadership frames by male and female superintendents. The findings of this study, along with current research on the relationship between the use
of leadership frames and gender, afford school districts with a lens through which to evaluate the legitimacy of their current superintendent hiring and evaluation practices.

Limitations

The following limitations may have applied to this study:

1. Top-ranking school administrators may not have given completely honest responses on the survey for fear of retaliation from their superintendents.

2. Top-ranking school administrators may not have answered certain questions on the survey.

3. Top-ranking school administrators may have opted out of the study entirely.

4. Top-ranking school administrators may not have given accurate responses.

5. E-mails containing the survey links may have been blocked by spam filters or inadvertently deleted.

Delimitations

The following delimitations may have affected the results of this study:
1. Only active Texas public school superintendents were evaluated by top-ranking school administrators using the Bolman and Deal Leadership Orientations (other) survey.

2. This study did not examine other factors that influence leadership frame usage, such as school climate, board members and their personal agendas, school wealth, the economic status of students and the community, the agendas of local activists, and state and federal accountability ratings.

Definitions

1. Board of trustees: A governing body elected by citizens for a 3-year term overseeing the administration of the local school district. The main responsibility of board members, who receive no compensation for their work, is to hire, evaluate, and, if necessary, fire the superintendent.

2. Leadership frames: Four perspectives developed by Bolman and Deal (2003) to describe the inner workings of an organization. The four frames are the structural, political, human resource, and symbolic frames.

4. **High-ranking subordinates:** In this study of public school superintendents, high-ranking subordinates are assistant superintendents and campus principals.

5. **Respondents:** In this study, those high-ranking subordinates who rated their superintendents on Bolman and Deal's (1991) Leadership Orientations (Other) survey.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

This chapter provides an overview of each of the four leadership frames. It then proceeds to present information regarding gender and leadership before discussing previous findings on the use of leadership frames.

Leadership Frames

Bolman and Deal (1991, 2003) argued that leaders and managers view problems and solutions within their organizations in a different manner. They based their argument upon the fact that leaders and managers view problems and solutions from four distinct perspectives or frames, which they identified as (a) the structural frame, (b) the human resource frame, (c) the political frame, and (d) the symbolic frame. Whereas they identified the structural and human resource frames as primarily management frames, they identified the symbolic and political frames as primarily leadership frames. Even though leadership is generally a more valued trait than is
management, most college-preparation programs spend little
time teaching the symbolic and political skills needed for
effective administration.

Bolman and Deal (2003) explained that leaders could
use all four frames to help them make sense of the world
and overcome the challenges of leading organizations, which
tend to be complex, surprising, deceptive, and ambiguous
entities. Successful leaders understand the nature of
organizations and are able to address problems as they
arise, view the problems from each frame, and then
holistically determine the best course of action. Leaders
who can see problems and solutions from the perspective of
each frame will be viewed as competent and effective
leaders and effective managers (Bolman & Deal, 1991, 2003;
Thompson, 2000). Table 1 provides an overview of the main
concepts found within each frame.

Leaders who understand each frame independently and in
conjunction with other frames will be prepared when the
unexpected occurs (Bolman & Deal, 2003). By truly gaining
understanding of all that is occurring within their
organization, leaders increase their probability of
success.
### Table 1

**Overview of Bolman and Deal’s Frames**

<table>
<thead>
<tr>
<th>Frames</th>
<th>Structural</th>
<th>Human resource</th>
<th>Political</th>
<th>Symbolic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metaphor for organization</td>
<td>Factory of machine</td>
<td>Family</td>
<td>Jungle</td>
<td>Carnival, temple, theater</td>
</tr>
<tr>
<td>Central concepts</td>
<td>Rules, roles, goals, policies, technology, environment</td>
<td>Needs, Skills, relationships</td>
<td>Power, conflict, competition, organizational politics</td>
<td>Culture, meaning, metaphor, ritual, ceremony, stories, heroes</td>
</tr>
<tr>
<td>Image of leadership architecture</td>
<td>Social</td>
<td>Empowerment</td>
<td>Advocacy</td>
<td>Inspiration</td>
</tr>
<tr>
<td>Basic leadership challenge</td>
<td>Attune structure to task, technology, environment</td>
<td>Align organizational and human needs</td>
<td>Develop agenda and powerbase</td>
<td>Create faith, beauty, meaning</td>
</tr>
</tbody>
</table>

The Structural Frame

According to Bolman and Deal (2003), "The structural frame focuses on the architecture of the organization – the design of units and subunits, rules and roles, goals and policies to shape and channel decisions and activities" (p. 18). Because it is primarily related to managerial effectiveness rather than leadership effectiveness, the structural frame is often referred to as the "bureaucratic" frame (Bolman & Deal, 1991; Davis, 1996; Thompson, 2000). The structural frame rests upon the following six assumptions (Bolman & Deal, 2003):

1) Organizations exist to achieve established goals and objectives, 2) organizations increase efficiency and enhance performance through specialization and a clear division of labor, 3) appropriate forms of coordination and control ensure that diverse efforts of individuals and units mesh, 4) organizations work best when rationality prevails over personal preferences and extraneous pressures, 5) structures must be designed to fit in organizations' circumstances (including its goals, technology, workforce, and environment), and 6) problems and performance gaps arise from structural deficiencies and can be remedied through analysis and restructuring. (p. 45)

Along with these assumptions, two central concepts serve as the bases of the structural frame: (a) hierarchal structures and (b) the specific roles and tasks within an organization.
Hierarchies

Vertical coordination is a key component of the structural frame (Bolman & Deal, 2003). Most successful organizations are characterized by a clear division of labor and a clear chain of command (Burns, as cited in Davis, 1996). Within this structure, authority, which rests in the top rung of administrative positions, is assumed by highly specialized top-level administrators tasked with keeping all activities aligned with the mission of the organization (Bolman & Deal; Weber, as cited in Rieger, 1995). Through exercising “rationality, linearity, specialization, and rules-orientation” (Sheaff, 2003, p. 29), organizations can be productive.

In a highly centralized hierarchical structure, management is in charge of planning, organizing, staffing, directing, coordinating, reporting, budgeting, problem solving, and decision-making (Gulick, as cited in Fitch & Van Riper, 1990; Taylor, 2006). Employees are responsible for performing their duties according to scientific time-motion studies (Taylor).

The hierarchical structure of an organization can be flattened to achieve lateral coordination, which uses the
planning process and teams to improve the work of the organization (Bolman & Deal, 2003). Lateral coordination is often more effective than is vertical coordination because "people's behavior is often remarkably untouched by commands, rules, and systems" (Bolman & Deal, p.53). As an important tenet of lateral coordination, planning is often used to coordinate activities and satisfy internal and external forces (Mintzberg, 1994). Effective teams energized by the common commitment of their members can be powerful tools for an organization. When individuals with different skills come together to accomplish team goals, the combined effort of the team is more productive than the independent work of the individuals of which it consists (Katzenbach, 1998).

Bureaucracies

A clear mission, goals, rules, policies, standard operating procedures, and administrative regulations are important facets of most organizations (Bolman & Deal, 2003; Burns, as cited in Davis, 1996). Bureaucracies help ensure that situations are handled uniformly and provide direction for handling personnel issues, client issues, and everyday procedures (Bolman & Deal, 2003) by providing
"precision, speed, continuity, unity of command, and strict subordination" (Weber, as cited in Rieger, 1995, p.57). Theorists in the structural frame view bureaucracies as the best way to manage organizations because they impose "discipline, formality, impartiality, and impersonality—traits that Weber believed could successfully reduce the effect of human relations on an organization" (Rieger, p. 57).

The structure of an organization should be devised to achieve the organization's goals and mission. Bolman and Deal (2003) found that "organizations operating in simpler and more stable environments are likely to employ a less complex and more centralized structures" whereas "organizations operating in rapidly changing, turbulent, and uncertain environments need much more complex and flexible structures" (p. 67).
The Human Resource Frame

According to Bolman and Deal (2003), "The human resource frame emphasizes understanding of people, with their strengths and foibles, reason and emotion, desires and fear" (p.18). Organizations that are primarily people oriented are more effective over the long term than are organizations that are predominantly task oriented. There are three bases of the human resource frame: Maslow's Hierarchy of Needs, workforce motivation, and relationships.

Maslow's Hierarchy of Needs

Maslow's (1954) Hierarchy of Needs, although largely unproven (Lawler & Suttle, 1972), serves as the basis of the human resource frame. Maslow grouped human needs into five basic categories, ranging from the lowest, most basic to the highest, most complex: (a) physiological, (b) safety, (c) belongingness and love, (d) esteem, and (e) self-actualization needs. The premise behind Maslow's theory was that lower needs must be met before higher needs can be addressed. Specifically, Maslow (1948) explained,

Relative satisfaction [of needs] submerges them and allows the next higher set of needs in the hierarchy to emerge, to dominate and organize the personality, so instead of being, e.g., hunger-obsessed, it now becomes
safety-obsessed. The principle is the same for the other sets of needs in the hierarchy, i.e., love, esteem, and self-actualization. (p. 403)

Workforce Motivation

Motivating the workforce to high levels of productivity is vital in organizations. Motivation that is lasting is based on intrinsic motivation rather than monetary rewards (Veritz, 1992). Successful organizations understand that when their workers' desire for personal fulfillment is their main motivator, they will align their personal goals with the organization's goals, leading productivity to increase (McGregor, as cited in Bolman & Deal, 2003). On the other hand, leaders that treat and/or discipline workers as they would children or deprive them of their physiological needs can expect behavior such as passivity and hostility as well as a refusal to accept responsibility (Argyris, as cited in Van Wart, 1994; McGregor, as cited in Bolman & Deal).

Leaders, who understand the premise of Maslow's Hierarchy of Needs will strive to develop an organizational structure that satisfies employees' basic needs and, once their basic needs are reasonably satisfied, address employees' higher-level needs. It is important to remember
that esteem and self-actualization are two needs that can never be satisfied; as such, individuals will always remain motivated by systems designed to build esteem and self-actualization (McGregor, as cited in Bolman & Deal, 2003).

McGregor's Theory Y posits that if an organization has rewards in place that address workers' higher needs, workers will embrace the objectives of the organization (McGregor, as cited in Bolman & Deal, 2003). A Theory Y organizational environment is one in which employees can satisfy their higher-level needs, including esteem and self-actualization, through their jobs. Organizations using a Theory Y management style should experience long-term individual and organizational success.

**Relationships**

As the source of our happiest moments and our greatest sorrows, relationships play a large and important role in job satisfaction (Bolman & Deal, 2003). Close relationships are the key to building a high-trust organizational climate. Without the trust that comes from close relationships, the social environment of the organization becomes unsafe (Covey, 2008), and employees become less productive because they are unable to meet their higher
needs of esteem and self-actualization (Maslow, 1954). Building trust and stronger relationships requires that leaders spend ample time with employees. If leaders fail to invest the time needed to build legitimate relationships with their employees, their employees will feel that they are being manipulated by the system rather than appreciated (Covey, 2008).

The Political Frame

In all organizations, politics refers to the behavioral and decision-making processes within the organization as they pertain to the relationship between scarce resources and emergent interests (Cyert & March, 1963). As long as resources are readily available, little conflict will occur between employees and management, but when resources are scarce, conflict will escalate (Bolman & Deal, 2003). In accordance with this conceptualization,

The political frame sees organizations as competitive arenas characterized by scarce resources, competing interests, and struggles for power and advantage. . . . [It] views organizations as living, screaming political arenas that host a complex web of individual and group interests. (Bolman & Deal, p. 186)

Bolman and Deal (2003) explained that the five main assumptions upon which the political frame are based are (a) organizations are coalitions made up of diverse
participants, (b) there are enduring differences between participants, (c) important decisions involve the allocation of scarce resources, (d) conflict arises from enduring differences and the allocation of resources, and (e) goals and decisions are made through negotiations and bargaining. Organizations often struggle with goal attainment, conflict, and power and control, three main features of the political frame. School districts are not exempt from this struggle, which often leads to much stress for superintendents. Of their many stressors, superintendents have reported that high expectations from all stakeholders and dwindling resources are their two main stressors (Vogt, 2007).

Goal Attainment

Organizations must decide on the methods that they will use to motivate the workforce to achieve their goals (Cyert & March, 1963). In the political frame, motivation is often purchased by offering side payments in the form of wages, interest, love, personal treatment, authority, and concessions during the bargaining process (Cyert & March, 1963). Side payments are also offered as a means of settling conflicts. The premise behind the use of side
payments is that they will induce employees to adopt organizational goals and agree to resolve their disputes for a price. Cyert and March explained the importance of side payments:

Side payments, far from being the incidental distribution of a fixed, transferable booty, represent the central process of goal specification. That is, a significant number of these payments are in the form of policy commitments. . . . [In fact, a] distinction between demands for monetary side payments and demands for policy commitments seems to underlie management-oriented treatments of organizations. (p. 30)

Organizations contain both passive and proactive coalitions. The cost of side payments to passive coalitions can be met without difficulty (Cyert & March, 1963). Once a coalition accepts side payments, it is committed to the policies for which it was paid.

Conflict

In the political frame, conflict is seen as a natural and inevitable event neither intrinsically good nor bad (Follett, 1942). Regardless of the nature of the conflict that inevitably arises within the organization, it is important to both leaders and workers that the organization survives. The resulting symbiotic relationship between these two groups works to ensure the survival of the organization. Fortunately, it is in the best interest of
the entire organization to stabilize a turbulent environment (Cyert & March, 1963).

In the political frame, conflict often occurs because resources are almost always in short supply, leading to constant competition among stakeholders for scarce resources. In this frame, the focus should not be simply on resolving conflicts but also making the best of situations. Organizations should understand that because conflict can enhance curiosity and encourage challenges to standard operating procedures and the status quo, it can increase innovation (Heffron, as cited in Bolman & Deal, 2003).

Organizations must understand that conflict often arises when standard operating procedures are not adhered to and past precedents are violated. Cyert and March (1963) explained,

Much of the structure [within an organization] is taken as [a] given. This is true primarily because organizations have memories in the form of precedents, and individuals in the coalition are strongly motivated to accept the precedents as binding. Whether precedents are formalized in the shape of an official standard operating procedure or are less formerly stored, they remove from conscious consideration many agreements, decisions, and commitments that might well be subject to renegotiation in an organization without a memory. . . . Past bargains become precedents for present situation[s]; a budget becomes a precedent for future budgets; and allocation of functions becomes a precedent for future allocations. (p. 33)
Power and Control

Acquiring knowledge of the exercise and distribution of power is paramount to gaining understanding of the political frame. Because organizations and workers are dependent on each other, the power associations that exist within organizations are not unidirectional but rather multidirectional (Bolman & Deal, 2003). In recognition of the multidirectional nature of power, "the political frame views authority as only one among many forms of power. It recognizes the importance of human (and group) needs but emphasizes that scarce resources and incompatible preferences cause needs to collide" (p. 192).

Control, important for any leader in any position of authority, can only be exerted as long as the leader's subordinates agree to accept his or her authority. Bolman and Deal (2003) identified eight type types of power: (a) power that comes from a position (authority), (b) power that comes from information and expertise, (c) power that comes from the distribution of rewards, (d) power that comes from coercion, (e) power that comes from strong alliances and networks, (f) power that comes from setting the agenda and goals, (g) power that comes from being able
to control and interpret events, and (h) power that comes from the individual himself/herself. Bolman and Deal explained that this last type of power, that of personal power, comes from having the "charisma, energy and stamina, political skills, verbal facility, or the ability to articulate a vision. . . . [The individual is] imbued with power independent of other sources" (p. 195).

