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The purpose of this research was to determine if principals' behaviors or actions related to a systems orientation or person orientation as defined by the trait approach to leadership theory. Also important to the study was to determine if teachers' perceptions of principal leadership behaviors were gender specific, i.e., to determine if subordinates (i.e. teachers) perceived male and female principals differently, as well as to determine if those perceptions differ according to subordinate gender (i.e. do male and female teachers view male and female principals differently?).

Data were gathered from a school district in the southeastern United States. Approximately 300 teachers from eleven traditional high schools were surveyed using the Leader Behavior Description Questionnaire (LBDQ) based on the work of Ralph Stogdill and the Ohio State University Leadership Studies. The survey was uploaded and administered as a web based survey, with respondents contacted through email.

The evidence from the study shows that there was no statistical difference in the leadership styles of mid level and high performing men and women principals as reported by teachers. However, male principals were reported more often to be in the lower performing quadrants (Structured or Passive Leaders)

than women leaders. Female principals were reported as being more attentive to systems and person orientations than their male counterparts.

Data gathered outside of the LBDQ provided evidence that women and men teachers both report being more satisfied with female principals than with male principals, as indicated by responses to the question of “do you feel your principal is effective?”

AN INVESTIGATION INTO THE BEHAVIORS OF HIGH SCHOOL LEADERS: GENDER AND ITS RELATIONSHIP TO LEADER ORIENTATIONS TO PERSONS AND SYSTEMS

by

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Approved by

Dr. Carolyn Riehl
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To Abby, my little woman, my source of inspiration for and dedication to this work.

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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I would like to thank and acknowledge my dissertation committee Chair Dr. Carolyn Riehl, for many years of dedication to my personal, educational, and professional growth over the year but especially over the past few years as we worked through the dissertation process from afar. I would like to also thank committee member Dr. Carl Lashley, who was often a source of moral support throughout the process. I would like to acknowledge Dr. Joanne Chesley for her dedication to my work and Dr. Larry Coble for his encouragement throughout the doctoral program.

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CHAPTER I

INTRODUCTION

This is a dissertation on the behaviors of high school principals and the relationship of these behaviors to gender. In this introduction I provide a general rationale for conducting research on this topic. Then, in Chapter II, I discuss pertinent literature relating to various theories of leadership, the historical perspective of women in educational leadership, and current themes related to gender and leadership.

That literature is then used to conceptualize a framework that can be used to analyze leadership behaviors as they relate to gender. Comments on the literature are included. The work continues in Chapter III with a discussion of the specific research questions I have explored, and a description of the methodologies I used in conducting this research study. Chapter IV presents an analysis of the data collected during the research study as framed within five specific hypotheses. The dissertation concludes with Chapter V where I offer a brief summary of the research questions as they relate to the literature, noteworthy trends presented in the data not related previously discussed, future implications, and future research suggestions.

Focus and Rationale of Research

Research continually points to the behavior of school leaders as one of the most important factors supporting high quality schools (Daresh, 1991). The principal's office has historically been occupied by men and many prescriptions for leader behavior have been derived from the study or example of male principals. Although today more women are now occupying the role of school leader, stereotypical gender norms are still present in the schoolhouses of today. To illustrate, while recently conducting an interview of a teaching candidate, the candidate referred to the principal in an example as "he or him" exclusively while being interviewed by two women principals. This is an interesting occurrence for the twenty-first century.

This topic is of particular interest to me first and foremost because I am a female currently working as a school principal. When processing situations, I will reflect on my actions with colleagues some of whom are men. Numerous times, when discussing situations particular to my school or theirs, our actions, thoughts, and comments are similar. However, I have found that the men are able to say and act in a much more authoritative manner than am I and still be viewed as effective with their staff.

My male colleagues and I will discuss situations where they responded with a firm, educationally sound decision and are praised for being a good "instructional leader" of the school, where I respond with the same answer, almost verbatim, and am referred to as "cold and rigid," among other things.

When working as a school leader, men do not have to consider their sexuality as a factor impacting their work. I argue and wish to study this area because I believe that women have to place their gender, and therefore the gender associated stereotypes, in the forefront of their actions to avoid possible negative responses from faculty when the gender stereotypes are challenged.

So often expectations and definitions for success in life fall along gender-defined lines. Men are thought to be or even portrayed in society as strong, decision making leaders and women are soft, caring individuals who are to look to the males for assistance in making the decisions of their life. And, any challenge to these well-instilled historical stereotypes is fraught with negative stereotypes for both the man and woman leader. That is, men who are more sensitive to the relationships within the school are viewed with suspicion, often about their sexual orientation, and women who are more attentive to task are scorned for being outside the realm of normalcy for women. Although neither may be true, the behaviors of the school administrator begin to define their overall effectiveness.

From my experience, it seems that men and women principals sometimes, though not always, behave differently. Furthermore, it seems to me that men and women principals' actions are perceived differently by their male and female teachers. That is, gender relates to leadership in two ways: the gender of the leader (whether the principal is a male or female) and the gender of the teacher

(whether the teacher is a male or female). I have conducted this dissertation research to understand these dynamics more fully.

As I more fully describe in Chapter III, the methodology I utilized in this study was an online survey administered to the teaching staff of eleven high schools in a school district in the Southeastern United States.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Educational administration has long been a male dominated field. In the past, male members of the educational community quickly assumed the role of leader in the forms of principal and superintendent, leaving women behind to assume teaching and other less powerful roles. However, as of late, more and more women are seeking those higher level school leadership positions, jockeying for the seat as hard and fast as their male counterparts, especially for the school principalship. The United States Department of Education (1997) cites an increase from 25% of public school administrators being women in 1988 to 34% in 1994. Although this increase begins to show progress in women obtaining leadership roles, when compared with the percentages of teaching roles held by teachers, there is a vast disconnect. In 1991, women accounted for 68.3 percent of the teaching population, while only 31.2% of administrators were female (Hammer & Rohr, 1994).

With this shift in educational administration to include women becoming more and more prevalent, it is important to understand some of the gender issues surrounding this theme. In this section, historical literature surrounding key themes and concepts related to leadership will be discussed. Literature more

specific to women in educational administration will then be discussed. Also, fundamental differences in the leadership styles of male and female school administrators will be reviewed.

Leadership Theory: Models and Approaches

> A good leader does three things well. First he [or she] knows what's going on. Second, he [or she] knows the right thing to do. And, third, he [or she] makes the right things happen, working through subordinates well organized and motivated to get things done. (Bolman & Deal, 1993, p. 24)

"Leadership" is quickly becoming a term that holds multiple meanings in society and therefore becoming much more of a concept, like democracy, rather than an operationalized term that can be proven or disproven given a specific list of qualifying characteristics. Leadership has been described in terms of personality perspectives, power relationships, goal achievement, or as an act or behavior (Northouse, 2001). Effective school leadership is often described using a combination of the above stated perspectives. "Strong leadership" has been linked to numerous attributes including a positive school climate, and high teacher morale as well as strong instructional leadership, positive student growth, and positive attention to the management of the school (Blasé, 1987). However, school leadership is founded on the fundamental tenets of leadership in general and the definition of a leader has been conceptualized in numerous ways. A discussion of several of these theories and models follows.

Trait Approach

During the early years of leadership study, prior to 1945, one of the most common theories was the trait theory (Bass, 1990; Hersey, Blanchard, & Johnson, 1996; Northouse, 2001). Trait theory is founded on the premise that leaders are born with specific characteristics such as friendliness or intelligence. Numerous researchers sought to identify a list of traits common to all good leaders. During the late 1940's, Stogdill conducted research that "suggested that no consistent set of traits differentiated leaders from non-leaders across a variety of situations" (Northouse, 2001, p. 15). Thus, a shift occurred from the traits of the "great man" to the impact of situations on leadership. However, over the past century studies have continued to be conducted on leadership traits and characteristics (Kirkpatrick & Locke, 1991; Lord, DeVader, & Allinger, 1986; Mann, 1959; Stogdill, 1948; 1974) to identify five major traits common to those identified as leaders: intelligence, self-confidence, determination, integrity, and sociability. The following statements offer a brief discussion of how each of those five traits is prevalent in a leader and the impact it has on the leader's environment (Bass, 1990; Northouse, 2001).

1. *Intelligence*: IQ, or intellectual ability, in leaders is usually high. That is, leaders with high IQs are able to reason at high levels, have strong verbal skills, and are perceptive with regard to what is occurring around them. The studies determined that when a leader's intelligence was similar to those around him, there was a positive effect. Where leaders' intelligence was much greater than

those around him, there was a negative impact on the environment, relating to a lack of ability to communicate effectively with followers (Bass, 1990; Mann, 1959; Northouse, 2001; Stogdill, 1948).

2. *Self Confidence*: Exhibiting a strong sense of self confidence, being certain about one's skill and competence level, was another characteristic common to leaders studied. Leaders often thought positively of themselves and their abilities and believed that they were able to make a difference in their environment. However, a lack of feeling of inferiority to others and lack of modesty could allow a leader to negatively impact their environment through an appearance of arrogance (Bass, 1990; Northouse, 2001; Stogdill, 1948; 1974).

3. *Determination*: Determination, often characterized by initiative, persistence, and ambition, refer to a leader's desire to get a job done. Possessing high levels of determination will mean that the leader will see that the job is completed with an astute ability to problem solve, but may fall victim to perceptions of being pushy, having unrealistic demands, or overly directive (Bass, 1990; Northouse, 2001).

4. *Integrity*: One of the most important common traits to leaders is that of integrity. Being honest and trustworthy allows followers to believe and have faith in their leader. Followers trust that leaders with integrity or "character" will do as they say they will do. There are no documented negative effects that good character can have on a leader's environment (Bass, 1990; Kirkpatrick & Locke, 1991; Northouse, 2001).

5. *Sociability*: Being sociable, friendly, tactful, and diplomatic, are traits common to leaders. People identified as leaders seek positive relationships and work hard to maintain them. They are cooperative and exhibit a sense of caring about their environment. Again, there are no negative impacts of sociability on a leader's environment (Bass, 1990; Northouse, 2001; Stogdill, 1948; 1974).

Trait theory is grounded in a plethora of research and has many merits. It allows us as a society to label and pinpoint characteristics to develop into leaders. However, that same strength of this theory is also its pitfall. Drawing such a narrow and definitive picture of a leader allows for no differentiation among people. Also, some of the traits described are difficult to teach and are more inherent in the predisposed nature of the individual.

Because these traits were identified in the early years of leadership research, the typical model for success was the white man. Women did not commonly hold leadership positions and therefore were not a factor of consideration for these studies. This fact therefore provides an assumption that women would not have any traits significantly different from men; that the way men act is the norm for any leader and any traits beyond those described would be abnormal.

Style Approach

Different from the trait approach, the style approach to leadership sought to identify leaders based on their behaviors rather than their traits. Research became a measure of attitude and predispositions toward leadership behaviors.

Different from the trait approach, the style approach gave importance to the perceptions of the subordinates in the relationship.

Many researchers have utilized a framework about leadership that encompasses two general dimensions: task behavior and relationship behavior. Northouse (2001) effectively defines task and relationship behaviors as follows:

> Task behaviors facilitate goal accomplishment: They help group members to achieve their objectives. Relationship behaviors help subordinates feel comfortable with themselves, with each other, and with the situation in which they find themselves. (p.35)

Many researchers sought to describe and analyze how leaders' behaviors fell along these two dimensions. Three of the most often discussed are those conducted at Ohio State University, at the University of Michigan, and by Blake and Mouton (Bass, 1990; Hersey et al., 1996; Howell & Costley, 2001; Hoy & Miskel, 1991; Northouse, 2001). A more in depth discussion of each of these studies is provided below:

Ohio State University studies. Studies of leadership at Ohio State University started in the 1940's and were based on Stogdill's trait findings previously discussed. First developed by Hemphill and Coons, the Leadership Behavior Description Questionnaire (LBDQ) was designed to measure the behaviors exhibited by leaders. Using a framework similar to the one described above, the study utilized two terms to describe leaders' behaviors. *Initiating structure* described any behavior that related to patterns of organization, channels of communication, and procedures. The term *consideration* was used

to describe any behavior that indicated “friendship, trust, warmth, interest, and respect in the relationship between the leaders and members of the group” (Hoy & Miskel, 1991, p. 262).

From the LBDQ four quadrants or four leadership styles emerged, the dynamic leader, the passive leader, the structured leader, and the considerate leader. The dynamic leader was characterized by above average scores on both consideration and initiating structure. The passive leader had scores that were below average on both areas. The structured leader was characterized by above average scores for initiating structure but below average for consideration. And, the considerate leader was defined by scores that fell below average for initiating structure but above average for consideration. Figure 1 provides a pictorial representation of the LBDQ model.

University of Michigan studies. At the same time the LBDQ was being designed at Ohio State University, the University of Michigan Survey Research Center was conducting research on leadership behavior as it related to business and industry. Similar to the OSU study, two styles of leadership emerged: *production-oriented* and *employee-centered* (Bass, 1990; Hersey et al., 1996; Howell & Costley, 2001; Hoy & Miskel, 1991; Northouse, 2001).

Production-oriented leaders were characterized by behaviors that stressed the technical and production aspects of their work. Employee-centered leaders were described as taking an interest in the human side of work; where there was a strong emphasis on the people doing the work rather than the work being done.

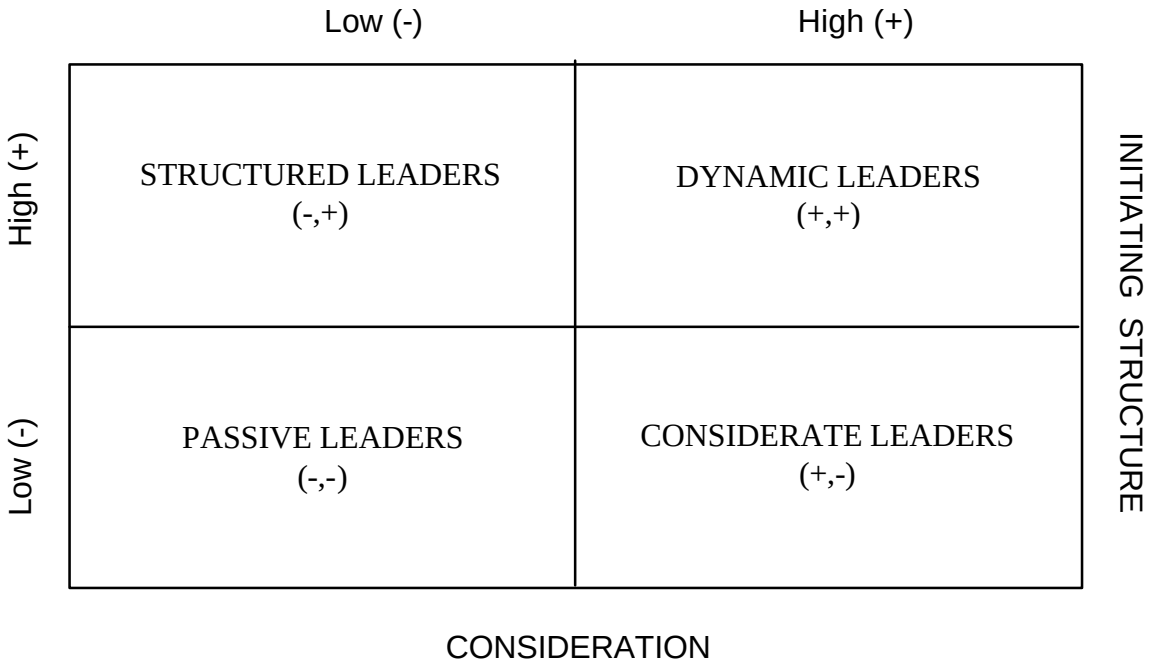

Figure 1. ***Leadership Styles Formed by Using the LBDQ***

The employee-centered leader was akin to the considerate leader as identified in the OSU study and the production-oriented to the passive, structured leader.

The limitation of both of these programs of study was that they looked at their behaviors and defined leaders according to an either/or scale. Today we know that leadership encompasses work in both areas. However, still, gender was not a consideration of this study. This again becomes problematic because the fundamental differences between men and women were still not acknowledged, in part because women in positions of leadership were still sparse during the time of this study.

Blake and Mouton: The Managerial Grid. Revised numerous times, the Managerial Grid (now referred to as the Leadership Grid) is a model developed in

the early 1960s by Robert Blake and Jane Mouton. The Leadership Grid identifies five different types of leaders in a quadrant type organization like that of the OSU study. However, the Grid utilizes the terms *concern for production* (task) and *concern for relationship* (people) as its axes. Although the labels for each type of leader differ slightly in the literature, Figure 2 provides an illustration of the five styles.

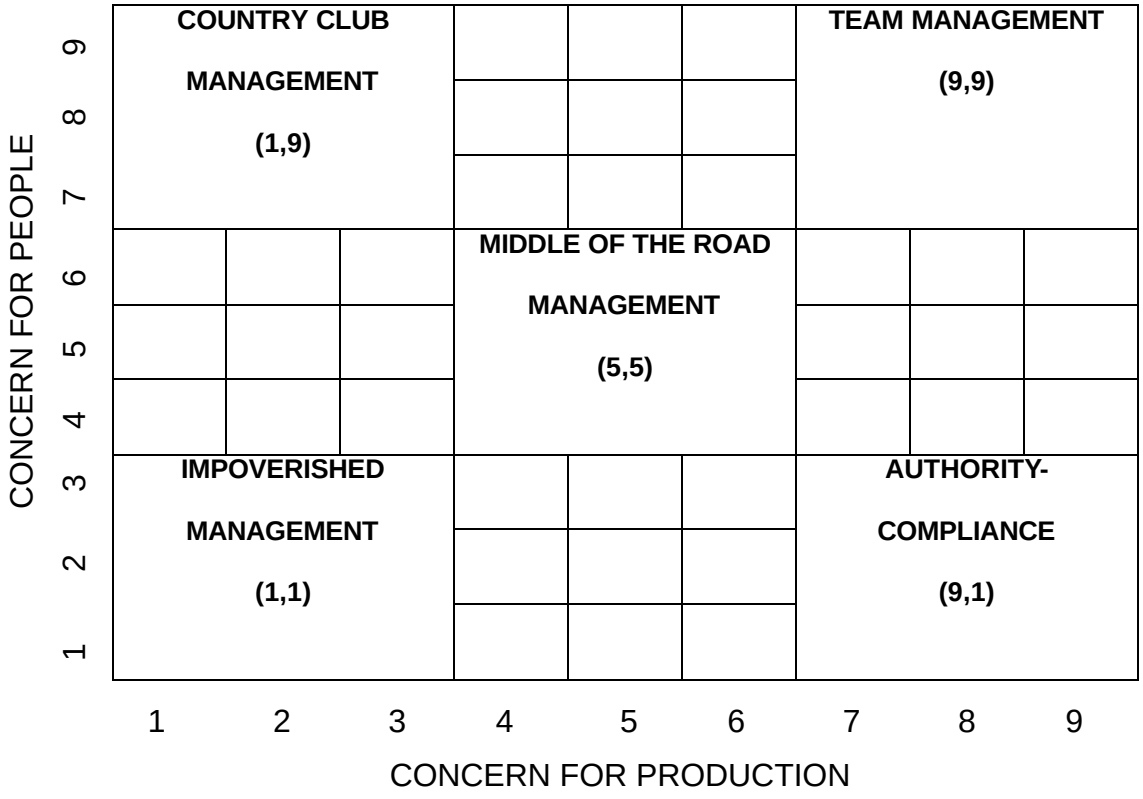

Figure 2. ***The Managerial/Leadership Grid***

Blake and McCanse (Blake & Mouton, 1964; Hersey et al., 1996; Northouse, 2001) describe the five styles of leadership as follows:

1. *Impoverished Management*: This type of leader exerts the minimum effort required to get the work done. He is unconcerned with the task or relationships involved in his work. This type of leader could be described as apathetic.

2. *Authority-Compliance:* This type of leader believes that people are tools for getting the job done. Little to no contact with the people in the organization is present. This type of leader could be described as controlling and demanding.

3. *Middle of the Road Management:* This type of leader has an interest in both the people in the organization and getting the task accomplished. They tend to give attention to employees while still emphasizing what is required to complete the task. This type of leader could be described as a compromiser.

4. *Country Club Management:* This type of leader believes that a positive climate is most important to an effective organization, even at the cost of production. Therefore, the social, emotional, and physical needs of the workers are met. This type of leader could be described as a pleaser or one who is eager to help others.

5. *Team Management:* This type of leader operates under the assumptions that work gets done when people are committed to not only their work, but other people in the organization. There is a common purpose in the organization and relationships are mutually respectful. This type of leader could be described as one who enjoys working and is committed to making work a positive experience for all members of the work community.

The style approach offers many merits to the study of leadership including the vast amount of research conducted within this area and the fact within this approach leadership becomes a tangible entity. Leaders can learn about how they behave in the work environment and adapt themselves accordingly to grow and change their style. However, a limitation of this approach is that there is no universally correct style of leadership that one can place over all situations to achieve maximum effectiveness.

Again too, at the time these studies occurred, women were not commonly acknowledged as leaders. Therefore the assumption exists that these styles are inherently male. It is only when we begin to discuss societal expectations and commonly held gender stereotypes that we begin to identify “people” behaviors of those that are more common to women and “task” as those more common to men. However, Blake and Mouton’s work is the first study to begin to acknowledge a possible blending of task and relationship behaviors.

Situational Approach

The situational leadership theory was developed by Paul Hersey and Kenneth Blanchard. Unlike the other two previously discussed leadership theories, situational leadership focuses upon leadership as it applies to situations. That is, the leader will act in differing manners depending upon the situation at hand. Therefore, it is assumed there is no one correct way to lead. Hersey and Blanchard identify four leadership styles which manifest themselves

in two types of behaviors, *directive* and *supportive* (Hersey et al., 1996; Hoy & Miskel, 1991; Northouse, 2001).

Directive behaviors include behaviors such as giving directions, setting time lines, and defining roles. Supportive behaviors include such behaviors as listening, praising, and problem solving. Different from the above models, directive behaviors do acknowledge relationships as a necessary component to leadership instead of being mutually exclusive from the task. Similar to the previously discussed models, these behaviors form four types of leadership styles. A description of each style is provided below:

1. *Delegating:* A delegating leader has low supportive and low directive behaviors. There is little input from the leader about how to carry out the task once subordinates understand what it is they are to do. Control over a project or task is surrendered to the subordinates.

2. *Directing:* A directing leader has high directive and low supportive behaviors. This leader is concerned with communicating the task or goal at hand and how to do it. There is little autonomy given to subordinates and the level of supervision is high.

3. *Supporting:* A supporting leader has high supportive behaviors and low directive behaviors. This leader works to bring out the skills in his staff to achieve the goal at hand. This leader operates within the organization as a problem solver to and with the subordinates.

4. *Coaching:* A coaching leader has both high supportive and directive behaviors. This leader, although very involved in the process and concerned about the well being of the subordinates, still maintains control about how the task is accomplished.

Also important to situational leadership is the developmental level of the followers. The level of the followers will directly impact the type of leadership necessary to achieve the goal at hand. That is, the leader would adapt their style according to the people they are working with. Figure 3 provides a graphic representation of this model.

The situational approach to leadership offers numerous strengths including the consideration of the developmental level of the followers. Seemingly, it would therefore readily adapt to numerous workplace environments. Also, similar to the style approach, the situational approach allows a leader to pinpoint specific behaviors and to compare and improve those behaviors accordingly. Although again, this approach places behaviors in direct connection with specific situations and does not allow for the variance present within individuals.

Northouse (2001) offers numerous criticisms of this approach as well. First, situational leadership is not firmly grounded in research. Second, there are several concerns with regard to assigning subordinate's developmental level when discussing leadership. There are several other mitigating factors defining subordinates such as age, gender, race, and motivation, which make it difficult to

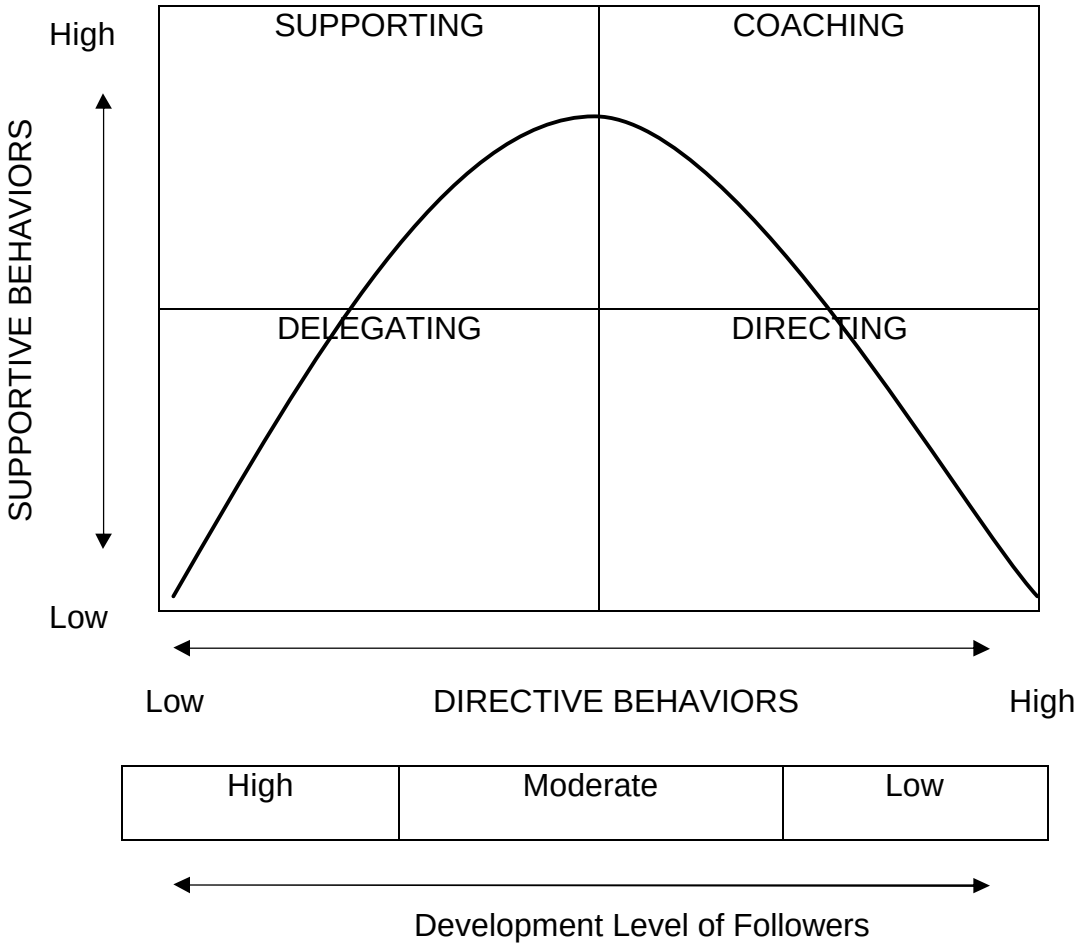

Figure 3. ***Situational Leadership***

quantify so simply where a subordinate is developmentally. Continuing, the developmental levels have no theoretical framework supporting their formation. Finally, the instrumentation utilized to assess leadership with this approach is a forced selection. This is limiting in nature and therefore predetermines a set of behaviors for each scenario only allowing the most common behaviors to emerge.

Transformational Approach

A more current theory of leadership, transformational leadership, has been the focus of research study since the early 1980s. Transformational leadership, defined by Burns and Downton, evolved from Burns' work on transactional leadership (Northouse, 2001). Transactional leadership focused on the exchanges between leaders and subordinates while transformational leadership refers to the exchanges between leaders and subordinates, engagement and connection between the two, and how the connections and engagements relate to the transformation of the organization. In the literature, transformational leadership is referred to as visionary leadership, strategic leadership, and charismatic leadership (Bass, 1990; Hersey et al., 1996; Northouse, 2001).

