

EXPLAINING THE DISCREPANCY BETWEEN PRINCIPALS' AND TEACHERS'
PERCEPTIONS OF THE PRINCIPAL'S LEADER BEHAVIOR

by

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ABSTRACT

The purpose of this study was to identify factors that contribute to the differences in teachers' and principals' perceptions of the principal's leader behavior. Data were collected from a systematically selected sample of principals in the 19,046 public high schools in the database of a commercial school mailing list company. Survey packets were sent to the principals. One hundred sixteen survey packets were returned with 106 being usable.

Principals completed Part I of a questionnaire designed to measure the principal's perceptions of his or her own leader behaviors. Each principal was asked to purposely select six teachers—one in English, math, science, social studies, vocational education, and special education—and have them complete a questionnaire to measure the teachers' perceptions of the principal's leader behavior. The criterion variables were determined by subtracting the mean teachers' response from the principal's response on each item for each school. The mean teachers' responses on Part II of the questionnaire served as measures of the predictor variables.

Principal components analyses were conducted to reduce the data and create meaningful scales. The data were then statistically treated three different ways: (1) by identifying the criterion variables using the difference scores, (2) by identifying the criterion variables using the difference scores when principals' responses only from the questionnaires were used, and (3) by identifying the criterion variables using the difference scores when teachers' responses only from the questionnaires were used. Predictor variables were the principal's modeling of ideal behavior, the principal's skill in teacher evaluation, the teachers' overall awareness of the school, the teachers' perceptions of discipline procedures, and the demographic categories of principal's and teachers' experience, principal's gender, school size, and school type.

Multiple regression analyses were used to determine relationships between the criterion and predictor variables. Principals' modeling of ideal behavior was a significant predictor of

every criterion variable in every model. Principals' skill in teacher evaluation was a significant predictor of the principal's quality of communication in every model. School awareness, discipline procedures, and demographic variables were not significant predictors of the criterion variables.

DEDICATION

As I write this dedication I am thinking of those people to whom this accomplishment means a great deal: those people who encouraged me, prayed for me, and yes, even nagged me. To these people, I dedicate this study.

To Rhonda, my wife: When we met in the first grade, neither of us could have imagined the life we would have together. Thank you for your help, for your understanding, and for your patience. Most of all, thank you for your love.

To Jennifer and Michael, my children: Your Dad finally made it! I hope you are half as proud of me as I am of you. Just being who you are put a lot of pressure on me to finish this process. When both of you graduated as high school valedictorians your Mom and I were proud. But you didn't stop there. Jennifer, by becoming a National Board Certified Teacher, and Michael, by earning your MBA, you have shown us that you can do anything. I am so proud of both of you. You have grown into amazing adults. I love you and your families.

To Catey, Molly, Abby, and Grace, my grandchildren: Catey, I can always remember when I started my doctorate. I missed the first day of my first class because that is the day you were born. I was with you that day; I would not have been anywhere else. Molly, Abby, and Grace, I was there when you were born too. I held each of you on the first day of your life. You will never know how much I love you. I am so glad to be your grandfather.

To my mother and father: Even though you are no longer with us, I know you were proud of me. I love you.

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Dr. Duane Alderman: Duane passed away not long after I completed my prospectus. As a matter of fact, Duane participated in my prospectus exam by phone from his hospital bed. Duane was a friend and a colleague. He was always checking on me and always encouraged me to finish. In grateful appreciation of his memory, I acknowledge his help and care.

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CHAPTER I

THE PROBLEM

Schools are complex organizations (Hoy, Gage, & Tarter, 2006) and school principals, who lead people, are charged with developing, maintaining, and improving the standards by which their schools operate. Leadership is a critical factor in determining organizational performance and effectiveness (Shum & Cheng, 1997), and as educational administration becomes more complex, with high stakes testing and personal and professional accountability, principals must be able to assess and, if necessary, adjust their leader behaviors to meet the needs of the people with whom they work.

Good principals recognize that leadership does not take place in a vacuum (Barnett, McCormick, & Conners, 1999). Everyday, principals have interactions with teachers. Over time, these interactions are the basis on which the personal and professional relationships between principals and teachers are built. School goals, which are the basis for developing organizational performance and effectiveness, are met by people; therefore, people are the central resources in schools (Deal & Peterson, 1999).

Education is a “people” business. Educational administrators are charged with working with teachers, staff, students, parents, communities, and governmental agencies to educate children. Even though administrators face serious accountability issues including high stakes testing, school accreditation, and the new federal legislation of the *No Child Left Behind Act of 2001* (P. L. 107-110, 2002), they must not forget that the goal of schools is to educate students and that teachers are most often the ones who accomplish that goal.

Kouzes and Posner (1995) defined leadership as “the art of mobilizing others to want to struggle for shared aspirations” (p. 30). The key phrases in this quote are “want to” and “shared aspirations.” Principals can often get teachers to comply with their directives simply because of the power they hold over teachers. This type of compliance is based solely on the coercive power of the principal and not on legitimate leadership skills (Erchul, Raven, & Ray, 2001; Raven, 1993). It should be noted that obedience to leadership is primarily voluntary. People follow leaders who appear to be legitimate (Bolman & Deal, 1997). True principal-leaders use not only the authority they have but the relationships they have built, the credibility they have developed, and their communication skills to inspire teachers to work cooperatively and do their best (Jacobson, Johnson, Ylimaki, & Giles, 2005; Souba, 1998).

Statement of the Problem

In the early 1900s, Fredrick Winslow Taylor developed a theory of organizational administration that was labeled the principles of scientific management. The four principles are:

1. Management is responsible for analyzing every aspect of how workers performed their jobs. He conducted time and motion studies to find the best way for workers to complete their tasks.
2. Management studies the workers and, after analyzing their work, trains them to correct their shortcomings.
3. Management is responsible for making the workers adhere to the work plan that is developed after the workers and tasks are analyzed.
4. Management is responsible for seeing that there is a division of labor between management and workers; that each knows what the other does and holds them accountable for their performance (Taylor, 1911).