Power in an organization can be distributed according to an overbounded or underbounded system (Alderfer & Brown, as cited in Bolman & Deal, 2003). Whereas the power in an overbounded system comes from a highly regulated and centralized bureaucracy, the power in an underbounded system comes from many sources, and, being diffuse, leads to loose control of all operations.

**Morality and Ethical Decision-Making**

The subject of morality is important to the political frame. Bolman and Deal (2003) identified four concepts and their related considerations that leaders should address when attempting to engage in ethical and moral decision-making:
1. *Mutuality*: Does everyone in the relationship operate under the same rules and have the same understanding of the situation?

2. *Generality*: Does the proposed action follow a principle of moral conduct applicable to similar situations?

3. *Openness*: Are decisions and thought processes made public and convertible?

4. *Caring*: Do the decisions reflect care and genuine interest in others?

Few doubt that organizations are political; in fact, most believe that "every significant organizational process is inherently political" (Bolman & Deal, 2003, p. 238). Politics can take on two personas: It can be either a sordid affair or an honorable affair used to achieve a noble purpose. To prevent the former and encourage the latter, leaders should remember that "positive politics, absent an ethical framework and a moral dialogue, is no more likely to occur than farming without sunlight or water" (p. 219).
The Symbolic Frame

According to Bolman and Deal (2003), "The symbolic frame focuses on issues of meaning and faith. It puts ritual, ceremony, story, play, and culture at the heart of organizational life" (p. 19). The symbols of an organization convey both cognitive and emotional messages that affect both the mind and spirit of every stakeholder. Although the symbolic frame is a part of every organization, it becomes most apparent in times of crisis and/or celebration. As the symbolic frame helps give meaning to the things around us, it is closely tied to and is the best predictor of effective leadership (Bolman & Deal, 1991, 2003; Thompson, 2000).

Bolman and Deal (2003) identified five main assumptions upon which the symbolic frame is based: (a) the meaning of the experience is what truly matters; (b) each individual evaluates each event from his or her own perspective; (c) symbols clarify, guide, and assure people in times of confusion; (d) symbols give people direction and create enthusiasm in their lives; and (e) the culture of an organization unifies the stakeholders around the hopes and dreams of the organization.
Organizational culture develops from the assumptions created when groups of stakeholders work together to solve the unique problems of their organization (Schein, 1992). When these assumptions work well, they are considered legitimate, and are taught to new employees as they are hired (Bolman & Deal, 2003). Because the culture of an organization is often communicated through its symbols, "managers who understand the power of symbols are much better equipped to understand and influence their organizations. . . . Managers who understand symbolic forms and activities and encourage their use help shape an effective organization" (Bolman & Deal, p. 244).

Bolman and Deal (2003) asserted that the six symbolic forms found in organizations are (a) myths, vision, and values; (b) heroes and heroines; (c) stories and fairy tales; (d) rituals; (e) ceremonies; and (f) metaphor, humor, and play. Campbell explained that because "myths, operating at the deepest reaches of consciousness, are the story behind the story" (as cited in Bolman & Deal, p. 251), they help maintain the values and character of the organization. In conjunction with myths, "vision turns an
organization's core ideology, or sense of purpose, into an image of what the future might become” (p. 253).

All organizations hold out heroes who, as role models epitomizing the basic beliefs and values of the organization, are respected for their hard work and dedication. These heroes help others make good choices by providing examples for them to follow on a daily basis (Bolman & Deal, 2003). Stories and fairy tales play a key role in organizations by providing moral instruction and offering reassurance, hope, comfort, and direction while conveying values, morals, and information. Stories and fairy tales are often used to train and empower employees, recognize accomplishments, and continue traditions (Armstrong, as cited in Bolman & Deal).

Rituals help clarify situations that are usually too complex or mysterious to understand by giving “structure and meaning to daily life” (Bolman & Deal, 2003, p. 259). On the other hand, ceremonies such as baptisms, weddings, anniversaries, graduations, and funerals “serve four major roles: they socialize, stabilize, reassure, and convey[ing] messages to the external constituencies” (p. 265). Though ceremonies and rituals have similar characteristics,
"ceremonies are grander, more elaborate, less frequent. . . Rituals are simpler, day-to-day routines, though still meaningful" (p. 264).

Employees and leaders often use metaphors to help them verbalize how they feel because metaphors allow them to "compress complicated issues into understandable images, influencing our attitudes, evaluations, and actions" (Bolman & Deal, 2003, p. 268). Metaphors allow employees to voice skepticism about situations and events, often in a humorous manner, and as such can contribute to the flexibility and adaptability of the organization.

Gender and Leadership

Are there differences between the leadership styles of men and women? According to Barbuto et al. (2007), previous researchers who have attempted to determine whether there is a correlation between gender and leadership style have reached conflicting conclusions; for every researcher who has found a correlation, another researcher has found none. Moreover, many of the researchers who have found differences between the leadership styles of men and women have acknowledged that these differences are not
statistically significant (Barbuto et al.; Bolman & Deal, 1991; Thompson, 2000).

Social Mores

Women often encounter a multitude of obstacles in their pursuit of leadership positions, many of which are embedded in social norms and mores. From a social perspective, leadership and power are commonly seen as masculine (Harris, Ballenger, Hickes-Townes, Carr, & Alford, 2004). Shakeshaft (1989) coined the term androcentric to describe a masculine view of leadership that asserts that men make better leaders than do women (as cited in Ridgeway, 2001). Four common stereotypes regarding gender and leadership are (a) leadership is masculine, not feminine; (b) female leaders who use a less dominant female leadership styles are weak; (c) subordinates respond differently to male and female leaders, even if they use the same leadership styles; and (d) women do not have the leadership traits needed to be effective leaders (Thompson, 2000). These deeply embedded social beliefs tend to marginalize women in general and penalize assertive women for acting outside of their perceived gender role (Ridgeway, 2001).
To explain these stereotypes, Eagly and Karau (2002) developed the role congruity theory. According to this theory, personal qualities can be classified into two categories: communal qualities, such as care and support, which have traditionally been viewed as feminine qualities, and agentic qualities, such as assertiveness, self-confidence, and dominance, which have traditionally been viewed as masculine qualities. When men display communal qualities or women display agentic qualities, they face the disapproval of their communities. Women often face stronger disapproval when displaying agentic qualities than do men when they exhibit communal qualities.

In accordance with role congruity theory, the “social construction of gender profoundly influences our society’s biases toward women in traditionally male-dominated roles” (Edmunds, 2008, p. 30). Because the superintendency has historically been a male-dominated position, “women who inhabit this role will necessarily have difficulties caused by their femaleness” (Skrla, 1997, p. 293).
Socially constructed conceptions of gender are not the only factors that affect how male and female leaders are viewed. Vernacular plays a particularly important role in their success. When speaking, men typically use facts and figures whereas women tend to discuss topics and relationships (Dana & Bourisaw, 2006). Moreover, women tend to use a tentative speech pattern that is seen as more trustworthy by men than by women, as women have been found to prefer female leaders who use a confident and assertive speech pattern (Eagly & Karau, 2002).

These social mores and stereotypes are only some of the many predicaments that women face. Perceptions, whether accurate or inaccurate, can affect the manner in which females leaders are viewed. Edmunds (2008) warned us to remember what is accepted as proper leadership behavior for a man might not be accepted as proper conduct for a woman.

The Glass Ceiling

The term glass ceiling has become very popular over the past 20 years. When this researcher performed an advanced search for the term glass ceiling on May 10, 2008 on the ProQuest Database, the database identified 2,575
articles and dissertations that used this term in their abstracts. However, the researcher found that only 23 articles and dissertations published between January 1, 1900 and December 31, 1987 contained this term. The researcher identified that the term first appeared in an article and dissertation in August 1981.

When the researcher conducted a search using the terms superintendent and glass ceiling together, the database identified far fewer articles and dissertations. Between January 1, 1988 and May 10, 2008, only 17 articles and dissertations containing these terms were published, and only one article containing these terms was published before January 1988. Although the glass ceiling has been the subject of many articles and dissertations over the last 20 years, only 0.66% of these articles and dissertations examined it in relation to the superintendency.

As previously discussed, Eagly and Carli (2007) proposed that we should no longer view the barriers to the superintendency as forming a “glass ceiling” but rather a “labyrinth.” They argued that a labyrinth is a more fitting depiction of the barriers that women face because it is not
a final barrier, like a glass ceiling, that creates an impenetrable barrier to the superintendency; rather, it is a series of complex challenges that women face throughout their careers that ultimately thwarts them.

Studies on Gender and Leadership

Much of the criticism of early leadership studies stems from the fact that they were based on a male leadership perspective (Brunner, 1998a; Shakeshaft, 1989; Wesson & Grady, 1994a, as cited in Katz, 2004). Shakeshaft asserted that "educational theories developed from a male centered or andocentric framework are a result of imbalanced and inaccurate research and are not representative of the female [leadership] paradigm" (as cited in Katz, 2004, p. 2). Although there is little evidence that Bolman and Deal's leadership frames are gender biased, some contend that they indeed are. For example, Gossetti and Rusch (1995) argued,

Unfortunately, the four frames still represent traditional perspectives of leading with examples drawn from a white-male, corporate, or sports world. Despite their value for moral and ethical perspectives, Bolman and Deal miss many opportunities . . . to expand perspectives about diversity and equity. (p. 23)
In his e-mail correspondance with this researcher regarding negative comments and feedback about the four leadership frames, L. Bolman stated, "I don’t know of other works that criticize ours — there are lots of places where we get positive comments, and many others where we’re cited for one purpose or another, but we haven’t attracted much criticism" (personal communication, May 7, 2008).

Many of the early leadership studies incorporating Bolman and Deal’s leadership frames usually did not consider gender differences for one of two reasons: either there were not a sufficient number of women in leadership roles for analysis at that time or the researchers did not consider women to have the same leadership abilities as men (Thompson, 2000). However, in their own early studies, Bolman and Deal (1991) addressed gender differences, and found that the leadership styles of men and women are more similar than different and that gender has very little correlation with the use of the four leadership frames. Moreover, Bolman and Deal as well as Thompson (2000) noted that whenever differences in frame use have been found, the differences have not been statistically significant.
Men and women are thought to have different personalities and leadership styles. Women are thought to be creative, ambitious, affectionate and trusting (Kelly, Hale, & Burgess, 1991, as cited in Thompson, 2000). Researchers have found that women tend to use leadership styles that (a) incorporate interpersonal relationships, (b) focus on task completion, (c) embrace participation, (d) strive for fairness, (e) use democratic methods, (f) focus on interpersonal relationships, and (g) include elements of mothering (Eagly & Johnson, 1990; Edmunds, 2008; Statham, 1987, as cited in Thompson, 2000). Women also tend to see the power used in leadership as a means to an end rather than an end in itself (Rosener, 2006).

Women often see themselves as transformational leaders, who, described as leaders able to motivate employees to see past their own immediate needs and self-interest (Burns, 1978; Rosener, 1990), are often viewed as extraordinary leaders (Van Eron, 1991). Women tend to be transformational leaders because they are able to see the big picture, gather information from many sources, and use this information to create a vision for the future (Van Eron). Women’s power often comes from their charm,
interpersonal skills, and personal contacts (Rosener, 1990).

In the role of superintendent, women are often more concerned with their instructional staff and at-risk students than are male superintendents (Glass, 2000). Because female superintendents often place a higher importance on working with parents and the community, they are often seen as more motivational than are their male counterparts (Glass, 2000). Female superintendents tend to "encourage participation, use democratic leadership styles, achieve higher levels of participation, maintain more closely knit organizations, and produce higher levels of job satisfaction than do their male counterparts" (Glass, Bjork, & Brunner, 2000, p. 17).

On the other hand, men are often seen as dominant, competitive, assertive, opportunistic, and manipulative (Kelly, Hale, & Burgess, 1991, as cited in Thompson, 2000). Their leadership style tends to be (a) more hands-off, (b) more authoritative, and (c) autocratic (Eagly & Johnson, 1990; Statham, 1987, as cited in Thompson, 2000). Men often view themselves as transactional leaders who, described as
leaders whose power comes from a position of authority (Rosener, 1990), are considered ordinary leaders and managers (Van Eron, 1991). Male leaders often strive to maintain the status quo and keep things running on an even keel (Van Eron).

Eagly et al. (1995) reported that although there are gender differences in leadership styles, there are no significant differences between perceived leadership effectiveness and gender, and men and women are equally effective leaders. These findings are important because they suggest that despite all the barriers that women face while aspiring to a leadership position, once in the position, they are as effective as are their male counterparts. Eagly et al. (1995) concluded that neither sex posses a true leadership advantage over the other, and the fear that women cannot perform well in a top leadership position in an organization is unjustified.

Findings on the Use of Leadership Frames

Although most of the findings of studies of leadership frames are somewhat consistent, there have been some discrepancies in findings over the past 17 years. Most dissertations and studies identified by this researcher
have been based on self-evaluations using Bolman and Deal's (1991) Leadership Orientations (Self) survey. On January 18, 2009 this researcher performed an advanced search using ProQuest LLC database and used the following terms to identify appropriate studies: (a) Bolman, (b) survey, and (c) gender. Of the 34 dissertations that the database identified, 26 of the authors had used the Bolman and Deal Leadership Orientations (Self) survey (Becker, 1999; Borden, 2000; Cote, 1999; Defrank-Cole, 2003; Duncan, 2004; Edmunds, 2007; Faverty, 1997; Frick, 1996; Gamblin, 2007; Gilson, 1994; Griffin, 2005; Guidry, 2007; Hodge, 2003; Hoo-Ballade, 2005; Johns, 2002; Knudsen, 2000; Kotti, 2008; McCartney-Infelise, 1999; McClellan-Holt, 2000; Miro, 1993; Pellegrino, 2003; Rivers, 1996; Toy, 2007; Travis, 1996; Trees, 2006; Turley, 2002) and only 8 had used Bolman and Deal's Leadership Orientations (Other) survey (Chang, 2004; Chen, 2004; Crist, 1999; Fleming, 2003; Pritchett, 2006; Ross, 2006; Sharpe, 2005; Ward, 2006). Among these eight dissertations, only two directly compared the use of the leadership frames according to leader gender and only two studies compared the respondents based on their gender. It
is important to note that none of these four dissertations focused on the position of superintendent.

Although Bolman and Deal's (1991) Leadership Orientations (Self) survey is useful for obtaining insight into how leaders view their own use of the leadership frames, it may not provide accurate information on how leaders truly use each frame. This study was based on the premise that perception is in fact reality. With this in mind, the remainder of this chapter focuses primarily on the findings of researchers who used Bolman and Deal's Leadership Orientations (Other) survey in their studies. The following section discusses the similarities and discrepancies among the findings of previous studies.