Transformational leadership motivates followers to go beyond the call of duty by raising followers' knowledge and understanding of the goal, getting followers to place personal agendas behind them and place the good of the team first, and working to have followers address higher level needs (Bass, 1985). Bass's model defines seven factors as contributing to leadership. Each of these seven is defined within one of three parts, transformational leadership, transactional leadership, or laissez-faire leadership that fall onto a continuum (see Figure 4).

Each of these leadership styles vary too within the continuum from the laissez-faire leader representing non-leadership to transformational leaders who are concerned with the growth of their subordinates. Transformational leaders

Figure 4. ***Bass's Leadership Continuum***

acknowledge that such factors such as idealized influence (charisma), inspirational motivation, intellectual stimulation, and individual consideration will move an organization farther than a transactional leader (Northouse, 2001). A transactional leader is concerned with the group, but is not concerned with the development of the individual. A laissez-faire leader has little to no concern for employees or the task at hand.

The transformational approach has many merits, the strongest one being that leadership not only acknowledges followers as influential and important parts of the organization, but suggests that positive exchanges between leaders and followers are how organizations move. The more the needs of the followers are met and developed, the further the organization will progress. Critically, this conceptual model is the most ambiguous of all previously described. Also, as Bryman (1992) points out, most of the data supporting transformational leadership are qualitative in nature. Therefore, the transference of the findings from organization to organization is questionable. Considering gender as a factor is equally as difficult to transfer because of the lack of empirical data. If the assumptions previously stated are continued, one could suppose that men are

more laissez-faire and women more transformational because of the greater attention to the relational aspect that women exhibit, but without concrete data, this can be merely speculation.

Women and Educational Leadership: An Historical Context

The early world of educational administration was primarily male-dominated. In the era from 1820 to 1900, only a handful of school administrators were women. Those women were often not appointed, but instead were founders and managers of their own schools. The period from 1900 to 1930 is referred to by Hansot and Tyack as “the golden age for women in school administration” (as cited in Shakeshaft, 1989, p. 34). Still though, that “golden age” found women as principals and superintendents predominately in elementary schools and small districts. The 1950s, following World War II, saw a decline in women serving as school leaders. Men were encouraged to take over the classrooms to become teachers and women were encouraged to stay at home; the nuclear family, male dominant era. Positions held by women in school leadership were replaced with males because of the perception that male characteristics were more favorable to administration than those of women. There was also a societal expectation that men returning from war would be placed into jobs to immediately return to providing for their family.

One-third of all working women held positions in only six areas: secretarial, retail sales, homemaker, elementary school teacher, waitressing, and nursing (Bem & Bem, 1975). The 1960s echoed the previous decade in that men

were to be the primary bread winners while women were encouraged to remain in the home. This decline continued to where only twenty percent of elementary principalships were held by women in 1972 (Riehl & Byrd, 1997). The 1970s, however, saw a plethora of civil activity for women with the beginning of Title IX legislation and the founding of new advocacy organizations and projects began to draw a great deal more attention to the women of education (Schmuck, 1995). But throughout the 1980s, there were fewer women serving in leadership roles in education than in 1905 (Shakeshaft, 1989) even though there was more attention and more research about women as leaders in education than ever before. Therefore, the norm became and remains “in school organizations women instruct students; men administer adults” (Ortiz, 1989, p. 54). Even in 1992, only 7.6% of secondary principals and 37% of elementary principals in the U. S. were women (Carr, 1995). This is troublesome in today’s society because of the increasing number of two-career households, in education women are still not acquiring the high paying, powerful positions. Only 14% of all superintendent positions were held by women in the 1990s (Glass, 2000), whereas 72% of the workforce in education was filled with women. In the corporate workforce, where 50% is made up of women, in 10% of the Fortune 500 corporations, 25% of the corporate office positions were occupied by women (Gettings, Johnson, Brunner, & Frantz, 2006).

Current Themes in Gender Issues in School Leadership

Although several researchers have studied potential theories as to why women have failed to enter school administration at the same rate as their male counterparts, several general explanations are predominant in the literature. First, through the occupational socialization process, i.e., the method of learning the informal network and intricacies to an organization, women have been taught they are to work as teachers, their role is to teach, and they should aspire to nothing further. This level of socialization is believed to begin first with departments of education as the first level of professional socialization. This theory coincides with the belief that sex-role stereotypes are prevalent not only throughout society in general, but are well engrained into the educational society as well (Eagly, Karau, & Johnson, 1992; Riehl & Byrd, 1997). All the rules of the game of education, customs of position, and ways of operation in the role were first described and defined by the White man's societal rules (Schaef, 1981; Shakeshaft, 1989). That is, men painted the picture of what an effective school leader should look like.

Consequently, women and ethnic minority members of society have had to assimilate to the role of educational leader according to the predetermined norms defined by a White male leader. Moreover, women have had to understand and to react within their role with a different set of behaviors that are inconsistent with gender-based stereotypes surrounding the role of woman as leader. These behaviors do however follow the "rules" defined by the male

culture. This becomes particularly problematic when the job responsibilities, daily interactions, priorities, perceptions, and job satisfaction are placed into the forefront of discourse (Shakeshaft, 1989). Those same sex role stereotypes have led to a higher social value being assigned to behaviors that are characterized as masculine than feminine. Men are perceived to lack interpersonal sensitivity, warmth, and ability to express themselves and women as less competent, independent, objective, and logical (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Coleman, 2003). When females are being socialized by males, they face pressures to conform to the male bureaucratic structures and norms and therefore go against what may be more natural processes and procedures unique to the gender (Cooper, 1995; Hart, 1995).

Research supports that a second explanation for women's limited inclusion in educational administration is that they have only been acknowledged as "token" members of society. (Kanter, 1977, Lee, Smith, & Cioci 1993; Ortiz, 1989). Within this belief of tokenism, women are included by invitation only and their inclusion in the world of administration is determined solely by the males in power. Eckman (2004), in a study designed to increase the understanding of the high school principalship by looking at how male and female principals examine and experience the role, cites four females describing hiring practices that favored male applicants. The women said, "I have no proof of this. I think they were just looking for men. Of course, they would never say that . . . I think token interviews have definitely happened" (p. 197).

Men are afforded the opportunity to have role models to develop an interest in moving up in the organization, while women have been considered for positions only after someone encouraged them to apply (Eckman, 2004). The "good ol' boys" network helped many men to become school principals. Coaches, who have effectively managed teams, were often led to principalships by their "sponsor" because of the implied transference of coaching skills to school leadership.

Men held and removed women from positions of leadership and allowed women's presence sometimes only in rural areas and as counselors (Tyack & Hansot, 1982). The structures are arranged so that men are decision makers and hold power over these decisions. It is only through self-sacrifice and practices where women separate themselves from other female peers that they begin to experience organizational inclusion (Chase & Bell, 1990; Cooper, 1995). As Schmuck and Schubert (1995) point out,

> the predominately male administrative culture and the predominately female teaching culture differ considerably; they differ on educational concerns, perceptions of power and influence, and the people with whom one interacts and the type of work to be done. (p. 282)

These cross-role, cross-gender differences begin to assert some of the fundamental differences in male and female leadership. Bernard (1981) supports this fact by asserting that "in professions like education, rules and norms developed by women are different from those developed by men whether legislative or crescive in nature" (p. 72). Women, therefore, are often caught

between the proverbial rock and a hard place. They experience both the need for belonging both to the group and to groups within the profession coupled with feelings of alienation towards the conforming conditions they are confronted with; they have to decide which practices they will adopt and which they will simultaneously reject (Westcott, 1979). In addition, male principals do not describe being faced with the same demands of balancing the demands of both school and family lives to the extent of women leaders.

This "role conflict" (Eckman, 2004) is experienced to a greater extent by women and could be another reason women fail to climb to the top of the organizational ladder. Although "the primary issue facing both males and females was 'managing their work and their time and coping with the stresses, tasks, and responsibilities of the job'" (p. 192), women encounter another phenomenon described by Hochschild (1989) as the "second shift." Perhaps much less prevalent in today's society, but certainly still existent, men leaving the workplace are often able to leave and begin processing their day while women begin their "second shift" of household duties that are a part of their role as parent and/or spouse. Similarly, women articulate the internal struggle to identify themselves as both a personal woman and a professional administrator (Schmuck & Schubert, 1995). This role commitment also places an internal struggle in women as to whether they are "work-committed" or "personal life or family committed" (Burke, 2002). Being committed to both work and home is taboo.

When children are the particular area of focus, men will most often list their wife as the primary caregiver while women report a sitter, nanny, or daycare. This provides yet another conflict and sense of anxiety and guilt that women encounter with their dual roles (Coleman, 2003). The following excerpt exemplifies the continuing conflict women leaders encounter:

> One of the fears I had in my mind of course was that she might be damaged by the terrible life I'd given her. And until she was quite grown up, I used to wonder whether she would be damaged. (Coleman, 1996, p. 328)

Coleman (2003) aptly summarizes some of the main reasons of "second shift" conflict for women. When summarizing the work of Davidson and Cooper (1992) she states that when comparing men and women in management positions,

> women are still likely to take the major responsibility for childcare and to feel it is their duty to do so, even in dual-career households; and it is only in the dual-career households that there is any evidence of change in the traditional balance of the woman taking major responsibility for the household. (p. 332)

Another belief as to why women may not readily ascend to leadership positions in schools is as simple as blatant or perceived discrimination based on gender. School superintendents, when interviewed as to whether they had a preference of males or females for principalships often responded "no" until specificity for secondary schools leadership came into question. Then men were preferred almost unanimously (Schmuck, 1995). Yet some superintendents said they would select an attractive woman for the position (Shakeshaft, 1999).

Although dated, these citations point out an important issue in school leadership and support the need for more current information on the topic. Whether blatant or perceived, sex discrimination at one time affected women's desire to aspire to move up the organizational ladder without a great deal of personal and professional sacrifice.

However, contrary to that belief of discrimination at the time of hiring, Schmuck and Schubert (1995) attest from their 15 women survey that the women they interviewed believed that they experienced no discrimination in getting the job, but instead different treatment following their being placed into the role. And, the discrimination they describe once they are in the position is that of systemic mistreatment, unfair competition, and purposeful lack of access to information—the "good ol' boy" network in action. Shakeshaft (1999) describes a situation where although superintendents will select attractive women for positions, they would distance themselves from that school leader for fear that school boards would feel something "unusual" was occurring, because of marital friction, and being scared of one's own feelings towards that woman.

Even as recent as 2002, Coleman reported that in a survey of secondary head teachers, two-thirds acknowledged some sort of sexism present at their time of appointment and questioned credibility throughout their experiences following that appointment. That sexism is exacerbated and exemplified when the women describe the freedom men felt to comment on their physical appearance (Coleman, 2002).

These struggles that women in educational leadership confront begin to point to some of the key themes surrounding the gender differences of males and females within the same leadership positions. One particular difference is that women in educational leadership are much more often able to articulate the feeling of isolation associated with the position (Sherman, 2000). In fact, this isolation is one of the greatest pressures women encounter because women often draw strength from the groups they are identified with (Cooper, 1995; Dunlap & Schmuck, 1995; Shakeshaft, 1989). In addition, Brunner (2000) recounts various woman superintendents' experiences with isolation and outcasting from male members of their position-alike group. These women articulated their isolation in terms of unnatural silencing. This took the form of being ignored, being interrupted, being purposefully left out of conversations. However, these same women often characterized their silence as merely "listening" to the conversations around them.

Another key theme emergent in the literature, yet similar in nature to those previously discussed, is the defeminization of women themselves to survive in the world of educational leadership (Bell, 1995; Cooper, 1995; Dunlap & Schmuck, 1995; Schmuck & Schubert, 1995). This defeminization often occurs as women try to begin to form new relationships with their subordinates and even peers. Shakeshaft (1989) points out that women typically view their position as one of master teacher, given the charge of instructional leadership, while men typically operate from a more operational, managerial perspective, thus relying

on the knowledge and skills of their staff to make sound judgments about curriculum and practice. The 1950s displayed a pattern in organizations where men were preferred employers over women because they were more likely to be powerful (Lee et al., 1993).

Often, the defeminization trends begin to occur as these women leaders begin to combine the role of manager and the role of instructional leader. Gross and Trask (1976) supported this view in that they defined the leadership and managerial style of women leaders as having a higher attention to task. Women leaders are typically more in the know; they pay more attention to the details of the school, and are in control of what is occurring around them. These characteristics are much less feminine in nature than the skill set women call upon when relationships are a key to their success. Kahn (1984) asserted that when women exhibit low-disclosing, high-task behaviors, more hostility is often expressed toward that female leader than if a man were in the role. Similarly, when women ascend to leadership positions in schools, subordinates will often immediately form negative expectations of that woman leader based on one prior experience with another woman in a position of power or on the basis of cultural stereotypes surrounding women leaders (Hurty, 1995).

However, women, like men, must prove themselves to their employers. But unlike men, women must prove themselves to be different from a negative stereotype of others like them (Bell, 1995). This continues to be problematic for women in educational administration as Cooper (1995) attests, “as organizational

members, women face pressures to conform, to follow and enforce rules, to adhere to and reproduce or support bureaucratic procedures" (p. 237). Further, Ferguson (1984) states that "the higher one moves in the organization, the more important impression management skills become" (p. 105). These same women are expected to show more loyalty and commitment to the organization as they move into positions of higher authority (Cooper, 1995). However, Brunner (2000) maintains that women in positions of authority (i.e., superintendents) have a difficult time characterizing and owning their power as leaders. Wolf (1994) stated, "there is a taboo that makes it virtually impossible in 'women's language' to directly claim power or achievement" (p. 250). Though Tannen (1994) claimed that when women downplay their authority it equates to her being less valued or not recognized as accomplished, thus placing the woman leader in a position of direct conflict with self and environment. Further, the skill sets needed to effectively operate with the members of the organization fall into direct conflict with those skills necessary for these educational leaders to conduct the business of schooling. This contrast could certainly be the source of the struggle Schmuck and Schubert (1995) described that women have over identity as woman and administrator.

Gender Differences in School Leadership

This all becomes relevant when one begins to look at differences and perceived differences between men and women school leaders. Because school leadership has been a predominately male-dominated area, women are required

to transcend societal norms of femininity (softness, passivity, sensitivity) to meet the socially defined role of leader with implied emphasis on hardness and reason (Coleman, 2003). Women are stereotypically believed to be caring, tolerant, and gentle while men are supposed to be aggressive, assertive, and decisive (Bem, 1974; Gray, 1993). Male stereotypes of school leadership are still the underlying norm. However, there is beginning to be a convergence, by both men and women, towards the more feminine attributes. When allowed to select adjectives to describe themselves, men and women leaders both selected “managers and leaders” and when given a choice of adjectives, women selected words more autocratic in nature and men more collaborative in nature. Almost 80% of the respondents identified themselves as “collaborative or people-centered” (Coleman, 2003, pp. 335-336).

Shakeshaft (1989) begins to articulate what the pertinent aspects of leadership are for women. She states that relationships are central to all actions of women administrators. The central foci for women administrators are effective teaching and learning. Building a community is an essential part of women administrators’ leadership styles. Brunner (1995) states that

> women who attain positions of power are most successful when they adopt female approaches to power which stress collaboration, inclusion, and consensus building models based on the belief that one person is not more powerful than another. (p. 24)

When describing their leadership style, women were cited supporting this assumption:

> I try and lead by being a leader with instruction and curriculum. And many of the males that I work with and have worked with in the past were hired as principals who were managers. . . . I rely more on relationships than the men I've worked for. I spend a lot more time listening than I do pontificating, and I think that's a female characteristic. . . . I use a lot more feeling words and terms and strategies. (Eckman, 2004, pp. 202-203)

Several researchers have commented on the work environment of women to support these findings. Women elementary principals spent more time in unscheduled meetings, made fewer trips from school, and observed teachers more often than males, thus placing increased emphasis on relationships within the school community (Kmetz & Willower, 1982). Women administrators have more contact with their superiors than do males (Berman, 1982), and women administrators are more likely to assist beginning teachers and to spend more time with teachers (Shakeshaft, 1989).

Shakeshaft also described the communication style of women leaders in that women use correct speech more than men, more intensifiers, more questions, and do not use pronouncements that would indicate there is only one way to look at the world. Women are described more often as polite, considerate, demonstrate more cheerful speech patterns, listen more, and remember more than their male counterparts. Men have been described as being frank and straightforward in their social interactions, yet still maintaining intellectual competency and rationality while women strive for deeper personal interactions; they are interested in "social amenities, emotional warmth, and affective manners" (Banks, 2000, p. 41). Women are also perceived, according to

Shakeshaft, as more democratic and participatory in their decision making processes.

Varghese (1990) found in a study of time allocation of administrators that men spend approximately 27% of their time dealing with paperwork while women spend only 19%. Continuing, men spend only 22% of their time in meetings and working with others while women leaders spend 34% of their time operating in that capacity. Riehl and Lee (1996) also described a 1990 study where common patterns in leadership styles of women emerged. The study found that women place a high priority on maintaining positive relationships among workers, found ways to share information with members of the organization and beyond, had "complex and multi-faceted identities," (p. 884) valued both work and family roles and worked to integrate them, and formed organizational structures that were more web-like with interconnections with the leader at the middle rather than at the top.

Noddings (1984) concurred and believed that women leaders act based on caring; they enact those around them to bring positive change. A final summarizing concept about women as leaders identifies women leaders as having five elements of power (Hurty, 1995). Women have *emotional energy*; they are willing to honestly and openly use a full range of emotions in their work with teachers, students, and the community. Women leaders foster a sense of *nurtured growth*. They possess the ability to nurture even small evidences of learning development. Women leaders engage in *reciprocal talk*; they talk with

and not at others by listening to and learning from other points of view. They foster *pondered mutuality* where there keep others in mind as they reflect on the decision making aspects of their work. And, they foster *collaborative change* working with and involving others in the transformation of schooling. Hurty believed that women possess a high level of “emotional energy” which involves acknowledging members of the educational community at the feeling level, showing compassion and sharing joy. Women are willing to do the emotional work necessary to engage others around them effectively. This emotional work would manifest itself in other ways as well. In a school where there was a strong sense of “emotional energy” there would likely be high levels of trust and autonomy present as well because the teachers would feel a strong sense of personal value from their leader.

Gender role expectations can be represented in gender stereotypes (Eagly et al., 1992). That is, “men are believed to be more self assertive and motivated to master their environment. . . . [where] in contrast, women are believed to be more selfless and concerned with others” (p. 79). In Eagly’s meta-analytic study, she ascertained that gender stereotypic differences were present, as well as counterstereotypic difference for task style, supporting the previously discussed work of Gross and Trask (1976).

> The most substantial sex difference was the tendency for female principals to lead in a more democratic and less autocratic style than did male principals. This finding suggests that women who occupy the principal role are more likely than men to treat teachers and other organizational subordinates as colleagues and equals and to invite their

> participation in decision making. Men evidently adopt a less collaborative style and are relatively more dominating and directive than women, (Eagly et al., 1992, p. 91)

Women principals are more often found to act in a democratic and participative manner than men and men more directive and autocratic (Lee, Smith, & Cioci, 1993).

However, Eagly et al. (1992) also found women leaders more task-oriented than their male counterparts. However, she associated this difference to be based on the emphasis of role identity rather than gender identity for the leader. This leads to a continuing assertion that the tension between sex and power roles is a continuing conflict for women (Coleman, 2003).

Leadership is defined by numerous traits, styles, and behaviors. We, as a society, struggle to define leadership as a blend of management (maintenance and control) and leadership (creation and inspiration), rather than allow it to remain mutually exclusive (Bennis, 1989). Being a school principal is one position where the perception of leader must blend more, and the expectations and stereotypes too, must converge. The job description of a school principal is a work in progress. One participant in Eckman's (2004) study begins to summarize the differences:

> I think it's a real different position for a woman than it is for a man because she brings a different set of techniques with her. The job still has to get done, and I don't think that you could make a blanket statement and say the majority of women well bring one type of style, because it is going to be as varied as their personalities. But, we do bring a female perspective and we have a little bit different approach-often, but not always. (p. 203)

Although she finds it difficult to make generalizations about men and women leaders, she readily acknowledges that the female perspective is different from the male, thus leading, in my opinion, to gender differentials in behaviors.

Conceptual Framework

Given the information presented thus far about school leadership and gender, and taking into account the various theories presented, I conducted research that sought to answer the following questions: Are teachers' perceptions of principal leadership behaviors gender specific? That is, do subordinates perceive male principals and female principals differently? Do these perceptions differ according to subordinate gender? How do those perceptions relate to a systems-orientation (i.e., task) versus a people-orientation?

When the core essentials of the work of a school leader are examined, they can be identified as either (a) Systems-oriented (i.e., task) or (b) Person-oriented. That is, the relationships involved in school leadership are more meaningful to effectiveness than are the tasks. My framework, based on the style approach to leadership previously discussed and the above stated theories with regard to women in leadership, is that women principals will, because of gender norms, perform in a more person oriented manner when compared to their male counterparts, where systems is defined according to the "task orientation" from the trait studies. Using the research stated above, the following framework was utilized to construct findings for gender related leadership behaviors: Principals will be identified in one of the following ways:

1. **Dynamic Leader**: High attention to systems and people;
2. **Considerate Leader:** Low attention to systems, high attention to people;
3. **Passive Leader:** low attention to both systems and people;
4. **Structured Leader:** high attention to systems and low attention to people; and
5. **Accommodating Leader:** mid-level attention to both systems and people.

Figure 5 below shows a graphic reconstruction of the style theory of leadership based on the work of both the Ohio State University Studies and Blake and Mouton. Hoy and Miskel (1991) have blended the two works, the LBDQ and the Managerial Grid in to the LBDQ Chart shown on the next page.

Also pertinent to the conceptual framework is the understanding that for women leaders there are two sets of normative expectations; one that is gender based and one that is position based. Unique to women is that these normative expectations do not align when discussing school leadership; contrary to the same position expectations for males (see Figure 6). Teachers' perceptions of their principal is impacted by both gender and position norms. This is evident when similar events transpire at schools where one principal is a male and one is a female; although the principals' actions and reactions might be identical, the reaction of the staff may not be, simply based on the gender of the principal.

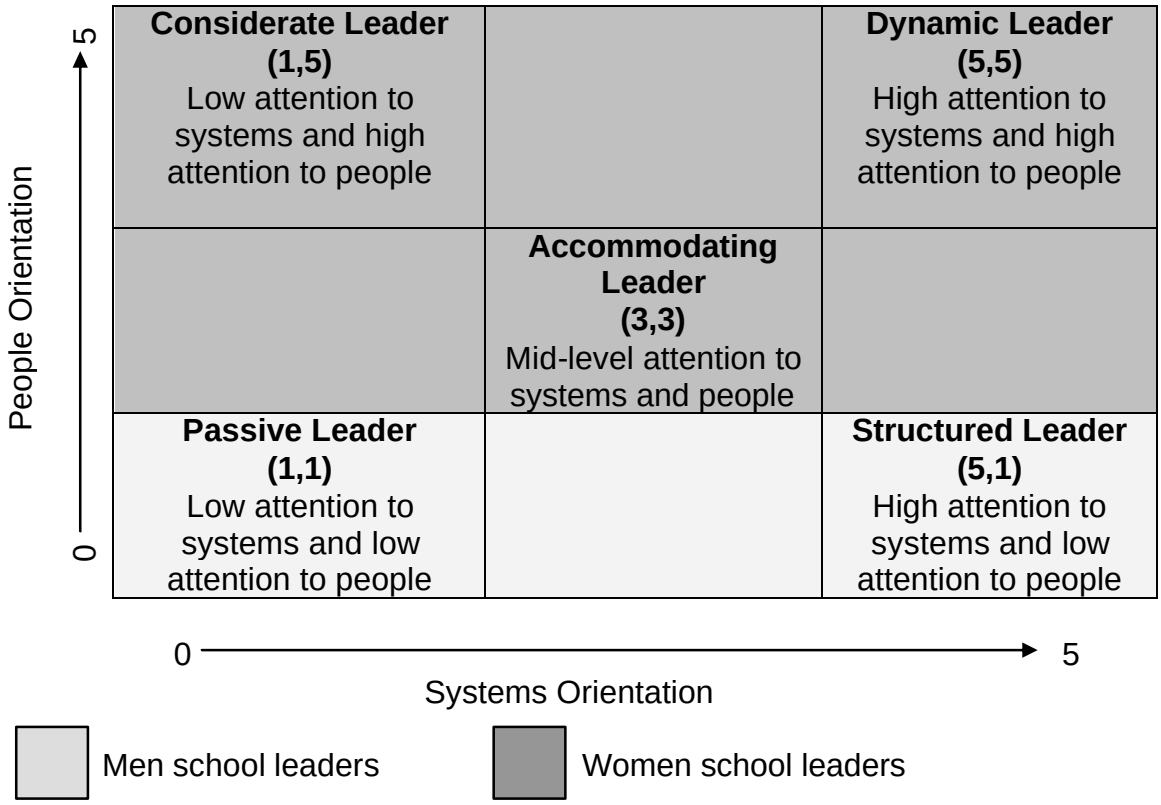

Figure 5: ***Theoretical Framework for Gender and Leadership Study***

Description of Leader Classifications:

Passive Leader: This leader lacks attention to systems and people. This leader assigns tasks and leaves individuals to complete the task.

Structured Leader: This leader has a high orientation towards task completion. Performance is monitored. Communication is formal.

Accommodating Leader: This leader seeks compromise. An understanding exists that both people and systems are important to complete given tasks.

Considerate Leader: This leader lends a great deal of attention to the people in the organization. This leader is concerned more with making friends and keeping peace in the organization than with completing tasks.

Dynamic Leader: This leader has high levels of attention to both people and the systems around it. High activity and participation are prevalent in this organization.

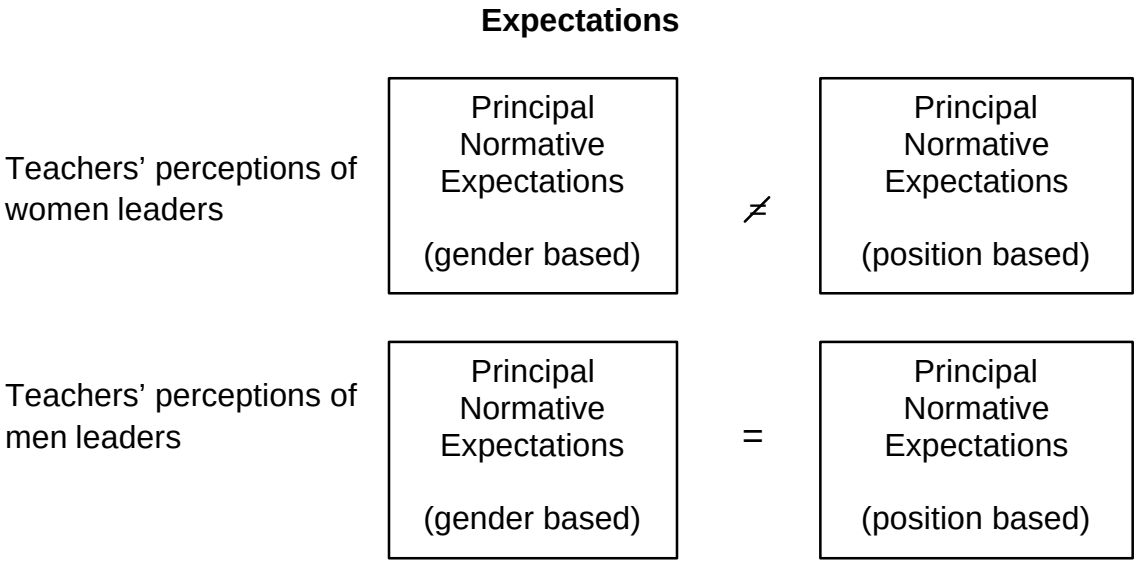

Figure 6. ***Conceptual Framework for Gender Differences in Behavior***

Therefore, my research questions are as follows:

1. How do principals' behaviors or actions relate to a Systems Orientation versus a Person Orientation?

2. Given the research stated above, I believe that women principals will more often be identified as Person Oriented when compared to their male counterparts. I also believe, because women typically have been left in the role of

teacher for a longer period of time before achieving the role of principal, therefore being more knowledgeable about the “task” or “system” they may also be readily identified as System Oriented when compared to their male counterparts. Moreover, in order to conceptualize this question I offer the following hypotheses to better address the conceptual framework:

Hypothesis 1: More women leaders will be identified as Accommodating Leaders.