In the 1920s, the principles of scientific management began to fall out of favor (Hersey & Blanchard, 1993). Taylor was accused of treating people like machines to accomplish the organization's goals. Management focused on the needs of the organization, not on those of the people. The relationship between leaders and followers was viewed as a one-way relationship; the leader told the followers what to do and they did it. People were considered secondary to the organization with little concern for their thoughts, feelings, and needs. Gradually, the human relations movement replaced scientific management as the premier theory of organizational administration.

From 1924 to 1927, the management at the Western Electric Hawthorne Works in Chicago had researchers conduct a series of experiments to determine how the amount of lighting affected production (accel-team, 2004). After finding that there was no clear connection between the amount of light and productivity, researchers began to wonder about the factors that would affect work output.

In 1927, Elton Mayo and associates began to examine the work conditions and productivity at the Hawthorne plant (accel-team, 2004). Because they knew that illumination had no effect on productivity, they began to look for other factors. Mayo worked with a group of six women. He chose two of the women, and they, in turn, chose the other four.

Mayo put the women on piecework for eight weeks (accel-team, 2004). He then experimented with changing the length of their working day and with the number and the length of breaks they were given. A supervisor explained each change before it took place. The women were allowed to decide on how the work would be accomplished. Mayo found that production went up for these six women during this eight-week period.

Mayo then returned these six women to their original, rigorous schedule that included a 48-hour workweek, work on Saturdays, and no rest breaks (accel-team, 2004). The women were taken off piecework. They were observed under these conditions for 12 weeks. Surprisingly, Mayo and associates found that during this 12 week period production for these six women was the highest recorded since the beginning of the experiment.

Mayo concluded that production improved, not because the physical working conditions were changed, but because management was paying attention to the six women individually and as a group (accel-team, 2004). The scientific management approach of finding the “one best way” to accomplish a task was replaced with a concern for the workers. Thus, the human relations movement in management was born.

Elton Mayo and associates argued that “the real power centers within an organization were the interpersonal relations that developed within the working unit” (Hersey & Blanchard, 1993, p. 96). Effective organizations “developed around the workers and had to take into consideration human feelings and attitudes” (p. 96). Therefore, for organizations to experience success, managers had to fulfill the needs of the workers. In essence, leaders had to develop mutually beneficial relationships with the followers. The human relations theorists understood that organizational goals were met, not by policies and procedures, but by people (Hersey & Blanchard).

As leadership models, scientific management and human relations are on opposite ends of the leadership continuum. Although each of these models are useful at certain times, leaders cannot be successful by only concentrating on one or the other. Leadership, especially principals’ leadership in schools, must be balanced by using elements of both task oriented and people oriented leader behaviors.

School administrators, who are under tremendous pressure to make sure that every child meets legislated educational goals, are often returning to the principles of scientific management. Legislators and educators have determined curricula, and administrators analyze every aspect of

teaching to try to find the best methods and techniques for all teachers to employ. They provide teachers with in-service in these methods and techniques and, through the evaluation process, make sure teachers adhere to this training. School-level administrators hold teachers accountable for their actions and are, in turn, held accountable by their district or division-level supervisors. District-level administrators are accountable to the local, state, and federal governments.

Emphasis is placed on achieving goals by determining and using scientifically based “best practices” (P. L. 107-110, 2002). There is nothing wrong with administrators, as leaders, encouraging or insisting that teachers use best practices: However, principals should be aware of the importance of the personal attention they show teachers. Because a principal’s leadership is affected by the relationships he or she has with teachers, effective principals must be aware of teachers’ needs and try to help fulfill those needs while achieving school goals (Deal & Peterson, 1999).

Lord, Brown, and Freiberg (1999) wrote, “The interpersonal relation of superiors to subordinates affects subordinates’ identification and self-concepts, which, in turn, are critical determinants of social and organizational processes” (p. 170). Put into the language of schools, the relationship between principal and teacher affects how the teacher perceives his or her role in the organization, and that perception, in turn, helps to influence the successes and failures of the school.

In 2003, Metropolitan Life conducted a survey of 1017 K-12 public school teachers and 800 school principals who served in public elementary, middle, and secondary schools. The survey revealed that both teachers and principals believe that, ideally, the most important leader behavior for principals is to motivate students and teachers to do their best. However, when the researchers asked specific questions about the principals’ leadership, they found that teachers and principals had divergent views of the principals’ leader behaviors.

Researchers for MetLife (2003) discovered that teachers felt their principals were more interested in student test scores, reporting, and compliance than they were in guiding and motivating teachers. However, when principals responded to these issues, they had exactly the opposite view. Principals felt that they attached more importance and time to guiding and motivating teachers than to test scores, reporting and compliance.

Principals were shown to have more positive views of the principal-teacher relationship than teachers did. Most principals (97%) were satisfied with their relationship with teachers

while 71% of teachers were satisfied with their relationship with the principal. A higher percentage of principals than teachers viewed their relationship as open (84% vs 50%), collaborative (84% vs 54%), friendly (84% vs 57%), mutually respectful (89% vs 58%), and supportive (86% vs 60%) (MetLife, 2003).

Many researchers agree that the leader-follower relationship, as viewed by the follower, is a major determinant of the effectiveness of the leader (Blase, 1988; Leithwood & Jantzi, 1997; Lord et al., 1999; Shum & Cheng, 1997). Again, in the language of schools, how teachers perceive the relationship they have with the principal influences the effectiveness of the principal's leadership. Therefore, the principal-teacher relationship is worthy of study. As Fiedler and Chemers (1974) wrote, "From a theoretical as well as an intuitive point of view, the interpersonal relationship between the leader and his group members is likely to be the most important single variable which determines his power and influence" (p. 64).