Frame Use

Previous research using the Bolman and Deal’s (1991) Leadership Orientations (Self) survey showed that the human resource frame and the structural frame are the two most widely used leadership frames (Faverty, 1997; Gamblin, 2007; Heimovics, Herman, & Coughlin, 1993; McCartney-Infelise, 1999; Ward, 2006). Of these two frames, researchers have found the human resource frame to be the more prevalent leadership frame (Defrank-Cole, 2003;
Gamblin, 2007). Defrank-Cole reported that nearly 79% of their participants used the human resource frame. The symbolic and political frames are nearly always used less often than are both the structural and human resource frames (Bankes, 2002; McCartney-Infelise; Ward).

It appears that experience plays a part in the use of the leadership frames. In 1989, Bensimon reported that less experienced leaders tend to use a single frame of reference, most commonly the structural or human resource frame, which are seen as managerial frames. In contrast, more experienced leaders use all four frames, which significantly increases their effectiveness as leaders (Thompson, 2000).

Gender and the Effectiveness of Particular Frames

Leaders prefer to use the frames that they believe to be the most effective. Although men and women tend to view the effectiveness of each frame differently, Burks (1992) reported that leaders, regardless of gender, tend to view the human resource and structural frames as the ideal leadership frames and the political and symbolic frames as less ideal. Durocher (1995) supported Burks’ premise that both men and women believe that leadership effectiveness
comes from use of the structural frame, but added that women tend to place a high importance on the symbolic and structural frames whereas men tend to place a high importance on the political frame. Even though men and women tend to differ in their beliefs in the effectiveness of particular frames, it is important to remember that Bolman and Deal (1991) reported that the structural and the human resource frames are management frames whereas the political and symbolic frames are the frames most closely related to effective leadership.

Men and women have not only reported that they view the characteristics of effective leadership differently but also that their most difficult problems originate from different frames. The majority of women have reported that their most difficult issues originate in the human resource frame, as the most difficult aspect of their jobs is dealing with people and personnel matters (Defrank-Cole, 2003). In contrast, the majority of men have reported that their most difficult problems originate in the political frame, especially issues relating to scarce resources, money, time, and legislative authority.
Researchers have found perceived leadership effectiveness to be dependent on leadership style and unrelated to gender, especially in situations where the leader uses multiple frames (Bolman & Deal, 1991; Thompson, 2000). When they use all four frames, leaders are perceived to be more effective, regardless of gender (Thompson). Neither gender possesses an advantage in leadership effectiveness over the other; men and women are more alike in their leadership styles than different (Bolman & Deal, 1991; Thompson, 2000).

Gender and Frame Use

Several researchers have found women tend to use the structural and human resource frames more than do men and tend to use the symbolic and political frames less than do men (Defrank-Cole 2003; Durocher, 1995; McCartney-Infelise, 1999). Durocher surmised that women’s greater use of the human resource and structural frames should not be surprising: Because women must compete in a male-dominated world, they must be more analytical and organized. In addition, because they are the primary caregivers in our society, it should come as no surprise that women are rated higher on the human resource frame than are their male
counterparts. In contrast, Ward (2006) found that gender
did not play a part in frame use, but his findings were not
statistically significant.

In a study using Bolman and Deal’s (1991) Leadership
Orientations (Other) survey, Chang (2004) found that men
who used the human resource frame were rated the most
effective leaders by their subordinates, followed by (in
order of decreasing effectiveness) men using the
structural, political, and symbolic frames. Chang found
that women using the human resource frame were rated the
most effective leaders by their subordinates, followed by
(in order of decreasing effectiveness) women using the
political, structural, and symbolic frames. Male chairs
were rated by their subordinates as using the human
resource and structural frames the most and the political
and symbolic frames the least used. There were some
discrepancies in the way that the subordinates rated the
frame use of their female leaders and the way female
leaders rated themselves. The female leaders were seen by
their subordinates as using the human resource frame the
most and the symbolic frame the least. However, the
subordinates viewed their female leaders as using the
political frame more than the structural frame, which
congrads the self-ratings that were reported earlier.

Effects of Age, Experience, Gender, Setting, and
Organizational Size

Many researchers have examined the use of frames
according to age, experience, and setting. Barbuto et al.
(2007), who examined the effects of gender, age, and
education on leadership, not only recommended that all
future research of gender differences in leadership
consider these factors but also that past studies using
this framework be revisited if the data are available.
Regarding the use of frames according to age and
experience, Barbuto et al. found that leaders over the age
of 46 and those with higher levels of education were viewed
as more transformational. Faverty (1997) found that
superintendents with more experience are better able to use
multiple frames. Harlow (1994) found that older
superintendents tend to use the political and symbolic
frames in critical situations more often than do their
younger peers. Gamblin (2007) found that administrators
over 45 years of age had significantly higher scores for
the political frame and women over 45 had higher means than
did men for the structural and human resource frames. However, none of Gablin’s differences was significant.

Other researchers have found that younger and less experienced superintendents use the structural and human resource frames for solving critical incidents more often than do older and more seasoned superintendents (Harlow, 1994; McCartney-Infelise, 1999). Although Ward (2006) found that setting did not play a part in the use of frames, Chang (2004) found that leaders in smaller settings used the human resource frame more often than did leaders in larger settings.

Several researchers have found no significant differences in frame use according to age (Hodge, 2003; Eckley, 1997; Kotti, 2008; Oliff, 2006; Rivers, 1996, Travis, 1996); organizational setting (Hodge, 2003); organizational size (Hodge, 2003; Kotti 2008); gender (Eckley, 1997; Griffin, 2005; Hodge, 2003; Hoo-Ballade, 1995; Kotti, 2008; Oliff, 2006, Rivers, 1996, Travis, 1996); experience (Hodge, 2003; Kotti, 2008; Turley, 2002), or educational attainment (Hodge, 2003; Eckley, 1997; Kotti, 2008, Travis, 1996).

Eckley (1997), Oliff (2006), and Rivers (1996) found that experience had a significant effect on the use of
Bolman and Deal's (1991) leadership frames. Griffin (2005) and Turley (2002) found female leaders had significantly higher means than did male leaders. Turley (2002) also found that female leaders had significantly higher means for both the political and symbolic frames.

Findings Related to Subordinates

Regarding subordinate level of education, Ross (2006), using Bolman and Deal's (1991) Leadership Orientations (Other) survey, found that teachers with a doctorate degree rated their principals more highly for both the structural and symbolic frames than did subordinates with a master's or bachelors degree. Teachers with a master's degree rated their principals more highly for the human resource frame whereas teachers with a bachelor's degree rated their principals more highly for the political frame.

Ross (2006) also found that age of subordinate had a significant influence on the human resource frame. In his study, teacher aged 60 to 69 rated their principals .61 points higher than did teachers aged 20 to 29 (Ross, 2006).

In a study of the leadership styles of department chairs, Chang (2004) found that male chairs scored significantly higher than did female chairs on the structural, human resource, and symbolic frames. Regarding
the size of the department, he found that chairs in smaller departments were more likely to use the human resource frame than were chairs in large departments. Regarding length of tenure, Chang found that chairs with 3 to 5 years of tenure had significantly higher means for the human resource frame than did chairs with over 5 years of tenure, and that chairs in small departments had significantly higher means for the symbolic frame than did chairs from large departments.

In his study of graduate medical education directors, Sharpe (2005) found that male directors had significantly higher means than did female directors on the structural, human resource, and symbolic frames. Students from small graduating classes reported that their directors had a significantly higher mean for the human resource frame. Directors that fell in the middle range of tenure of 3 to 5 years had a significantly higher means than other directors who had more and/or less tenure for the human resource frame.
CHAPTER III

METHODOLOGY

Overview

The primary purpose of this study was to provide insight into the use of leadership frames by male and female Texas public school superintendents. Based on Bolman’s (2008) assertion that there is a considerable advantage to obtaining responses on leadership surveys from the colleagues of leaders rather than the leaders themselves, the researcher collected data regarding superintendents’ use of leadership frames only from high-ranking subordinate district administrators and not the superintendents’ themselves.

The researcher employed survey research, defined as research that attempts to learn about a large population by surveying a small portion of the population (Leedy & Ormrod, 2005), to obtain the data necessary for comparing the perceived use of Bolman and Deal’s (1991) four leadership frames. Specifically, he attempted to capture top-ranking school administrators’ opinions regarding their...
superintendents' leadership style as reflected in their responses on Bolman and Deal's Leadership Orientations (Other) survey. To collect the data, the researcher sent an e-mail containing a link to the Bolman and Deal Leadership Orientations (Other) survey to all the assistant superintendents and campus principals in each selected district. The researcher used a matched-pair methodology whereby he matched male and female superintendents according to school district location and school district size to maximize the internal validity of the study and "control confounding variables so that these variables are ruled out as explanations for any effects observed" (Leedy & Ormrod, p. 183).

This chapter presents the research questions, null hypotheses, research methodology, instrumentation, and methods of participant selection and data collection. It then proceeds to discuss the validity and reliability of the instrument and the statistical analysis of the data.

Research Questions

Research Question 1 (RQ₁)

To what extent do Texas male and female public school superintendents differ in their use of Bolman and Deal's
four leadership frames as perceived by their high-ranking administrative subordinates?

Research Question 2 (RQ₂)

When controls are introduced for superintendent tenure, school setting, school size, superintendent age, and superintendent degree, do the perceived gender differences of superintendents persist?

Research Question 3 (RQ₃)

To what extent are the perceived differences of Texas public school superintendents’ use of Bolman and Deal’s four leadership frames related to the gender of their subordinates?

Null Hypotheses

Null Hypothesis 1 (NH₁)

No significant differences exist between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames.

Null Hypothesis 2 (NH₂)

No significant differences exist between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames and the gender of their subordinates.
Participants

There are 1,030 public school districts in Texas divided into 20 geographic regions (Texas Education Agency, 2008). School districts in each region that are similar in size and setting are often similar in terms of demographics and socioeconomics. At the time of this study, 47 of the districts in Texas were headed by interim superintendents, who are rarely permanent school employees. Most interim superintendents are retired school administrators who serve temporarily until a permanent superintendent is hired. Due to the part-time nature of their work, the researcher did not include interim superintendents in the study sample. Of the remaining 985 districts that the researcher examined, 832 (84.5%) were headed by male superintendents and 153 (15.5%) were headed by female superintendents (Texas Education Agency, 2008b).

Bolman (2008) suggested that there is a considerable advantage to obtaining responses on leadership surveys from the colleagues of leaders rather than the leaders themselves. Bolman explained, “Research has generally found that the validity of self-ratings of leadership is generally low, so there is a considerable advantage in
getting colleague ratings" (p. 1). The premise behind this could lie in the assumption that perception is in fact reality. In light of this information, the researcher distributed surveys to only assistant superintendents and campus principals in each of the selected Texas public school districts. He obtained their names, positions, and e-mail addresses from the Texas Education Agency Web site, which lists such information for all school districts and school administrators (Texas Education Agency, 2008).

Selection of Superintendents/Districts

At the time of this study, 153 of the school districts in Texas were headed by a full-time female superintendent and 830 districts were headed by a full-time male superintendent (Texas Education Agency, 2008b). To enhance the reliability of this study, the researcher selected only those districts that had three or more top-ranking administrators, and based on this criterion, excluded 54 of the districts headed by female superintendents. The researcher found that there were two major benefits to choosing districts with three or more assistant superintendents and/or campus principals. First, it allowed for selection of a large sample of participants, which
decreased the probability of making a Type II error (Leedy & Ormrod, 2005). Second, it allowed multiple participants to evaluate their superintendent, which increased the consistency of the data. After the researcher excluded those districts that did not fulfill this criterion, the potential sample consisted of participants from 99 districts that had a female superintendent and 99 districts that had a male superintendent.

The researcher based the final selection of the superintendents to include in the study on geographical/educational region and student enrollment. He also ensured that he included an equal number of male and female superintendents. To make the final selection, the researcher entered each district’s name, region number and current enrollment into an Excel spreadsheet; sorted the data by gender, geographical region, and student enrollment; and matched school districts with female superintendents to school districts with male superintendents based on geographical region and school size. Table 2 shows the number of districts selected from each region.
Table 2

*Number of Districts Chosen From Each Region*

<table>
<thead>
<tr>
<th>Region</th>
<th>Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Region 1</td>
<td>14</td>
</tr>
<tr>
<td>Region 2</td>
<td>6</td>
</tr>
<tr>
<td>Region 3</td>
<td>14</td>
</tr>
<tr>
<td>Region 4</td>
<td>18</td>
</tr>
<tr>
<td>Region 5</td>
<td>12</td>
</tr>
<tr>
<td>Region 6</td>
<td>6</td>
</tr>
<tr>
<td>Region 7</td>
<td>8</td>
</tr>
<tr>
<td>Region 8</td>
<td>14</td>
</tr>
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<td>Region 9</td>
<td>2</td>
</tr>
<tr>
<td>Region 10</td>
<td>10</td>
</tr>
<tr>
<td>Region 11</td>
<td>22</td>
</tr>
<tr>
<td>Region 12</td>
<td>16</td>
</tr>
<tr>
<td>Region 13</td>
<td>16</td>
</tr>
<tr>
<td>Region 14</td>
<td>2</td>
</tr>
<tr>
<td>Region 15</td>
<td>6</td>
</tr>
<tr>
<td>Region 16</td>
<td>4</td>
</tr>
<tr>
<td>Region 17</td>
<td>4</td>
</tr>
<tr>
<td>Region 18</td>
<td>0</td>
</tr>
<tr>
<td>Region 19</td>
<td>4</td>
</tr>
<tr>
<td>Region 20</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>198</strong></td>
</tr>
</tbody>
</table>
Selection of Participants

The Texas Education Agency (2008b) classifies administrators into the following six categories: (a) area superintendents, (b) deputy superintendents, (c) associate superintendents, (d) assistant superintendents, (e) assistant county superintendents, and (f) principals. In this study, the researcher generically refers to all assistant superintendents in all five categories as assistant superintendents. The researcher solicited all the assistant superintendents and campus principals, a total of 2,344 potential participants, from the 198 districts he selected for study.

Survey Distribution and Data Collection

For practicality purposes, the researcher used an online survey tool provided by SurveyMonkey.com, a well-respected Internet survey company, and distributed the survey via e-mail. The researcher obtained valid work e-mail addresses through both open records requests and the AskTED (an acronym for "ask Texas Education Directory") database found on the Texas Education Agency Web site. AskTED provides contact information for Texas public schools, public school districts, and educational service
centers (Texas Education Agency, 2008). The e-mail solicitation letter contained (a) an invitation to participate in the research; (b) a statement regarding the purpose of the research; (c) an explanation of the procedures to be followed; (d) an explanation of how the data would remain strictly confidential; (e) a statement that participation would be voluntary and that participants could withdraw from the study at any time; (f) contact information for the researcher, the IRB chairman, and the researcher's mentor; and (g) a hyperlink to the survey on the Web site SurveyMonkey.com (see Appendix B).

The e-mail instructed the participants to click on the hyperlink, which would take them to the survey. SurveyMonkey.com immediately captured their responses and stored them until the cut-off date, which was 4 weeks after the initial letter of solicitation had been sent. After the participants had completed the survey, the researcher downloaded their responses into an Excel spreadsheet and then imported them into the SPSS 16 Grad Pack statistical software program.