Hypothesis 2: Women leaders will be identified in the upper quadrants of the LBDQ chart (Considerate/Dynamic Leader) more often than men leaders.

Hypothesis 3: Men leaders will more readily be identified in the lower quadrants of the LBDQ chart (Structured or Passive Leaders).

These hypotheses are stated as such because of the assumption that women leaders are going to be rated by their subordinates as having a higher attention to both System and to Person orientation as a *modus operandi* than male principals. Again, over the past decades women have had to work longer and harder to obtain and sustain their positions. They knew their subject well and cared about the people around them, which, if true, will result in their teachers scoring them relatively high on both scales.

3. Are teachers’ perceptions of principal leadership behaviors gender specific? Do subordinates perceive male principals and female principals differently? Do these perceptions differ according to subordinate gender?

One of the ideas I explored above was the thought of the difference in normative expectations for women and men principals based on gender and position. This research question helps address this piece of the conceptual framework and the following hypotheses will speak to those perceptions:

Hypothesis 4: Both male and female teachers will identify female principals as more Systems-oriented than male principals.

Hypothesis 5: Both male and female teachers will identify women principals as more Person-oriented than men principals.

Both of the above hypotheses are written to address my belief in the fact that there are normative differences in the perceptions of the teachers based on the gender of the principal. That is, again, that male principal's actions will be perceived differently than a female principal's actions because of the difference in the normative gender expectations. Although I am not predicting there to be any statistical significance to how male and female teachers perceive the principals, I do believe there will be a difference between the two.

In the next chapter I describe the methods I utilized to study these matters. The sample will also be discussed at length and the survey instrument and process will be described.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

As previously stated, I planned to answer the following research questions using the hypotheses listed below:

Question One: How do principals' behaviors or actions relate to a Systems Orientation versus a Person Orientation?

Hypothesis 1: More women leaders will be identified as Accommodating Leaders.

Hypothesis 2: Women leaders will be identified in the upper quadrants of the LBDQ chart (Considerate/Dynamic Leader) more often than men leaders.

Hypothesis 3: Men leaders will more readily be identified in the lower quadrants of the LBDQ chart (Structured or Passive Leaders).

Questions Two, Three, and Four: Are teachers' perceptions of principal leadership behaviors gender specific? Do subordinates perceive male principals and female principals differently? Do these perceptions differ according to subordinate gender?

Hypothesis 4: Both male and female teachers will identify female principals as more Systems-oriented than male principals.

Hypothesis 5: Both male and female teachers will identify women principals as more Person-oriented than men principals.

Although there has been a great deal of research regarding gender and leadership behaviors, most is dated and there is little current research on teacher perceptions of their principal's behaviors. With the ever-changing current of school leadership, this study was conducted to add to the body of knowledge connecting school leadership behaviors with gender in an effort to identify current trends.

Research Approach

In order to investigate these questions, I utilized a nonexperimental quantitative approach (Isaac & Michael, 1995; Wiersma & Jurs, 2005). Specifically, to answer the research questions I used a cross-sectional designed survey. A cross-sectional designed survey allowed me to select a sample from a population (a selection of high school teachers), a cross-section, to determine data that would be representative of data for the whole population (a school district in the southeastern United States). Also, this study was neither studying data over time nor was it studying change; therefore, a longitudinal study was not appropriate. This method was selected because the study involves the need to understand relationships between the variables of principal and teacher gender. Quantitative data were derived from a 100 question web-based survey administered to the staff and leader of eleven high schools through Zarca Interactive, a web based survey data management system with whom Parks District has an existing relationship. This has proven convenient since teachers are familiar with the Zarca Interactive format already as it is utilized often for

feedback from the district for satisfaction surveys on staff development sessions, climate, and other any other district level information gathering needs. For this study, the survey was available to the 1100 invitees for a period of approximately four weeks, from May 18, 2006 through June 22, 2006.

Sample Selection

All schools selected were situated in a school district in central North Carolina with both a mid-sized city and rural areas. Schools selected for the study were all traditional high schools, that is, no schools that were atypical in format (Early Colleges, Middle Colleges, Alternative Programs, etc.) were selected. Also, schools where the principal had less than six months experience in their current position were eliminated from the study. In an effort to control any confounds that would exist due to varying school settings and to acknowledge the need that in order to gather valid data, the subordinates need a minimum of six months to begin to know their leader, these criterion for selection were essential. The participants invited to participate in the survey were the school principal and any certified subordinate staff member at each school.

This sample was selected for several reasons. First, I believe that the context of high schools, versus the context of the elementary or middle school, was better suited for my study. The format of the high school is much more formalized than that of the elementary or middle school. Also, there are larger numbers of staff members at most high schools than middle or elementary schools and, there is more of a gender balance among those teachers; there are

more similar numbers of men and women rather than the disproportionately low number of males in the elementary schools. More participants allowed me to have a larger sample for the study as well. Also, as stated in the literature review, the high school remains the least accessible principalship to women, whether by personal choice by the women or by the lack of selection of women for the position at time of assignment. Also, given that most of the studies discussed previously related to high schools, my selection of high schools for the setting of my study allows me comparison data for discussion of results in a later chapter of this dissertation.

Settings of Study

The high schools selected for this study are situated in a school district in the southeastern United States. Parks School District is the third largest school district in its state and serves nearly 70,000 students. Parks employs almost 8,400 personnel full time and operates on a budget exceeding $550 million dollars. The per-pupil expenditure for this district averaged slightly over $7000 during the 2004-2005 school year. The district is ethnically diverse with most of the students being from Caucasian (44.6%) dissent, and from African American dissent (40.7%). Other ethnicities represented are American Indian, Asian, Hispanic, and Multi-racial, all represented at 6% of the district or less.

Parks has 112 schools. Sixty-five are elementary schools, 20 are middle schools and there are 22 high schools. Five schools in the district are special schools serving either severely and profoundly disabled students or students who

require an alternative learning environment due to expulsion from their home school. Schools that are selected for the study are described in more detail below. Selected sites are evenly distributed geographically throughout Parks District.

Adams High School

Adams serves over 1100 students in grades nine through twelve of which 21.1% are White and 67.7% are African American. Only 35.2% of Adams' students passed the state mandated End of Course testing. Adams is designated, according to its state standards, as Low Performing. Adams also did not make the federally required Adequate Yearly Progress during the 2004-2005 school year.

Adams' current principal is an African American woman who is currently in her first principalship. The principal has been serving at the school since March 2005.

Danville High School

Danville serves nearly 1,300 students in grades nine through twelve. Danville's student body is composed of 94% African American children and 3% Hispanic children. Danville's students were 50.9% proficient on the End of Course tests. Danville's designation according to their state's ranking is as a Priority School making High Growth. However, Danville High did not make Adequate Yearly Progress during the 2004-2005 school year.

The principal at Danville is an African American woman who has been serving the school since July 2004. She has had other experience as a principal in the elementary and middle school settings in Parks District.

Eagle High School

Eagle serves close to 970 students in grades nine through twelve. Eagle's student body is 49.1& White and 37.9% African American. At Eagle, 57.5% of their students passed the End of Course tests during the 2004-2005 school year. They are designated, by state standards, as a Priority School making Expected Growth. They did not make federal Adequate Yearly Progress.

Eagle's principal is a white woman who has been serving the school since July 2004. Her principalship at Eagle is her first traditional appointment (she has served as principal of summer programs) but has served in positions at the district level prior to this position.

Gates High School

Gates serves over 1,700 students in grades nine through twelve The student body at Gates is composed of 59% Caucasian students and 32% African American students. During the 2004-2005 school year 77.7% of Gates students passed the state End of Course testing. Gates is designated by the state as a School of Progress making High Growth. Gates did not make federal Adequate Yearly Progress but is listed in Newsweek as one of the top 100 schools in the nation.

Gates' principal is a White male. The principal has been in his current position since July 2002. Gates' principal had prior administrative experience as an elementary school principal in Parks District and has been acknowledged as a Parks District's Principal of the Year.

Hastings High School

Hastings serves nearly 1,350 students in grades nine through twelve. Hastings' students are 44% African American and 37% Caucasian. At Hastings 52.4% of students passed the End of Course test during the 2004-2005 school year. Hastings is designated as a "95R" School. Based on data at the state level, less than 95% of Hastings students were tested and the school presented a rationale to the state to explain, yet the reason was rejected. That title does not allow for any designation at the state level. However, for comparison purposes and based on the students tested, Hastings would have been a Priority School making High Growth.

Hastings' principal is a white female. She has worked at Hastings since the beginning of her administrative career in July 2003. In July 2005 she was promoted from assistant principal to principal.

Poplar High School

Poplar serves over 1700 students in grades nine through twelve. The two largest ethnic groups at Poplar are African American and Caucasian. Approximately 90% of Poplar's students fall equally into one of these subgroups. Poplar's students were 69.2% proficient on the End of Course test during the

2004-2005 school year. They are identified as a School of Progress making Expected Growth. They did not make federal Adequate Yearly Progress.

The principal at Poplar High School is a White woman. She is a veteran principal, having served at Poplar for numerous years but also has experience at the elementary and middle school levels as well as district level experience. She has been recognized as a Parks District's Principal of the Year.

Rydell High School

Rydell High serves nearly 1,500 students in grades nine through twelve. At the school 54.8% of the students are Caucasian and 30.9% are African American. At Rydell High, 70.7% of students passed the state End of Course testing. The are designated by the state as a School of Progress making Expected Growth. They did not make federal Adequate Yearly Progress.

The principal at Rydell is a Caucasian woman. She is a veteran principal, having served the school for many years. She is the third principal at Rydell since it opened in 1959.

Sage High School

Sage High School serves approximately 950 students and is one of the smallest high schools in Parks. Sage's student body is 50% Caucasian and 36% African American. On the End of Course tests, 58.3% of Sage's students passed. Sage is labeled a Priority School making Expected Growth. Sage, like the other high schools previously described, did not make federal Adequate Yearly Progress.

The principal at Sage is new this academic year. He is a Caucasian male in his first principalship. He has previously served as an assistant principal in another high school in the district.

Stone High School

Stone High School serves nearly 1,300 students in grades nine through twelve. Stone's students are 76% Caucasian and 18% African American. Scoring well on the End of Course testing, 75.6% of Stone's students passed. Stone is designated as a School of Progress making High Growth. However, Stone did not make Adequate Yearly Progress.

The principal at Stone is a Caucasian male. He is a veteran principal who came to Parks District and Stone High School in July 2002.

Street High School

Street High serves over 1,150 students. Street serves 52% Caucasian students and 48% non-White students. Street's students were 73.7% proficient on the End of Course test. Street is designated as a School of Progress making Expected Growth. It was one of the only high schools in the district and the only one in this study to make federal Adequate Yearly Progress.

Street High School's principal is a Caucasian male. He has served Street High School since July of 2004. He is a veteran principal with prior administrative experience at the elementary school level and at the district level.

Wallace High School

Serving almost 1,450 students, Wallace is an average size high school for Parks. Wallace's students are 62.7% Caucasian and 22.0% African American. Faring well, 75.8% of Wallace's students passed the state End of Course test. Wallace is designated by the state as a school with No Recognition. Wallace did not make federal Adequate Yearly Progress.

Wallace's principal is a Caucasian male. He has been at Wallace for over two years, starting there in July of 2003. He has previous administrative experience in Parks District, having served as an assistant principal and principal at the middle school level. See Table 1 for important data points for selected sites.

Methodology

To conduct this research I surveyed the staff and principal of eleven high schools using the Leader Behavior Description Questionnaire (LBDQ) Form XII originally developed at Ohio State University during the 1940s. This instrument was chosen because it was developed to obtain descriptions of a leader by their subordinates. The instrument was also developed around the style approach theory of leadership, which was important to support my conceptual framework previously described. The LBDQ addresses behaviors only and has been used to examine the behaviors in leaders in contexts other than education, therefore providing a much broader scale when defining and interpreting "leadership." Form XII is the fourth revision to the original scale.

Table 1

Descriptive Information about Schools in the Study

School Name	Number of Students	State Designation*	Adequate Yearly Progress	Principal Gender/Race	Years Experience at Current School
Adams High School	1,100	Low Performing School	No	African American Woman	One
Danville High School	1,300	Priority School	No	African American Woman	Two
Eagle High School	970	Priority School	No	White Woman	Two
Gates High School	1,700	School of Progress	No	White Male	Four
Hastings High School	1,350	95R/Priority School	No	White Woman	One
Poplar High School	1,700	School of Progress	No	White Woman	Two
Rydell High School	1,500	School of Progress	No	White Woman	More than ten
Stone High School	1,300	School of Progress	No	White Male	Four
Sage High School	950	Priority School	No	White Male	One
Street High School	1,150	School of Progress	Yes	White Male	Two
Wallace High School	1,450	No Recognition	No	White Male	Three

* *Note.* A *School of Progress* is a school that made at least expected growth and had at least 60% of its students' scores at or above Achievement Level III (but was not an Honor School of Excellence or a School of Honor or Distinction). It receives certificates and incentive awards for expected or high growth. A *Low Performing School* is a school that failed to meet its expected growth standards and has significantly less that 50% of its students' scores at or above Achievement Level III. A Priority school is a school that has less than 60% of its students' scores at or above Achievement Level III, irrespective of making its expected growth standards, and is not a Low Performing School. A *95R School* is a school in which less than 95% of the students were tested, and for which a rationale explaining this submitted to the state was rejected.

In choosing a method for this research, I had to consider the merits of both qualitative and quantitative studies. Qualitative research is interpretive, allowing

participant and researcher an opportunity to discuss feelings, ideas, and relationships that exist between items. In qualitative studies, the words are analyzed for potential connections and conclusions. Examples of qualitative methodologies are interviews, case studies, and observations. Quantitative research allows participants to be presented with data in a format where their answers are gathered and presented to the researcher in a numerical format that are then analyzed using various statistical procedures. Examples of quantitative methodologies are surveys that can be administered as pencil and paper questionnaires, web-based questionnaires, face-to-face interviews, or telephone interviews.

The use of a questionnaire (web-based administration aside), was certainly a part of this methodological design. Wolf (1997) defines a questionnaire as “a self-report instrument used for gathering information about variables of interest to an investigator” (p. 422). He also explains that questionnaires can be structured, giving the participant choices to select from, or unstructured, asking the respondent to provide an open-ended answer. Continuing, Wolf also points out several assumptions that questionnaires are based on, “a) the respondent can read and understand the questions or items, b) the respondent possess the information to answer the questions or items, and c) the respondent is willing to answer the questions or items honestly” (1997, p. 422). This questionnaire was administered under the above stated assumptions.

Given that the goal was to analyze behaviors according to a given scale (a 5-1 Likert scale), the questionnaire administered needed to be structured in format. Since a great deal of research has been done already on task-orientation and systems-orientation (see Chapter II) and survey instruments have already been developed and validated as an effective data gathering technique, and because I did not feel that the behaviors principals exhibited had changed dramatically enough to warrant the development and validation of an entire new survey for this endeavor, I chose to utilize this methodology to draw on the strengths and expertise of the established research in this field by using an existing survey.

Therefore, to conduct this research I utilized a web-based questionnaire, powered by Zarca Interactive, a Web-based data collection and management company with whom Parks District has an existing relationship, to gather data. This methodology was selected for several reasons. First, this methodology allowed me access to a much larger sample size. Utilizing a Web-based survey instrument, I was able send the questionnaire electronically to the staff and principal at all of the schools described above, without exclusion. Also, the time needed to visit eleven schools and administer a survey of this length would drastically increase the time needed for this study. In the original research design, March to April of the given school year was the optimal window for data gathering. I felt this way because I believed the staff would have had an entire year to learn a new principal or become that much more familiar with one who

was not new. However, if utilizing a paper and pencil survey would have been used, it would have been necessary to limit the number of participating schools further, especially considering that access to the Zarca system proved to be problematic due to internal organizational issues at Parks District which delayed the survey administration by approximately two months.

Other advantages to using a Web-based survey exist. Lowered cost for survey administration, ease of data entry, and flexibility and control over format (Granello & Wheaton, 2004). Once access to the Zarca Interactive program was granted by Parks District administrators and I became familiar with its operation, I had to convert the paper and pencil questionnaire to a web-based format. This task was completed with attention to details such as maintaining the same order of questions as in the original document, how to format the survey to allow it to be simple for participants to progress through, and how to visually present the survey in a manner that was not overwhelming to participants, the flexibility and control over format that Granello and Wheaton describe above. Appendix E provides a copy of the web-based teacher edition of the survey for comparative purposes.

Once the survey was loaded and checked for accuracy, all items were selected as “mandatory response.” This allowed for there to be no missing data as a part of this survey. That is, all participants who answered the survey answered all questions.

Access to the Parks School District email listserv allowed all certified staff members email addresses from the participating schools to be uploaded into the Zarca system. A total of 1,100 participants were invited to complete the survey. A test email was sent to my Parks account assure that the survey would deploy correctly. The first email arrived as SPAM and therefore required further modification.

After a conversation with the technology department of Parks District, the SPAM filter was modified to allow the survey to arrive as a regular email to invitees. Another test email was administered with no error. Another reason an electronic administration was selected was that response time for a Web-based survey is much higher than with traditional mailed survey (Farmer, 1998; Franceschini, 2000; Lazar & Preece, 1999). In fact, turn around time can be shortened from 4-6 weeks with mailed surveys to 1-2 days with Web-based surveys (Farmer, 1998). Administration dates of the survey were from May 18, 2006 to June 22, 2006, a window for participation of approximately five weeks. Three hundred eighty-seven of 1,100 invitees participated in the survey. Table 2 provides information regarding number of participants by day and timing of reminders sent.

Had a Web-based instrument not been utilized, the study would have been much more restricted given the numerous reminders sent during the short period of time. Seventy-four percent of the total responses came immediately following a reminder email.

As with any methodological process, there are potential limitations to it. However, limitations to online data collection are few. Two limitations that affected this research are addressed below.

Table 2

Teacher Response Rates by Date

Participation Date	Number of Respondents
May 18, 2006	Survey launch
May 18, 2006	62
May 19, 2006	21
May 21, 2006	2
May 22, 2006	13
May 23, 2006	First reminder email sent
May 23, 2006	121
May 24, 2006	16
May 25, 2006	7
May 26, 2006	Second reminder email sent
May 26, 2006	40
May 28, 2006	1
May 29, 2006	2
May 30, 2006	9
May 31, 2006	4
June 1, 2006	2
June 2, 2006	4
June 3, 2006	1
June 5, 2006	1
June 6, 2006	4
June 8, 2006	Third reminder email sent
June 8, 2006	23
June 9, 2006	39
June 10, 2006	2
June 11, 2006	2
June 12, 2006	6
June 13, 2006	2
June 17, 2006	1
June 19, 2006	1
June 22, 2006	1

Representativeness of Sample

One of the cited drawbacks to online research is that when using this format, the researcher jeopardizes having a representative sample because of limited use of the internet (Granello & Wheaton, 2004). However, all participants in this study had access to the technology necessary to complete the instrument. A potential limitation is that all requested participants may not have readily accessed email. Throughout the survey process, only two surveys were returned as “undeliverable” and less than 15% of the population was reported as “not participated” in a form other than “opted out” or “permanently opted out.”

Because the original timeline of the survey was delayed by approximately two months and because the percentage of participants able to view the email invitation was around 85%, the planned method of follow up, mailed paper and pencil surveys to non-respondents, was not utilized for several reasons. The approximate 2-month survey delay has already been mentioned. Therefore, the last email reminder was sent on the last day of school. Sending a paper and pencil survey to follow up to email non-respondents would have not been delivered to the invitees until August 25, 2006, the first day of school for the 2006-2007 school year. This would have been a confound that would have been a serious threat to the validity of the study. Therefore, the decision was made to not utilize the originally planned follow up procedure.

Also, as survey data were returned, I consulted a statistician to determine a benchmark return rate for online surveys. In an informal discussion he stated

that most of the research conducted at the university has a 30 to 35% return rate on average. The return rate for my survey fell at the top end of that range. Further discussion resulted in the concept of representativeness of sample as the important concept of return rate. Once it once determined that the returned sample was representative of the population selected, it was determined the 35% return rate would be sufficient for data analysis. Further analysis of the representativeness of the sample is discussed in Chapter IV.

Response Rates

There have been several studies analyzing the response rates of Internet research. The studies provide mixed results, but most state that e-mail surveys provide a lower response rate than traditional surveys (Granello & Wheaton, 2004). The response rate for this survey was 35% of all invited participants.

Instrumentation

This study was designed to examine the behaviors of school leaders. Therefore, the Leader Behavior Description Questionnaire, or LBDQ as it is commonly referred to, was utilized. This instrument is based on the work of Ralph Stogdill and the Ohio State University Leadership Studies previously described. However, the instrument utilized for this study is a revised version. The revised version expands on the work of Stogdill and others and expands the subscales of Initiating Structure and Consideration. Further Ohio State Studies propose twelve dimensions of leadership under the two umbrellas of Systems

Orientation and Person Orientation. Each of the twelve subscales is described in Table 3 (Hoy & Miskel, 1991).

Table 3

Systems Oriented Behaviors vs. Person-Oriented Behaviors

Systems-Oriented Behaviors	Person-Oriented Behaviors
Production Emphasis: Leader applies pressure for productive output	*Tolerance of Freedom:* Leader allows followers scope for initiative, decision, and action
Initiation of Structure: Leader clearly defines their role and lets subordinates know what is expected	*Tolerance of Uncertainty:* Leader is able to tolerate uncertainty and postponement without anxiety or upset
Representation: Leaders speaks and acts as the representative of the group	*Consideration:* Leader regards the comfort, well-being, status, and contributions of followers
Role Assumption: Leader actively exercises the leadership role rather than surrendering leadership to others	*Demand Reconciliation:* The leader is able to reconcile conflicting demands and reduces disorder to the system
Persuasion: Leader uses persuasion and argument effectively; exhibits strong convictions	*Predictive Accuracy:* Leader exhibits foresight and ability to predict outcomes accurately
Superior Orientation: Leader maintains cordial relations with superiors, has influence with them, and strives for higher status	*Integration:* Leader maintains a close-knit organization and resolves inter-member conflicts

Based on current knowledge and trends in educational leadership, I updated the terminology and descriptions to apply more readily to educational administration. However, the general format, style, and results are still reflective of the original Form XII. To make revisions, I read each question item and interpreted it with an educational lens. I did this only in an attempt to update and make sense of the instrument today. Therefore, for analysis and discussion

purposes, the following terms and definitions will be utilized (see Table 4). Each participant was prompted to respond to 100 statements that are rated on a Likert Scale of 5 to 1, where 5 indicates the leader always exhibits that behavior, and 1 indicates the leader never exhibits the behavior. Several items are written to be scored in reverse and attention was given to correctly score those items during analysis. Copies of the instruments are located in Appendix A and B of this dissertation.

Table 4

Systems-Oriented Behaviors vs. Person-Oriented Behaviors (Revised)

Systems-Oriented Behaviors	Person-Oriented Behaviors
Production Emphasis: Leader applies pressure for productive output	*Trust and Autonomy:* Leader allows followers scope for initiative, decision, and action
Need for Order and Control: Leader clearly defines their role and lets subordinates know what is expected	*Flexibility:* Leader is able to tolerate uncertainty and postponement without anxiety or upset
Representation: Leaders speaks and acts as the representative of the group	*Consideration:* Leader regards the comfort, well-being, status, and contributions of followers
Role Assumption: Leader actively exercises the leadership role rather than surrendering leadership to others	*Problem-Solving:* The leader is able to reconcile conflicting demands and reduces disorder to the system
Persuasion: Leader uses persuasion and argument effectively; exhibits strong convictions	*Vision:* Leader exhibits foresight and ability to predict outcomes accurately
Concern for Advancement: Leader maintains cordial relations with superiors, has influence with them, and strives for higher status	*Conflict Resolution:* Leader maintains a close-knit organization and resolves inter-member conflicts

Data Organization

Once data collection had ended, it was necessary to score and organize the data according to the subscales set forth in the previous chapters. The subscales for the analyses were formed using the answers to the questions in the combinations found in Table 5. All items were scored on a 5 to 1 scale with the exception of items 6, 12, 16, 26, 36, 42, 46, 53, 56, 61, 62, 65, 66, 68, 71, 87, 91, 92, and 97, which were scored in a reverse 1 to 5 scale.

Table 5

Subscale Formation

Subscale	Question Numbers
System Orientation	
Production Emphasis	8, 18, 28, 38, 48, 58, 68, 78, 88, 98
Representation	1, 11, 21, 31, 41
Role Assumption	6, 16, 26, 36, 46, 56, 66, 76, 86, 96
Persuasion	3, 13, 23, 33, 43, 53, 63, 73, 83, 93
Need for Order and Control	4, 14, 24, 34, 44, 54, 64, 74, 84, 94
Concern for Advancement	10, 20, 30, 40, 50, 60, 70, 80, 90, 100
Person Orientation	
Trust and Autonomy	5, 15, 25, 35, 45, 55, 65, 75, 85, 95
Consideration	7, 17, 27, 37, 47, 57, 67, 77, 87, 97
Problem Solving	51, 61, 71, 81, 91
Vision	9, 29, 49, 59, 89
Conflict Resolution	19, 39, 69, 79, 99
Flexibility	2, 12, 22, 32, 42, 52, 62, 72, 82, 92

Participant data were then exported from Zarca Interactive in a Microsoft Excel Spreadsheet and uploaded into SPSS, a statistical data management software program. Raw data consisted of individual participant answers to each question in the survey. Subscale scores for each construct were derived by

summing the scores each participant had provided in the survey according to the scale above. The mean of each sum was then found in order to normalize the variance between the subscales. A typical statistical method of handling this is obtaining a z-score for each sum and utilizing that z-score as the measure of comparison. However, since the 5 to 1 scale utilized in the study holds meaning and the same effect of both keeping the data meaningful and washing away the variance could occur by using the mean, I chose to utilize that method. Item statistics and reliabilities for each of the subscales are found in Table 6. Item statistics and reliabilities for individual questions are located in Appendix F.

Cronbach's Alpha correlates each item's score with each individual's score then compares that to the variability present for all the individual items (Salkind, 2004). Other measures of internal consistency reliability exist (Spearman-Brown, Kuder-Richardson, etc.) and have been used with this survey in the past, but presently Cronbach's Alpha is readily used by social scientists and was chosen for use in this study. The reliability factors illustrated above present a high level of internal consistency as a benchmark for good reliability is .80 (Howell, 1985). The reliability of the instrument as a whole was a=.977 and for the analyses once the subscales were formed a=.924.

Comparing the item statistics between the Systems and Person scales shows higher reliabilities within the Person subscales. This is an interesting occurrence because three of the six subscales for the Person construct are made up of only five questions. Therefore, one would expect lower reliabilities in those

areas when looking at the data from a mathematical lens, the subscale with the highest reliability, is indeed a ten item construct.