Any research that is aimed at explaining the leader-follower phenomenon between principals and teachers should be useful. This agrees with Blase (1995), who administered *The Inventory of Principals' Characteristics that Contribute to Teacher Empowerment* to 285 teachers in 11 Georgia schools, and wrote: "Although substantial research has been centered on principal-teacher relationships, more research along these lines, from a variety of theoretical perspectives, would be valuable" (p. 216).

Purpose of Study

Leadership, like beauty, is difficult to describe, but you know it when you see it" (Souba, 1998, p. 1). As Souba infers, leadership is more easily recognized than it is quantified. Many researchers have tried to define and describe successful leadership and leadership skills so that present and potential leaders can emulate those skills and become successful leaders. Burns (1978) wrote: "Leadership is one of the most observed and least understood phenomena on earth" (pp. 1-2). "If we know far too much about our leaders, we know far too little about leadership. We fail to grasp the essence of leadership that is relevant to the modern age" (pp. 1-2).

Grasping the "essence of leadership" is difficult to do, especially the leadership of a school principal. Being a principal is a complex job, requiring a multitude of talents which are not easily quantified (Hoy et al., 2006). However, all the leader behaviors a principal exhibits help to define the relationship he or she has with his or her teachers.

Therefore, the purpose of this study is to explore the principal-teacher relationship as a leader-follower relationship. In this study, I identified factors that contribute to the discrepancies between principals' and teachers' perceptions of the principal's leader behavior.

Research Questions

The research question was:

What variables explain differences in principals' and teachers' perceptions of the principal's leader behavior?

Within this research I sought to answer the following four sub-questions:

1. What variables explain differences in principals' and teachers' perceptions of the principal's leader behavior in the area of consideration?
2. What variables explain differences in principals' and teachers' perceptions of the principal's leader behavior in the area of creating culture?
3. What variables explain differences in principals' and teachers' perceptions of the principal's leader behavior in the area of communication?
4. What variables explain differences in principals' and teachers' perceptions of the principal's leader behavior in the area of adaptability?

An Explanation for the Differences Between Teachers' and Principals' Perceptions of the Principal's Leader Behavior

The Metropolitan 2003 survey of elementary, middle, and secondary public school teachers and principals revealed that there was a discrepancy between principals' and teachers' perceptions of the principal's leader behavior. Although the researchers provided data which indicated that this discrepancy between principals' and teachers' perceptions existed, they offered no theory explaining why it existed. Obviously, principals and teachers form their perceptions of the principal's leader behavior differently. The attribution theory may help to explain why (Attribution Theory, 2004).

Attribution theory is a way for people to explain what happens to them. If something good happens, people often attribute the outcome of the event to something that they had done. They take credit for their good fortune. However, if something bad happens to them, they often attribute the outcome to something that was beyond their control (Attribution Theory, 2004). If a student passes a test, he or she may attribute it to the fact that they were prepared and knew the

material. But, if a student does poorly on a test, they may attribute it to the fact that the test was hard or that the teacher was purposely trying to fail the students.

If the student did poorly and thought the teacher was trying to fail students, he or she forms negative perceptions of the teacher. If the student thinks he or she failed the test because it was hard, he or she may attribute his or her performance to the difficulty level of the test and may have neutral feelings about the teacher or may even form positive feelings about the teacher if the student felt the teacher had tried to help him or her understand the material. This idea of attributing a reason to an outcome may help to explain the discrepancy between principals' and teachers' perceptions of the principal's leader behavior.

Principals form perceptions of their leader behavior internally, while teachers form their perceptions of the principal's leader behavior by observation. When the principal's leader behavior affects a teacher positively, the teacher may attribute the positive outcome to the principal's actions or the teacher may attribute the positive outcome to something that the teacher did. If the principal's leader behavior affects a teacher negatively, the teacher may blame the negative effect on the situation and have neutral or positive feelings, about the principal. However, the teacher may perceive the principal's actions as directly causing the negative outcome and form negative perceptions of the principal's leader behavior.

Because of this effort to explain outcomes and because principals and teachers form perceptions of the principal's leader behavior differently, a discrepancy between the principals' and teachers' perceptions of the principal's leader behavior exists.

Development of the Criterion Variables

Waters, Marzano, and McNulty (2003) conducted a meta-analysis that included 70 studies on leadership. These studies were conducted over a 30-year period. The criteria for inclusion in the meta-analysis was that the study had to be quantitative, student achievement had to be used as the dependent variable, and teacher perceptions of leadership had to serve as the independent variable. The meta-analysis involved 14,000 teachers, 2,894 schools, and over one million students. Their research yielded 21 specific principal leadership responsibilities that had a significant effect on student achievement.

I divided the definitions Waters et al. (2003) assigned these 21 leadership responsibilities into five domains I labeled Principal Leadership Behaviors (see Table 1).

Even though I divided these leadership responsibilities into five domains, I used only four in this study: (1) **Consideration**, which contains leadership behaviors related to personal and professional relationships based on awareness of needs and demonstrated care and support; (2) **Creating Culture**, which contains leadership behaviors related to creating a school culture based on personal beliefs about education; serving as an advocate for the school, children, and teachers; recognizing and rewarding children, teachers, and staff for their works; and effectively dealing with failures; (3) **Communication**, which contains leadership behaviors related to creating and communicating a clear vision and goals for the school; communicating effectively with teachers formally, in written and oral language; and informally, through modeling appropriate behavior; and (4) **Adaptability**, which contains leadership behaviors related to the ability to adapt behaviors to situations and how well the principal copes with and manages change. I chose not to use the fifth domain because it is largely a measure of management, not leadership.