The researcher sent a follow-up e-mail 2 weeks after sending the initial e-mail thanking those who had completed
the survey and reminding those who had not to complete the survey. The researcher sent a second follow-up letter 3 weeks after the original letter of solicitation had been sent containing the same hyperlink to the survey and requesting that the potential participants complete the survey if they so desired.

The programming contained in the online survey collection tool would not allow participants to return to the survey once they had completed the survey. If the participants closed the survey before completion, they were able to return to the last question that they had left unanswered and complete the survey. The participants' anonymity was assured because the survey was designed so that the researcher could not obtain any identifying information that would identify participants.

Instrumentation

The researcher obtained permission from Dr. Lee Bolman prior to using the Leadership Orientations (Other) survey (Bolman, 2008; see Appendix A). The researcher added several demographic questions at the end of the survey pertaining to the superintendents' gender; race (Anglo, Hispanic, Black, or other); age (≤42, 43-53, or ≥54 years
of age); years of experience/tenure in the district (<1, 1-8, or ≥9 years); school size (small ≤999 students, midsized 1,000-4,999 students, or large ≥5000 students); school setting (rural, suburban, or urban district); and educational level (master’s or doctorate degree). The survey also captured demographic information regarding the subordinates’ gender, race, age, tenure, and degree according to the same classifications (see Table 3).

Bolman and Deal developed the Leadership Orientations (Other) survey in 1980 to “measure individuals’ orientations toward leading through each of the four frames (structural, human resource, political, and symbolic)” (Bolman, 2008, p. 1), which had been identified by Bolman and Deal almost a decade earlier (Bolman, 2008). Of the three sections of the Leadership Orientations (Other) survey, the researcher only used Section I. In e-mail correspondence, the researcher asked Dr. Bolman the best way to combine Sections I and II of the survey. Dr. Bolman (personal communication, May 7, 2008) replied that the first 32 questions of the survey would provide the empirical data needed for this study, so Sections II and III could be omitted.
<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Race</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
</tr>
<tr>
<td></td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Age</td>
<td>≤42</td>
</tr>
<tr>
<td></td>
<td>43-53</td>
</tr>
<tr>
<td></td>
<td>≥54</td>
</tr>
<tr>
<td>Tenure</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>1-8</td>
</tr>
<tr>
<td></td>
<td>≥9</td>
</tr>
<tr>
<td>School size</td>
<td>≤999</td>
</tr>
<tr>
<td></td>
<td>1000-4999</td>
</tr>
<tr>
<td></td>
<td>≥5000</td>
</tr>
<tr>
<td>School setting</td>
<td>Rural</td>
</tr>
<tr>
<td></td>
<td>Suburban</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td>Degree</td>
<td>Bachelor's</td>
</tr>
<tr>
<td></td>
<td>Master's</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
</tr>
</tbody>
</table>
In Section I, the participants were instructed to select a response for each question that they felt would best describe their superintendent's leadership behavior according to a 5-point Likert scale in which 1 = never, 2 = occasionally, 3 = sometimes, 4 = often, and 5 = always (Bolman, 2008). For data analysis, the researcher tallied the responses according to the number associated with the participants' responses. The four frames were assessed by eight questions each. Questions 1, 5, 9, 13, 17, 21, 25, and 29 pertained to the structural frame; questions 2, 6, 10, 14, 18, 22, 26, and 30 to the human resource frame; questions 3, 7, 11, 15, 19, 23, 27, and 31 to the symbolic frame; and questions 4, 8, 12, 16, 20, 24, 28, and 32 to the political frame (Bolman, 2008).

Bolman and Deal's (1991) Leadership Orientations (Other) survey has been tested for validity and reliability. Extensive statistical analysis has been conducted to determine its validity using tests of Split Half Correlation, Spearman Brown Coefficient, Guttman (Rulon) Coefficient, and Coefficient Alpha (Bolman, 2008). Bolman based the reliability statistics on approximately 1,300 ratings of managers and administrators in the
business and education fields. Table 4 displays the internal consistency data for Bolman and Deal's four leadership frames.

Data Analysis

The researcher performed one-way and two-way ANOVAs to analyze the effect of the independent variables (main effects) on each dependent variable. An ANOVA is a statistical procedure that tests for differences between means of at least one independent variable, which consists of at least two levels (Leedy & Ormrod, 2005). In this study, gender was the primary main effect. The other main effects in this study were superintendent age, superintendent tenure, school size, school setting, superintendent degree, and subordinate (respondent) gender. The researcher used these additional main effects to select and separate cases for analyses. The four dependent variables in this study were (a) the structural frame, (b) the human resource frame, (c) the political frame, and (d) the symbolic frame. The researcher statistically analyzed the data collected in this study using the SPSS 16 GradPack. The main effects are shown in Table 5.
Table 4

Internal Consistency Data for Bolman and Deal's Four Leadership Frames

<table>
<thead>
<tr>
<th>Statistical test</th>
<th>Structural frame</th>
<th>Human resource frame</th>
<th>Political frame</th>
<th>Symbolic frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split Half</td>
<td>.875</td>
<td>.867</td>
<td>.837</td>
<td>.882</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spearman Brown</td>
<td>.933</td>
<td>.929</td>
<td>.911</td>
<td>.937</td>
</tr>
<tr>
<td>Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guttmon (Rulon)</td>
<td>.933</td>
<td>.929</td>
<td>.911</td>
<td>.936</td>
</tr>
<tr>
<td>Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td>.920</td>
<td>.931</td>
<td>.913</td>
<td>.931</td>
</tr>
<tr>
<td>Alpha (all items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td>.856</td>
<td>.902</td>
<td>.839</td>
<td>.846</td>
</tr>
<tr>
<td>Alpha (odd items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td>.834</td>
<td>.843</td>
<td>.842</td>
<td>.887</td>
</tr>
<tr>
<td>Alpha (even items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Bolman, 2008)

Table 5

Main Effects of the Study

<table>
<thead>
<tr>
<th>Key variable</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
</tr>
<tr>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>≤42</td>
<td>1</td>
</tr>
<tr>
<td>43 to 53</td>
<td>2</td>
</tr>
<tr>
<td>≥54</td>
<td>3</td>
</tr>
<tr>
<td>School Setting</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>1</td>
</tr>
<tr>
<td>Suburban</td>
<td>2</td>
</tr>
<tr>
<td>Urban</td>
<td>3</td>
</tr>
<tr>
<td>School Size</td>
<td></td>
</tr>
<tr>
<td>≤999 students</td>
<td>1</td>
</tr>
<tr>
<td>1000 to 4999 students</td>
<td>2</td>
</tr>
<tr>
<td>≥5000 students</td>
<td>3</td>
</tr>
<tr>
<td>Tenure</td>
<td></td>
</tr>
<tr>
<td>&lt;1 year</td>
<td>1</td>
</tr>
<tr>
<td>1 to 8 years</td>
<td>2</td>
</tr>
<tr>
<td>&gt;8 Years</td>
<td>3</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>1</td>
</tr>
<tr>
<td>Master’s</td>
<td>2</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3</td>
</tr>
</tbody>
</table>
The researcher determined the significance level of each hypothesis at the .05 probability level, which is standard for social research. The following sections described the statistical techniques that the researcher employed for each research question.

Research Question 1 (RQ₁)

To what extent do Texas male and female public school superintendents differ in their use of Bolman and Deal’s four leadership frames as perceived by their high-ranking administrative subordinates?

Null Hypothesis 1 (NH₁). No significant difference exists between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames.

Statistical technique. The researcher performed a one-way ANOVA to test for differences between the superintendents’ perceived use of Bolman and Deal’s four leadership frames according to the superintendents’ gender.

Research Question 2 (RQ₂)

When controls are introduced for superintendent tenure, school setting, school size, superintendent age, and superintendent degree, do the perceived gender differences of the superintendents persist?
Statistical technique. The researcher performed a series of two-way ANOVAs, each of which included one of the following main effects of gender and a control main effect: (a) gender and tenure, (b) gender and school setting, (c) gender and school size, (d) gender and superintendent age, and (e) gender and superintendent degree.

Research Question 3 (RQ3)

To what extent are the perceived differences of Texas public school superintendents' use of Bolman and Deal’s four leadership frames related to the gender of their subordinates?

Null Hypothesis 2. No significant differences exist between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames and the gender of their subordinates.

Statistical technique. The researcher performed a series of one-way ANOVAs, selecting one group of male subordinates and one group of female subordinates as cases for the analysis. He then tested for differences between the male and female subordinates regarding their perceptions of their superintendents’ use of Bolman and Deal’s four leadership frames.
CHAPTER IV
DATA ANALYSIS

The purpose of this study was to broadly examine and analyze gender differences in the leadership styles of Texas superintendents by analyzing their subordinates’ responses on Bolman and Deal’s (1991) four-frame Leadership Orientations (Other) survey. The researcher utilized three statistical methods to analyze the data and address the research questions. First, he conducted a series of one-way ANOVAs to analyze differences in the superintendents’ perceived use of Bolman and Deal’s leadership frames by gender. Second, he conducted a series of two-way ANOVAs to determine whether perceived gender differences persisted when controls for superintendent tenure, school setting, school size, superintendent age, and superintendent degree were introduced. Third, he conducted a series of one-way ANOVAs to determine whether any of the perceived differences were related to the gender of the participants (respondents).
Sample Size

The superintendents selected for this study were from 198 school districts located in 19 of the 20 Texas Educational Service Centers regions. The researcher only included superintendents who served at their district along with at least three campus-level principals and/or central-level assistant superintendents. From these 198 school districts, the researcher sent letters of solicitation via e-mail to 2,344 potential respondents. The researcher received roughly 389 e-mail failure notices and refusal to participate notifications. Approximately 25% (n = 484) of the remaining 1,955 respondents completed the survey.

Demographics

The survey requested that the respondents provide demographic information regarding their superintendents' gender, degree, age, race, and length of tenure. The respondents also provided information regarding the size and setting of their school district. Table 6 shows the superintendent demographic information provided by the respondents. Almost the same proportion of male (49%) and female (51%) superintendents were evaluated by the respondents. White male (42.6%) and White female (43%)
superintendents were the largest groups represented in this study, accounting for 85.6% of the sample.

Table 6

Superintendent Demographic Information

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Percentage</th>
<th>Female</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td></td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>237</td>
<td>49</td>
<td>247</td>
<td>51</td>
<td>484</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>206</td>
<td>42.6</td>
<td>208</td>
<td>43</td>
<td>414</td>
</tr>
<tr>
<td>Hispanic</td>
<td>22</td>
<td>4.5</td>
<td>36</td>
<td>7.4</td>
<td>58</td>
</tr>
<tr>
<td>Black</td>
<td>6</td>
<td>1.2</td>
<td>3</td>
<td>0.6</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>0.6</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤42</td>
<td>12</td>
<td>2.5</td>
<td>9</td>
<td>1.9</td>
<td>21</td>
</tr>
<tr>
<td>43-53</td>
<td>81</td>
<td>16.7</td>
<td>104</td>
<td>21.5</td>
<td>185</td>
</tr>
<tr>
<td>≥54</td>
<td>144</td>
<td>29.8</td>
<td>134</td>
<td>27.7</td>
<td>278</td>
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<td>Years of experience</td>
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<tr>
<td>&lt;1</td>
<td>23</td>
<td>4.8</td>
<td>14</td>
<td>2.9</td>
<td>37</td>
</tr>
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<td>1-8</td>
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<td>193</td>
<td>39.9</td>
<td>348</td>
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<td>&gt;8</td>
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<td>12.2</td>
<td>40</td>
<td>8.3</td>
<td>99</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master's</td>
<td>122</td>
<td>25.2</td>
<td>58</td>
<td>12</td>
<td>180</td>
</tr>
<tr>
<td>Doctorate</td>
<td>115</td>
<td>23.8</td>
<td>189</td>
<td>38</td>
<td>304</td>
</tr>
<tr>
<td>School setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>96</td>
<td>19.8</td>
<td>59</td>
<td>12.2</td>
<td>155</td>
</tr>
<tr>
<td>Suburban</td>
<td>128</td>
<td>26.4</td>
<td>118</td>
<td>24.4</td>
<td>246</td>
</tr>
<tr>
<td>Urban</td>
<td>13</td>
<td>2.7</td>
<td>70</td>
<td>14.5</td>
<td>83</td>
</tr>
<tr>
<td>School size</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>≤999</td>
<td>19</td>
<td>3.9</td>
<td>24</td>
<td>5</td>
<td>43</td>
</tr>
<tr>
<td>1000-4999</td>
<td>86</td>
<td>17.8</td>
<td>63</td>
<td>13</td>
<td>149</td>
</tr>
<tr>
<td>≥5000</td>
<td>132</td>
<td>27.3</td>
<td>160</td>
<td>33.1</td>
<td>292</td>
</tr>
</tbody>
</table>
Hispanic male (4.5%) and Hispanic female (7.4%) superintendents were the second largest group, but only accounted for 11.9% of the sample. Black male (1.2%) and Black female (.6%) superintendents were the third largest group. “Other” male (.6%) superintendents made up the smallest group.

Only 3.4% of the superintendents were 42 years of age or younger. Fewer male superintendents (16.7%) than female superintendents (21.5%) were between the ages of 43 and 53. Over 57% of the superintendents were 54 years of age or older. Almost 8% of the superintendents had less than 1 year of experience in their current district. More than 71% of the superintendents had between 1 and 8 years of tenure in their school district. Female superintendents (39.9%) with 1 to 8 years of tenure were the largest group. Less than 21% of the superintendents had more than 8 years of tenure in their district. More male superintendents (25.2%) than female superintendents (12%) had a master’s degree. However, considerably more female superintendents (38%) than male superintendents (23.8%) had a doctorate degree.

Roughly 32% of the superintendents served in rural districts and over 50% served in suburban districts. More
male superintendents (46.2%) than female superintendents (36.6%) served in rural and suburban districts. However, more female superintendents (14.5%) than male superintendents (2.7%) served in urban districts. Less than 9% of the superintendents served in school districts that enrolled 999 or less students; almost 31% served in districts that enrolled between 1,000 and 4,999 students; and more than 60% served in districts that enrolled over 5,000 students.

Analysis of Research Question 1

Research Question 1 (RQ₁)

To what extent do Texas male and female public school superintendents differ in their use of Bolman and Deal’s four leadership frames as perceived by their high-ranking administrative subordinates?

Null Hypothesis 1 (NH₁)

No significant differences exist between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames.

Structural Frame

The results of the ANOVA indicated that the main effect of gender was significant ($F = 6.09$, $df = 1,482$, $p =$
.014 ≤ .05). The mean score of female superintendents was .174 points higher than that of male superintendents (see Table 7). Therefore, the researcher rejected the null hypothesis.

Human Resource Frame

The results of the ANOVA indicated that the main effect of gender was significant \( (F = 11.87, \ df = 1,482, \ p = .001 \leq .05) \). The mean score of female superintendents was .266 points higher than that of male superintendents (see Table 7). Therefore, the researcher rejected the null hypothesis.

Political Frame

The results of the ANOVA indicated that the main effect of gender was significant \( (F = 12.24, \ df = 1,482, \ p = .001 \leq .05) \). The mean score of female superintendents was .239 points higher than that of male superintendents (see Table 7). Therefore, the researcher rejected the null hypothesis.