Table 6

Item Statistics

	Mean	Std. Deviation	Cronbach's Alpha	N
System Orientation				
Production Emphasis	38.6677	5.26409	.784	337
Representation	20.6320	2.66278	.749	337
Concern for Advancement	36.5074	5.31514	.766	337
Persuasion	37.3858	7.67336	.928	337
Need for Order and Control	39.9525	5.84910	.866	337
Role Assumption	38.8249	6.13942	.813	337
Person Orientation				
Flexibility	33.8932	7.21526	.892	337
Consideration	35.1068	8.04492	.919	337
Problem Solving	18.3442	4.10360	.885	337
Trust and Autonomy	34.6528	8.39579	.946	337
Vision	17.6825	3.60432	.908	337
Conflict Resolution	17.6677	4.30212	.915	337

Representation, the subscale with the least reliable score, was a subscale with a five question construct. However, like the above discussed reliabilities for the Person Oriented subscales, the 10-item constructs would have been expected to have a higher reliability than the a=.766 and a=.784 of Concern for Advancement and Production Emphasis produced.

To further the discussion above, Table 7 provides a great deal of information important to substantiating the reliability of the subscales within the survey with the given sample size. The first column figures the effect on the overall mean if a subscale was deleted from the survey. The second column shows the effect on the variance, or spread of the data, if a subscale were

Table 7

Item-Total Statistics for Mean Subscales

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
System Orientation					
Role Assumption	330.4926	2359.394	.679	.639	.917
Representation	348.6855	2672.597	.445	.409	.926
Concern for Advancement	332.8101	2512.196	.491	.351	.924
Production Emphasis	330.6499	2599.419	.326	.589	.930
Persuasion	331.9318	2121.308	.880	.798	.908
Need for Order and Control	329.3650	2318.042	.799	.779	.912
Person Orientation					
Flexibility	335.4243	2268.650	.700	.735	.917
Problem Solving	350.9733	2439.788	.852	.808	.914
Consideration	334.2107	2121.214	.832	.846	.911
Trust and Autonomy	334.6647	2160.509	.732	.804	.917
Vision	351.6350	2469.048	.894	.821	.914
Conflict Resolution	351.6499	2408.681	.888	.824	.912

deleted. Column three, Corrected Item-Total Correlation, shows the relationship between the individual responses on the questions and the overall total score on the survey (Hinton, 2004). An ideal relationship would be a positive one above 0.3. Therefore, there may be questions that are weak in the Production Emphasis subscale and questions below standard in the subscale areas of Representation and Concern for Advancement. The Squared Multiple Correlation provides a value for the amount of variability in each subscale as predicted by items in the rest of the survey (Hinton, 2004). The final column provides a Cronbach's Alpha value for reliability if a subscale was deleted.

The purpose of Cronbach's Alpha values was discussed previously. However, with these data, it illustrates the point even further. Take for example the Production Emphasis subscale. The Corrected Item Total Correlate is only .326, very low. And, the Cronbach's Alpha value if the subscale was deleted increases to .930. However, given that removing an entire subscale from the survey would dramatically alter the original design and intended use, I chose not to proceed. But, again, it is interesting that even in this analysis that the subscales that would provide an increased alpha value (to better reliability) to the data are all System Oriented constructs. This could be an anomaly of Parks district being a district that perhaps has strong demands of principals to be Persons Oriented therefore allowing for more variation in the System Oriented constructs. However, an investigation into the variance in the reasoning behind

the subscales would require a much more in depth study than the nature of this dissertation.

In order to quantify the Systems Orientation and Person Orientation as described in the conceptual framework, a mean of each of the six subscales under the Systems subheading and the Person subheading was obtained using the sum scores of the subscales before taking the mean of that subscale. The Systems Orientation mean and Person Orientation mean will become meaningful later in the data analysis but merited mention as to its inception at this point in the discussion.

Reliability and Validity

Popham (2002) defines reliability as “the consistency with which a test measures whatever it is measuring” (p. 27). That is, reliable research must be stable and predictable. In statistical analyses, reliability is measured most commonly with Cronbach’s coefficient alpha. With any type of research reliability is important because it is the consistency in measurement that allows us to glean results from the given data. Inconsistency in measurement creates confounds that could present false relationships or inaccurate representations between two given variables. Reliability to any research “is threatened by any careless act in the measurement or assessment process, by instrumental decay, by assessments that are insufficiently long (or intense), by ambiguities of various sorts, and a host of other factors” (Lincoln & Guba, 1985, p. 292). Data analysis for this study utilized Cronbach’s Alpha to establish reliabilities.

There are three types of reliability: stability reliability, alternate form reliability, and internal consistency reliability. Stability reliability refers to the consistency of results over time (Popham, 2002). When an instrument is administered, the results are consistent across the span of the research time frame. Alternate form reliability refers to the degree in which two or more instruments are equivalent. North Carolina's End of Grade tests are a good example of when a high level of alternate form reliability would be important. Internal consistency reliability is the degree to which the items within an instrument are consistent. In surveying a population, the researcher would want to design an instrument that had a high level of internal consistency reliability. In a quantitative study examining end of grade test scores, one would want a high level of alternate form reliability given there are three forms of the assessment, as well as stability (over time) and internal consistency where there is more than one question measuring mastery of a topic. For the LBDQ, there were at least five items measuring each of the twelve subscales, establishing as has been illustrated, a rather good level of internal consistency reliability.

Validity, although very closely linked to reliability, is the more significant concept. Validity, as defined by Popham (2002) is "an overall evaluation of the degree to which a specific interpretation of a test's results are supported" (p. 51), while Janesick (as cited in Lincoln & Guba, 1985) states that "validity in qualitative research has to do with the description and explanation and whether or not the explanation fits the description" (p. 393). The literature is extensive

when it comes to discussions of validity, both for qualitative and quantitative work. For, if a study is not valid, it is, in essence, of no worth. There are three types of validity evidence: content related evidence, criterion related evidence, and construct related evidence (Popham, 2002). Content related evidence supports validity when the measurement method accurately represents the information the researcher is seeking. That is, the method should effectively allow the researcher to glean accurate (and highly reliable) results. Criterion related evidence supports validity when the measurement procedure accurately predicts a participant's performance on an external criterion. For example, an IQ test can often accurately predict a student's grade in a given subject. This IQ test score would therefore provide a high level of validity. Construct related evidence is much more complex and is referred to when measuring such intangibles as happiness or competence in a given area.

Campbell and Stanley (1966) list eight possible threats to internal validity of a one shot case study: "history, maturation, testing, instrumentation, statistical regression, differential selection, experimental mortality, and selection-maturation interaction" (p. 8). The four factors they cite as definite weaknesses to a study of this type, a one-shot case study, are *history, maturation, selection,* and *mortality*.

For this study, *history* and *maturation*, as Campbell and Stanley pointed out, were threats to validity. Informal conversations and correspondence with participants revealed that as more surveys were taken, the more word spread about the length of the survey. Although my belief is that the effect was on the

sample size and not on the results, an indirect result of a lower reliability is at stake because of the small sample. *History*, in this case is the amount of information the participants gathered about the survey, the schedule, etc that might have had an effect on the data. *Maturation* referred to the participants growing older, more tired toward the end of the school year, attitudinal changes about schooling in general that may have affected their answers.

Other threats to this study were *selection* and *mortality*. *Selection* was a threat to validity simply because there was not a true experimental design to eliminate all confounds. My design worked to eliminate as many confounding variables as possible, but until the selection is purely random, selection will always pose a threat to the research. *Mortality*, the dropping out and in this case, non-participants as well, was another important threat to internal validity. For this study I had many more non-participants than expected. I expected at least a 50% participation rate with my survey. However, my return rate, which was previously discussed, was much lower at 35%. And, in order to minimize another confound, I had to deselect other participants, thus dropping others out of the study and increasing my mortality rate a factor I will discuss more fully later in Chapter IV.

Of all of the threats to internal validity discussed, I feel that mortality had the greatest effect on my results. And, although Campbell and Stanley do not cite instrumentation as one of the top threats to validity, I felt this was an issue worthy of discussion. Instrumentation was a problem for several participants in the study. They reported having a hard time answering some of the questions. The

need for an “I don’t know” column or a “not applicable” choice for some questions was sent as dialogue to me following the completion of the survey. For future revisions to this instrument or for someone conducting similar research, this would be a factor to consider.

External validity, the ability to generalize the results across differing settings (race, gender, age, location, etc), also has identifiable threats. LeCompte and Goetz (as cited in Lincoln & Guba, 1985) identified four threats to the external validity of a study: “selection effects, setting effects, history effects, and construct effects” (p. 292). Selection effects would be present when a non-randomized, quasi-experimental approach was being utilized. The only time this threat would not exist would be in a research study with a truly experimental design with random sampling. Therefore, this is a factor for consideration for the external validity of this study.

Campbell and Stanley (1966) cite four possible sources of threats to external validity to a study as well, Interaction of testing and *X,* Interaction of selection and *X*, Reactive Arrangements, and Multiple-*x* Interference. A threat to the external validity would mean that generalizing the results beyond the scope of the sample would be an invalid interpretation of the data. For this design type, one shot case study, the only one they identify as a threat is Interaction of Selection and *X.* However, Campbell and Stanley describe the Interaction of Selection and *X* as an event that would occur after selection (i.e., a treatment) that would cause the performance or results to differ on the survey. If the results

differed then the validity would be compromised. However, no treatment occurred to any group of participants after selection during the survey administration.

Although not related to either internal or external validity, but yet still noteworthy to the methodological process, the following series of events is included in this section. Because participants were given a link to contact the researcher at any time during the process, a great deal of informal dialogue occurred through email. One problem that was a common theme to participants was the fact that they were unsure that their survey results would remain confidential. They were worried that their principal would find out what they, as individuals, had said about them. Although the participants were reassured that their responses were confidential and would not be shared with the principal in any form other than what was presented as a part of this dissertation, other factors compounded this concern. One participant pointed out that the web site, Zarca Interactive, was not a “secure” website and therefore hackers could access the information. After consulting with the technician at Zarca Interactive, I was assured that because it was an interactive link, the need for an unsecured site was necessary. Another participant shared their concern that the survey was not anonymous. After responding to the participant that an anonymous survey would not allow the researcher to track participants, this invitee seemed at ease.

The second unforeseen problem with this methodology was the large number of participants requesting information about why and how they were selected or who gave permission for the administration of the survey. Although all

the above stated information was contained in the consent statement, many participants solicited individual responses to assure that they were not being singled out for information.

The final and most interesting unforeseen confound with this methodology was the need to further establish personal credibility with the survey. Because as a researcher I am also an employee of Parks District, I feel this may be a unique occurrence. Several participants asked for personal information about me (who am I, why am I doing this, what do I plan to do with the information, etc.). Therefore, the following statement was sent as an email to the staff at the eleven participating schools on May 23, 2006:

> Good morning, I hope this finds you all off to a great start today. I want to begin by thanking those of you who have already responded to my request to participate in a survey about leadership behaviors of your principal. I have had many questions about the research and hoped that by sending a personal email answering those to you all you would feel more at ease about participating. First, I am the principal at Smith Elem. I am a doctoral candidate at UNCG, seeking an Ed.D. in educational leadership. I am interested in the differences in behaviors in men and women leaders and teacher reactions therein. (in a nutshell) My research has been approved by the UNCG review board, Dr. Becoats, and the PCS review board (Dr. Sharon Johnson's office). Your data that you provide is not accessible to anyone at PCS other than me. That protection is built into the approval process. Data that is gathered will be reported only as group data. No individual responses (other than narrative data that will enrich my analysis) will be reported, but that too will be discussed with anonymity. I welcome your questions and responses. The more of you who are willing to participate, the more rich my data is and therefore the better my analysis becomes.
>
> You were selected because you are one of the eleven traditional high schools where your principal has been in place for at least this school year. The research I have is mostly grounded in high schools, so although

> I would have liked to look at elem schools, comparison data will be better by looking at high schools.
>
> I know this is a terribly busy time of year for you all. I appreciate the time you will give to this endeavor. Please feel free to reply with any questions or concerns or feel free to call me personally. Again, thanks for your time and I hope this helps ease any anxiety you may have had!

Fortunately, this strategy must have proven effective as this date had the highest participation of any other during the entire survey life. Although each of these problems was unforeseen, each lends a unique twist to the research that is worthy of attention for anyone conducting similar research in the future.

Given the nature of my study, I felt I was not faced with the same level of difficulty in establishing validity and reliability as someone who was creating a research instrument then analyzing the results from it or someone who was conducting narrative research. Reliability of the sub-scales for the original LBDQ were determined by using a modified Kuder-Richardson formula. Tables for Means and Standard Deviations and Reliability for the original LBDQ can be found in Appendix C and D of this dissertation.

CHAPTER IV

DATA ANALYSIS

This study utilizes several analyses based on the data gathered in the previously discussed survey to examine the differences in leadership behaviors in men and women school principals. Statistical analyses are utilized to examine the data and to present a general pattern of trends. All analyses were performed using SPSS 14.0 Advanced Version statistical analysis software.

Participants

Representativeness of Sample

As previously stated, there were a total of 1,100 invitations to participate in this survey issued. Of those, there were 387 respondents. From those respondents, the decision was made to exclude any person not identified as a "teacher" through the survey instrument in order to keep the data as consistent as possible. The assumption was made that all high school teachers function in relatively the same manner, while those excluded often carried extra responsibilities or different positions that might alter their perception of their principal. Examples of positions excluded from analysis are certified support staff, assistant principals, athletic directors, counselors, and curriculum facilitators. This decision to exclude participants reduced the response number to 337.

Because the response rate was low for this survey, it was important to assure that the sample of those responding was similar to those not responding. Since participant gender is the primary factor of concern for this study, I conducted a frequency analysis for participant type according to gender. A summary of the data is presented in Table 8.

Table 8

Participation Rates by Gender and Participation Type

Participant Type	Gender	Frequency	Percentage
All invited participants	M	445	40.4
	F	655	59.6
Participants (classroom teachers); Data were used for analysis	M	129	38.3
	F	208	61.7
Non-participants (invited but did not Respond to the survey)	M	296	41.6
	F	416	58.4
Participants (other certified staff); Data were not used for analysis	M	25	49.0
	F	26	51.0

As one can glean from the table above, the percentages of participant types all fell within similar ranges. Therefore, one can make the assumption that based on gender, a representative sample of the population was returned for this survey. A χ^2 goodness of fit tests supports this by showing that neither the participants nor non-participants differ significantly from the gender breakdown of the entire sampling frame (χ^2=0.63, df=1, p=0.43 & χ^2=0.41, df=1, p=0.52) respectively.

Descriptive Statistics

As previously stated, the population sample was drawn from eleven standard high schools in the Southeastern United States. The settings of these schools are described in the previous chapter. However, demographic information was gathered on each participant as a part of the survey to enrich the analysis. Data were gathered on gender, race, years in current position, years in education, and age. Tables 9 through 13 present this information for discussion below.

Table 9

Number of Years in Current Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-4	178	52.8	52.8	52.8
	5-10	81	24.0	24.0	76.9
	11-15	23	6.8	6.8	83.7
	16-20	19	5.6	5.6	89.3
	20+	36	10.7	10.7	100.0
	Total	337	100.0	100.0	

There are several points of interest with regard to the number of years in current position. First, it is interesting to note that 52.8% of the participants have been in their position four or fewer years. This does not allow for a great deal of consistency to be in place at the schools, nor does it allow time for a staff to come together as a professional learning community when over 50% is new every 5 years or less. This is dually difficult when your percentage of veteran teachers, those with over 16 years of experience, is very low assuming that 16 to

20 years in a position would also mean years of experience. However it is more important to point out that this may just be a point of skewedness for this data. Perhaps highly mobile or inexperienced teachers are the ones more likely to answer an online survey. Also a point to consider is that most of the principals at the schools have been at their site for fewer than 3 years. Therefore, some of these teachers could have moved with that principal from another school in the district to their current school thus resulting in a higher percentage of teachers in the 1 to 4 range. This would be illustrated by a more even distribution across the ranges in the next table.

Table 10

Total Years of Experience in Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-4	103	30.6	30.6	30.6
	5-10	84	24.9	24.9	55.5
	11-15	50	14.8	14.8	70.3
	16-20	29	8.6	8.6	78.9
	20+	71	21.1	21.1	100.0
	Total	337	100.0	100.0	

Although the personnel at the high schools seems to be mobile as illustrated above, there is a much lower percentage of Beginning Teachers, teachers in their first three years of service to education, than one might expect given the high percentage of staff in their first four years in a position at the location. A much higher percentage of long term veterans, those with more than 20 years of experience, were present than expected. Therefore, these long term

veterans must be moving from school to school, perhaps following a principal they find to be effective.

As speculated, the spread across the percentages is much more equally distributed suggesting that teachers are mobile. However, this could also represent several other factors. The sample could represent the fact that younger teachers are more willing to reply to online surveys. Given the advent of the 21st century learner, more new teachers are being taught to utilize technological resources as an everyday item. Students and young adults today are more comfortable emailing and text messaging rather than having a face-to-face conversation so it seems only logical that this fact must be acknowledged. Therefore, this fact, years of experience in education, will be important to compare to age later in this discussion.

Table 11

Race: Participants vs. Parks District

		Frequency Sample	Percent Sample	Frequency District	Percent District
Valid	African American	65	19.3	1084	23.9
	Asian	5	1.5	29	0.6
	Caucasian	251	74.5	3318	73.3
	Hispanic	8	2.4	47	1.1
	No Response	2	.6	N/A	N/A
	Other	6	1.8	30	0.7
	Total	337	100.0	4528	100.0

Table 11 above illustrates the descriptive statistics for race for the sample of participants compared to the certified teachers in all of Parks District.

Overwhelmingly, Caucasian teachers are the majority group for both the sample and for Parks District. African American teachers compromise the next largest subgroup for both areas as well, further supporting the representativeness of the sample for this research. In the sample collected, all data for non-majority races are in a larger percentage than for the district as a whole. This would lead me to believe that high schools are more diverse then perhaps the elementary or middle schools given that the percentages of the other ethnicities are low for the district as a whole but for the sample the percentages are larger than would be represented in an expected N value. Because these data are comparative of the district and not of the sample, no test of fit was performed.

Table 12

Participant Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-25	43	12.8	12.8	12.8
	26-30	47	13.9	13.9	26.7
	31-35	43	12.8	12.8	39.5
	36-40	44	13.1	13.1	52.5
	41-45	37	11.0	11.0	63.5
	46-50	41	12.2	12.2	75.7
	51-55	53	15.7	15.7	91.4
	55+	29	8.6	8.6	100.0
	Total	337	100.0	100.0	

The information regarding participant age is of particular interest. There is an almost even distribution of participants in each five year age span given. In the survey design, I thought that there would be a direct relationship between the

age of the participant and their years of experience. However, it appears there are more teachers at the high school level, based on this sample, who entered in a non-tradition manner. That is, they did not begin teaching after going to college for four years immediately after high school. Table 13 further illustrates this relationship:

Table 13

The Relationship between Age and Total Years of Experience in Education

			Total years of experience in education					Total
			1-4	5-10	11-15	16-20	20+	
Age	21-25	Count	43	0	0	0	0	43
		% within Total years of experience in education	41.7%	.0%	.0%	.0%	.0%	12.8%
	26-30	Count	24	23	0	0	0	47
		% within Total years of experience in education	23.3%	27.4%	.0%	.0%	.0%	13.9%
	31-35	Count	11	24	8	0	0	43
		% within Total years of experience in education	10.7%	28.6%	16.0%	.0%	.0%	12.8%
	36-40	Count	7	13	17	7	0	44
		% within Total years of experience in education	6.8%	15.5%	34.0%	24.1%	.0%	13.1%
	41-45	Count	8	8	9	7	5	37
		% within Total years of experience in education	7.8%	9.5%	18.0%	24.1%	7.0%	11.0%
	46-50	Count	5	6	3	5	22	41
		% within Total years of experience in education	4.9%	7.1%	6.0%	17.2%	31.0%	12.2%
	51-55	Count	5	6	8	7	27	53
		% within Total years of experience in education	4.9%	7.1%	16.0%	24.1%	38.0%	15.7%
	55+	Count	0	4	5	3	17	29
		% within Total years of experience in education	.0%	4.8%	10.0%	10.3%	23.9%	8.6%
Total		Count	103	84	50	29	71	337
		% within Total years of experience in education	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Although a large percentage of the high school teachers, 41.7%, do follow the expected relationship of entering education after four years of college, more interesting is the fact that almost 25% of participants are over 35 years of age and in their first four years of teaching. That fact would impact this study because the perceptions of a 35-year-old first year teacher have both the lenses of a person with more experience with the world than the typical 21-year-old beginning teacher. Those more experienced life lenses could alter their perception of their principal, yet they share the beginning teacher lenses with that 21-year-old when it comes to true experience in the working world of education. That would also mean that most likely those participants are entering education as a second career and have therefore experienced a “boss” of another type and therefore have a point of reference to which compare their principal which could impact their perception therein. Further work could therefore be done with this study to examine the impact of age and gender on principal’s actions.

Discussion of Research Framework

In Chapter II I reviewed the existing literature about different frameworks for leadership and gender differences in leadership behaviors. In Chapter III, I framed research questions and formulated hypotheses suggesting that women principals would be scored as both Person Oriented and Systems Oriented. In this section, I discuss how I have used my data to test these hypotheses. The overall pattern of Person and System Orientation is demonstrated in Figure 7 as a starting point for these discussions.

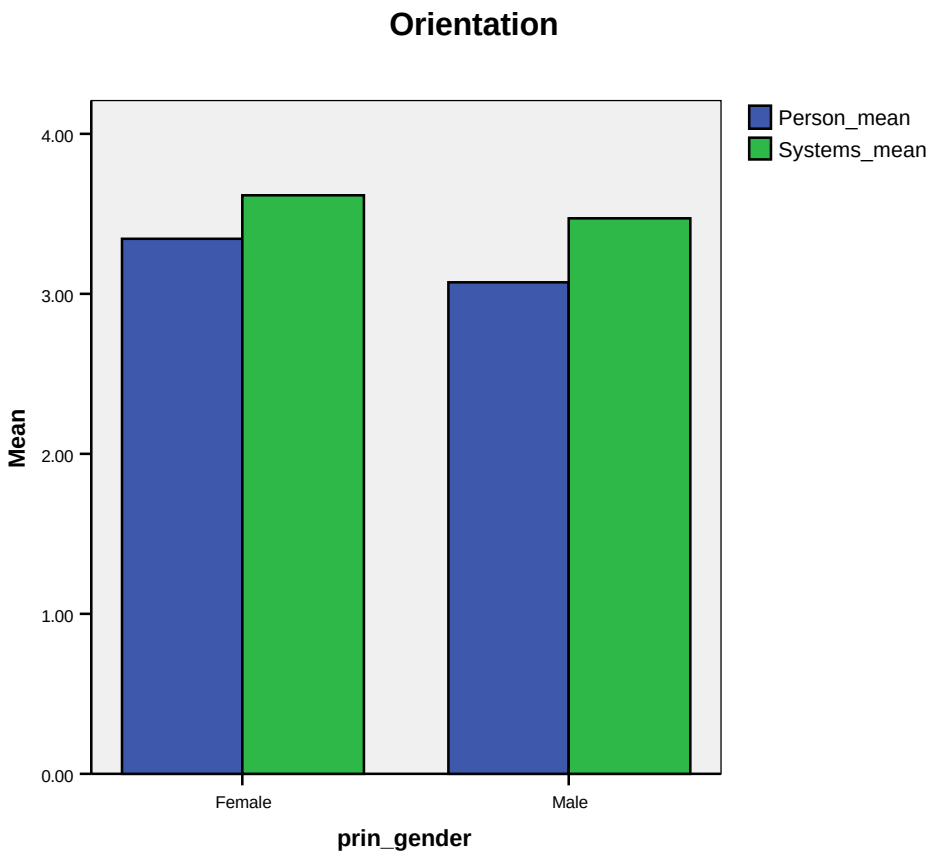

Figure 7. ***Relationship of Principal Gender to Systems and Person***

As shown in Figure 7, both male and female principals were perceived by their teachers as having high levels of attention to both Systems and People (mean=2.5). One can see that teachers rate female principals as having a higher level of attention to both Systems and Person Orientations, when simply looking at the above graph of means and not placing any level of discussion on significance. And, teachers perceive both male and female principals as having a higher level of attention to Systems Orientation over Person Orientation. Teachers do perceive women principals to have a higher level of attention to

Person oriented behavior than their male counterparts. Further, more analytical discussions of the hypotheses with statistical analyses to support the discussion follows.

Discussion of Hypotheses

To facilitate the understanding of my results, I refer readers back to page 78 and Table 3 from the previous chapter, which presents the characterizations of the different types of leaders that are examined in my analysis.

Hypothesis 1: More women leaders will be identified as Accommodating Leaders

In order to quantify this hypothesis, the following scatterplot was created to illustrate the mean of Systems and Person Orientation for men and women principals. A scatterplot is a visual representation of a correlation. The diagram helps to illustrate many aspects about the relationships between the variables such as whether the relationship between the given variables is positive or negative by the slope created when the data points are clustered and the strength of the relationship by the grouping of the data points (Salkind, 2004). For example, a strong, positive correlation, .80 to 1.0, would result in a set of data points that resembled a nearly straight line beginning in the lower left corner of the *x*- and *y*- axes and progressing diagonally upwards towards the far right boundary of the graph.

As is illustrated in Figure 8, there is a positive, rather strong correlation for teacher ratings of women principals to both Systems and Person Orientation and

there appears to be much more of a positive correlation illustrated in the rating of women principals overall. However, to utilize the framework discussed previously, an Accommodating Leader would have data points around (3, 3). The data points for the ratings for the male principals are more loosely clustered and are spread more widely across the graph.

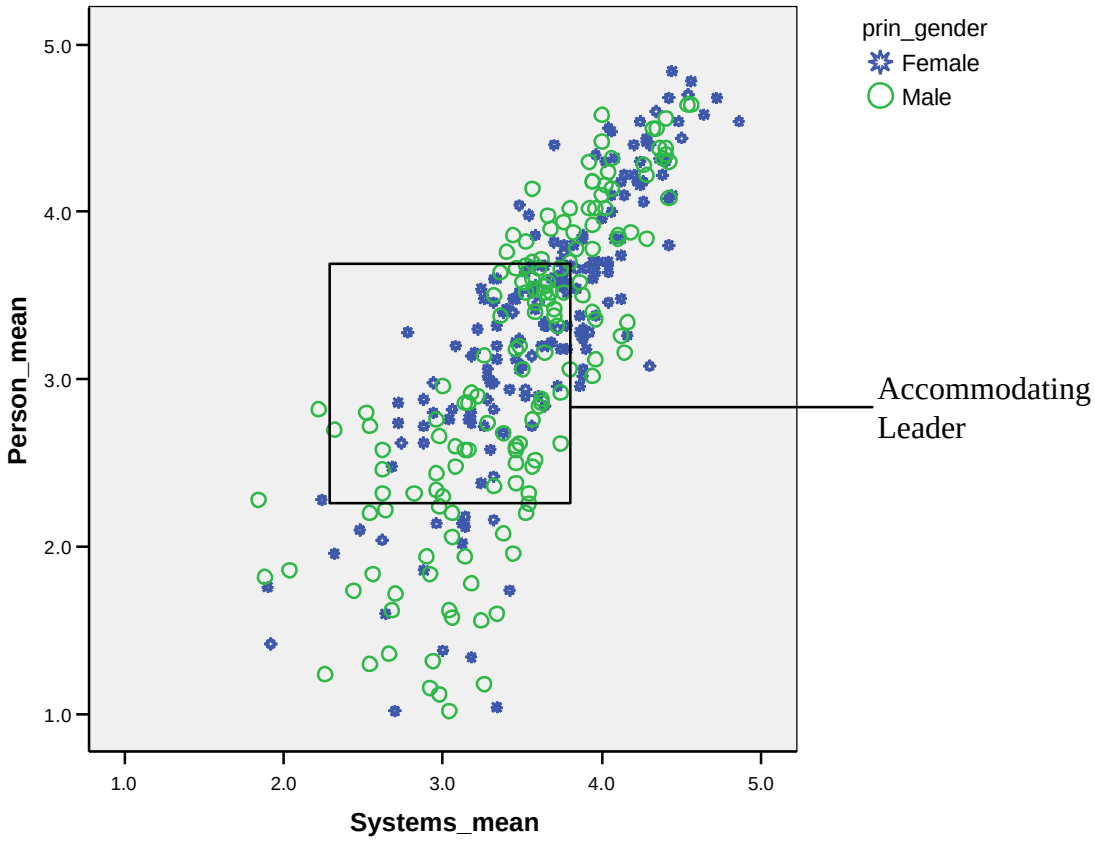

Figure 8. ***Scatterplot Diagram of System and Person Means by Gender (Accommodating Leader)***

The area boxed shows the area described in the contextual framework as Accommodating Leader (3, 3). Most teachers rated women principals fairly close

to this area where the teachers' ratings of the male principals have a greater spread throughout the bottom half of the diagram. The group statistics for the scatterplot above illustrate that the teachers perceive that female principals have a Person mean of 3.3461 and a Systems mean of 3.612, thus placing their grid points aptly into the Accommodating Leader grid area around points (3, 3). However, teachers also perceive men leaders to be Accommodating, just not at the same levels. Teacher perceptions for Person means for male principals was 3.07 and for Systems was 3.47 (see Table 14).