I used these four domains as initial components of the criterion variables: the measure of the difference between the principals' and teachers' perception of the quality of the principal's leader behavior, where teachers' perceptions of the quality of their principal's leader behaviors are subtracted from the principal's perceptions of the quality of his or her leader behaviors, as measured on a Likert scale.

*Types of Variables That May Affect Differences in Teachers' and Principals'
Perceptions of the Principal's Leader Behavior*

In 1997, Leithwood and Jantzi conducted a study in a large school district in Ontario, Canada. The purpose of the study was to explore the factors that influenced teachers' perceptions of their principal's transformational leadership. The overall question they posed was, "What factors influence teachers to attribute leadership qualities to their principals?" (p. 312).

Table 1

A Classification of the Waters et al. (2003) Leadership Responsibilities into Principal Leadership Behavioral Domains

Domain	Leadership responsibility (Waters et al., 2003)	Definition (observed principal behavior)
Consideration	Maintain working relationships with members of the school community	Demonstrates a personal knowledge of teachers and staff
	Maintain visibility throughout the school	Has positive, meaningful interactions with teachers and students
Creating culture	Create school climate	Promotes a sense of community, cooperation, and shared beliefs within and about the school
	Foster positive school image	Openly advocates for the school
	Affirm actions of self and others	Recognizes and celebrates successes and acknowledges failures
	Maintain personal philosophy about education	Maintains strong beliefs about schooling and openly communicates those beliefs
Communication	Provide contingent rewards	Recognizes and rewards individual successes
	Focus on present and future	Establishes clear goals and vision and keeps them in the forefront
	Send clear messages and practice active listening	Establishes and maintains good communication with teachers and students
	Provide intellectual stimulation for self and others	Makes sure that teachers and staff are aware of and discuss current educational research
Adaptability	Seek teacher input	Involves teachers in the decision making process
	Evaluates need for change	Challenges the status quo
	Motivate others	Inspires and leads others to take risks
	Demonstrate flexibility	Adapts leader behavior to fit the situation
Management	Aware of total school environment	Is aware of what is going on in the school and uses this information to make decisions
	Understand purpose of school	Monitors the effectiveness of educational practices
	Maintain order in school community	Establishes standard operating procedures
	Procure resources	Provides teachers with the proper materials and training
	Participate in development and assessment of curriculum	Is involved in development and implementation
	Familiar with instructional methods	Is knowledgeable about educational practices
	Maintain order and discipline	Protects teachers' instructional time

Note: The responsibilities are from Waters, J. T., Marzano, R. J., & McNulty, B. A. (2003). *Balanced leadership: What 30 years of research tells us about the effect of leadership on student achievement*. Aurora, CO: Mid-continent Research for Education and Learning.

Leithwood and Jantzi (1997) surveyed 2378 teachers (1632 in 100 elementary schools and 746 in 15 secondary schools). The survey addressed two main issues: the transformational leadership and the management skills of the principal with whom the teacher worked. Of the 69% of the teachers who responded, 53% or 1253 surveys contained useable data on the transformational leadership of the principal and 52% or 1042 contained useable data on the principal's management skills. This expanded on a previous study they had conducted in 1996 when they surveyed 420 teachers in a British Columbia school district.

Leithwood and Jantzi (1997) were especially interested in teachers' perceptions of their principal's transformational leadership and the factors that contributed to those perceptions. They decided on two categories of variables, alterable and unalterable, that they would use to explore the transformational leadership of principals. Alterable variables were defined as those variables that were "subject to intentional change in a relatively short period of time" (p. 317). In their original 1996 study, alterable variables were sub-divided into in-school and out-of-school variables. In the 1997 study the category of out-of-school alterable variables was dropped "because of its lack of explanatory power in our original results" (p. 317). Unalterable variables were those that were "typically difficult to change through intentional effort" (p. 317).

Alterable variables included phenomena associated with the school's "mission and goals, culture, structure and organization, policies and procedures, planning, information collection and decision making, and instruction" (p. 317). Unalterable variables included basic demographic characteristics of teachers and principals (age, gender, and experience) and the size and level (elementary or secondary) of the schools.

In exploring the relationship between teachers and principals, it seems obvious that some factors affecting the teachers' perceptions of the principal-teacher relationship are dynamic and changeable, while others are static, longstanding, and difficult or impossible for principals or teachers to change. In this study, I explored variables that helped determine principals' and teachers' perceptions of the principal's leader behavior.

Development of the Predictor Variables

The predictor variables are those I determined would account for the discrepancy between the principals' and teachers' perceptions of the principal's leader behavior. To develop the domains for the predictor variables I reviewed two books and 21 studies on leadership. From these sources, I gleaned keywords that were repeated several times. Based on my review of the

literature on leadership and my experience as an administrator, I divided this list of keywords into five domains: (1) **School Culture**, which contains items related to the history of the school and community, the vision and mission for the school, the morale of the school, and how people are recognized for their achievements; (2) **Level of Caring**, which contains items related to how well listening occurs in the school, the concern for others, and how friendly and inviting the school is; (3) **Modeling Ideal Behavior**, which contains items related to trust, respect, credibility, and open communication; (4) **Level of Control**, which contains items related to discipline, safety, volunteerism, scheduling, and allocation of resources; and (5) **Professional Practice**, which contains items related to the evaluation of and feedback to school personnel, how encouragement and motivation is demonstrated, the principal's visibility within the school, a collaborative environment, and the decision-making process.

I used these five domains and the general demographic categories of principals' and teachers' experience, principals' and teachers' gender, principals' and teachers' age, school size (student enrollment), and school type (rural, suburban, or urban) to develop my theory for this study (see Figure 1).

School Culture and the Discrepancy Between Principals' and Teachers' Perceptions of the Principal's Leader Behavior

If teachers view their school's culture as being positive, they will have positive perceptions of their principal's leader behavior. Barnett et al. (1999) found that a positive school culture is associated with teachers having positive attitudes toward their jobs. They also determined that the leadership practices of the principal were an important factor in determining school culture.