Symbolic Frame

The results of the ANOVA indicated that the main effect of gender was significant \( (F = 14.41, \ df = 1,482, \ p = .000 \leq .05) \). The mean score of female superintendents was
.303 points higher than that of male superintendents (see Table 7). Therefore, the researcher rejected the null hypothesis.

Analysis of Findings for RQ1

Female superintendents had significantly higher means than did male superintendents for each of the four frames. The mean difference between female and male superintendents was greatest for the symbolic frame (.303), followed by the human resource (.266), political (.239), and structural frames (.174). The order of means for frames usage was the same for male and female superintendents. The superintendents have the highest means for the structural frame, followed by the political, human resource, and symbolic frames, respectively (see Table 7).

These findings suggest that female superintendents are viewed by their high-ranking administrative team as more effective in their use of both the management and leadership frames than are male superintendents. The structural and human resource frames are seen as primarily management frames and the political and symbolic frames as primarily leadership frames (Bolman & Deal, 1991).
Table 7

Superintendents’ Perceived Use of Leadership Frames by Gender

<table>
<thead>
<tr>
<th>Frame</th>
<th>Gender</th>
<th>Mean</th>
<th>SE</th>
<th>N</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>Obs. power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Male</td>
<td>4.09</td>
<td>.050</td>
<td>237</td>
<td>1,482</td>
<td>6.06</td>
<td>.014*</td>
<td>.691</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.27</td>
<td>.049</td>
<td>247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>Male</td>
<td>3.89</td>
<td>.055</td>
<td>237</td>
<td>1,482</td>
<td>11.87</td>
<td>.001*</td>
<td>.930</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.16</td>
<td>.054</td>
<td>247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pol.</td>
<td>Male</td>
<td>3.93</td>
<td>.049</td>
<td>237</td>
<td>1,482</td>
<td>12.24</td>
<td>.001*</td>
<td>.937</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.17</td>
<td>.048</td>
<td>247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sym.</td>
<td>Male</td>
<td>3.83</td>
<td>.057</td>
<td>237</td>
<td>1,482</td>
<td>14.41</td>
<td>.000*</td>
<td>.966</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.13</td>
<td>.056</td>
<td>247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic. *p ≤ .05.
Because the female superintendents received significantly higher scores for every frame, it is apparent that their subordinates consider them more likely than the male superintendents to demonstrate behaviors that are associated with both effective leadership and effective management.

Analysis of Research Question 2

Research Question 2 (RQ₂)

When controls are introduced for superintendent tenure, school setting, school size, superintendent age, and superintendent degree, do the perceived gender differences of the superintendents persist?

Tenure

To determine whether the main effect of tenure altered the findings for RQ₁, the researcher analyzed the results of a two-way ANOVA that estimated the impact of the main effects of superintendent gender and superintendent tenure and the interaction effect between both on the perceived use of each dependent variable (each frame). The main effect of gender remained statistically significant when tenure was introduced as a main effect for each of the four frames: (a) structural ($F = 4.703$, $df = 1,478$, $p =$ 81
.031 ≤ .050); (b) human resource ($F = 6.455, \text{df} = 1,478, p = .011 \leq .050$); (c) political ($F = 5.780, \text{df} = 1,478, p = .017 \leq .050$); and (d) symbolic ($F = 6.776, \text{df} = 1,478, p = .010 \leq .050$). Neither the main effect of tenure nor the interaction effect between gender and tenure was statistically significant for any of the four frames (see Table 8).

An analysis of the estimated marginal means revealed that principals and assistant superintendents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The female superintendents’ means were .231 points higher ($SE = .107$) for the structural frame, .296 points higher ($SE = .117$) for the human resource frame, .248 points higher ($SE = .103$) for the political frame, and .314 points higher ($SE = .121$) for the symbolic frame (see Table 9).
Table 8

Two-Way ANOVA Results for Superintendents’ Perceived Use of Leadership Frames by Gender, Tenure, and Gender*Tenure

<table>
<thead>
<tr>
<th>Frame</th>
<th>Effects</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
<th>Obs. power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>Gender</td>
<td>1,478</td>
<td>2.857</td>
<td>4.703</td>
<td>.031*</td>
<td>.581</td>
</tr>
<tr>
<td></td>
<td>Tenure</td>
<td>2,478</td>
<td>.070</td>
<td>.058</td>
<td>.944</td>
<td>.059</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Tenure</td>
<td>2,478</td>
<td>.370</td>
<td>.304</td>
<td>.738</td>
<td>.098</td>
</tr>
<tr>
<td>Str.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>Gender</td>
<td>1,478</td>
<td>4.689</td>
<td>6.455</td>
<td>.011*</td>
<td>.718</td>
</tr>
<tr>
<td></td>
<td>Tenure</td>
<td>2,478</td>
<td>.580</td>
<td>.399</td>
<td>.671</td>
<td>.115</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Tenure</td>
<td>2,478</td>
<td>.109</td>
<td>.075</td>
<td>.928</td>
<td>.061</td>
</tr>
<tr>
<td>Pol.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1,478</td>
<td>3.280</td>
<td>5.780</td>
<td>.017*</td>
<td>.670</td>
</tr>
<tr>
<td></td>
<td>Tenure</td>
<td>2,478</td>
<td>.362</td>
<td>.319</td>
<td>.727</td>
<td>.101</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Tenure</td>
<td>2,478</td>
<td>.363</td>
<td>.320</td>
<td>.726</td>
<td>.101</td>
</tr>
<tr>
<td>Sym.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1,478</td>
<td>5.259</td>
<td>6.776</td>
<td>.010*</td>
<td>.738</td>
</tr>
<tr>
<td></td>
<td>Tenure</td>
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<td>.532</td>
<td>.343</td>
<td>.710</td>
<td>.105</td>
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<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Tenure</td>
<td>2,478</td>
<td>.155</td>
<td>.100</td>
<td>.905</td>
<td>.065</td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic. Source = between subjects. *p ≤ .05.
Table 9

Estimated Marginal Means for Superintendent Gender, Superintendent Tenure, and Superintendent Gender*Tenure

<table>
<thead>
<tr>
<th>Frame</th>
<th>Significant effects</th>
<th>Gender</th>
<th>Mean</th>
<th>SE</th>
<th>Mean diff.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Gender</td>
<td>Male</td>
<td>4.06</td>
<td>.067</td>
<td>-.231</td>
<td>237</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.29</td>
<td>.083</td>
<td>.231</td>
<td>247</td>
</tr>
<tr>
<td>HR</td>
<td>Gender</td>
<td>Male</td>
<td>3.89</td>
<td>.073</td>
<td>-.296</td>
<td>237</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.18</td>
<td>.091</td>
<td>.296</td>
<td>247</td>
</tr>
<tr>
<td>Pol.</td>
<td>Gender</td>
<td>Male</td>
<td>3.90</td>
<td>.065</td>
<td>-.248</td>
<td>237</td>
</tr>
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<td>Female</td>
<td>4.15</td>
<td>.080</td>
<td>.248</td>
<td>247</td>
</tr>
<tr>
<td>Sym.</td>
<td>Gender</td>
<td>Male</td>
<td>3.81</td>
<td>.076</td>
<td>-.314</td>
<td>237</td>
</tr>
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<td></td>
<td></td>
<td>Female</td>
<td>4.13</td>
<td>.094</td>
<td>.314</td>
<td>247</td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic.
The main effect of gender remained significant for each of the four frames even after the main effect of tenure was added to the model. After the addition of the main effect of tenure, the female superintendents continued to be viewed by their high-ranking administrative team as more effective in their use of both the management and leadership frames. Therefore, it remains apparent that female superintendents are viewed by their subordinates as more likely to demonstrate behaviors associated with successful leadership and management than are male superintendents.

Setting

To determine if the main effect of setting altered the results found for RQ1, the researcher analyzed the results of a two-way ANOVA that estimated the impact of the main effects of superintendent gender and superintendent setting and the interaction effect between both on the perceived use of each dependent variable (each frame). The main effect of gender remained statistically significant when setting was introduced as a main effect for each of the four frames: (a) structural \( (F = 6.294, \, \text{df} = 1,478, \, p = 0.012 \leq 0.050) \); (b) human resource \( (F = 6.217, \, \text{df} = 1,478, \, p = \)
The main effect of setting was not statistically significant for any of the four frames. The interaction effect between gender and setting was significant for the structural ($F = 4.020$, df = 2,478, $p = .019 ≤ .050$) and human resource ($F = 3.143$, df = 2,478, $p = .044 ≤ .050$) frames (see Table 10).

An analysis of the estimated marginal means revealed that principals and assistant superintendents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The female superintendents’ means were .236 points higher (SE = .094) for the structural frame, .257 points higher (SE = .103) for the human resource frame, .246 points higher (SE = .091) for the political frame, and .249 points (SE = .107) for the symbolic frame (see Table 11).
Table 10

Two-Way ANOVA Results for Superintendents' Perceived Use of Leadership Frames by Gender, Setting, and Gender*Setting

<table>
<thead>
<tr>
<th>Frame</th>
<th>Effects</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
<th>Obs. power</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Main</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1,478</td>
<td>3.720</td>
<td>6.294</td>
<td>.012*</td>
<td>.707</td>
</tr>
<tr>
<td></td>
<td>Setting</td>
<td>2,478</td>
<td>2.315</td>
<td>1.959</td>
<td>.142</td>
<td>.406</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>Gender*Setting</td>
<td>2,478</td>
<td>4.752</td>
<td>4.020</td>
<td>.019*</td>
</tr>
<tr>
<td></td>
<td>HR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Main</td>
<td>1,478</td>
<td>4.423</td>
<td>6.217</td>
<td>.013*</td>
<td>.701</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting</td>
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<td>1.377</td>
<td>0.968</td>
<td>.381</td>
<td>.218</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>Gender*Setting</td>
<td>2,478</td>
<td>4.471</td>
<td>3.143</td>
<td>.044*</td>
</tr>
<tr>
<td></td>
<td>Pol.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Main</td>
<td>1,478</td>
<td>4.030</td>
<td>7.249</td>
<td>.007*</td>
<td>.766</td>
</tr>
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<td></td>
<td>Setting</td>
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<td>2.905</td>
<td>2.613</td>
<td>.074</td>
<td>.520</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>Gender*Setting</td>
<td>2,478</td>
<td>2.263</td>
<td>2.036</td>
<td>.132</td>
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<tr>
<td></td>
<td>Sym.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Main</td>
<td>1,478</td>
<td>4.136</td>
<td>5.460</td>
<td>.020*</td>
<td>.645</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting</td>
<td>2,478</td>
<td>4.371</td>
<td>2.885</td>
<td>.057</td>
<td>.564</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>Gender*Setting</td>
<td>2,478</td>
<td>3.998</td>
<td>2.639</td>
<td>.072</td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic. Source = between subjects. *p ≤ .05.
Table 11

Estimated Marginal Means for Superintendent Gender, Superintendent Setting, and Superintendent Gender*Setting

<table>
<thead>
<tr>
<th>Frame</th>
<th>Significant effects</th>
<th>Gender</th>
<th>Mean</th>
<th>SE</th>
<th>Mean diff.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Gender</td>
<td>Male</td>
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<td>.079</td>
<td>-.236</td>
<td>237</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.27</td>
<td>.051</td>
<td>.236</td>
<td>247</td>
</tr>
<tr>
<td>HR</td>
<td>Gender</td>
<td>Male</td>
<td>3.90</td>
<td>.087</td>
<td>-.257</td>
<td>237</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.16</td>
<td>.056</td>
<td>.257</td>
<td>247</td>
</tr>
<tr>
<td>Pol.</td>
<td>Gender</td>
<td>Male</td>
<td>3.92</td>
<td>.077</td>
<td>-.246</td>
<td>237</td>
</tr>
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<td></td>
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<td>Female</td>
<td>4.17</td>
<td>.050</td>
<td>.246</td>
<td>247</td>
</tr>
<tr>
<td>Sym.</td>
<td>Gender</td>
<td>Male</td>
<td>3.88</td>
<td>.077</td>
<td>-.249</td>
<td>237</td>
</tr>
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<td></td>
<td></td>
<td>Female</td>
<td>4.13</td>
<td>.058</td>
<td>.249</td>
<td>247</td>
</tr>
<tr>
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<td></td>
<td>Rural</td>
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<td>.078</td>
<td>-.48</td>
<td>96</td>
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<td>.57</td>
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<td>Urban</td>
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</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic.
Even after the main effect of setting was added to the model, female superintendents continued to receive significantly higher scores for each frame. This indicates that in this analysis, female superintendents are viewed by their high-ranking administrative team as being more likely to demonstrate behaviors associated with successful leadership and management than are male superintendents.

A review of the profile plots indicated a significant ordinal interaction between gender and setting for both the structural and human resource frames. For the structural frame, female superintendents had the highest means in each type of district (rural, suburban, and urban), although the greatest difference in means was in rural districts (see Figure 1). The mean score for female superintendents in rural districts was 4.38 (SE = .100, n = 59), compared to 3.90 (SE = .078, n = 96) for male superintendents. The difference between male and female superintendents almost completely disappeared (mean difference = .02) in suburban districts but widened again (mean difference = .15) in urban districts.
Figure 1. Estimated marginal means for the structural frame, gender and setting.
For the human resource frame, female superintendents continued to have the highest means in each type of district. The greatest difference in means was in rural districts (see Figure 2). The mean score for female superintendents in rural districts was 4.27 (SE = .110, n = 59), compared to 3.70 (SE = .086, n = 96) for male superintendents. The difference between male and female superintendents narrowed in suburban districts (mean difference = .16) and almost completely disappeared in urban districts (mean difference = .05).

The greatest difference in means for both the structural and human resource frames was in rural districts; not only did female superintendents receive the highest scores but male superintendents received the lowest scores in rural districts. Such a large difference in scores may be attributed to two factors. First, in rural districts, assistant superintendents and campus principals often work directly with their superintendent, and such closeness often provides ample opportunity for subordinates to view their superintendent’s strengths and weaknesses on a continual basis.
Figure 2. Estimated marginal means for the human resource frame, gender and setting.
Second, female superintendents may be required to have exceptional personal characteristics; because women face great obstacles when attempting to reach the position of superintendent, it is reasonable to suggest that their possession of extraordinary characteristics made them stand out and thus achieve the position to which they had aspired.

School Size

To determine if the main effect of size altered the results found for RQ₁, the researcher analyzed the results of a two-way ANOVA that estimated the impact of the main effects of superintendent gender and school size and the interaction effect between both on the perceived use of each dependent variable (each frame). The main effect of gender remained statistically significant when size was introduced as a main effect for each of the four frames: (a) structural ($F = 10.936$, $df = 1,478$, $p = .001 < .050$); (b) human resource ($F = 17.019$, $df = 1,478$, $p = .000 < .050$); (c) political ($F = 14.297$, $df = 1,478$, $p = .000 < .050$); and (d) symbolic ($F = 15.902$, $df = 1,478$, $p = .000 < .050$). The main effect of size was statistically significant for both the political ($F = 3.872$, $df = 2,478$, $p = .021 < .050$) and symbolic ($F = 5.465$, $df = 2,478$, $p = .004 < .050$) frames. The
interaction effect between gender and size was significant for the structural ($F = 3.459$, $df = 2,478$, $p = .032 \leq .050$) and human resource ($F = 4.148$, $df = 2,478$, $p = .016 \leq .050$) frames (see Table 12).