To further illustrate, Table 15 and Table 16 below contain analyses for Pearson's Correlation. Pearson's Correlation tests for variance within each variable itself and its variation together with other variables. Person and Systems variable itself and its variation together with other variables. Person and Systems in teacher perception of women principals correlate at a higher level, 829 than that of teacher perception of men, .784. These data explain the clustering of the

Table 14

Group Statistics for Scatterplot Diagram

	prin_gender	N	Mean	Std. Deviation	Std. Error Mean
Person_mean	Female	184	3.3461	.78755	.05806
	Male	153	3.0702	.91613	.07406
Systems_mean	Female	184	3.6212	.54113	.03989
	Male	153	3.4757	.56644	.04579

Table 15

Correlations—Female Principals

		Person_mean	Systems_mean
Person_mean	Pearson Correlation	1	.829(**)
	Sig. (2-tailed)		.000
	N	184	184
Systems_mean	Pearson Correlation	.829(**)	1
	Sig. (2-tailed)	.000	
	N	184	184

** Correlation is significant at the 0.01 level (2-tailed).

Table 16

Correlations—Male Principals

		Person_mean	Systems_mean
Person_mean	Pearson Correlation	1	.784(**)
	Sig. (2-tailed)		.000
	N	153	153
Systems_mean	Pearson Correlation	.784(**)	1
	Sig. (2-tailed)	.000	
	N	153	153

** Correlation is significant at the 0.01 level (2-tailed).
a prin_gender = Male

data points on the scatterplot. The points for the women principals are more tightly clustered; they have a higher correlation.

Another data source to further illustrate and support the hypothesis that more women leaders will be identified as Accommodating Leaders is that after

conducting a frequency analysis that sorted results for teachers rating women principals with scores on System mean and Person mean higher than 2 but lower than 4, a result of 123 of the 184 respondents for women principals rated them within these parameters, equating to 66.8% of women principals being identified as Accommodating, a clear majority. However, 94 of the 153 participants rating male principals also rated their male principal in the Accommodating Leader range, at 61.4%. Although more women leaders were rated as Accommodating Leaders, a Chi-square goodness of fit test yielded the following results: x2=.995, *df*=1, and *p*=.318. Therefore, although numerically women leaders are more readily identified as Accommodating Leaders, statistically, when we look at the number of women and men principals teachers should rate in this area, given the population, there is no statistical difference (see Table 17).

Table 17

Accommodating Leaders

	Observed N	Expected N	Residual
Female	123	130.2	-7.2
Male	94	86.8	7.2
Total	217		

Hypothesis 2: Women leaders will be identified in the upper quadrants of the LBDQ chart (Considerate or Dynamic) more often than men leaders.

To answer and address this hypothesis I will again use a scatterplot diagram to illustrate results (Figure 9). To look at the LBDQ chart in quadrants, and to look at the data supplied by the participants, no leaders in Parks District were identified as Considerate leaders. Therefore, no comparison between men and women leaders can be made in that quadrant.

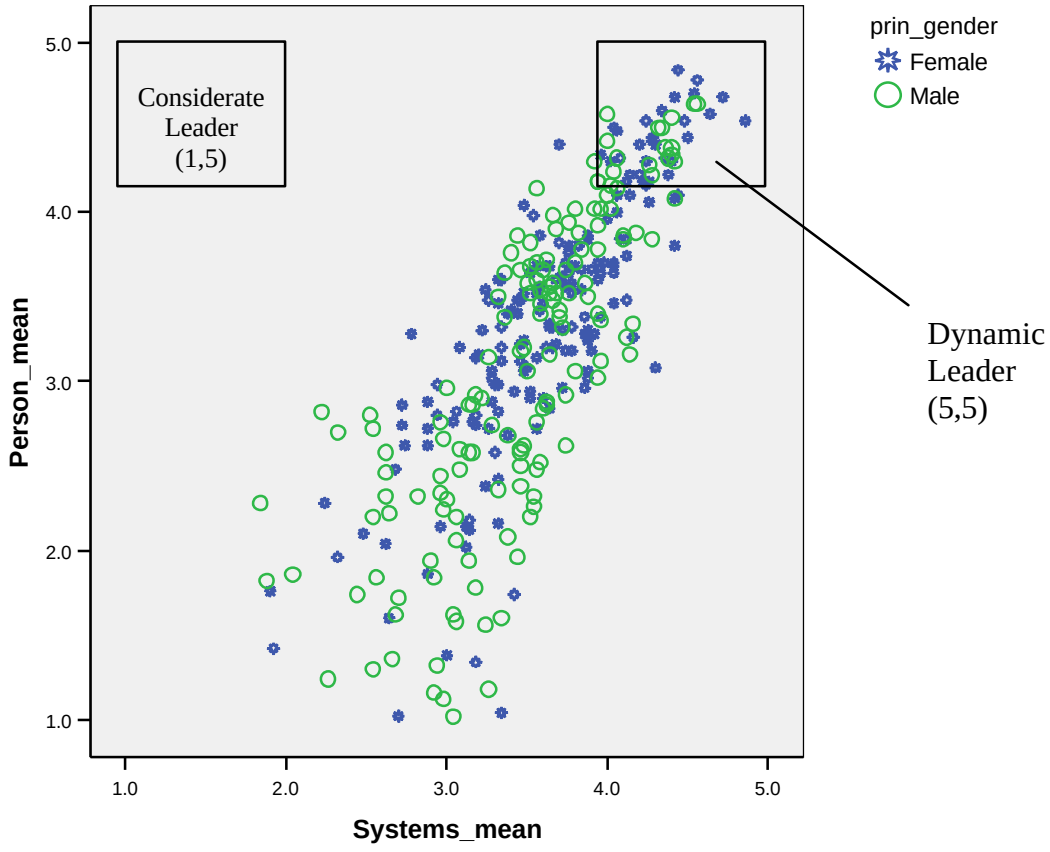

Figure 9. ***Scatterplot Diagram of System and Person Means by Gender (Considerate and Dynamic Leaders)***

Continuing, several men and women leaders were identified as Dynamic Leaders according to the scatterplot diagram. Utilizing the graphic representation (Figure 9) as a visual representation of the Dynamic Leaders, the correlations discussed with the previous hypothesis hold true with this hypothesis as well. However, listed below is a table illustrating extreme high values for System and Person means (see Table 18). This table illustrates the highest ratings teachers provided for male and female principals. As one can interpret, all extreme values for Persons Orientation are held by teachers rating women principals with values over 4.6 and all extreme values for Systems Orientation except one are held by teachers rating women principals with values over 4.5.

Table 18

Extreme Values—Highest

			prin_gender	Value
Person_mean	Highest	1	Female	4.84
		2	Female	4.78
		3	Female	4.70
		4	Female	4.68
		5	Female	4.68
Systems_mean	Highest	1	Female	4.86
		2	Female	4.72
		3	Female	4.64
		4	Female	4.56
		5	Male	4.56

In order to further support this hypothesis, I felt further statistical analysis was necessary. After sorting the data to include teacher perception of principals with Systems and Person mean scores of higher than 4, a chi-square test was performed.

A chi-square test involves a comparison of what you would expect to happen with data and what is observed to occur with data (Salkind, 2004). The chi-square test refers to how “good” your set of data “fits.”

There were 52 participants who identified their principals as Dynamic according to the parameters set forth above. Utilizing expected parameters similar to the sample size (i.e. 60% women participants, 40% male participants), the observed values were actually reported higher than expected (see Table 19).

Table 19

Chi Square Output for Dynamic Leaders

	Observed N	Expected N	Residual
Female	34	31.0	3.0
Male	18	21.0	-3.0
Total	52		

Therefore, the chi square value was equal to .719, and Pearson’s Chi-Square value (p) was .397 indicating that although women principals were identified more often as Dynamic Leaders, it is not possible to say there is a

significant difference between the number of teachers who rated men and women principals at the Dynamic level. Therefore, although women leaders were counted more often there is not statistical support to support this hypothesis.

Hypothesis 3: Men will more readily be identified in the lower quadrants of the LBDQ chart (Structured or Passive Leaders).

To address this hypothesis the same scatterplot will be utilized for a third time since it again ties back to the conceptual framework.

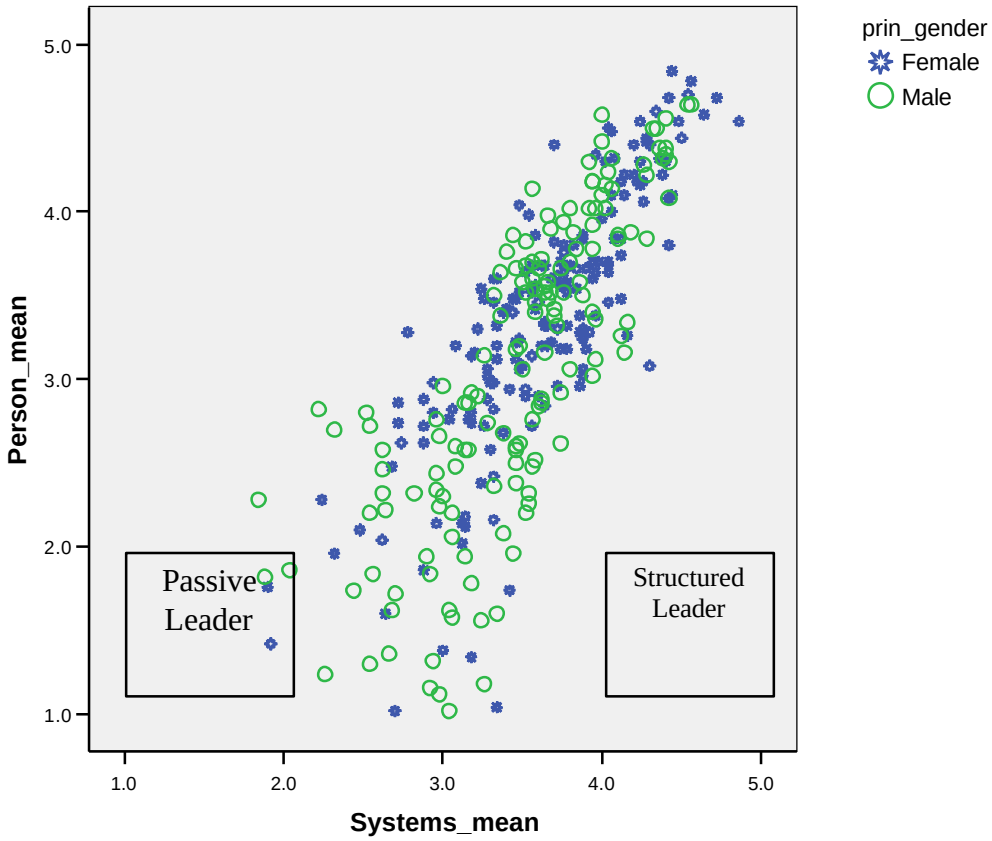

Figure 10. ***Scatterplot Diagram of System and Person Means by Gender (Structured and Passive Leaders)***

First, for this hypothesis, visual discrimination shows that there are many more participants who have identified male principals in the lower quadrants of the scatterplot. In order to maintain consistency throughout this presentation of data, the same analyses will be discussed. Because participants did not rate principals in the Structured Leader quadrant, there are no data available for comparison. Therefore, Table 20 represents the lowest values for the scatterplot.

Table 20

Extreme Values-Lowest

		prin_gender	Value
Systems_mean	Lowest	Male	1.84
		Male	1.88
		Female	1.90
		Female	1.92
		Female	1.94
Person_mean	Lowest	Female	0.68
		Female	1.02
		Male	1.02
		Female	1.04
		Male	1.12

Somewhat similar to the percentage of gender of the participants themselves, the percentage of lowest rated principals was 60% female and 40% male when one looks only at case analysis. Like the extreme values for the upper end of the scales, there is very little variance in the values. However, unlike the upper end, there is one extremely low outlier that may affect the data. If one were

to look only at this level of analysis, it would appear that the women principals were identified as Passive leaders more readily than men. However, further statistical analysis is required to substantiate this conclusion.

To further substantiate, the same statistical analysis described for hypothesis two above, the Chi-square, goodness of fit test, was utilized. Table 21 illustrates the results.

Table 21

Chi Square Output for Passive Leaders

	Observed N	Expected N	Residual
Female	11	20.0	-9.0
Male	23	14.0	9.0
Total	34		

Like Hypothesis 2, consideration was given to the sample population and adjustments were made to the expected N before the Chi-square was calculated. As one can see, the expected value for teacher perception of male principals is actually a great deal lower than the observed and the opposite for the teacher perception of female principals. The data are also substantiated with better chi square values than hypothesis two. The chi square value was 9.836 with a (p) value of .002, statistically significant. Therefore, given these data, one can

conclude that teachers believe that men principals are more readily identified as Passive Leaders and this hypothesis is therefore supported.

Before addressing hypotheses four and five it is necessary to address the interconnectedness of these participants. Because these participants are all in the same eleven schools, one would expect to see some degree of similarity in their answers because of the environmental similarities they share. To address these issues statistically, a process called hierarchical linear modeling, or HLM, is utilized wherein formulas are written to isolate the "nesting" effect and to identify which factor has what effect on which variable. Typically with data of this nature HLM is utilized. However, when several different exploratory HLMs were run there was no one factor at the second level of analysis (what determines the nesting) that would cause a need for a higher level modeling.

Hypothesis 4: Both male and female teachers will identify female principals as more Systems-oriented than male principals.

In order to accurately test this hypothesis, an analysis of variance test or ANOVA was conducted. An ANOVA is necessary to test variance because more than one group was being tested, i.e., I was looking at the gender of the teachers and the gender of the principals not just the gender of the principals. The test of the ANOVA is reported as an F value for R. A. Fisher (Salkind, 2004). The F value is a ratio that reflects a comparison of the amount of variability between groups to the amount of variability within each group. All data are presented below.

Table 22

Relationship of Teacher Gender to Principal Gender

Gender of Rated Principal	Gender of Teacher		Total
	Female	Male	
Female	106	78	184
Male	102	51	153
Total	208	129	337

Table 22 shows that of the 337 participants, 208 were female and 129 were male. Of those, 106 female teachers and 78 male teachers rated female principals. One hundred two female teachers and 51 male teachers rated male principals.

Similar to the data presented above in Hypothesis 1 without the second variable of teacher gender as a consideration, the mean for male and female principals as rated by male and female principals are all within the same range (Female 3.62; Male 3.47). Also noteworthy is that there is little variance in their Standard Deviations further supporting similarities between these mean scores (see Table 23).

One assumption of linear models (ANOVA, Linear Regression), is that the variance is homogenous between the various sub-grouping levels of the data in

Table 23

Descriptive Statistics for Systems Orientation

prin_gender	Gender	Mean	SD	N
Female	Female	3.6457	.52748	106
	Male	3.5879	.56086	78
	Total	3.6212	.54113	184
Male	Female	3.4969	.55680	102
	Male	3.4333	.58857	51
	Total	3.4757	.56644	153
Total	Female	3.5727	.54586	208
	Male	3.5268	.57472	129
	Total	3.5551	.55668	337

the analysis. A violation of these assumptions calls into the question the ability to generalize beyond the scope of the sample collected, but does not prevent interpretation of the effects for the sample. The Levene's Test of Homogeneity of Variance looks for a significance level of (p> 0.05) to determine if variances between groups are significant. Since our p=.874 there is very little variance between the data reported by male and female teachers. This indicates for this analysis the assumption of homogeneity of variance is supported (see Table 24). The results of the one way ANOVA are presented in Table 25. The p=.016 indicates that there is a significant difference between the gender of the principals on the Systems orientation. However, both male and female teachers,

Table 24

Levene's Test of Variance for Systems Orientation

F	df1	df2	Sig.
.233	3	333	.874

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a Design: Intercept+prin_gender+gender+prin_gender * gender

with no regard *p*=.963, feel that female principals are more systems oriented than male principals. Therefore, this hypothesis is supported.

Hypothesis 5: Both male and female teachers will identify women principals as more Person-oriented than men principals.

Similar to hypothesis four, this hypothesis necessitates analysis in the form of ANOVA because of the additional variable consideration. Data are presented and discussed with the tables below.

Table 26 illustrates a great deal more variance between both the mean and the standard deviation between the male and female teachers and male and female principals with Person Orientation. Also, the standard deviations are much larger meaning there was much more instability among individual answers than there was in the Systems Orientation. However, the means are still around the means when the factor of teacher gender was not a consideration (Female=3.3; Male=3.07).

Table 25

ANOVA Results for Systems Orientation

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Observed Power (a)
	(b)					
prin_gender	1.782	1	1.782	5.813	.016	.672
Gender	.285	1	.285	.928	.336	.161
prin_gender * gender	.001	1	.001	.002	.963	.050
Error	102.069	333	.307			

a Computed using alpha = .05
b R Squared = .020 (Adjusted R Squared = .011)

Table 26

Descriptive Statistics for Person Orientation

prin_gender	Gender	Mean	SD	N
Female	Female	3.3402	.81900	106
	Male	3.3541	.74785	78
	Total	3.3461	.78755	184
Male	Female	3.0545	.91958	102
	Male	3.1016	.91747	51
	Total	3.0702	.91613	153
Total	Female	3.2001	.87940	208
	Male	3.2543	.82500	129
	Total	3.2208	.85814	337

The variability described above impacted the Levene's Test for Homogeneity of Variance. In this case *p*=.007 indicating a significant difference

between male and female teachers in the way they rated their principals. This is most likely attributed to the fact that male principals have much more variance in ratings than do female principals. Another factor of consideration to correct this error would be to address the N count. To correct N, an increase in the sample size would help, or, balancing the numbers in each of the groups of participants so there were an even number of male teachers and female teachers rating an even number of male and female principals; perfect survey participant design. Therefore, because of the fact that the Levene's test has failed, the remaining results must be interpreted with caution and may not be generalized beyond the scope of the population described in this sample (see Table 27).

Table 27

Levene's Test Variance for Person Orientation

F	df1	df2	Sig.
4.085	3	333	.007

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a Design: Intercept+prin_gender+gender+prin_gender * gender

Table 28 shows a *p*=.006 for principal gender. Another important statistic contained in the table is the observed power of .793. A benchmark power is .80 for good power data. The .793 is very close to that benchmark indicating that not

only through the *p* value, but reinforced through the power, that principal gender is a significant factor for Person Orientation. That is, both male and female teachers identify female principals more often as Person oriented than male principals. Therefore, this hypothesis, with the caveat stated above about the Levene's test, is supported.

Table 28

ANOVA Results for Person Orientation

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Observed Power (a)
	(b)					
prin_gender	5.607	1	5.607	7.747	.006	.793
Gender	.072	1	.072	.099	.753	.061
prin_gender * gender	.021	1	.021	.029	.864	.053
Error	240.992	333	.724			

a Computed using alpha = .05
b

Principal Self-Reports

Although a great deal of data was not obtained from the principals themselves, I thought it would be interesting to do a brief comparison of how the principals felt they behaved compared to how their teachers rated their actions. In Figure 11 below, the same histogram is shown that began this discussion except this diagram illustrates principals' self perceptions rather than teacher's

perceptions. One cautionary note, these data are representative of only 6 responding principals: 2 females and 4 males.

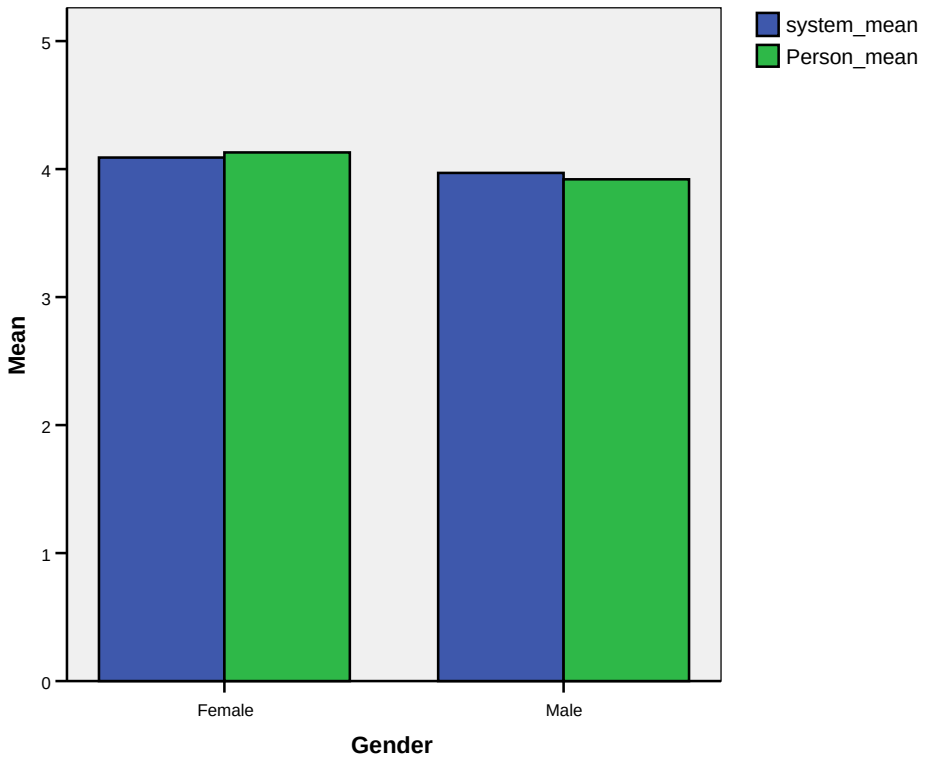

Figure 11. ***Principal Self Perception of System and Person Orientation***

There is a difference between the way principals perceive themselves and the way teachers rate them. First, female principals rated themselves as giving more attention to the Person Oriented leadership actions than the System Oriented actions. Men principals readily acknowledged they were more oriented towards the Systems behaviors. However, I find it interesting that both male and female principals both rate themselves high in both areas. Table 29 compares

the mean scores for self report and teacher report for the Systems and Person Orientation to further illustrate this point.

Table 29

Teacher Perception of Behaviors vs. Principal Self Reporting Behaviors

	Principal Gender	Teacher Report	Principal Report
Systems Orientation Mean Score	Female	3.62	4.09
	Male	3.47	3.96
Person Orientation Mean Score	Female	3.34	4.13
	Male	3.07	3.09

All principals, both male and female, rated themselves higher than their subordinates in all areas; an interesting trend worthy of further discussion in Chapter V. It is difficult for me to draw conclusions with these data, as the data for women principals are based on only two reports, and is therefore a nonrepresentative sample because of its small size. However, I do find it noteworthy that the male principals in the sample seem to have a much more realistic grasp of their level of functioning (as described by the participants in the sample) than the women. The final diagram I offer for discussion with regard to principal self report is the scatterplot located as Figure 12.

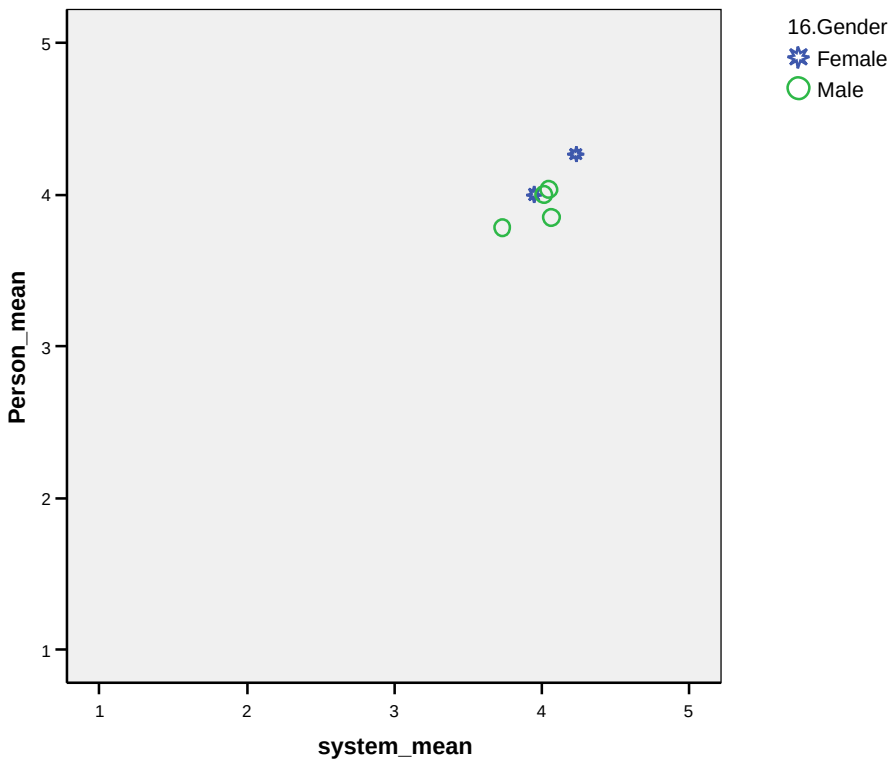

Figure 12. ***Principal Perception of their Performance on the LBDQ Chart***

Following the same line of discussion as with the scatterplots previously discussed, the female principals appear to have a greater correlation (tighter alignment) than the male principals. Similar though to the teachers' ratings, the principals' overall self ratings did place themselves in the upper Accommodating to Dynamic areas of the chart where most of the teachers had rated their principal. As shown with the table and in the scatterplot, the male principals do tend to rate themselves lower overall than the female principals. Again, however, I am hesitant to draw any firm conclusions with these data or to do any further analysis beyond simple comparisons due to the small sample size. This area,

principal perception of their behaviors, would be another area of further research that will be discussed in Chapter V.

CHAPTER V

FINDINGS AND DISCUSSIONS

The purpose of this final chapter is to provide a review of the entire research study with an opportunity for discussion of the results as they relate to trends in the data and how those trends should inform the work of future leaders. The chapter concludes with recommendations for future researchers and possible next steps for replication or advancement of a study similar to this one.

Summary of Research Questions

The purpose of the study was multifaceted; to determine if principals' behaviors or actions related to a Systems Orientation or Person Orientation as defined by the "trait approach to leadership theory"; Systems and Person orientation; to determine if teachers' perceptions of principal leadership behaviors were gender specific; to determine if subordinates (i.e. teachers) perceive male and female teachers differently; and to determine if those perceptions differ according to subordinate gender (i.e., do male and female teachers view male and female principals differently?).