Level of Caring and the Discrepancy Between Principals' and Teachers' Perceptions of the Principal's Leader Behavior

Teachers who feel their principal listens to them and shows concern for their well-being will perceive the principal's leader behavior in positive terms. In their study on the transformational leadership of principals, Barnett et al. (1999) found a high correlation ($r = .81$) between the individual concern principals' demonstrated to teachers and the teachers' perceptions of the principal's leader behavior.

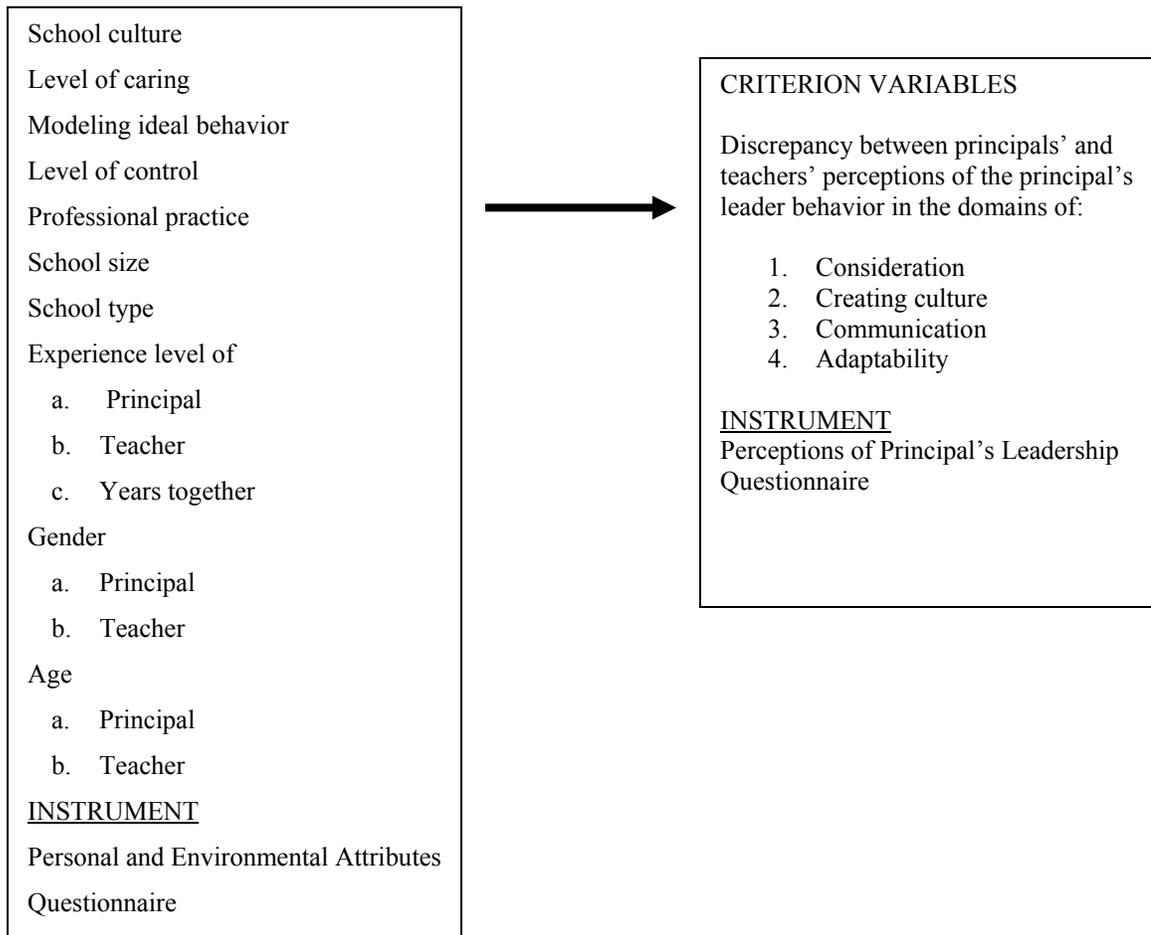


Figure 1. Variables explaining the discrepancy between teachers' and principals' perceptions of the principal's leader behavior

Modeling Ideal Behavior and the Discrepancy Between Principals' and Teachers' Perceptions of the Principal's Leader Behavior

If teachers perceive that their principal models ideal leader behavior in the areas of trust, respect, credibility, and open communication, they will view the principal's overall leadership in positive terms. Blase and Blase (1999) found that when principals modeled positive behaviors, teachers were more likely to act positively. In an earlier study, Blase (1987) concluded that teachers who worked for principals whom they considered to be negative role models "tended to dis-involve themselves from their work" (p. 205).

Level of Control and the Discrepancy Between Principals' and Teachers' Perceptions of the Principal's Leader Behavior

When principals are fair and consistent in exercising their control, teachers will perceive the principal's leader behavior in positive terms. Blase and Blase (1997) found that principals who were facilitative, shared leadership, and empowered teachers had a positive effect on their teachers' attitudes. Blase and Blase (1997) also found that principals who often demonstrated their power over teachers, had a negative effect on their teachers' attitudes.

Professional Practice and the Discrepancy Between Principals' and Teachers' Perceptions of the Principal's Leader Behavior

When principals demonstrate positive leader behaviors in the area of professional practice, teachers will perceive the principal's overall leadership in positive terms. Jantzi and Leithwood (1996) found that principals who inspired others, who provided intellectual stimulation, and who set high expectations and standards for their schools were more positively perceived as transformational school leaders. Blase (1987) concluded that principals who were not visible and who were indecisive and ambiguous had a negative effect on teachers' perceptions of their leadership.