An analysis of the estimated marginal means revealed that principals and assistant superintendents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The female superintendents’ means were .313 points higher ($SE = .095$) higher for the structural frame, .427 points higher ($SE = .104$) for the human resource frame, .346 points higher ($SE = .091$) for the political frame, and .425 points higher ($SE = .107$) for the symbolic frame (see Table 13). Even after the main effect of size was added to the model, the female superintendents continued to receive significantly higher scores for each frame. This finding indicates that in general, female superintendents are viewed by their subordinates as more likely to demonstrate behaviors that are associated with successful leadership and management than are male superintendents.
Table 12

Two-Way ANOVA Results for Superintendents’ Perceived Use of Leadership Frames by Gender, School Size, and Gender*School Size

<table>
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<tr>
<th>Frame</th>
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<th>F</th>
<th>p</th>
<th>Obs. Power</th>
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<td>Interaction</td>
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Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic. Source = between subjects. *p ≤ .05.
Table 13

Estimated Marginal Means For Superintendent Gender, School Size, and Gender*Size

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<tr>
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<th>Mean diff.</th>
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Table 13 *continued*

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<th>Mean diff.</th>
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<td>.088</td>
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Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic.
Superintendents from large districts of over 5,000 students had significantly higher means than did superintendents from midsized districts for both the political (mean difference = .200, $p = .009$) and symbolic (mean difference = .276, $p = .002$) frames, those frames which Bolman and Deal (1991) described as leadership frames.

The superintendents from the largest districts ($\geq$5,000 students) are seen by the respondents as displaying more of the characteristics of effective leadership than are superintendents from midsized districts. This finding could reflect the hiring practices of the districts, in particular the fact that larger districts offer greater compensation to superintendents than do midsized and small districts. Based on this practice, it is reasonable to suggest that larger districts have a better pool of applicants from which to select their superintendent than do midsized and small districts.

A review of the profile plots indicates a significant ordinal interaction between gender and district size for both the structural and human resource frames. For the structural frame, female superintendents had the highest means for each district size, with the greatest difference
in means in small districts (see Figure 3). The mean score for female superintendents in small districts was 4.54 (SE = .158, n = 24), compared to 3.91 (SE = .177, n = 19) for male superintendents. The difference between male and female superintendents narrowed in midsized districts (mean difference = .277) and almost completely disappeared in large districts (mean difference = .029).

For the human resource frame, female superintendents had the highest means in each district size and, yet again, the greatest difference in means between male and female superintendents was in small districts (see Figure 4). The mean score for female superintendents in small districts was 4.37 (SE = .172, n = 24), compared to 3.61 (SE = .194, n = 19) for male superintendents. The difference between male and female superintendents narrowed in midsized districts (mean difference = .436) and almost completely disappeared in large districts (mean difference = .088).
Figure 3. Estimated marginal means for the structural frame, gender and district size.
Figure 4. Estimated marginal means for the human resource frame, gender and district size.
As with the findings in rural districts, school size appears to play the same role in the perception of how superintendents use Bolman and Deal’s (1991) four leadership frames. In small districts, respondents and superintendents must work closely with one another on a regular basis. Therefore, the perceptions of the respondents in small districts are probably more accurate than are those of the respondents in midsized and large districts. In large districts, the difference in means between male and female superintendents almost completely disappears. Whereas assistant superintendents in large districts may work intimately with their superintendents, the principals in those districts must judge their superintendents from a distance, making them more likely to evaluate the perceived effectiveness of the position rather than the superintendent’s use of the leadership frames.

Age

To determine if the main effect of age changed the results found for RQ1, the researcher analyzed the results of a two-way ANOVA that estimated the impact of the main effects of superintendent gender and superintendent age and the interaction effect between both on the perceived use of each dependent variable (each frame). With the introduction
of the main effect of age, the main effect of gender and age were no longer significant, nor was the interaction effect between gender and age. The main effect of age consumed enough of the variance in this model that the main effect of gender was no longer significant. Age is the only variable that negated all the significant findings from RQ1.

Degree

To determine whether the main effect of degree earned altered the findings from RQ1, the researcher analyzed the results of a two-way ANOVA that estimated the impact of the main effects of superintendent gender and superintendent degree and the interaction effect between both on the perceived use of each dependent variable (each frame). The main effect of gender remained statistically significant when degree was introduced as a main effect for the (a) human resource ($F = 8.988$, df = 1,480, $p = .003 < .050$); (b) political ($F = 5.653$, df = 1,480, $p = .018 < .050$); and (c) symbolic ($F = 6.717$, df = 1,480, $p = .010 < .050$) frames. The main effect of degree was statistically significant for the (a) structural ($F = 14.733$, df = 1,480, $p = .000 < .050$); (b) political ($F = 14.648$, df = 1,480, $p = .000 < .050$); and (c) symbolic ($F = 13.932$, df = 1,480, $p = .000 < .050$) frames.
Table 14

Two-Way ANOVA Results of Superintendents’ Perceived Use of Leadership Frames by Gender, Age, and Gender*Age

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<th>Effects</th>
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<th>F</th>
<th>p</th>
<th>Obs. power</th>
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</tr>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Age</td>
<td>2,478</td>
<td>.060</td>
<td>.053</td>
<td>.948</td>
<td>.058</td>
</tr>
<tr>
<td>Pol.</td>
<td>Main</td>
<td>1,478</td>
<td>2.372</td>
<td>3.072</td>
<td>.080</td>
<td>.417</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>2,478</td>
<td>2.293</td>
<td>1.485</td>
<td>.228</td>
<td>.317</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Age</td>
<td>2,478</td>
<td>.465</td>
<td>.301</td>
<td>.740</td>
<td>.098</td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic. Source = between subjects. *p ≤ .05.
The interaction effect between gender and degree was not significant for any of the four frames (see Table 15). An analysis of the estimated marginal means revealed that the principals and assistant superintendents rated their female superintendents significantly higher than they rated their male superintendents for three of the four frames. The female superintendents' means were .253 points higher (SE = .084) for the human resource frame, .175 points higher (SE = .073) for the political frame, and .223 points higher (SE = .086) for the symbolic frame (see Table 16).

Even after the main effect of degree was added to the model, the female superintendents continued to receive significantly higher scores for three of the four frames. Although the significant finding in the structural frame was negated by the introduction of the main effect of degree, it is clear that female subordinates are still perceived in a highly positive manner by their subordinates. This finding confirms that high-ranking administrators view their female superintendents as more effective in their use of both the management and leadership frames than they view their male superintendents.
Table 15

Two-Way ANOVA Results of Superintendents' Perceived Use of Leadership Frames by Gender, Degree, and Gender*Degree

<table>
<thead>
<tr>
<th>Frame</th>
<th>Effects</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
<th>Obs. power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>Gender</td>
<td>1,480</td>
<td>.874</td>
<td>1.488</td>
<td>.223</td>
<td>.230</td>
</tr>
<tr>
<td>Str.</td>
<td>Degree</td>
<td>1,480</td>
<td>8.657</td>
<td>14.733</td>
<td>.000*</td>
<td>.969</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Degree</td>
<td>1,480</td>
<td>.001</td>
<td>.001</td>
<td>.973</td>
<td>.050</td>
</tr>
<tr>
<td>Main</td>
<td>Gender</td>
<td>1,480</td>
<td>6.500</td>
<td>8.988</td>
<td>.003*</td>
<td>.849</td>
</tr>
<tr>
<td>HR</td>
<td>Degree</td>
<td>1,480</td>
<td>.552</td>
<td>.763</td>
<td>.383</td>
<td>.141</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Degree</td>
<td>1,480</td>
<td>.095</td>
<td>.131</td>
<td>.717</td>
<td>.065</td>
</tr>
<tr>
<td>Main</td>
<td>Gender</td>
<td>1,480</td>
<td>3.099</td>
<td>5.653</td>
<td>.018*</td>
<td>.660</td>
</tr>
<tr>
<td>Pol.</td>
<td>Degree</td>
<td>1,480</td>
<td>8.028</td>
<td>14.648</td>
<td>.000*</td>
<td>.969</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Degree</td>
<td>1,480</td>
<td>.340</td>
<td>.621</td>
<td>.431</td>
<td>.123</td>
</tr>
<tr>
<td>Main</td>
<td>Gender</td>
<td>1,480</td>
<td>5.045</td>
<td>6.717</td>
<td>.010*</td>
<td>.734</td>
</tr>
<tr>
<td>Sym.</td>
<td>Degree</td>
<td>1,480</td>
<td>10.464</td>
<td>13.932</td>
<td>.000*</td>
<td>.961</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender*Degree</td>
<td>1,480</td>
<td>.156</td>
<td>.207</td>
<td>.649</td>
<td>.074</td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic. Source = between subjects. *p ≤ .05.
### Table 16

**Estimated Marginal Means for Superintendent Gender, School Size, and Gender*Size**

<table>
<thead>
<tr>
<th>Frame</th>
<th>Significant effects</th>
<th>Mean</th>
<th>SE</th>
<th>Mean diff.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>Gender</td>
<td>Male</td>
<td>3.89</td>
<td>.055</td>
<td>-.253</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.14</td>
<td>.064</td>
<td>.253</td>
</tr>
<tr>
<td>Pol.</td>
<td>Gender</td>
<td>Male</td>
<td>3.94</td>
<td>.048</td>
<td>-.175</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.11</td>
<td>.056</td>
<td>.175</td>
</tr>
<tr>
<td>Sym.</td>
<td>Gender</td>
<td>Male</td>
<td>3.83</td>
<td>.056</td>
<td>-.223</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>4.06</td>
<td>.065</td>
<td>.223</td>
</tr>
<tr>
<td>Str.</td>
<td>Degree</td>
<td>Master’s</td>
<td>4.00</td>
<td>.061</td>
<td>-.292</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctorate</td>
<td>4.29</td>
<td>.045</td>
<td>.292</td>
</tr>
<tr>
<td>Pol.</td>
<td>Degree</td>
<td>Master’s</td>
<td>3.89</td>
<td>.059</td>
<td>-.281</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctorate</td>
<td>4.17</td>
<td>.044</td>
<td>.281</td>
</tr>
<tr>
<td>Sym.</td>
<td>Degree</td>
<td>Master’s</td>
<td>3.78</td>
<td>.069</td>
<td>-.321</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctorate</td>
<td>4.10</td>
<td>.051</td>
<td>.321</td>
</tr>
</tbody>
</table>

*Note.* Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic.
Superintendents with a doctorate degree received significantly higher scores than did superintendents with a master's degree for three of the frames. Superintendents with a doctorate had significantly higher means for the structural (.292, SE = .076), political (.281, SE = .073), and symbolic (.321, SE.086) frames. These findings indicate that superintendents with a doctorate are seen as more proficient in their use of both the leadership and management frames. Based on these findings, educational attainment appears to play a significant role in the manner in which the respondents view their superintendents as leaders and managers.

Analysis of Research Question 3

Research Question 3 (RQ3)

To what extent are the perceived differences of Texas public school superintendents' use of Bolman and Deal's four leadership frames related to the gender of their subordinates?

Null Hypothesis 2 (NH2)

No significant differences exist between male and female superintendent's perceived use of each of Bolman and
Deal's four leadership frames and the gender of their subordinates.

*Method of Analysis*

To investigate the possibility of gender bias among the respondents, the researcher divided the male and female respondents into two groups for further analysis and performed the same series of one-way ANOVAs that he had performed to answer RQ$_1$. This procedure allowed him to compare the ratings that the male and female respondents had assigned to their male and female superintendents for each of the four frames.

*Male Subordinates*

*Structural frame.* The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant ($F = 4.421$, df = 1,207, $p = .037 < .05$; see Table 17). The male respondents rated their female superintendents .210 points higher (SE = .100) than they rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

*Human resource frame.* The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant ($F = 8.563$, df = 1,207, $p = .004 < .05$; see Table
The male respondents rated their female superintendents .299 points higher (SE = .102) than they rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

Political frame. The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant ($F = 7.364$, df = 1,207, $p = .007 \leq .05$; see Table 17). The male respondents rated their female superintendents .257 points higher (SE = .095) than they rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

Symbolic frame. The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant ($F = 10.688$, df = 1,207, $p = .001 \leq .05$; see Table 17). The male respondents rated their female superintendents .363 points higher (SE = .111) than they rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

Analysis of Findings for Male Respondents

The male respondents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The mean
difference between female and male superintendents was greatest for the symbolic frame (.363), followed by the human resource (.299), political (.257), and structural (.210) frames. The order of means for frames usage was the same for both the male and female superintendents: The structural frame had the highest mean, followed by the human resource, political, and symbolic frames, respectively (see Table 17). These findings suggest that the male respondents view their female superintendents as more effective in their use of both the management and leadership frames. This finding indicates that the male respondents view their female superintendents as more likely than their male superintendents to demonstrate behaviors that are associated with effective leaders and managers.
Table 17

Male Subordinates' Perception of Their Superintendents' Use of Leadership Frames by Gender

<table>
<thead>
<tr>
<th>Frame</th>
<th>Gender</th>
<th>Mean</th>
<th>SE</th>
<th>N</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>Obs. power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Male</td>
<td>4.11</td>
<td>.071</td>
<td>104</td>
<td>1,207</td>
<td>4.421</td>
<td>.037*</td>
<td>.553</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.32</td>
<td>.070</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>Male</td>
<td>3.99</td>
<td>.072</td>
<td>104</td>
<td>1,207</td>
<td>8.563</td>
<td>.004*</td>
<td>.830</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.29</td>
<td>.072</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pol.</td>
<td>Male</td>
<td>3.94</td>
<td>.067</td>
<td>104</td>
<td>1,207</td>
<td>7.364</td>
<td>.007*</td>
<td>.771</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.20</td>
<td>.067</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sym.</td>
<td>Male</td>
<td>3.83</td>
<td>.079</td>
<td>104</td>
<td>1,207</td>
<td>10.688</td>
<td>.001*</td>
<td>.902</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.20</td>
<td>.078</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic.
*p ≤ .05.
Female Subordinates

Structural frame. The results of a one-way ANOVA indicated that the main effect of superintendent gender was not significant because \( p \) was greater than .05 (\( F = 2.262, df = 1,273, p = .134 < .05 \); see Table 18). Therefore, the researcher failed to reject the null hypothesis. Although the results of this analysis were not significant, it is important to note that the female respondents rated their female superintendents .148 points higher (SE = .099) than they rated their male superintendents.

Human resource frame. The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant (\( F = 4.927, df = 1,273, p = .027 < .05 \); see Table 18). The female respondents rated their female superintendents .246 points higher (SE = .111) than they rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

Political frame. The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant (\( F = 5.472, df = 1,273, p = .020 < .05 \); see Table 18). The female respondents rated their female superintendents .226 points higher (SE = .097) than they
rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

Symbolic frame. The results of a one-way ANOVA indicated that the main effect of superintendent gender was significant \((F = 5.289, \text{df} = 1,273, p = .022 \leq .05);\) see Table 18). The female respondents rated their female superintendents .259 points higher \((SE=.112)\) than they rated their male superintendents. Therefore, the researcher rejected the null hypothesis.