Data were gathered from a school district in the southeastern United States. Eleven high schools in the district were selected for the study based on the following criteria: a) the school served students in grades 9 through 12, b)

the principal at the school had been in place since at least August 2005, and c) the school was traditional in format.

Teachers at the eleven high schools were surveyed using a Web-based version of the Leader Behavior Description Questionnaire (LBDQ) Form XII originally developed by the Ohio State University Leadership Studies. Teachers were asked a series of 100 questions about their principal's actions in order to determine if the principal acted in a more System Oriented or Person Oriented manner. From the teacher responses, data were scaled, summed, meaned, and correctly oriented in order to analyze the specific hypotheses about gender and leadership behaviors. A variety of descriptive and linear analyses were conducted to demonstrate the relationships between principal gender and leadership behavior and teacher gender and perceptions of principal actions.

Findings and Discussion

A general summary of the results follows along with a discussion of any trends present within the data. Connections to previously discussed literature will also be made in new contexts as well.

By testing to see if more women would be identified as Accommodating Leaders, if women leaders would be identified in the upper quadrants of the LBDQ chart more often than men leaders, and if men leaders would more readily be identified in the lower quadrants of the LBDQ chart I was able to address the first research question; how do principals' behaviors or actions relate to a Systems or Person Orientation. As shown best in Figure 7, teachers perceive

both men and women principals to have rather high levels of attention to both Systems and Person actions. However, when tests of statistical significance are applied, there often was no statistical difference between the way teachers rated male and female principals when it came to rating principals positively. For the purpose of this discussion, I consider the following areas of the LBDQ grid to be "effective" ratings: Accommodating, Considerate, and Dynamic Leaders and "ineffective" ratings to be Structured and Passive Leaders.

First, I expected there to be a much greater divide in the way male and female teachers perceived male and female principals. Fortunately, male and female teachers perceive "effective" principals, no matter their gender, the same. But, when "ineffective" principals behaviors were examined, they were found to more often be males. My supposition about this trend is that this is an after effect of the sponsorship and tokenism that took place years ago (Kanter, 1977; Ortiz, 1989; Lee et al., 1993). Principalships were granted based on gender, not necessarily on merit, and thus there may be more ineffective male principals because they obtained their position based on gender at that time. Teachers who were surveyed seem to agree as well. One of the additional questions teachers were prompted to respond to beyond the LBDQ was "Do you feel your principal is effective?" A cursory glance at these data also supports this gender divide. Teachers felt their male principals were effective 72.5% of the time while they rated their female principals as effective 86.4% of the time. Continuing, also previously discussed in Chapter II (Bell 1995; Hurty, 1995), women principals

have to work to overcome negative gender stereotypes that exist when they enter a position. Women teachers are much more critical of other women in leadership and in this case, women principals. To further the discussion of effectiveness above, the following table will help illustrate my next point.

Table 30

Teacher Perception of Principal Effectiveness by Gender

	Teacher Gender	Not Effective	Effective
Female Principal	Female	16.0	84.0
	Male	10.3	89.7
Male Principal	Female	26.5	73.5
	Male	29.4	70.6

Given the larger number of women teachers in the sample and the nature of the research previously stated, I would have expected the female teachers to be much more critical of the women principals. Therefore, assuming that the scoring was done with the gender criticism described, one fairly assumes teachers, both male and female perceive female principals to be more effective leaders.

When these data are discussed in the context of the last two hypotheses, both male and female teachers will identify female principals as more Systems Oriented and Person Oriented than men principals, we must further review the

context of the gender leadership. However, both male and female teachers did identify female principals as more System and Person Oriented, but there was only significance to the data at the Person Oriented level. When one tries to place this into the context of a twenty first century female leader, one must call upon the rules of occupational socialization discussed in Chapter II (Cooper 1995; Hart, 1995). One must recall that women principals, because of limited access to the principalship become masters in their craft first and learn the management aspects of the principalship once they are in the position (Systems Orientation). One could argue though, because of the “second shift” women are faced with (Coleman, 2003) women learn their new role quickly and well, because they are being socialized into the role of principal by their male counterparts who already do the job well. And, because the Person Oriented actions are those that occur more naturally for women and therefore allow women principals to score higher on that scale (gender normative expectations) the aspect that is more natural is the one that is statistically significant difference from their male counterpart. Therefore, women and men principals have been allowed the time and energy to focus on the task at hand to become better at the area they are weakest in to provide strong principals, both make and female.

Another finding on the data worthy of comment is the fact that principals rated themselves higher in all areas than their teachers. Without going into deep analysis, which is certainly possible with this topic, it is important to acknowledge several factors with regard to this trend. Even the best leader who values

participatory decision making and is a Dynamic Leader, still can not make their subordinates aware of every facet that their job entails. Moreover, the job of school principal is extremely demanding, more demanding than can be perceived by a teacher in a survey. And, I can't say I have met a principal or a person who has entered any position going into it to not doing their best. Therefore, the principal's perception is their reality. With the lenses they wear and the perceptions they have of their school, their responsibilities, and their demands, they may feel they are doing that much better than the principal next door. However, self reflection and ongoing dialogue and feedback will help even the best principal to have their "numbers" more in line with their subordinates.

The data have many trends, but the one most poignant to me is this: teachers, both male and female, perceive women principals to be higher functioning than their male counterparts. This is not to discount the work of the male principal at all. If fact, I feel it is important to acknowledge that there is less of a gender difference than I expected to be present. But, when all of the factors are considered, the number of teachers who rate women principals as Dynamic Leaders, the lack of number of teachers rating women principals as Passive leaders, the high level of functioning in both the System and Person Orientation areas, and the teacher effectiveness ratings, I think it supports my statement. I realize there were areas where statistical significance did not support my hypotheses; however, significance is often an issue of sample size, and when

you look at the scatterplot diagram and look at the strong correlation, I believe that the data are suggestive in the general direction of my hypotheses.

Implications

Parks District is fortunate to have such a strong group of high school principals on staff. They appear to work hard and must obviously care for their staff and about their school. Because there does appear to be a disconnect between the principal data and the teacher data, perhaps Parks District could engage in professional development designed to enrich the relationship between the principal and teachers where the goal is to help teachers provide open, honest dialogue to their principal about his or her performance, perhaps through a 360 degree feedback instrument. Although I know this has been done in the past, since over 50% of the staff at these schools is new within the last five years, feedback from the current staff may provide new, meaningful information to the current principal.

Many of the principals studied were women. And, those teachers rated as most effective were women. One of the initiatives I would suggest for Parks District, in addition to its existing Masters Cohort Program, would be a Principal Mentor Program. Given that most school superintendents are still men and selection for principalships will still occur by superintendents or cadres of Senior level administrators who may be predominately males (Glass, 2000), it is important for the women principals of today to begin to mentor teachers they see interested in being principals or who they feel have the characteristics of good

leaders. Women principals need to take charge of the occupational socialization for both rising men and women principals and assert themselves as permanent members of the higher ranks of educational administration.

Finally, conceptually I believe we have over the past ten years redefined the operationalized definition of the principalship to include both instructional leader and manager. However, I believe it is time once again to reconceptualize and redefine this term. For, I believe in the next five to ten years there is going to be yet another paradigm shift. As the data have illustrated, there are increasing numbers of female principals. Hopefully, there will also be increasing numbers of female Senior Staff members and Superintendents. If this is so, acknowledging the "second shift" for women will be a must. Women principals (and men too) have not achieved these high levels of performance without sacrifice to their personal lives. The principalship has become a "high stakes" position where you must perform or be replaced and baseline performance often requires a minimum of a 60 hour work week. When this 60 hour work week is coupled with a family, perhaps a husband or wife and a child or two, this work week becomes 80 hours, easily. Therefore, districts like Parks are going to have to be attentive to helping all of their employees be attentive to finding a balance between work and home life and placing that as both a priority and a mandate to success in their district.

Suggestions for Future Researchers

I have enjoyed researching this topic immensely. However, time prevents me from conducting all of the analyses I'd like with these data as well as

conducting future studies. Therefore, I offer the following as suggestions for continuing research of this type again and for future related studies:

If I were to conduct research of this type again, I would make a few modifications to the survey itself. Based on feedback from the participants, I would add a column for “Do Not Know or Not Applicable.” I would also look at the reliabilities listed in the Appendix of this dissertation to possibly exclude questions from the study.

Another logistical change I would make to this study would be to increase my sample size. Given that Parks District has 112 schools, I probably should have opened my survey up to all schools in the district to increase the number of respondents. Or, in order to maintain the construct of only high school settings, I should have solicited the support of a few neighboring counties. This would have addressed my issues with response rate, hopefully, and possibly, statistical significance in some cases.

Although gender is an interesting topic to me, a study of this type could be conducted in a similar manner using any of the following variables, principal age, experience, longevity at school, race, etc. Another way to modify this study would be to do an individual principal analysis based on the subscales. It would be interesting to see which subscales teachers rated male and female principals highest on. However, due to time, this level of analysis was not possible.

Another suggestion for future research is to conduct a mixed method approach to this study. I would suggest selecting four schools, two where there

are female principals and two where there are male principals. However, I would suggest selecting an instrument that will allow for more of a 360 design so there can be better triangulation of data through follow-up conversation. I would also suggest adding in an additional level of interviews and observation to enrich the data.

My final suggestion would be to conduct a year-long case study of a beginning principal and an experienced principal to determine if there are changes in teacher perceptions of their behaviors when there is ongoing dialogue in a professional learning community.

The evidence from my study shows that women principals are at least as effective as men, and perhaps more effective, at providing leadership that is high on System and Persons Orientations forms of leadership that have been well supported in the literature on leadership effectiveness. At the very least, this study should help to encourage districts like Parks to continue to recruit and support their female leaders to encourage their male leaders to develop their skill sets that are in line with the Persons Orientation.

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APPENDIX A

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE—FORM XII

Originated by staff members of
The Ohio State Leadership Studies
And revised by the Bureau of Business Research

Purpose of the Questionnaire

On the following pages is a list of items that may be used to describe the behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Although some items may appear similar, they express differences that are important in the description of leadership. Each item should be considered as a separate description. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to describe, as accurately as you can, the behavior of your supervisor.

Note: The term, “group” as employed in the following items, refers to a department, division, or other unit of organization that is supervised by the person being described.

The term “members,” refers to all the people in the unit of organization that is supervised by the person being described.

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Columbus, OH 43210

DIRECTIONS:

a. READ each item carefully.

b. THINK about how frequently the leader engages in the behavior described by the item.

c. DECIDE whether he/she (A) Always (B) Often, (C) Occasionally, (D) Seldom or (E) Never act as described by the item.

d. DRAW A CIRCLE around one of the five letters (A B C D E) following the item to show the answer you selected.

A = Always

B = Often

C = Occasionally

D = Seldom

E = Never

e. MARK your answers as shown in the examples below.

Example: Often acts as described A B C D E

Example: Never acts as described A B C D E

Example: Occasionally acts as described A B C D E

1. Acts as the spokesperson of the group	A B C D E
2. Waits patiently for the results of a decision	A B C D E
3. Makes pep talks to stimulate the group	A B C D E
4. Lets group members know what is expected of them	A B C D E
5. Allows the members complete freedom in their work	A B C D E
6. Is hesitant about taking initiative in the group	A B C D E
7. Is friendly and approachable	A B C D E
8. Encourages overtime work	A B C D E
9. Makes accurate decisions	A B C D E
10. Gets along well with the people above him/her	A B C D E
11. Publicizes the activities of the group	A B C D E
12. Becomes anxious when he/she cannot find out what is coming next	A B C D E
13. His/her arguments are convincing	A B C D E
14. Encourages the use of uniform procedures	A B C D E
15. Permits the members to use their own judgment in solving problems	A B C D E
16. Fails to take necessary actions	A B C D E
17. Does little things to make it pleasant to be a member of the group	A B C D E
18. Stresses being ahead of competing groups	A B C D E
19. Keeps the group working together as a team	A B C D E

20. Keeps the group in good standing with higher authority A B C D E
21. Speaks as a representative of the group A B C D E
22. Accepts defeat in stride A B C D E
23. Argues persuasively for his/her point of view A B C D E
24. Tries out his/her ideas in the group A B C D E
25. Encourages initiative in the group members A B C D E
26. Lets others persons take away his/her leadership in the group A B C D E
27. Puts suggestions made by the group into operation A B C D E
28. Needles members for greater effort A B C D E
29. Seems able to predict what is coming next A B C D E
30. Is working hard for a promotion A B C D E
31. Speaks for the group when visitors are present A B C D E
32. Accepts delays without becoming upset A B C D E
33. Is a very persuasive talker A B C D E
34. Makes his/her attitudes clear to the group A B C D E
35. Lets the members do their work the way they think best A B C D E
36. Lets some members take advantage of him/her A B C D E
37. Treats all group members as his/her equals A B C D E
38. Keeps the work moving at a rapid pace A B C D E

39. Settles conflicts when they occur in the group A B C D E

40. His/her superiors act favorably on most of his/her suggestions A B C D E

41. Represents the group at outside meetings A B C D E

42. Become anxious when waiting for new developments A B C D E

43. Is very skillful in an argument A B C D E

44. Decides what shall be done and how it shall be done A B C D E

45. Assigns a task, then lets the members handle it A B C D E

46. Is the leader of the group in name only A B C D E

47. Gives advance notice of changes A B C D E

48. Pushes for increased production A B C D E

49. Things usually turn out as he/she predicts A B C D E

50. Enjoys the privileges of his/her position A B C D E

51. Handles complex problems efficiently A B C D E

52. Is able to tolerate postponement and uncertainty A B C D E

53. Is not a very convincing talker A B C D E

54. Assigns group members to particular tasks A B C D E

55. Turns the members loose on a job, and lets them go to it A B C D E

56. Backs down when he/she ought to stand firm A B C D E

57. Keeps to himself/herself A B C D E

58. Asks the members to work harder A B C D E

59. Is accurate in predicting the trend of events A B C D E

60. Gets his/her superiors to act for the welfare of the group members A B C D E

61. Gets swamped by details A B C D E

62. Can wait just so long, then blows up A B C D E

63. Speaks from a strong inner conviction A B C D E

64. Makes sure that his/her part in the group is understood by the group members A B C D E

65. Is reluctant to allow the members any freedom of action A B C D E

66. Lets some members have authority that he/she should keep A B C D E

67. Looks out for the personal welfare of group members A B C D E

68. Permits the members to take it easy in their work A B C D E

69. Sees to it that the work of the group is coordinated A B C D E

70. His/her word carries weight with superiors A B C D E

71. Gets things all tangled up A B C D E

72. Remains calm when uncertain about coming events A B C D E

73. Is an inspiring talker A B C D E

74. Schedules the work to be done A B C D E

75. Allows the group a high degree of initiative A B C D E

76. Takes full charge when emergencies arise A B C D E

77. Is willing to make changes A B C D E

78. Drives hard when here is a job to be done A B C D E

79. Helps group members settle their differences A B C D E

80. Gets what he/she asks for from his/her superiors A B C D E

81. Can reduce a madhouse to system and order A B C D E

82. Is able to delay action until the proper time occurs A B C D E

83. Persuades others that his/her ideas are to their advantage A B C D E

84. Maintains definite standards of performance A B C D E

85. Trusts members to exercise good judgment. A B C D E

86. Overcomes attempts made to challenge his/her leadership A B C D E

87. Refuses to explain his/her actions. A B C D E

88. Urges the group to beat its previous record. A B C D E

89. Anticipates problems and plans for them. A B C D E

90. Is working his/her way to the top. A B C D E

91. Gets confused when too many demands are made of him/her A B C D E

92. Worries about the outcome of any new procedure. A B C D E

93. Can inspire enthusiasm for a project. A B C D E

94. Asks that group members follow standard rules and regulations. A B C D E

95. Permits the group to set its own pace.	A B C D E
96. Is easily recognized as the leader of the group.	A B C D E
97. Acts without consulting the group.	A B C D E
98. Keeps the group working up to capacity.	A B C D E
99. Maintains a closely knit group.	A B C D E
100. Maintains cordial relations with superiors	A B C D E

APPENDIX B

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE—FORM XII SELF

Originated by staff members of
The Ohio State Leadership Studies
And revised by
Bureau of Business Research

On the following pages is a list of items that may be used to describe how you behave as a leader. This is not a test of ability. It simply asks you to describe as accurately as you can, how you behave as a leader of the group that you supervise.

Note: The term, “group” as employed in the following items, refers to a department, division, unit or collection of peoples that you supervise.

The term “members” refers to all the people in the unit that you supervise.

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DIRECTIONS:

a. READ each item carefully.

b. THINK about how frequently you engage in the behavior described by the item.

c. DECIDE whether you (A) Always (B) Often, (C) Occasionally, (D) Seldom or (E) Never act as described by the item.

d. DRAW A CIRCLE around one of the five letters (A B C D E) following the item to show the answer you selected.

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

e. MARK your answers as shown in the examples below.

Example: Often acts as described A B C D E

Example: Never acts as described A B C D E

Example: Occasionally acts as described A B C D E

1. I act as the spokesman of the group. A B C D E

2. I wait patiently for the results of a decision A B C D E

3. I make pep talks to stimulate the group A B C D E

4. I let group members know what is expected of them A B C D E

5. I allow the members complete freedom in their work A B C D E

6. I am hesitant about taking initiative in the group A B C D E

7. I am friendly and approachable A B C D E

8. I encourage overtime work A B C D E

9. I make accurate decisions A B C D E

10. I get along well with the people above me A B C D E

11. I publicize the activities of the group A B C D E

12. I become anxious when I cannot find out what is coming next A B C D E

13. My arguments are convincing A B C D E

14. I encourage the use of uniform procedures A B C D E

15. I permit the members to use their own judgment in solving problems A B C D E

16. I fail to take necessary actions A B C D E

17. I do little things to make it pleasant to be a member of the group A B C D E

18. I stress being ahead of competing groups A B C D E

19. I keep the group working together as a team A B C D E

20. I keep the group in good standing with higher authority A B C D E

21. I speak as a representative of the group A B C D E

22. I accept defeat in stride A B C D E

23. I argue persuasively for my point of view A B C D E

24. I try out my ideas in the group A B C D E

25. I encourage initiative in the group members A B C D E

26. I let others persons take away my leadership in the group A B C D E

27. I put suggestions made by the group into operation A B C D E

28. I needle members for greater effort A B C D E

29. I am able to predict what is coming next A B C D E

30. I am working hard for a promotion A B C D E

31. I speak for the group when visitors are present A B C D E

32. I accept delays without becoming upset A B C D E

33. I am a very persuasive talker A B C D E

34. I make my attitudes clear to the group A B C D E

35. I let the members do their work the way they think best A B C D E

36. I let some members take advantage of me A B C D E

37. I treat all group members as my equals A B C D E

38. I keep the work moving at a rapid pace A B C D E

39. I settle conflicts when they occur in the group A B C D E

40. My superiors act favorably on most of my suggestions A B C D E

41. I represent the group at outside meetings A B C D E

42. I become anxious when waiting for new developments A B C D E

43. I am very skillful in an argument A B C D E

44. I decide what shall be done and how it shall be done A B C D E

45. I assign a task, then lets the members handle it A B C D E

46. I am the leader of the group in name only A B C D E

47. I give advance notice of changes A B C D E

48. I push for increased production A B C D E

49. Things usually turn out as I predict A B C D E

50. I enjoy the privileges of my position A B C D E

51. I handle complex problems efficiently A B C D E

52. I am able to tolerate postponement and uncertainty A B C D E

53. I am not be a very convincing talker A B C D E

54. I assign group members to particular tasks A B C D E

55. I turn the members loose on a job, and let them go to it A B C D E

56. I back down when I ought to stand firm A B C D E

57. I keep to myself A B C D E

58. I ask the members to work harder A B C D E

59. I am accurate in predicting the trend of events A B C D E

60. I get my superiors to act for the welfare of the group members A B C D E

61. I get swamped by details A B C D E

62. I can wait just so long, then blow up A B C D E

63. I speak from a strong inner conviction A B C D E

64. I make sure that my part in the group is understood by the group members A B C D E

65. I am reluctant to allow the members any freedom of action A B C D E

66. I let some members have authority that I should keep A B C D E

67. I look out for the personal welfare of group members A B C D E

68. I permit the members to take it easy in their work A B C D E

69. I see to it that the work of the group is coordinated A B C D E

70. My word carries weight with his superiors A B C D E

71. I get things all tangled up A B C D E

72. I remain calm when uncertain about coming events A B C D E

73. I am an inspiring talker A B C D E

74. I schedule the work to be done A B C D E

75. I allow the group a high degree of initiative A B C D E

76. I take full charge when emergencies arise A B C D E

77. I am willing to make changes A B C D E

78. I drive hard when here is a job to be done A B C D E

79. I help group members settle their differences A B C D E

80. I get what I ask for from my superiors A B C D E

81. I can reduce a madhouse to system and order A B C D E

82. I am able to delay action until the proper time occurs A B C D E

83. I persuade others that my ideas are to their advantage A B C D E

84. I maintain definite standards of performance A B C D E

85. I trust the members to exercise good judgment A B C D E

86. I overcome attempts made to challenge my leadership A B C D E

87. I refuse to explain my actions A B C D E

88. I urge the group to beat its previous record A B C D E

89. I anticipate problems and plans for them A B C D E

90. I am working my way to the top A B C D E

91. I get confused when too many demands are made of me A B C D E

92. I worry about the outcome of any new procedure A B C D E

93. I can inspire enthusiasm for a project A B C D E

94. I ask that group members to follow standard rules and regulations A B C D E

95. I permit the group to set its own pace A B C D E

96. I am easily recognized as the leader of the group A B C D E

97. I act without consulting the group A B C D E

98. I keep the group working up to capacity A B C D E

99. I maintain a closely knit group A B C D E

100. I maintain cordial relationship with superiors A B C D E

APPENDIX C

MEANS AND STANDARD DEVIATIONS

Table 1. Means and Standard Deviations

Subscale	Army Division		Highway Patrol		Aircraft		Ministers		Community Leaders	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Representation	20.0	3.0	19.9	2.8	19.8	2.8	20.4	2.4	19.6	2.4
2. Dem Recon					19.2	2.8	19.8	3.1	19.7	3.3
3. Tol Uncertainty	36.2	4.7	35.6	4.6	33.2	6.2	37.5	6.3	37.7	5.6
4. Persuasiveness	38.3	6.2	37.9	5.9	36.5	5.5	42.1	4.7	39.5	5.5
5. Initiating Struct	38.6	5.7	39.7	4.5	36.6	5.4	38.7	4.9	37.2	5.7
6. Tol Freedom	35.9	6.5	36.3	5.3	38.0	5.9	37.5	6.0	36.4	5.0
7. Role Assumpt	42.7	6.1	42.7	5.3	40.9	5.6	41.5	5.4	39.8	5.6
8. Consideration	37.1	5.6	36.9	6.5	37.1	5.8	42.5	5.8	41.1	4.7
9. Prod Emph	36.3	5.1	35.8	5.7	36.1	5.6	34.9	5.1	35.4	6.8
10. Pred Accuracy	18.1	2.1	17.8	2.1	19.2	2.6	20.5	2.3	19.8	2.5
11. Integration	19.5	2.6	19.1	2.7						
12. Sup Orientat.	39.9	4.9	39.1	5.1	38.6	4.2				
Number of cases	235		185		165		103		57	

Subscale	Corporation Presidents		Labor Presidents		College Presidents		Senators	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Representation	20.5	1.8	22.2	2.2	21.4	1.9	20.7	2.5
2. Dem Recon	20.6	2.7	21.5	3.2			20.7	3.5
3. Tol Uncertainty	35.9	5.4	40.4	5.6	37.2	5.5	35.3	7.6
4. Persuasiveness	40.1	4.2	43.1	4.8	41.1	4.2	42.5	4.6
5. Initiating Struct	38.5	5.0	38.3	5.6	37.7	4.2	38.8	5.5
6. Tol Freedom	38.9	4.9	38.0	4.0	39.6	3.9	36.6	6.2
7. Role Assumpt	42.7	3.5	43.3	5.5	43.5	4.5	41.0	5.7
8. Consideration	41.5	4.0	42.3	5.5	43.5	4.5	41.0	5.7
9. Prod Emph	38.9	4.4	36.0	5.0	36.2	5.0	41.2	5.2
10. Pred Accuracy	20.1	1.8	20.9	2.0				
11. Integration								
12. Sup Orientat.	43.2	3.1			42.9	2.9		
Number of cases	55		44		55		44	

APPENDIX D

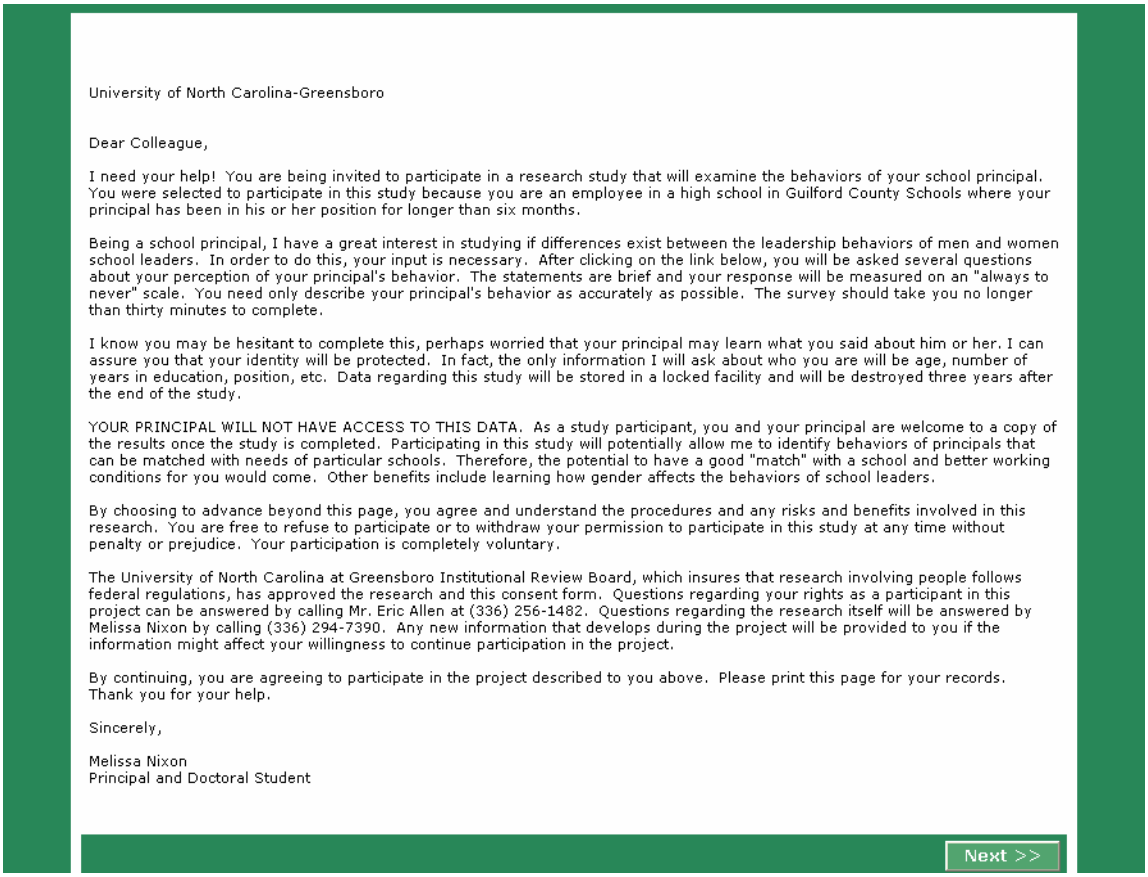
RELIABILITY COEFFICIENTS

Table 2. Reliability Coefficients (Modified Kuder-Richardson)

Subscale	Army Division	Highway Patrol	Aircraft Executives	Ministers	Community Leaders	Corporation Presidents	Labor Presidents	College Presidents	Senators
1. Representation	.82	.85	.74	.55	.59	.54	.70	.66	.80
2. Demand Reconciliation			.73	.77	.58	.59	.81		.81
3. Tolerance Uncertainty	.58	.66	.82	.84	.85	.79	.82	.80	.83
4. Persuasiveness	.84	.85	.84	.77	.79	.69	.80	.76	.72
5. Initiating Structure	.79	.75	.78	.70	.72	.77	.78	.80	.64
6. Tolerance Freedom	.81	.79	.86	.75	.86	.84	.58	.73	.65
7. Role Assumption	.85	.84	.84	.75	.83	.57	.86	.75	.85
8. Consideration	.76	.87	.84	.85	.77	.78	.83	.76	.38
9. Production Emphasis	.70	.79	.79	.59	.79	.71	.65	.74	
10. Predictive Accuracy	.76	.82	.91	.83	.62	.84	.87		
11. Intergration	.73	.79							
12. Superior Orientation	.64	.75	.81			.66		.60	

APPENDIX E

TEACHER SURVEY AS PRESENTED IN ZARCA INTERACTIVE



University of North Carolina-Greensboro

Dear Colleague,

I need your help! You are being invited to participate in a research study that will examine the behaviors of your school principal. You were selected to participate in this study because you are an employee in a high school in Guilford County Schools where your principal has been in his or her position for longer than six months.