Demographics and the Discrepancy Between Principals' and Teachers' Perceptions of the Principal's Leader Behavior

The effects of the general demographic categories of principals' and teachers' experience, principals' and teachers' ages, and principals' and teachers' gender, school size (student enrollment), and school type (rural, suburban, or urban) on the criterion variables are not clear. In this study, I will test the effect of these variables on the criterion variable and report the results.

CHAPTER II

REVIEW OF THE LITERATURE

My purpose is to explore the principal-teacher relationship as a leader-follower relationship. I seek to identify factors that contribute to differences in teachers' and principals' perceptions of principal's leader behavior. The studies I chose for the literature review were those in which the researchers examined the phenomena of leadership, followership, and the perceptions of leadership. However, before examining current research, it is important to understand how the study of modern leadership has developed.

History of Leadership from Taylor to Kouzes and Posner

Fiedler (1967) wrote:

The topic of leadership has always held a strong fascination for man. The literature abounds with books on how to be a good leader. Advice has ranged from such homilies as being honest, loyal, good, and fair, to the more cynical guidelines laid down by Niccolo Machiavelli.

The control of others for the purpose of accomplishing a common task is both a necessary and a desirable skill, and it is likely to remain so as long as we must cope with tasks which one man cannot accomplish without the assistance of others. (p. 3)

There have been many studies conducted on leaders and leadership. This section of the literature review is an examination of the evolution of leadership research throughout the 20th century.

Scientific Management and the Human Relations Movement

Fredrick Winslow Taylor conducted one of the early 20th Century leadership studies. In the early 1900s, Taylor became one of the most widely read theorists on organizational administration (Hersey & Blanchard, 1993). He believed that the best way to increase the output of workers was to improve the techniques and methods they used. He developed time and motion studies to analyze every aspect of workers' tasks to improve performance. This technical approach to leadership became known as scientific management (Taylor, 1911).

Scientific management was task-oriented. In scientific management, the main focus of the leader was to address the needs of the organization, not the needs of the people.

Consequently, Taylor “has been interpreted as considering people as instruments or machines to be manipulated by their leaders” (Hersey & Blanchard, p. 90).

In the 1920s and 1930s, Taylor’s scientific management was challenged by the human relations movement. As the name implies, the human relations movement was people-oriented. The focus of the leader was to “facilitate cooperative goal attainment among followers while providing for their personal growth and development” (Hersey & Blanchard, 1993, p. 97).

Trait Theory

Until the 1940s, much research about leaders focused on individual leadership traits. The great-man theory of leadership was espoused by those who thought that great leaders were born with certain traits that allowed them to lead effectively. The great-man theory was used to explain the development of successful and visionary leaders. The trait theory of leadership followed the great-man theory and differed from it in the fact that, although researchers believed that successful leaders had common leadership traits, they did not believe people were born with leadership ability, but developed it through experience (Bass, 1990).

In 1948, Ralph Stogdill published a review of 163 studies on leadership. These studies were focused on discovering the traits that all leaders had in common (Bass, 1990). The studies were evaluated for the physical, intellectual, social, and personality traits possessed by leaders. “There was a preponderance of evidence from a wide variety of studies...that indicated that patterns of leadership traits differed with the situation” (Bass, 1990, p. 73). Stogdill’s review caused a shift in thinking, encouraging social scientists to look beyond traits in an attempt to understand leadership.

Leader Behavior

Researchers began to examine leader behavior, not leader traits. In 1945, the Bureau of Business Research at Ohio State University initiated studies that attempted to identify various aspects of leader behavior (Hersey & Blanchard, 1993). In the Ohio State studies, leadership was defined as “the behavior of an individual when directing the activities of a group toward goal attainment” (Hersey & Blanchard, 1993, p. 101).

Researchers at Ohio State grouped leader behavior into two major categories: (a) Initiating Structure, which was task oriented behavior and (b) Consideration, which was relations oriented behavior (Bass, 1990). The Ohio State Leadership Studies were considered to be the

“most notable, and the most complete, research directed toward the determination of dimensions of leader behavior” (Buros, 1972, p. 1149) at the time.

Managerial Assumptions

As an extension of the human relations movement, the self-esteem of workers became an important factor in measuring the effectiveness of leaders (Hersey & Blanchard, 1993). McGregor, Argyris, Likert, and others set forth the idea that the leaders’ assumptions about their followers affected leadership (Bass, 1990). McGregor stated that managerial assumptions affected workers’ behavior, while Argyris argued that most workers were treated like immature humans. Likert put these ideas together in his description of management systems that were based on the values and beliefs of the leader (Hersey & Blanchard, 1993). Likert’s management systems follow:

Likert's Four Management Systems

	Managerial assumption	Workers' motivation
System 1	No confidence or trust in employees	Fear, threats, punishment, occasional rewards
System 2	Condescending trust in employees	Rewards and actual or potential punishment
System 3	Substantial, but not complete trust in employees	Rewards, occasional punishment, and some involvement in decision-making
System 4	Complete confidence and trust in employees	Full participation and involvement in decision-making

Note. Compiled from Hersey, R. E. & Blanchard, K. H. (1993). *Management of Organizational Behavior: Utilizing Human Resources*. (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Transactional and Transformational Leadership

Burns (1978) identified two basic types of leadership: transactional and transformational. In transactional leadership “leaders approach followers with an eye to exchanging one thing for another” (Burns, 1978, p. 4). In transformational leadership the “leader recognizes and exploits an existing need or demand of a potential follower. But, beyond that, the transforming leader

looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower” (p. 4). Transactional leadership is sometimes referred to as “ordinary” leadership while transformational leadership is referred to as “extraordinary” leadership (Barnett et al., 1999). Although Burns considered transforming leadership to be a more potent form of leadership, he felt that most leader-follower relationships were transactional (Burns, 1978).