Analysis of Findings for Female Respondents

The female respondents rated their female superintendents significantly higher than they rated their male superintendents for the human resource, political, and symbolic frames. The greatest mean difference between the female and male superintendents was for the symbolic frame (.259), followed by the human resource (.246), political (.226), and structural (.148) frames. The order of means for frame usage was the same for both the male and female superintendents: The structural frame had the highest mean, followed by the political, symbolic, and human resource frames, respectively (see Table 18).
Table 18

Female Subordinates' Perception of Their Superintendents' Use of Leadership Frames by Gender

<table>
<thead>
<tr>
<th>Frame</th>
<th>Gender</th>
<th>Mean</th>
<th>SE</th>
<th>N</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>Obs.</th>
<th>power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Male</td>
<td>4.07</td>
<td>.071</td>
<td>133</td>
<td>1,273</td>
<td>2.262</td>
<td>.134</td>
<td>.323</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.22</td>
<td>.069</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>Male</td>
<td>3.81</td>
<td>.080</td>
<td>133</td>
<td>1,273</td>
<td>4.927</td>
<td>.027*</td>
<td>.599</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.06</td>
<td>.077</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pol.</td>
<td>Male</td>
<td>3.93</td>
<td>.069</td>
<td>133</td>
<td>1,273</td>
<td>5.472</td>
<td>.020*</td>
<td>.645</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.16</td>
<td>.067</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sym.</td>
<td>Male</td>
<td>3.82</td>
<td>.081</td>
<td>133</td>
<td>1,273</td>
<td>5.289</td>
<td>.022*</td>
<td>.630</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.08</td>
<td>.078</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Str. = structural, HR = human resource, Pol. = political, Sym. = symbolic.
*p ≤ .05.
These findings suggest that female respondents view their female superintendents as more effective in their use of one of the management frames and both of the leadership frames. Because the female respondents rated their female superintendents significantly higher than they rated their male superintendents on three of the four frames, it is apparent that the female respondents view their female superintendents in basically the same manner as do the male respondents.

Comparison of Findings for Male and Female Respondents

Both the male and female respondents rated their female superintendents higher than they rated their male superintendents for each frame. The male respondents rated both their male and female superintendents more highly than did the female respondents for each frame. Even though the data indicated gender differences among the respondents, these differences do not reflect a true gender bias in this study, as both the male and female respondents viewed their female and male superintendents in a similar manner.
Summary

The results of the first set of analyses, a straight comparison of gender that included the ratings of all the superintendents for all four frames, revealed that female superintendents had significantly higher means than did male superintendents for each frame. These findings suggest that the female superintendents are viewed by the respondents as more effective in their use of both the managerial (structural and human resource) and leadership (political and symbolic) frames than are the male superintendents. The finding that female superintendents received significantly higher scores than did male superintendents on each frame indicates that female superintendents are viewed by their respondents as exhibiting more of the behaviors associated with successful leaders and managers.

When the controls of superintendent tenure, school setting, and school size were introduced, female superintendents continued to have significantly higher means for each of the four frames. These main effects did not negate the significant findings for RQ1. However, when the main effect of age was introduced, all of the
significant findings for RQ1 regarding gender disappeared. When the control of degree was introduced, the significant findings from RQ1 persisted for the human resource, political, and symbolic frames.

Seven of the 8 analyses regarding the gender of the respondent were significant. The male respondents rated their female superintendents significantly higher than they rated their male superintendents for each frame. The female respondents rated their female superintendents more highly than they rated their male superintendents for all four frames, but the difference in means was only significant for the human resource, political, and symbolic frames. Even though the male respondents rated both their female and male superintendents more highly than did the female respondents for each frame, there was no indication that a gender bias existed in this study.

The female superintendents were rated more highly for each frame in all 32 analyses presented in this chapter. The data indicate that female superintendents are viewed by the respondents as more effective than are male superintendents in their use of the managerial (structural
and human resource) and leadership (political and symbolic) frames.
CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study was to broadly examine and analyze gender differences in superintendents’ leadership styles through analyzing their subordinates’ responses on Bolman and Deal’s (1991) Leadership Orientations (Other) survey. This study provided insights into the leadership frames used by male and female Texas public school superintendents.

Description of the Sample

The researcher selected for analysis 99 female and 99 male superintendents who were serving in a Texas public school district with at least three high-ranking subordinate administrators. The researcher matched each male superintendent to a female superintendent working within a district of similar enrollment and within the same Educational Service Center region. The respondents reported that 51% of their superintendents were female, 49% male, 85% White, 12% Hispanic, and 2% Black. Over 57% of the
superintendents were over 54 years of age whereas 38% were between 43 and 53 and 3% were younger than 43. Almost 72% of the superintendents had between 1 and 8 years of tenure in their district whereas only 20% had over 8 years of tenure. Of the almost 62% of superintendents who had earned a doctorate degree, approximately 38% was female and 24% was male. Superintendents representing suburban districts made up 51% of the sample, superintendents from rural districts made up 32% of the sample, and superintendents from urban districts made up 17% of the sample. Over 60% of the districts represented had over 5,000 students, 31% had between 1,000 and 5,000 students, and only 9% had less than 1,000 students.

The researcher solicited every campus principal and assistant superintendent employed by these 198 districts, a total of 2,344 high-ranking subordinates, to take part in this survey study. After sending an e-mail solicitation letter, the researcher received approximately 308 e-mail failure notices and one notification from a school district stating that its 81 high-ranking subordinates would not take part in this study. Approximately 25% (n = 484) of the remaining subordinates completed the survey.
Roughly 57% of the respondents were female, 43% male, 77% White, 14.8% Hispanic, and 6.6% Black. Over 46% of the respondents was between the ages of 43 and 53 and nearly 29% was younger than 43. Approximately 54% of the respondents had over 8 years of tenure in their district and almost 73% had earned a master’s degree.

Statistical Methods

The researcher performed both one-way and two-way ANOVAs to analyze the data. He performed one-way ANOVAs to directly compare gender differences in the perceived use of Bolman and Deal’s (1991) four leadership frames and identify possible gender biases among the respondents. The researcher performed a series of two-way ANOVAs to compare the influence of multiple main effects and interaction effects on each dependent variable (each frame) and ascertain whether the perceived differences in superintendent frame use remained as various main effects were introduced. The researcher included the main effect of gender and the following control main effects in each two-way ANOVA to answer the second research question: (a) gender and tenure, (b) gender and school setting, (c)
gender and school size, (d) gender and superintendent age, and (e) gender and superintendent degree.

Findings

The primary focus of this study was to compare differences between male and female superintendents’ perceived use of Bolman and Deal’s (1991) four leadership frames. A secondary focus was to determine whether gender bias existed within the subordinate administrators’ responses and perceptions. The researcher developed three research questions to facilitate a comprehensive review of the data. The following sections present the findings for each research question.

Research Question 1

Research Question 1 (RQ1). To what extent do Texas male and female public school superintendents differ in their use of Bolman and Deal’s four leadership frames as perceived by their high-ranking administrative subordinates?

Null Hypothesis 1 (NH1). No significant differences exist between male and female superintendents’ perceived use of each of Bolman and Deal’s four leadership frames.
Findings for RQ1. The respondents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The female superintendents had significantly higher means for the structural (.174, \( p = .014 \)); human resource (.266, \( p = .001 \)); political (.239, \( p = .001 \)); and symbolic (.303, \( p = .000 \)) frames. These findings indicate that female superintendents are viewed by the respondents as more effective in their use of both the management (structural and human resource) and leadership (political and symbolic) frames. The behaviors of the female superintendents assessed in this study are more closely tied to successful leadership and management styles than are those of the male superintendents.

Research Question 2

Research Question 2 (RQ2). When controls are introduced for superintendent tenure, school setting, school size, superintendent age, and superintendent degree, do the perceived gender differences of superintendents persist?

Findings for tenure. When the main effect of tenure was introduced in conjunction with the main effect of gender, female superintendents continued to have a
significantly higher mean for each of the four frames. Female superintendents’ means were .231 points higher (SE = .107, \( p = .031 \)) for the structural frame, .296 points higher (SE = .117, \( p = .011 \)) for the human resource frame, .248 points higher (SE = .103, \( p = .017 \)) for the political frame, and .314 points higher (SE = .121, \( p = .010 \)) for the symbolic frame. The main effect of tenure and the interaction effect between gender and tenure were not significant.

Even with the addition of the main effect of tenure, the respondents continue to view their female superintendents as more likely than are their male superintendents to demonstrate the behaviors associated with successful leadership and management.

Findings for setting. When the main effect of setting was introduced into the model, female superintendents continued to have significantly higher means than did male superintendents for each of the four frames. Female superintendents’ means were .236 points higher (SE = .094, \( p = .012 \)) for the structural frame, .257 points higher (SE = .103, \( p = .013 \)) for the human resource frame, .246 points higher (SE = .091, \( p = .007 \)) for the political frame, and
.249 points higher (SE = .107, p = .020) for the symbolic frame. The main effect of setting was not significant for any of the four frames. However, the interaction effect between gender and setting was significant for both the structural (p = .019) and the human resource (p = .044) frames.

In both of these significant interactions, the greatest difference was found in rural districts. For the structural frame, the mean score for female superintendents in rural districts was 4.38 (SE = .100, n = 59), compared to 3.90 (SE = .078, n = 96) for male superintendents. For the human resource frame, the mean score for female superintendents in rural districts was 4.27 (SE = .110, n = 59), compared to 3.70 (SE = .086, n = 96) for male superintendents.

These findings indicate that even after the main effect of setting was introduced into the model, the respondents continue to believe that the female superintendents exhibit higher levels of leadership and management behaviors than do the male superintendents. In addition, the interaction effect between gender and setting indicated that female superintendents in rural districts
are seen as more effective managers than are their male counterparts.

*Findings for school size.* Even after the main effect of size was introduced into the model, female superintendents continued to have significantly higher means than did male superintendents for each of the four frames. Female superintendents’ means were .313 points higher (SE = .095, \( p = .001 \)) for the structural frame, .427 points higher (SE = .104, \( p = .000 \)) for the human resource frame, .346 points higher (SE = .091, \( p = .000 \)) for the political frame, and .425 points higher (SE = .107, \( p = .000 \)) for the symbolic frame. The main effect of size had a significant finding for the political (\( p = .021 \)) and symbolic (\( p = .004 \)) frames. Superintendents from large districts had significantly higher means than did superintendents from midsized districts for both the political (mean difference = .200, \( p = .009 \)) and symbolic (mean difference = .276, \( p = .002 \)) frames. The interaction effect between gender and size was significant for both the structural (\( p = .032 \)) and human resource (\( p = .016 \)) frames.

For both of these significant interactions, the greatest difference between male and female superintendents
was in small school districts. For the structural frame, the mean score for female superintendents in small districts was 4.54 (SE = .158, n = 24), compared to 3.91 (SE = .177, n = 19) for male superintendents. The difference between male and female superintendents narrowed in midsized school districts (mean difference = .277) and almost completely disappeared in large districts (mean difference = .029). For the human resource frame, the mean score for female superintendents in small districts was 4.37 (SE = .172, n = 24), compared to 3.61 (SE = .194, n = 19) for male superintendents. The difference between male and female superintendents narrowed in midsized districts (mean difference = .436) and almost completely disappeared in large districts (mean difference = .088).

These findings indicate that the female superintendents' perceived use of leadership frames persisted even after the main effect of size was added to the model. The respondents perceive superintendents from large districts (≥ 5,000 students) as using the leadership frames more effectively than do superintendents from midsized (between 1,000 and 4,999 students) districts. As with the findings for rural districts, female
superintendents in small districts are perceived as more likely to exhibit behaviors associated with effective management than are their male counterparts.

Findings for age. When the main effect of age was introduced into the model, female superintendents continued to have higher means than did male superintendents for each of the four frames, but the differences were no longer significant. Age is the only main effect that negates the significant findings for all four frames addressed by RQ1.

Findings for degree. When the main effect of degree earned was introduced into the model, the female superintendents continued to have significantly higher means than did the male superintendents for the human resource, political, and symbolic frames. The female superintendents’ means were .253 points higher (SE = .084, p = .003) for the human resource frame, .175 points higher (SE = .073, p = .018) for the political frame, and .223 points higher (SE = .086, p = .010) for the symbolic frame.

The main effect of degree had a significant influence on the structural, political, and symbolic frames. Superintendents with a doctorate degree had significantly higher means on the structural (.292, SE = .076, p = .000);
political (.281, SE = .073, p = .000); and symbolic (.321, SE = .086, p = .000) frames. The interaction effect between gender and degree was not significant for any of the four frames.

Analysis of Findings for Gender and Degree. The findings for RQ1 persisted in the findings for RQ2 for the human resource, political, and symbolic frames when the main effect of degree was added to the model. Specifically, the female superintendents continue to be viewed as using both leadership frames and one management frame more effectively than are the male superintendents. Additionally, superintendents with a doctorate degree are viewed as exhibiting more behaviors associated with effective leadership and management than are superintendents with a master’s degree.

Research Question 3

Research Question 3 (RQ3). To what extent are the perceived differences of Texas public school superintendents’ use of Bolman and Deal’s four leadership frames related to the gender of their subordinates?

Null Hypothesis 2 (NH2). No significant differences exist between male and female superintendents’ perceived
use of each of Bolman and Deal's four leadership frames and the gender of their subordinates.

Findings for RQ3. The male respondents rated their female superintendents significantly higher than they rated their male superintendents for each of the four frames. The mean difference between female and male superintendents was greatest for the symbolic frame (.363, SE = .111, p = .001), followed by the human resource (.299, SE = .102, p = .004); political (.257, SE = .095, p = .007); and structural (.210, SE = .100, p = .037) frames. The female respondents rated their female superintendents significantly higher than they rated their male superintendents for the human resource (SE = .111, p = .027); political (SE = .097, p = .020); and symbolic (SE = .112, p = .022) frames. The mean difference between female and male superintendents was greatest for the symbolic frame (.259), followed by the human resource (.246), political (.226), and structural (.148) frames.

The male respondents rated both their male and female superintendents more highly for each of the four frames than did the female respondents. Both the male and female respondents rated their superintendents most highly on
their use of the structural frame and more highly on the political frame than the symbolic frame. The main discrepancy in the respondents’ perceptions pertained to the human resource frame; the male respondents rated their superintendents’ use of the human resource frame as the second highest whereas the female respondents rated their superintendents’ use of this frame as the lowest. Despite the gender differences pertaining to this finding, there does not appear to be a gender bias among the respondents overall.

Conclusions

The purpose of this study was to broadly examine and analyze gender differences in superintendents’ leadership styles through analyzing their subordinates’ responses on Bolman and Deal’s (1991) Leadership Orientations (Other) survey. The researcher constructed the research questions and null hypotheses to direct him toward a series of conclusions regarding differences in the perceived use of the leadership frames according to gender.

Researchers who have investigated the relationship between gender and leadership have obtained conflicting results. According to Barbuto et al. (2007), for every
researcher who has found a correlation, another has found that no correlation exists. Moreover, many of the findings indicating differences in the leadership styles of men and women have not been statistically significant, and it appears that neither sex possess a true leadership advantage over the other (Barbuto et al.; Bolman & Deal, 1991; Eagly et al., 1995; Thompson, 2000).