Being a school principal, I have a great interest in studying if differences exist between the leadership behaviors of men and women school leaders. In order to do this, your input is necessary. After clicking on the link below, you will be asked several questions about your perception of your principal's behavior. The statements are brief and your response will be measured on an "always to never" scale. You need only describe your principal's behavior as accurately as possible. The survey should take you no longer than thirty minutes to complete.

I know you may be hesitant to complete this, perhaps worried that your principal may learn what you said about him or her. I can assure you that your identity will be protected. In fact, the only information I will ask about who you are will be age, number of years in education, position, etc. Data regarding this study will be stored in a locked facility and will be destroyed three years after the end of the study.

YOUR PRINCIPAL WILL NOT HAVE ACCESS TO THIS DATA. As a study participant, you and your principal are welcome to a copy of the results once the study is completed. Participating in this study will potentially allow me to identify behaviors of principals that can be matched with needs of particular schools. Therefore, the potential to have a good "match" with a school and better working conditions for you would come. Other benefits include learning how gender affects the behaviors of school leaders.

By choosing to advance beyond this page, you agree and understand the procedures and any risks and benefits involved in this research. You are free to refuse to participate or to withdraw your permission to participate in this study at any time without penalty or prejudice. Your participation is completely voluntary.

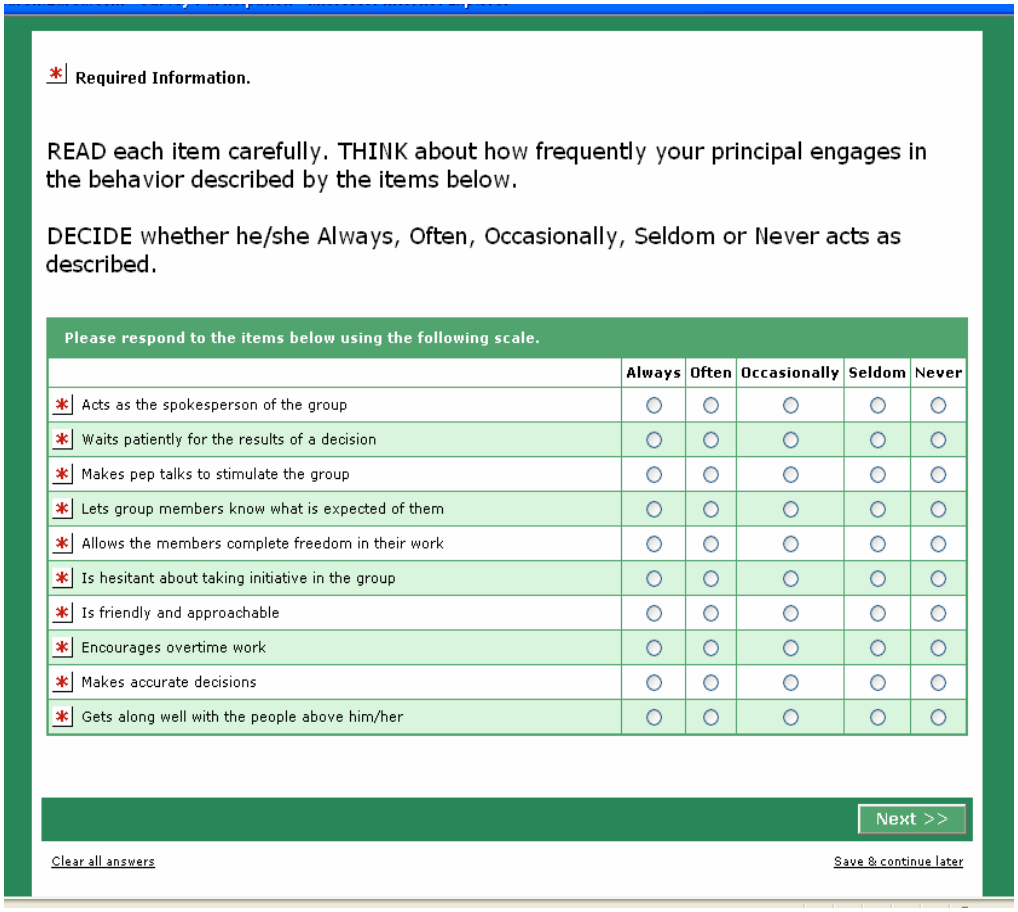
The University of North Carolina at Greensboro Institutional Review Board, which insures that research involving people follows federal regulations, has approved the research and this consent form. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336) 256-1482. Questions regarding the research itself will be answered by Melissa Nixon by calling (336) 294-7390. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue participation in the project.

By continuing, you are agreeing to participate in the project described to you above. Please print this page for your records. Thank you for your help.

Sincerely,

Melissa Nixon
Principal and Doctoral Student

Next >>



* Required Information.

READ each item carefully. THINK about how frequently your principal engages in the behavior described by the items below.

DECIDE whether he/she Always, Often, Occasionally, Seldom or Never acts as described.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
* Acts as the spokesperson of the group	○	○	○	○	○
* Waits patiently for the results of a decision	○	○	○	○	○
* Makes pep talks to stimulate the group	○	○	○	○	○
* Lets group members know what is expected of them	○	○	○	○	○
* Allows the members complete freedom in their work	○	○	○	○	○
* Is hesitant about taking initiative in the group	○	○	○	○	○
* Is friendly and approachable	○	○	○	○	○
* Encourages overtime work	○	○	○	○	○
* Makes accurate decisions	○	○	○	○	○
* Gets along well with the people above him/her	○	○	○	○	○

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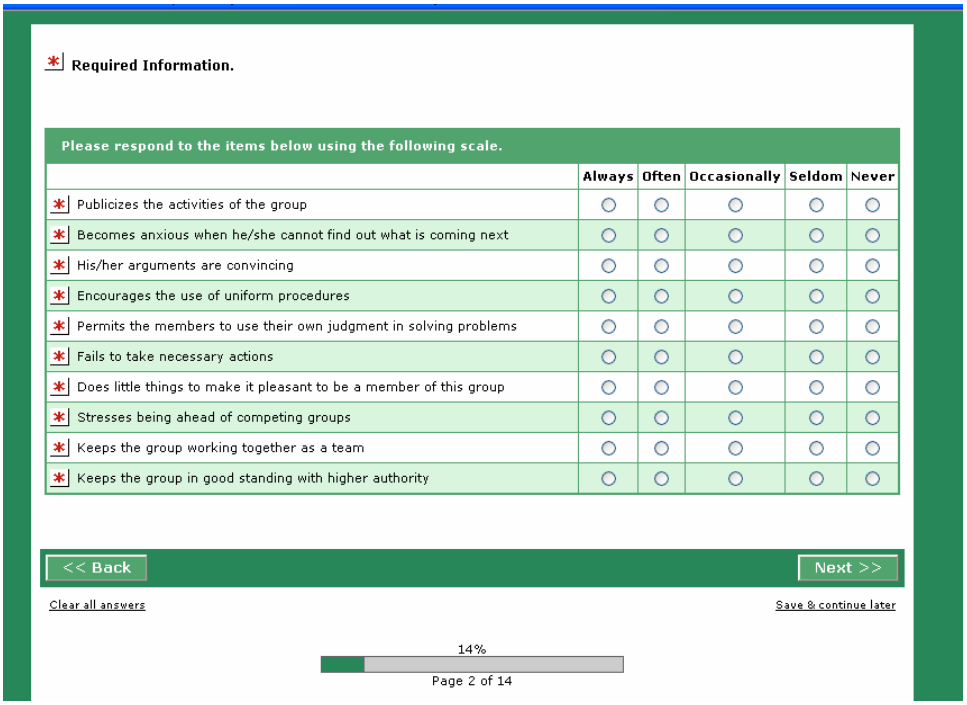

* Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
* Publicizes the activities of the group	○	○	○	○	○
* Becomes anxious when he/she cannot find out what is coming next	○	○	○	○	○
* His/her arguments are convincing	○	○	○	○	○
* Encourages the use of uniform procedures	○	○	○	○	○
* Permits the members to use their own judgment in solving problems	○	○	○	○	○
* Fails to take necessary actions	○	○	○	○	○
* Does little things to make it pleasant to be a member of this group	○	○	○	○	○
* Stresses being ahead of competing groups	○	○	○	○	○
* Keeps the group working together as a team	○	○	○	○	○
* Keeps the group in good standing with higher authority	○	○	○	○	○

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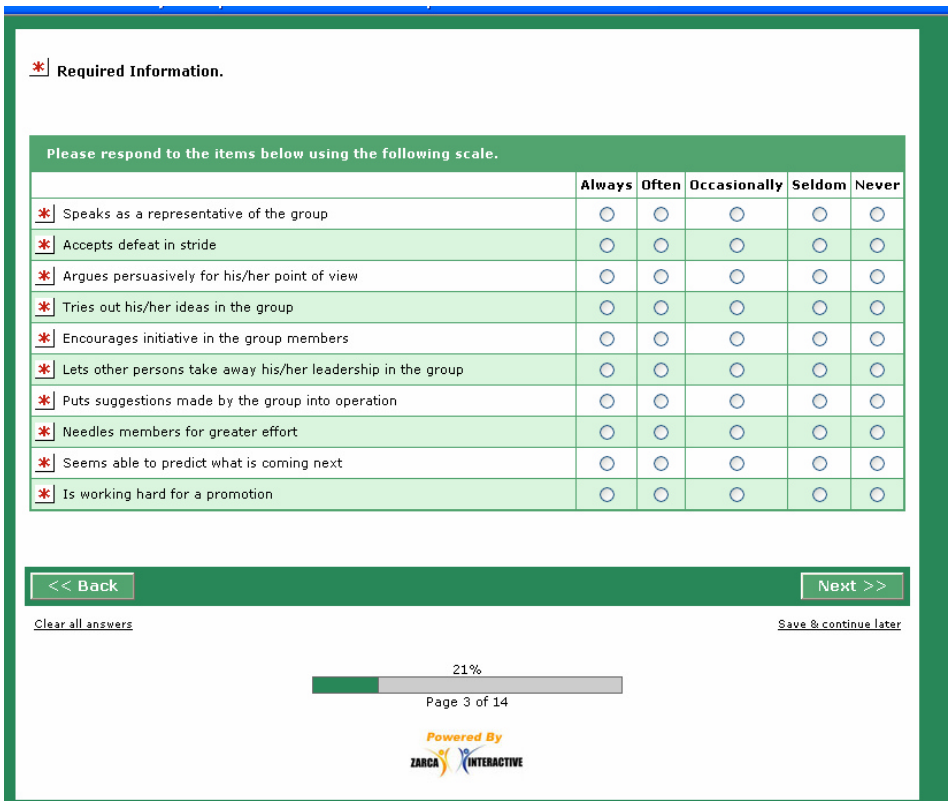

Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
Speaks as a representative of the group	○	○	○	○	○
Accepts defeat in stride	○	○	○	○	○
Argues persuasively for his/her point of view	○	○	○	○	○
Tries out his/her ideas in the group	○	○	○	○	○
Encourages initiative in the group members	○	○	○	○	○
Lets other persons take away his/her leadership in the group	○	○	○	○	○
Puts suggestions made by the group into operation	○	○	○	○	○
Needles members for greater effort	○	○	○	○	○
Seems able to predict what is coming next	○	○	○	○	○
Is working hard for a promotion	○	○	○	○	○

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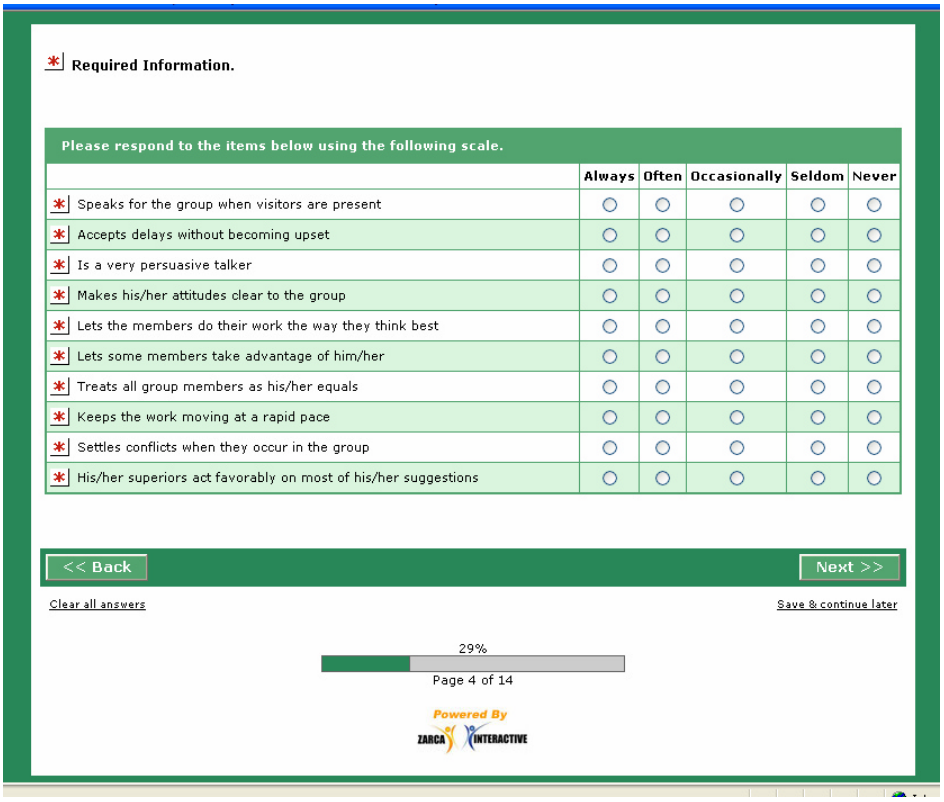

Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
Speaks for the group when visitors are present	○	○	○	○	○
Accepts delays without becoming upset	○	○	○	○	○
Is a very persuasive talker	○	○	○	○	○
Makes his/her attitudes clear to the group	○	○	○	○	○
Lets the members do their work the way they think best	○	○	○	○	○
Lets some members take advantage of him/her	○	○	○	○	○
Treats all group members as his/her equals	○	○	○	○	○
Keeps the work moving at a rapid pace	○	○	○	○	○
Settles conflicts when they occur in the group	○	○	○	○	○
His/her superiors act favorably on most of his/her suggestions	○	○	○	○	○

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Clear all answers Save & continue later

29%

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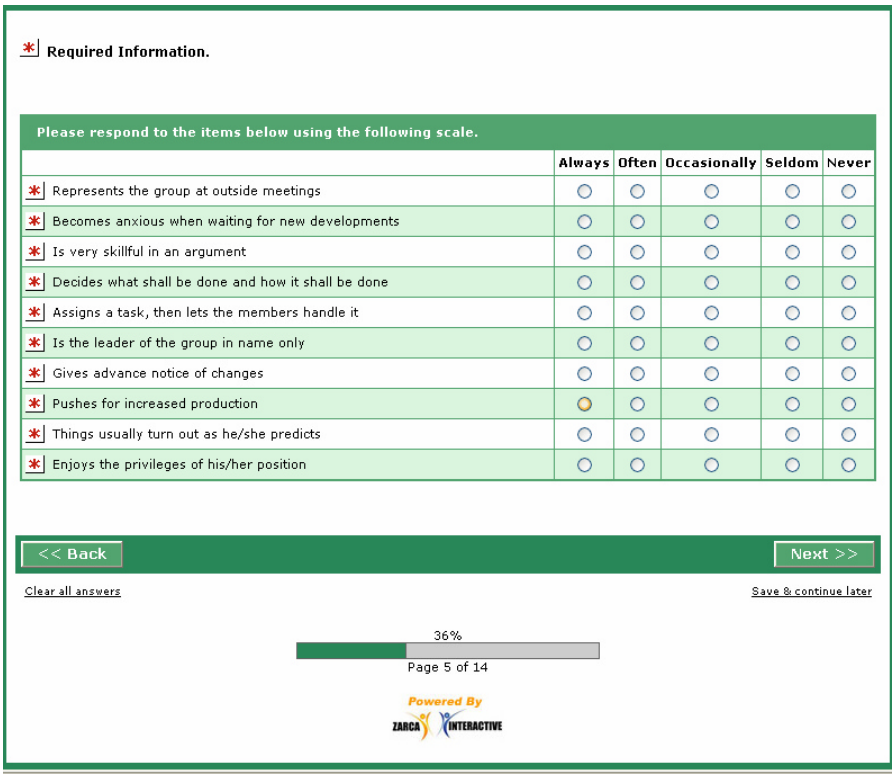

* Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
* Represents the group at outside meetings	○	○	○	○	○
* Becomes anxious when waiting for new developments	○	○	○	○	○
* Is very skillful in an argument	○	○	○	○	○
* Decides what shall be done and how it shall be done	○	○	○	○	○
* Assigns a task, then lets the members handle it	○	○	○	○	○
* Is the leader of the group in name only	○	○	○	○	○
* Gives advance notice of changes	○	○	○	○	○
* Pushes for increased production	○	○	○	○	○
* Things usually turn out as he/she predicts	○	○	○	○	○
* Enjoys the privileges of his/her position	○	○	○	○	○

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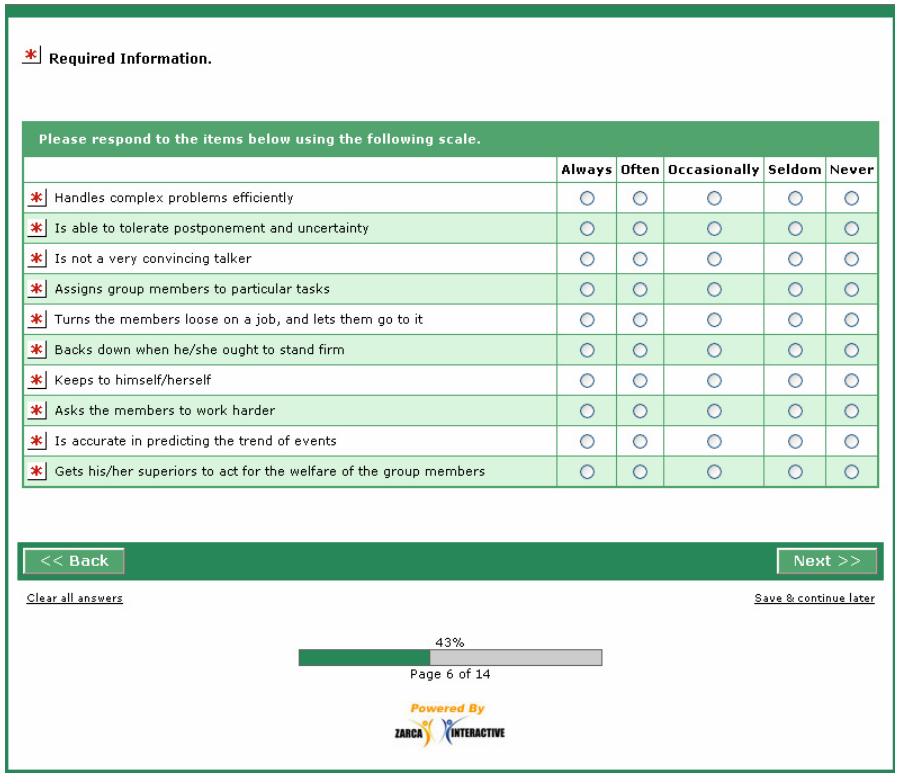

* Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
* Handles complex problems efficiently	○	○	○	○	○
* Is able to tolerate postponement and uncertainty	○	○	○	○	○
* Is not a very convincing talker	○	○	○	○	○
* Assigns group members to particular tasks	○	○	○	○	○
* Turns the members loose on a job, and lets them go to it	○	○	○	○	○
* Backs down when he/she ought to stand firm	○	○	○	○	○
* Keeps to himself/herself	○	○	○	○	○
* Asks the members to work harder	○	○	○	○	○
* Is accurate in predicting the trend of events	○	○	○	○	○
* Gets his/her superiors to act for the welfare of the group members	○	○	○	○	○

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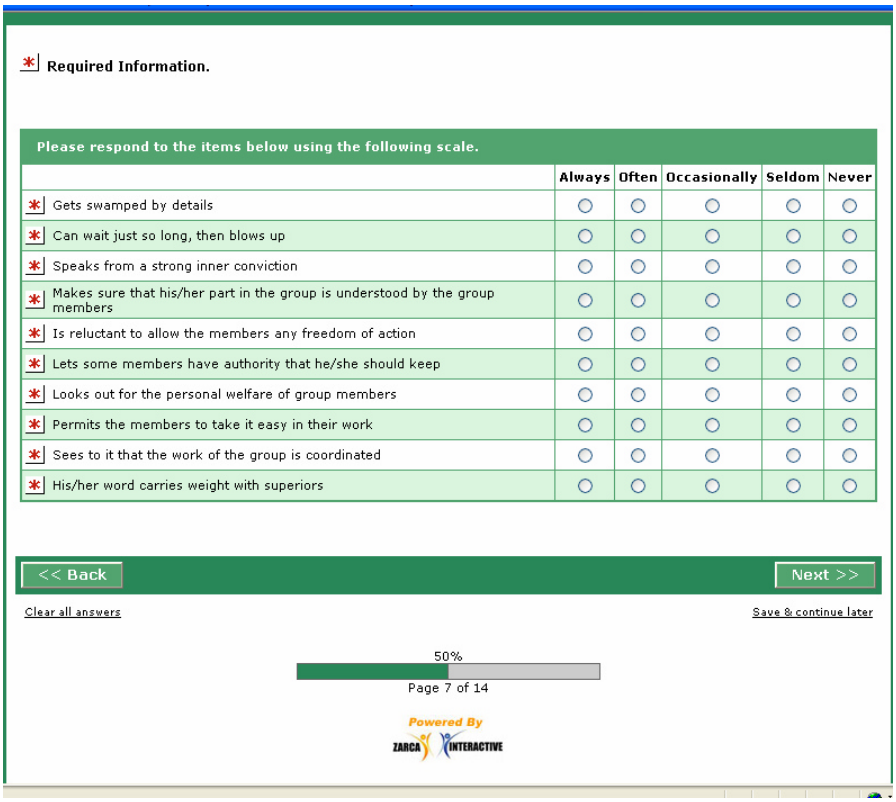

Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
Gets swamped by details	○	○	○	○	○
Can wait just so long, then blows up	○	○	○	○	○
Speaks from a strong inner conviction	○	○	○	○	○
Makes sure that his/her part in the group is understood by the group members	○	○	○	○	○
Is reluctant to allow the members any freedom of action	○	○	○	○	○
Lets some members have authority that he/she should keep	○	○	○	○	○
Looks out for the personal welfare of group members	○	○	○	○	○
Permits the members to take it easy in their work	○	○	○	○	○
Sees to it that the work of the group is coordinated	○	○	○	○	○
His/her word carries weight with superiors	○	○	○	○	○

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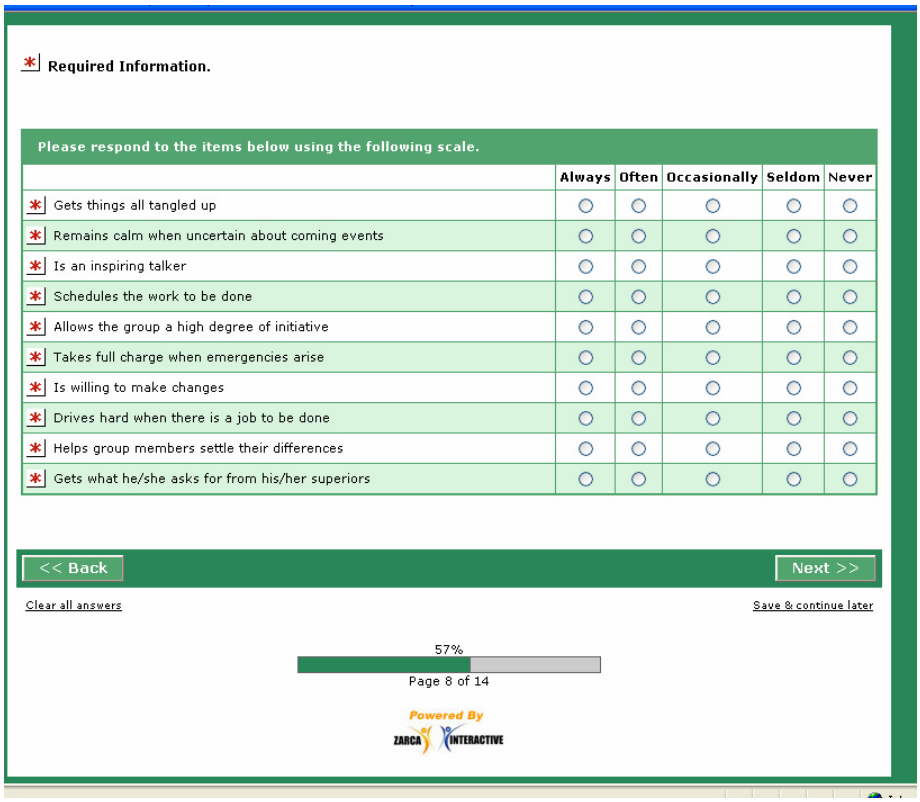

Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
Gets things all tangled up	○	○	○	○	○
Remains calm when uncertain about coming events	○	○	○	○	○
Is an inspiring talker	○	○	○	○	○
Schedules the work to be done	○	○	○	○	○
Allows the group a high degree of initiative	○	○	○	○	○
Takes full charge when emergencies arise	○	○	○	○	○
Is willing to make changes	○	○	○	○	○
Drives hard when there is a job to be done	○	○	○	○	○
Helps group members settle their differences	○	○	○	○	○
Gets what he/she asks for from his/her superiors	○	○	○	○	○