Situational Leadership

In his 1948 review of the literature, Stogdill concluded that leadership varied from situation to situation (Bass, 1990). In 1954, Gibb wrote about the importance of the relationship between the leader, the followers, and the situation they faced. Gibb set forth three theories of leadership: (1) unitary trait theory, (2) constellation-of-traits theory, and (3) interactional theory.

The unitary trait theory is the belief that there is a single trait that characterizes leaders wherever they are found. The constellation-of-traits theory is the assertion that leadership is not a unitary trait, but a pattern of traits that each leader possesses which distinguishes the leader from the followers. Individuals who subscribe to the interactional theory believe that the description of leadership must take into account: (1) the leader’s personality; (2) the attitudes, needs, and problems of the followers; (3) the dynamics of the group; and (4) the nature of the situation (Gibb, 1954). Gibb set the stage for modern situational leadership theorists.

Situational leadership is leadership that is evaluated based on the situation in which the leaders and followers find themselves (Bass, 1990; Fiedler & Chemers, 1974; Hersey & Blanchard, 1993). One common thread in situational leadership is that it requires the leader to be flexible and to be able to determine which leadership style is appropriate for the situation (Hersey & Blanchard, 1993; Hesselbein, Goldsmith, & Beckhard, 1997).

Servant-Leadership

In 1970, Robert K. Greenleaf wrote an essay entitled *The Servant As Leader*. In this essay Greenleaf set forth the idea that anyone who desires to lead must first have a desire to serve. The leader must serve the people by trying to make sure the people’s needs are met. Greenleaf later expanded this view of servant-leadership to include organizations and trustees (<http://www.greenleaf.org/leadership/servant-leadership/Robert-K-Greenleaf-Bio.html>).

Larry Spears (2004), president of the Robert K. Greenleaf Center for Servant-Leadership, developed 10 characteristics of servant-leaders: (1) listening, (2) empathy, (3) healing, (4)

awareness, (5) persuasion, (6) conceptualization, (7) foresight, (8) stewardship, (9) commitment to the growth of people, and (10) building community. Spears reports that these 10 servant-leader characteristics are not exhaustive, but do communicate the basic ideas of this concept of leadership.

Abel (2000) conducted a study designed to create a comprehensive description of servant-leaders. She identified characteristics and behaviors that defined servant-leaders. Abel found servant-leaders have an ethic of service which is a strong motivation for their leader behaviors. Servant-leaders have a sense of being “called” to their position. They view their work as more than a job and feel that they are the best person to lead in their particular situation. Abel (2000) found that servant-leaders have positive personal characteristics in the areas of “trustworthiness, truthfulness, honesty, compassion, and integrity” (p. 84). She found that servant-leaders value people. Because they value people, they develop positive relationships, thus creating an environment of cooperation.

Barbuto and Wheeler (2006) found a wealth of literature about servant-leadership: However, they reported that “the empirical examination of servant-leadership has been hampered by a lack of theoretical underpinnings” (p. 301). They developed operational definitions for the 10 characteristics of servant-leaders reported by Spears (2004), plus the additional characteristic of calling. Their goal was to develop and validate an instrument that could be used to empirically measure these 11 characteristics of servant-leadership.

Barbuto and Wheeler (2006) used a panel of 11 experts to determine face validity and identify poorly written items. Initially, items that were correctly placed in each of the 11 categories 60% of the time were retained. Some items were rewritten and then all items were presented to another panel of five experts. Items correctly categorized 80% of the time were included in the final instrument.

Barbuto and Wheeler (2006) administered the survey to 80 elected community officials from the Midwestern United States and to 388 of the officials’ colleagues or employees. After collecting the data from the participants, the researchers performed a principal components analysis with a Varimax rotated solution. This data reduction resulted in items loading into the following 5 domains:

Domain	Operational definition
Altruistic calling	Leader's desire to make a positive difference
Emotional healing	Leader's ability to foster spiritual recovery from adversity
Wisdom	Leader's awareness and anticipation of consequences
Persuasive mapping	How well leaders use sound reasoning and conceptualization
Organizational stewardship	How well leaders guide and direct their organization in making positive contributions to community

Note. Compiled from Barbuto, J. E. & Wheeler, D. (2006). Scale development and construct clarification of servant leadership [Electronic version]. *Group and Organization Management*, 31 (3), 300-326.

The researchers found some discrepancies between the perceptions of leaders and followers. Leaders reported the best predictor of their employees' willingness to do extra work was their organizational stewardship. However, employees reported that the leader's wisdom was the most important factor in determining the employees' willingness to do extra work. Leaders assumed that organizational stewardship and wisdom were the best predictors of employee satisfaction, but the employees related their leader's skill in the area of emotional healing as the best indicator of employee satisfaction. Both leaders and followers listed organizational stewardship as the best indicator of the leader's effectiveness (Barbuto & Wheeler, 2006).

Vision and Values

Leaders are encouraged to lead with vision. Warren Bennis and Burt Nanus found that for effective leaders, "attention through vision was one of their key strategies" (Kouzes & Posner, 1995, p. 93). Kouzes & Posner (1995) wrote: "It's their sense of vision and their ability to look ahead that distinguishes credible leaders" (p. 94).

Covey (1996) wrote: "The leader of the future... will be one who creates a culture or value system centered upon principles" (p. 149). Covey (1996) sets forth three roles that leaders

must take: (1) pathfinding—creating a compelling vision and mission; (2) aligning—ensuring that every aspect of the organization contributes toward achieving the vision and mission; and (3) empowering—allowing people to use their talents, intelligence, and creativity. A clear vision and reflective thought, coupled with actions and consideration, are the hallmarks of a modern, effective leader.

Historical Review

Table 2 is a review of some key historical and modern leadership studies. Table 2 is by no means an exhaustive list. Several researchers (Bass, 1990; Burns, 1978; Fiedler, 1967; Kouzes & Posner, 1995; Yukel, 1994) recognize that leadership is one of the most studied phenomena in our society.