This study was unique in that the respondents rated their female superintendents more highly than they rated their male superintendents for each of the four frames in all 32 analyses, of which 26 analyses were statistically significant ($\alpha \leq .05$). Whereas the structural and human resource frames are closely associated with management, the political and symbolic frames are closely associated with leadership (Bolman & Deal, 1991). Having rated female superintendents more highly for all four frames, it is apparent that the respondents perceive the female superintendents analyzed in this study as more likely to display the behaviors of effective leaders and managers than are the male superintendents in this study.

As discussed in chapter 1, Eagly et al. (1995) reported that both men and women are equally effective
leaders, and despite all of the barriers that women face in obtaining a leadership position, once in the position they are as effective as are their male counterparts. In this study, the participants indicated that they do not view their female superintendents as effective as their male counterparts but rather as more effective in their use of both the management (structural and human resource) and leadership (political and symbolic) frames.

As discussed in chapter 2, most previous dissertations and studies of leadership effectiveness in using the four frames have been based on self-evaluations using the Bolman and Deal (1991) Leadership Orientations (Self) survey. Although the findings of these studies have provided insight into how leaders view their own use of the leadership frames, they may not provide accurate information on how leaders truly use each frame. This researcher based this study on the premise that perception is in fact reality. Based on this understanding, this section only compares findings from studies that also used Bolman and Deal’s (1991) Leadership Orientations (Other) survey.
This study found that assistant superintendents and campus principals rated their female superintendents significantly higher than they rated their male superintendents on their use of each of the four frames. These findings are similar to those reported by Fleming (2003), who found that the 311 teachers participating in his study rated their female principals \((n = 16)\) significantly higher than they rated their male principals \((n = 3)\) for all four frames. In contrast, Chang (2004) found that faculty members rated their male chairs \((n = 126)\) more highly than they rated their female chairs \((n = 104)\) for each frame. Among the ratings for the four frames, Chang found that the males chairs' ratings for the structural, human resource, and symbolic frames were significantly higher than were those for the female chairs.

The male respondents in this study rated both their male and female superintendents more highly than did the female respondents. These findings are supported by Chen (2004), who found that male teachers \((n = 84)\) rated their principals significantly higher than did female teachers \((n = 117)\) for each of the four frames. Although Ross (2006) also found that male teachers rated their principals more
highly on the human resource and symbolic frames, he also
found that female teachers rated their principals more
highly on the structural and political frames. Although
Ross's findings are insightful, they were not statistically
significant.

This study adds credence to Eagly et al.'s (1995)
contention that the fear that women cannot perform well in
a top leadership position in an organization is
unjustified. After reviewing the findings of this study, it
might be difficult for educators and researchers to
understand why female superintendents account for only 18%
of all superintendents in the United States (Gewertz, 2006;
Grogan, 2005). It appears that the reasons for the
underrepresentation of women in the superintendency can be
traced to two overarching factors. First, women face a
series of obstacles to the superintendency. As previously
discussed, Eagly and Carli (2007) proposed that we should
no longer view the barriers to the superintendency as
forming a "glass ceiling" but rather a "labyrinth" to
advancement. The second and probably greater obstacle is
that school boards are hesitant to hire a female
superintendent (Glass, 2000). As gatekeepers to the
superintendency, the school board alone determines who has access to this position (Bourisaw & Dana, 2006). Women are often interviewed for the position of superintendent, but do not have a realistic opportunity to be chosen.

Early criticism regarding gender studies stemmed from the fact that early studies were based on a male leadership perspective (Brunner, 1998a; Shakeshaft, 1989; Wesson & Grady, 1994a, as cited in Katz, 2004). In fact, Cossetti and Rusch (1995) complained that Bolman and Deal’s (1991) four frames are based on the traditional male leadership paradigm. Despite the fact that women may have been at a disadvantage in early studies, the women investigated in this study appear to have surpassed their male counterparts in the ability to practice behaviors closely associated with effective leadership and management. By adding pertinent information to the existing body of knowledge regarding the perceived use of Bolman and Deal’s (1991) leadership frames by both male and female superintendents, this study has addressed Edmunds’s (2008) complaint that “although there is a growing body of research on female superintendents, there is still a paucity of information on how female superintendents lead” (p. 2).
Marzano and Waters (2006) argued, “When district leaders effectively address specific responsibilities, they can have a profound, positive impact on student achievement” (p. 8). With this argument and the findings of this study in mind, this researcher recommends that the following question serve as the basis of future discussion and research: Does a superintendent’s leadership and management aptitude impact student achievement? Future studies should consider the following five district-level responsibilities, which Marzano and Waters have shown to have a significant impact on student achievement:

1. *Engaging in collaborative goal setting.* In this step, which is part of the human resource frame, it is important to include as many stakeholders as possible in goal setting activities. Although total agreement is not completely necessary, all stakeholders should agree to pursue and attain the established goals.

2. *Establishing nonnegotiable goals for achievement and instruction.* In this step, which is part of the structural frame, specific goals and targets are set for the district, schools, and students in regards to student achievement.
3. Ensuring board alignment with and support of district goals. In this step, which is part of the structural frame, the superintendent ensures that the goals that the board has set remain the board's top priority and does not allow other initiatives to detract from them. It is important that the superintendent refocus the board whenever it drifts away from the established goals.

4. Monitoring of achievement and instruction goals. In this step, which is part of the structural frame, the superintendent continually monitors student achievement, addresses any discrepancies between district goals and student achievement, and develops methodologies that ensure that the goals are achieved.

5. Using resources to support the goals for instruction and achievement. In this step, which is part of the political frame, "superintendents of high-performing districts ensure that the necessary resources, including time, money, personnel, and materials, are allocated to accomplish the district's goals" (p. 13). Superintendents might have to cut back in areas that are not tied closely to the district's goals, which can lead to very heated debate.
As a superintendent's leadership and management styles clearly impact student achievement, it is essential that school boards hire superintendents who are strong leaders and managers. Because the superintendency can have a positive impact on student achievement, it is paramount that school boards hire the best candidate, regardless of gender.

Recommendations

This study has provided insightful information regarding gender and the perceived use of Bolman and Deal's (1991) leadership frames. Specifically, this study found that female superintendents are perceived by their administrative team as significantly superior to their male counterparts in their use of the managerial (structural and human resource) and leadership (political and symbolic) frames. Despite this fact, female candidates for the superintendency are routinely overlooked by school boards, who are entrusted by the voters to select the best candidate, regardless of gender.

Based on the results of this study, this researcher makes the following recommendations:
1. Although many school boards are hesitant to hire female superintendents because they doubt women's managerial and leadership abilities, this study indicates that high-ranking school administrators have no such doubts. Although there is no plausible way to enlighten and convince all school board members across the nation that women are legitimate choices for the superintendency, policymakers should consider requiring school boards to include and give an active voice to assistant superintendents and campus principals in the superintendent selection process.

2. Graduate schools and superintendent preparation programs should use the information and findings of this study to enlighten aspiring administrators. By gaining greater understanding of the implications of the study's findings, both male and female candidates for the superintendency could gain greater understanding of the complexities associated with school leadership and management.

3. The information presented in this study could be used to increase the awareness of board members and superintendent search firms concerning the leadership and
management capabilities of female candidates and the continued underrepresentation of women in the superintendence. Additionally, school boards and superintendent search firms could use Bolman and Deal's (2003) four frames as a basis for developing a series of comprehensive interview questions they use to screen potential candidates.

4. A qualitative study of superintendent search firms should be conducted to gain greater understanding of the reasons why school boards are hesitant to hire female superintendents. Because these search firms are involved in the superintendent hiring process in many school districts, they should be able to provide vital information regarding the barriers that female candidates face when aspiring to the superintendancy.

5. Replication of this study in various geographical areas and states would allow for gender comparisons between public school superintendents in Texas and other states and regions.

6. Further research should be conducted into gender and race as they pertain to the superintendancy, possibly by studies that replicate aspects of this study. Due to the
extremely small numbers of minority females in the position of superintendent, future studies should encompass an extremely large geographical area. Interesting findings emerged in the current study regarding race; however, the sample size of minorities was too small to make accurate assumptions regarding gender and race.

7. Further research should be conducted into small and rural school districts. The researcher found the interaction effects between gender and small school districts and between gender and rural school districts to be significant. Quantitative and qualitative research examining the possible reasons for these significant gender differences is warranted.
References


**Appendix A**

**Leadership Orientations (Other) Survey**

### Leadership Orientations (Other)

1. **Leadership Orientations (Other)**

   This questionnaire asks you to describe the person that you are rating in terms of leadership and management style.

   **1. Leader Behaviors**

   You are asked to indicate how often each item is true of the person that you are rating.

   Please use the following scale in answering each item.

   1 = Never

   2 = Occasionally

   3 = Sometimes

   4 = Often

   5 = Always

   So, you would answer '1' for an item that is never true of the person you are describing. '2' for one that is occasionally true, '3' for one that is sometimes true, and so on.

   Be discriminating! The results will be more helpful to the ratee if you think about each item and distinguish the things that the ratee really does all the time from the things that s/he does seldom or never.

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   **1. My superintendent thinks very clearly and logically.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **2. My superintendent shows high levels of support and concern for others.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **3. My superintendent shows an exceptional ability to mobilize people and resources to get things done.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **4. My superintendent inspires others to do their best.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **5. My superintendent strongly emphasizes careful planning and clear time lines.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **6. My superintendent builds trust through open and collaborative relationships.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **7. My superintendent is a very skillful and shrewd negotiator.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **8. My superintendent is highly charismatic.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always

   **9. My superintendent approaches problems through logical analysis and careful thinking.**

   - Never
   - Occasionally
   - Sometimes
   - Often
   - Always
<table>
<thead>
<tr>
<th>Leadership Orientations (Other)</th>
</tr>
</thead>
<tbody>
<tr>
<td>* 10. My superintendent shows high sensitivity and concern for others' needs and feelings.</td>
</tr>
<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 11. My superintendent is unusually persuasive and influential.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 12. My superintendent is an inspiration to others.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 13. My superintendent develops and implements clear, logical policies and procedures.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 14. My superintendent fosters high levels of participation and involvement in decisions.</td>
</tr>
<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 15. My superintendent anticipates and deals adroitly with organizational conflict.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 16. My superintendent is highly imaginative and creative.</td>
</tr>
<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 17. My superintendent approaches problems with facts and logic.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
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<tr>
<td>* 18. My superintendent is consistently helpful and responsive to others.</td>
</tr>
<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 19. My superintendent is very effective in getting support from people with influence and power.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 20. My superintendent communicates a strong and challenging vision and sense of mission.</td>
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<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>* 21. My superintendent sets specific, measurable goals and holds people accountable for results.</td>
</tr>
<tr>
<td>[ ] Never  [ ] Occasionally  [ ] Sometimes  [ ] Often  [ ] Always</td>
</tr>
<tr>
<td>Leadership Orientations (Other)</td>
</tr>
<tr>
<td>--------------------------------</td>
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<tr>
<td>* 22. My superintendent listens well and is unusually receptive to other people's ideas and input.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 23. My superintendent is politically very sensitive and skillful.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 24. My superintendent sees beyond current realities to create exciting new opportunities.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 25. My superintendent pays extraordinary attention to detail.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 26. My superintendent gives personal recognition for work well done.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 27. My superintendent develops alliances to build a strong base of support.</td>
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<tr>
<td>Never</td>
</tr>
<tr>
<td>* 28. My superintendent generates loyalty and enthusiasm.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 29. My superintendent strongly believes in clear structure and a chain of command.</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>* 30. My superintendent is a highly participative manager.</td>
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<tr>
<td>Never</td>
</tr>
<tr>
<td>* 31. My superintendent succeeds in the face of conflict and opposition.</td>
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<tr>
<td>Never</td>
</tr>
<tr>
<td>* 32. My superintendent serves as an influential model of organizational aspirations and values.</td>
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<tr>
<td>Never</td>
</tr>
</tbody>
</table>
Leadership Orientations (Other)

2. Demographic Information

This information is needed to analyze the survey data.

* 1. My superintendent’s gender is:
   - [ ] Male
   - [ ] Female

* 2. My superintendent’s race is:
   - [ ] White
   - [ ] Hispanic
   - [ ] Black
   - [ ] Other

* 3. My superintendent’s age is:
   - [ ] ≤42
   - [ ] 43-53
   - [ ] ≥54

* 4. My superintendent has been employed in this District as the superintendent for:
   - [ ] Less than 1 year
   - [ ] 1-5 years
   - [ ] ≥5 years

* 5. My superintendent’s highest degree is a:
   - [ ] Bachelor's
   - [ ] Master's
   - [ ] Doctorate

* 6. This school district is a(n):
   - [ ] rural district
   - [ ] suburban district
   - [ ] urban district

* 7. This school district has:
   - [ ] ≤999 students
   - [ ] 1000-4999 students
   - [ ] ≥5000 students
Leadership Orientations (Other)

*8. My gender is:
   □ Male
   □ Female

*9. My race is:
   □ White
   □ Hispanic
   □ African American
   □ Other

*10. My age is:
   □ ≤42
   □ 43-53
   □ ≥54

*11. My highest degree is a:
   □ Bachelor
   □ Master
   □ Doctorate

*12. I have been employed in this District for:
   □ Less than 1 year
   □ 1-5 years
   □ ≥5 years
Appendix B

Letter of Solicitation

October 8, 2008

Dear Assistant Superintendent, Principal, or Administrator:

I am currently enrolled at Seton Hall University in the Executive Ed.D. program as a doctoral student.

I am collecting data for my dissertation. The title of my dissertation is *Perception of the Use of Leadership Frames by Male and Female Superintendents in Texas by Top-Ranking School Administrators*. The purpose of this research will be to broadly examine and analyze gender differences in leadership styles through analyzing their subordinates’ responses using Bolman and Deal’s four-frame Leadership (Other) survey. This study will compare the leadership preferences of male and female superintendents in Texas.

You have been selected to complete this survey because you have been identified as a high-ranking administrator in your district. This survey is designed to collect your perception of your superintendent’s leadership style.

This research is being conducted entirely online using SurveyMonkey.com. The survey instrument utilized in this study will be the Bolman and Deal’s (1991) Leadership Orientations (Other) survey, which was developed to measure leadership orientation styles based on Bolman and Deal’s four-frame model.

The risks of this research are minimal because the procedures that will be used are consistent with sound research design. The results of this survey will only be reported as group data and will not be reported in any format that connects your responses to your superintendent or district. All responses will remain confidential.

Data will be secured in a locked fireproof safe in the office of the researcher. All electronically stored data will be stored on a USB memory key.

Attached to this email is a link to the survey. The survey is short and should not take more than fifteen minutes to complete. Your participation in the study is voluntary.
By proceeding to the survey, you are consenting to participate in this research study. You may choose to stop participation at any time.

Please click on this link and proceed to the survey:


This research study has been approved by the Seton Hall University Institutional Review Board.

Questions regarding this study can be directed to the Director of the Institutional Review Board, Dr. Mary F. Ruzicka, at (973)313-6314 or irb@shu.edu, or my mentor, Dr. Elaine Walker, at (973) 275-2307 or walkerel@shu.edu.

Sincerely,
Charles Kolb
(432)664-5259
kolbchar@shu.edu