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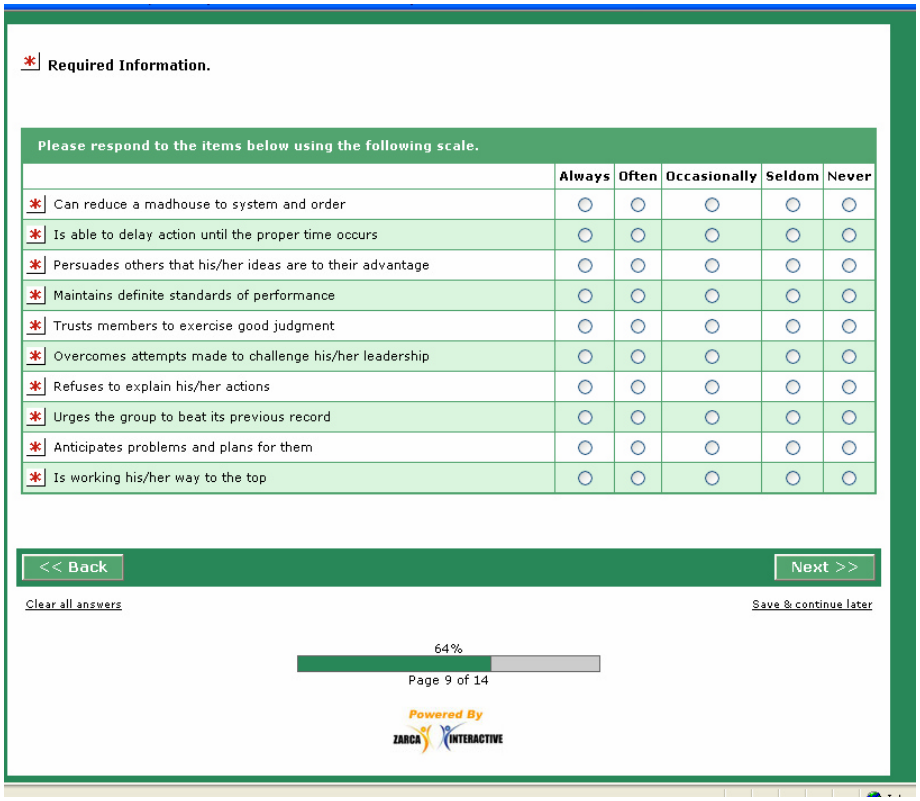

* Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
* Can reduce a madhouse to system and order	○	○	○	○	○
* Is able to delay action until the proper time occurs	○	○	○	○	○
* Persuades others that his/her ideas are to their advantage	○	○	○	○	○
* Maintains definite standards of performance	○	○	○	○	○
* Trusts members to exercise good judgment	○	○	○	○	○
* Overcomes attempts made to challenge his/her leadership	○	○	○	○	○
* Refuses to explain his/her actions	○	○	○	○	○
* Urges the group to beat its previous record	○	○	○	○	○
* Anticipates problems and plans for them	○	○	○	○	○
* Is working his/her way to the top	○	○	○	○	○

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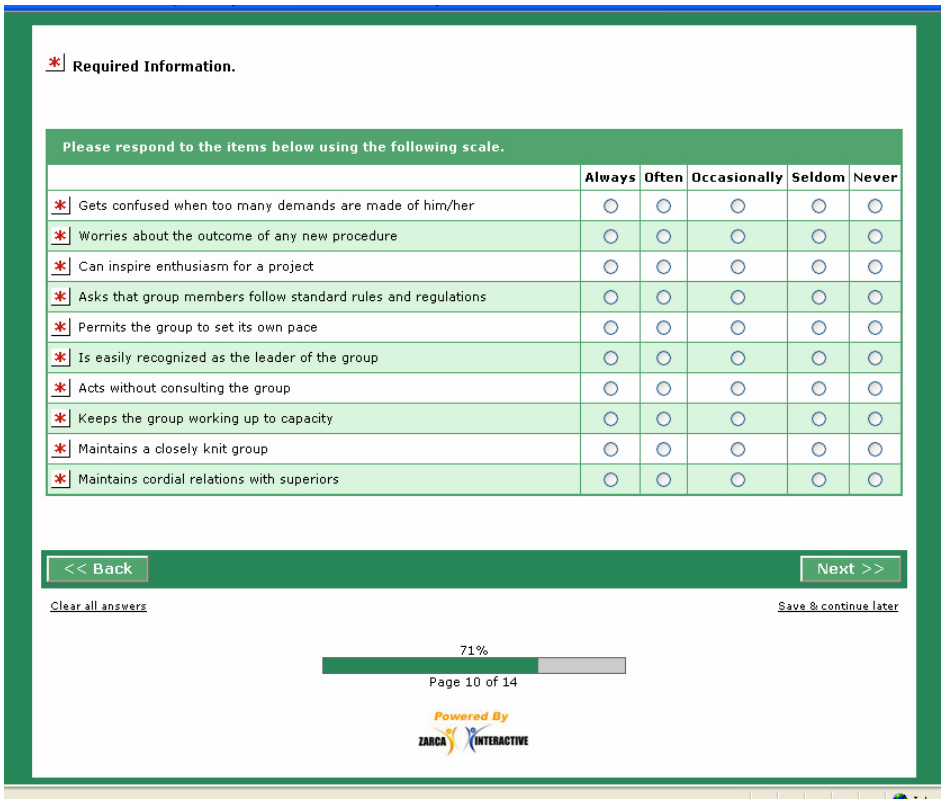

* Required Information.

Please respond to the items below using the following scale.

	Always	Often	Occasionally	Seldom	Never
* Gets confused when too many demands are made of him/her	○	○	○	○	○
* Worries about the outcome of any new procedure	○	○	○	○	○
* Can inspire enthusiasm for a project	○	○	○	○	○
* Asks that group members follow standard rules and regulations	○	○	○	○	○
* Permits the group to set its own pace	○	○	○	○	○
* Is easily recognized as the leader of the group	○	○	○	○	○
* Acts without consulting the group	○	○	○	○	○
* Keeps the group working up to capacity	○	○	○	○	○
* Maintains a closely knit group	○	○	○	○	○
* Maintains cordial relations with superiors	○	○	○	○	○

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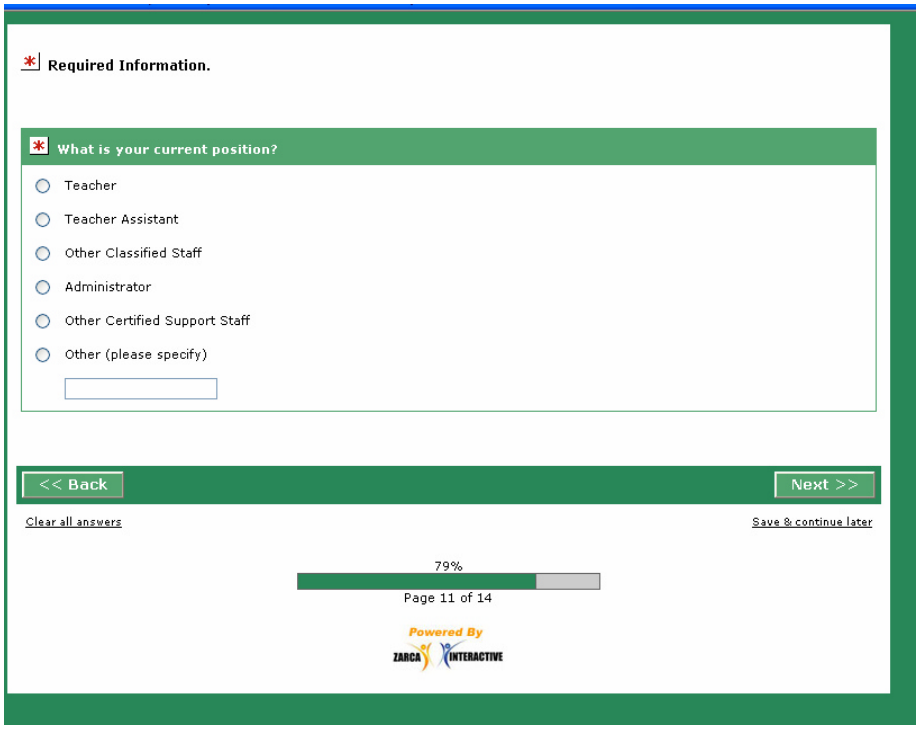
Required Information.
What is your current position?
Teacher
Teacher Assistant
Other Classified Staff
Administrator
Other Certified Support Staff
Other (please specify)
<< Back
Next >>
Clear all answers
Save & continue later
79%
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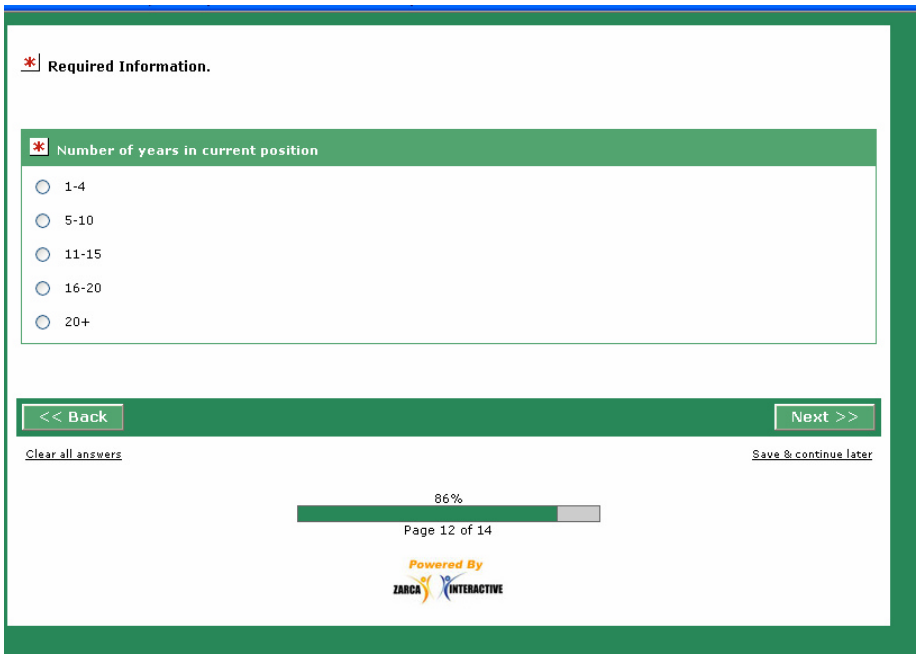
Required Information.
Number of years in current position
1-4
5-10
11-15
16-20
20+
<< Back
Next >>
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Save & continue later
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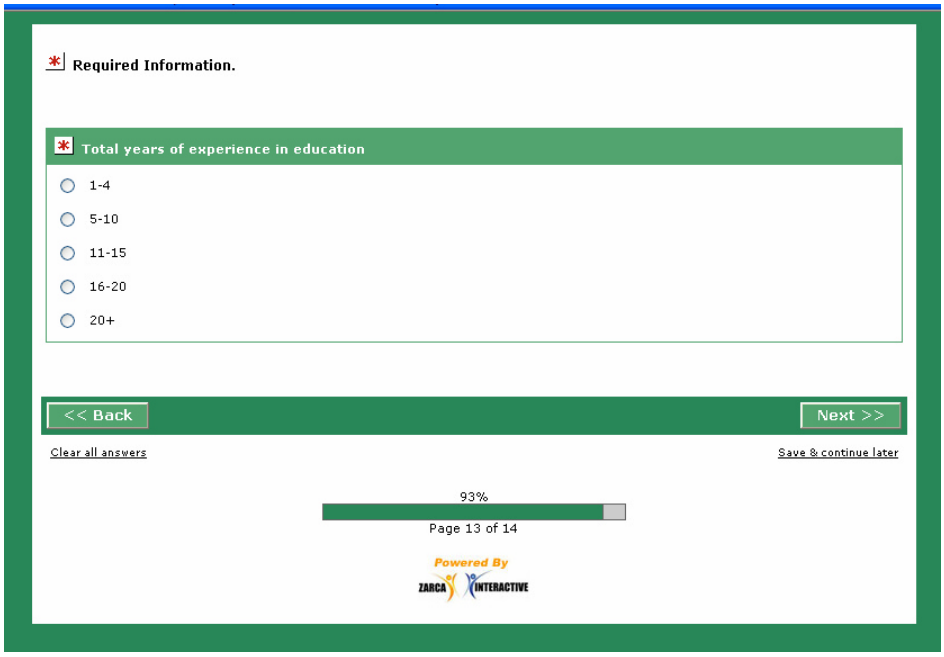
Required Information.
Total years of experience in education
1-4
5-10
11-15
16-20
20+
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Clear all answers
Save & continue later
93%
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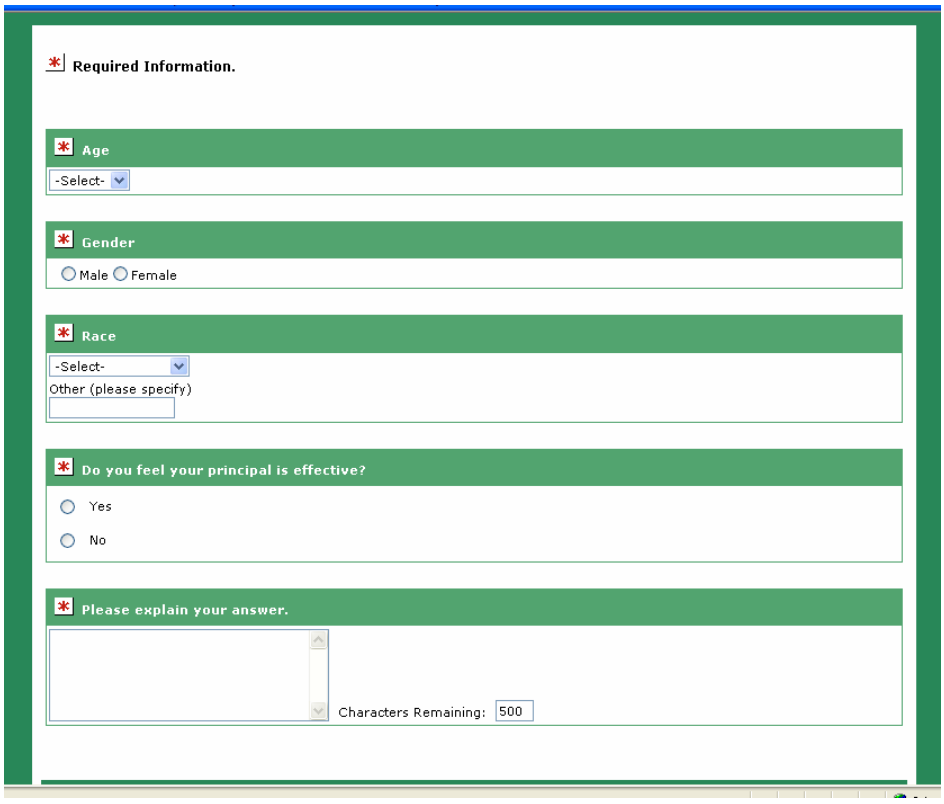
Required Information.
Age
-Select-
Gender
Male Female
Race
-Select-
Other (please specify)
Do you feel your principal is effective?
Yes
No
Please explain your answer.
Characters Remaining: 500

APPENDIX F

ITEM STATISTICS AND RELIABILITIES FOR INDIVIDUAL QUESTIONS

Case Processing Summary

		N	%
Cases	Valid	337	100.0
	Excluded[a]	0	.0
	Total	337	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.977	100

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q1	365.13	2779.840	.279	.977
q2	365.73	2727.753	.707	.976
q3	365.49	2742.072	.570	.976
q4	365.14	2740.057	.678	.976
q5	365.90	2729.555	.620	.976
q6	365.22	2781.965	.179	.977
q7	365.35	2730.633	.626	.976
q8	365.80	2820.390	-.166	.978
q9	365.61	2729.929	.825	.976
q10	365.26	2766.711	.438	.977
q11	365.39	2769.357	.374	.977
q12	366.17	2749.693	.419	.977
q13	365.68	2726.807	.793	.976

q14	365.36	2741.022	.580	.976
q15	365.75	2728.564	.707	.976
q16	365.71	2724.107	.757	.976
q17	365.98	2742.839	.504	.977
q18	365.61	2789.984	.099	.977
q19	365.71	2720.565	.789	.976
q20	365.36	2743.738	.692	.976
q21	365.13	2761.993	.496	.977
q22	366.08	2742.451	.514	.977
q23	365.46	2747.564	.565	.976
q24	365.57	2756.073	.487	.977
q25	365.61	2719.822	.773	.976
q26	365.78	2804.066	-.027	.977
q27	365.87	2734.854	.732	.976
q28	366.13	2805.590	-.041	.977
q29	365.95	2728.691	.750	.976
q30	366.00	2821.676	-.155	.978
q31	365.26	2796.597	.064	.977
q32	366.07	2748.700	.538	.977
q33	365.58	2720.697	.787	.976
q34	365.10	2751.320	.544	.977
q35	365.92	2729.273	.654	.976
q36	365.47	2744.226	.501	.977
q37	365.93	2703.109	.755	.976
q38	365.39	2748.828	.637	.976
q39	365.64	2723.795	.760	.976
q40	365.74	2756.530	.552	.977
q41	365.05	2769.122	.435	.977
q42	366.24	2756.594	.408	.977
q43	365.54	2728.773	.727	.976
q44	365.27	2794.847	.081	.977
q45	365.77	2749.464	.557	.977
q46	365.42	2754.190	.422	.977
q47	366.04	2719.409	.765	.976
q48	365.13	2783.348	.237	.977
q49	365.83	2746.318	.729	.976
q50	365.80	2823.645	-.201	.978
q51	365.55	2714.147	.842	.976
q52	365.96	2740.981	.602	.976
q53	365.47	2717.345	.711	.976

q54	365.59	2765.148	.460	.977
q55	366.02	2746.643	.507	.977
q56	365.44	2744.294	.505	.977
q57	365.63	2755.782	.395	.977
q58	365.42	2798.506	.030	.977
q59	365.86	2740.868	.752	.976
q60	365.94	2734.803	.660	.976
q61	366.06	2744.514	.540	.977
q62	365.41	2733.313	.580	.976
q63	365.36	2743.661	.599	.976
q64	365.41	2738.129	.675	.976
q65	365.83	2726.171	.643	.976
q66	365.68	2762.348	.368	.977
q67	365.64	2714.213	.775	.976
q68	365.51	2787.274	.139	.977
q69	365.69	2726.865	.780	.976
q70	365.64	2740.659	.654	.976
q71	365.37	2726.240	.727	.976
q72	365.64	2733.227	.648	.976
q73	365.72	2706.188	.809	.976
q74	365.46	2745.302	.641	.976
q75	365.86	2719.642	.753	.976
q76	365.07	2745.378	.622	.976
q77	365.60	2728.747	.700	.976
q78	365.06	2751.374	.607	.976
q79	365.84	2717.000	.783	.976
q80	365.84	2757.714	.533	.977
q81	365.80	2716.669	.798	.976
q82	365.81	2731.932	.746	.976
q83	365.77	2744.711	.615	.976
q84	365.31	2725.220	.742	.976
q85	365.65	2714.233	.770	.976
q86	365.49	2749.286	.548	.977
q87	365.70	2724.965	.693	.976
q88	365.01	2771.053	.366	.977
q89	365.65	2722.365	.802	.976
q90	365.78	2807.519	-.055	.977
q91	365.47	2734.857	.658	.976
q92	366.17	2781.482	.203	.977
q93	365.71	2713.563	.815	.976

q94	365.02	2753.523	.572	.977
q95	366.22	2756.367	.470	.977
q96	365.08	2741.219	.680	.976
q97	366.33	2732.395	.639	.976
q98	365.45	2742.778	.705	.976
q99	366.05	2715.462	.765	.976
q100	365.31	2758.993	.542	.977

Representation

Reliability Statistics

Cronbach's Alpha	N of Items
.749	5

Item Statistics

	Mean	Std. Deviation	N
q1	4.19	.738	337
q11	3.93	.815	337
q21	4.19	.760	337
q31	4.06	.742	337
q41	4.26	.710	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q1	16.45	4.754	.556	.689
q11	16.70	5.151	.344	.770
q21	16.44	4.307	.700	.632
q31	16.57	5.055	.445	.729
q41	16.37	4.846	.556	.690

Problem Solving

Reliability Statistics

Cronbach's Alpha	N of Items
.885	5

Item Statistics

	Mean	Std. Deviation	N
q51	3.77	.992	337
q61	3.26	1.001	337
q71	3.95	.987	337
q81	3.52	1.015	337
q91	3.85	.965	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q51	14.58	10.870	.763	.851
q61	15.09	11.775	.591	.890
q71	14.40	10.657	.809	.840
q81	14.82	10.867	.739	.856
q91	14.49	11.269	.717	.861

Flexibility

Reliability Statistics

Cronbach's Alpha	N of Items
.892	10

Item Statistics

	Mean	Std. Deviation	N
q2	3.59	.993	337
q12	3.15	1.164	337
q22	3.23	1.086	337
q32	3.24	.932	337
q42	3.08	1.038	337
q52	3.35	.956	337
q62	3.91	1.114	337
q72	3.68	1.002	337
q82	3.50	.890	337
q92	3.15	.926	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q2	30.30	41.878	.715	.875
q12	30.74	41.436	.618	.883
q22	30.66	43.172	.540	.888
q32	30.65	42.728	.694	.877
q42	30.82	42.776	.604	.883
q52	30.54	42.059	.733	.875
q62	29.98	40.434	.733	.874
q72	30.21	42.250	.676	.878
q82	30.39	43.494	.662	.880
q92	30.75	46.528	.370	.897

Persuasion

Reliability Statistics

Cronbach's Alpha	N of Items
.928	10

Item Statistics

	Mean	Std. Deviation	N
q3	3.83	.990	337
q13	3.64	.900	337
q23	3.86	.907	337
q33	3.74	.980	337
q43	3.78	.954	337
q53	3.84	1.127	337
q63	3.95	.918	337
q73	3.59	1.125	337
q83	3.54	.879	337
q93	3.61	1.030	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q3	33.55	50.319	.540	.930
q13	33.75	47.860	.820	.916
q23	33.53	50.387	.596	.927
q33	33.64	46.510	.854	.914
q43	33.61	47.454	.800	.917
q53	33.54	46.630	.714	.922
q63	33.43	50.133	.608	.926
q73	33.79	44.933	.841	.914
q83	33.84	50.079	.645	.925
q93	33.78	46.434	.811	.916

Need for Order and Control

Reliability Statistics

Cronbach's Alpha	N of Items
.866	10

Item Statistics

	Mean	Std. Deviation	N
q4	4.18	.864	337
q14	3.96	.990	337
q24	3.75	.886	337
q34	4.21	.877	337
q44	4.05	.778	337
q54	3.73	.753	337
q64	3.91	.895	337
q74	3.86	.835	337
q84	4.01	.980	337
q94	4.30	.799	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q4	35.78	27.203	.695	.844
q14	35.99	27.423	.560	.855
q24	36.20	28.997	.465	.862
q34	35.74	27.569	.638	.848
q44	35.91	31.437	.249	.876
q54	36.22	29.846	.462	.862
q64	36.04	27.588	.619	.850
q74	36.09	27.959	.629	.849
q84	35.94	25.428	.791	.833
q94	35.65	27.799	.685	.845

Trust and Autonomy

Reliability Statistics

Cronbach's Alpha	N of Items
.946	10

Item Statistics

	Mean	Std. Deviation	N
q5	3.42	1.102	337
q15	3.57	.983	337
q25	3.71	1.008	337
q35	3.40	1.051	337
q45	3.55	.889	337
q55	3.30	1.025	337
q65	3.49	1.113	337
q75	3.45	1.037	337
q85	3.66	1.082	337
q95	3.10	.911	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q5	31.23	56.210	.791	.940
q15	31.08	56.987	.845	.938
q25	30.94	57.946	.751	.942
q35	31.25	56.195	.837	.938
q45	31.10	60.421	.671	.945
q55	31.35	58.568	.693	.944
q65	31.17	56.103	.789	.940
q75	31.20	56.297	.843	.938
q85	30.99	55.589	.851	.937
q95	31.55	60.052	.681	.945

Role Assumption

Reliability Statistics

Cronbach's Alpha	N of Items
.813	10

Item Statistics

	Mean	Std. Deviation	N
q6	4.09	1.013	337
q16	3.61	.976	337
q26	3.54	1.195	337
q36	3.85	1.081	337
q46	3.90	1.058	337
q56	3.88	1.071	337
q66	3.64	1.003	337
q76	4.24	.859	337
q86	3.83	.905	337
q96	4.23	.846	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q6	34.73	31.829	.423	.804
q16	35.21	30.716	.557	.789
q26	35.28	33.008	.237	.829
q36	34.97	29.651	.584	.785
q46	34.92	31.054	.468	.799
q56	34.94	29.976	.560	.788
q66	35.19	30.880	.521	.793
q76	34.58	31.440	.572	.789
q86	34.99	31.851	.491	.796
q96	34.59	31.254	.605	.786

Consideration

Reliability Statistics

Cronbach's Alpha	N of Items
.919	10

Item Statistics

	Mean	Std. Deviation	N
q7	3.97	1.075	337
q17	3.34	1.101	337
q27	3.45	.868	337
q37	3.38	1.241	337
q47	3.28	1.024	337
q57	3.69	1.088	337
q67	3.68	1.074	337
q77	3.72	.991	337
q87	3.61	1.052	337
q97	2.99	1.028	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q7	31.14	52.341	.721	.909
q17	31.77	54.540	.552	.919
q27	31.66	54.197	.764	.908
q37	31.72	49.141	.807	.904
q47	31.82	53.062	.711	.910
q57	31.42	55.851	.473	.923
q67	31.43	51.401	.790	.905
q77	31.39	53.065	.740	.908
q87	31.49	52.203	.751	.908
q97	32.12	53.161	.701	.910

Production Emphasis

Reliability Statistics

Cronbach's Alpha	N of Items
.784	10

Item Statistics

	Mean	Std. Deviation	N
q8	3.52	1.102	337
q18	3.71	1.054	337
q28	3.19	1.057	337
q38	3.93	.789	337
q48	4.18	.729	337
q58	3.90	.884	337
q68	3.81	.952	337
q78	4.26	.787	337
q88	4.31	.790	337
q98	3.87	.795	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q8	35.15	23.696	.261	.795
q18	34.96	22.947	.362	.780
q28	35.48	22.280	.432	.769
q38	34.74	23.442	.477	.763
q48	34.48	22.590	.662	.745
q58	34.77	22.482	.531	.756
q68	34.86	23.888	.313	.783
q78	34.41	22.576	.604	.749
q88	34.36	22.797	.569	.753
q98	34.80	23.144	.515	.759

Vision

Reliability Statistics

Cronbach's Alpha	N of Items
.908	5

Item Statistics

	Mean	Std. Deviation	N
q9	3.71	.830	337
q29	3.37	.926	337
q49	3.48	.724	337
q59	3.45	.771	337
q89	3.67	.943	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q9	13.97	8.651	.748	.892
q29	14.31	8.073	.771	.888
q49	14.20	9.142	.759	.891
q59	14.23	8.742	.802	.882
q89	14.01	7.919	.788	.885

Conflict Resolution

Reliability Statistics

Cronbach's Alpha	N of Items
.915	5

Item Statistics

	Mean	Std. Deviation	N
q19	3.61	.979	337
q39	3.67	.976	337
q69	3.63	.913	337
q79	3.48	1.030	337
q99	3.27	1.072	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q19	14.06	12.047	.810	.891
q39	13.99	12.196	.786	.896
q69	14.04	12.648	.774	.899
q79	14.19	11.843	.791	.895
q99	14.40	11.746	.763	.901

Concern for Advancement

Reliability Statistics

Cronbach's Alpha	N of Items
.766	10

Item Statistics

	Mean	Std. Deviation	N
q10	4.06	.756	337
q20	3.95	.797	337
q30	3.32	1.288	337
q40	3.57	.776	337
q50	3.52	1.061	337
q60	3.37	.962	337
q70	3.68	.886	337
q80	3.48	.783	337
q90	3.54	1.144	337
q100	4.01	.748	337

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q10	32.45	24.326	.450	.745
q20	32.55	24.301	.422	.748
q30	33.19	23.057	.286	.777
q40	32.93	23.186	.597	.728
q50	32.99	24.675	.232	.776
q60	33.13	24.051	.347	.757
q70	32.83	22.367	.608	.723
q80	33.03	23.074	.606	.727
q90	32.97	22.419	.418	.750
q100	32.50	23.334	.603	.728