Table 2

A Historical Review of Key Contributors to the Theory and Research in Leadership

Researcher-contributor	Theory, model, or concept	Conclusions	Date
Taylor	Scientific management	Improve production by improving methods.	1911
Mayo	Human relations	Improve production by attention to workers.	1933
Stogdill	Leader traits and behavior	Traits alone do not predict who will be a leader. Research should focus on leader behavior.	1948
Gibb	Interactional theory	Personalities of leader and followers and characteristics of group and situation combine to predict leadership.	1954
McGregor	Theory X—Theory Y	Managerial assumptions about followers affect leader behavior.	1957
Tannenbaum & Schmidt	Continuum of leader behavior	There is a continuum of leadership styles from democratic to authoritarian.	1958
French & Raven	Bases of social power	Identified five bases of power.	1959
Argyris	Immaturity—maturity continuum	The assumptions of leaders about followers affect the behavior of followers.	1964

(continued next page)

Table 2 (continued)

Researcher-contributor	Theory, model, or concept	Conclusions	Date
Herzberg	Two factor theory of motivation	The factors affecting job satisfaction differ from the factors that affect job dissatisfaction.	1966
Likert	Management systems	The management system applied by the leader affects the productivity of the followers.	1967
Fiedler	Contingency theory	The situation determines the effectiveness of the leader. Engineer the situation to fit the leader.	1967
Hersey & Blanchard	Situational leadership	Leadership style should match situations.	1969
Greenleaf	Servant-leadership	Those who lead must first serve.	1970
Burns	Transformational leadership	Leader-follower relationships determine the effectiveness of the leader.	1978
Bennis & Nanus	Leadership competencies	Effective leaders create a shared vision and a mission with followers.	1985
Covey	Principle-centered leadership	Leadership is based on values and principles.	1991
Kouzes & Posner	Leadership practices	Leader self-evaluation on key leadership practices is used to improve leadership.	1995

Note. Compiled from Bass, B. M. (1990). *Bass & Stogdill's Handbook of Leadership: Theory, Research, and Managerial Applications*. (3rd ed.). NY: The Free Press; Burns, J. M. (1978). *Leadership*. NY: Harper & Row; Covey, S. R. (1996). Three roles of the leader in the new paradigm. In F. Hesselbein, M. Goldsmith & R. Beckhard (Eds.). *The leader of the future*. San Francisco: Jossey-Bass; French, J. R. P. & Raven, B. (1959). The bases of social power. In J. M. Shafritz & J. S. Ott (Eds.), *Classics of organization theory*. (4th ed.). (pp. 375-384). Fort Worth: Harcourt Brace; Gibb, C. A. (1954). Leadership. In G. Lindzey (Ed.), *Handbook of social psychology: Vol. 2. Special fields and applications*. (pp. 877-920). Reading, MS: Addison-Wesley; Hersey, R. E. & Blanchard, K. H. (1993). *Management of Organizational Behavior: Utilizing Human Resources*. (6th ed.). Englewood Cliffs, NJ: Prentice-Hall; Kouzes, J. M. & Posner, B. Z. (1995). *The Leadership Challenge*. (2nd ed.). San Francisco: Jossey-Bass; Taylor, F. W. (1911). *The Principles of Scientific Management*. NY: Harper & Brothers.

Modern Definitions of Leadership

Barker (1997) laments the fact that many researchers do not define leadership when they discuss it or write about it. After analyzing a total of 587 studies with the word “leadership” in their title, he found that 366 did not have a specific definition for the word. Barker felt that the bulk of researchers assumed that everyone knows what leadership is, therefore a definition was not required.

Because leadership is such a complex phenomenon, it is inappropriate to assume that people have a common, working definition of leadership. And, since leadership is dynamic, with leaders adapting their behavior to the situation, it is difficult to create an all-encompassing definition. How leadership is defined depends on the frame of reference in which it is being observed. The leadership of a company's C.E.O. may be defined quite differently from the leadership of an army colonel. Certainly, the definition of leadership, as practiced by a school principal is different from either the C.E.O. or the colonel.

Several researchers agree that leadership is recognized as a social process that depends on both the leaders and followers (Barker, 1997; Bass, 1990; Hersey & Blanchard, 1993; Lord et al., 1999). This concept of leadership seems to fit the school setting. Schooling is certainly a social process and the principal is recognized as the leader while the teachers are the followers. While this definition is acceptable, it is too generic and vague to be used to fully explain leadership.

Burns (1978) defined leadership as either transactional or transformational. Transactional leadership is leadership based on an exchange where followers receive rewards for their followership. In transformational leadership, leaders are able to motivate followers to achieve based on the value of the outcome of the activity. Transactional leadership is often defined as ordinary leadership while transformational leadership is considered to be extraordinary (Burns, 1978). Burns' theories of transactional and transformational leadership are very similar to the definitions of leadership that were developed in the Ohio State Leadership Studies in 1945. In this series of studies, researchers developed the idea that leadership or leader behavior falls into two major categories: (1) Initiating Structure, which is leadership focused on achieving tasks, and (2) Consideration, which is leadership that is focused on the needs of the followers (Hersey & Blanchard, 1993).

Categorizing and defining leadership is based on the leader's ability to complete tasks and work with people. Reviewing the work of early researchers (accel-team, 2004; Taylor, 1911) it is clear that they defined leadership as either task oriented or people oriented. The results of the 1945 Ohio State Leadership Studies were similar. Initiating Structure is associated with task oriented behavior, while Consideration is leadership that is concerned with people and relationships (Hersey & Blanchard, 1993). Burns' (1978) transactional and transformational theories of leadership remain popular and are the subject of much modern research (Barnett, et

al., 1999; Jantzi & Leithwood, 1996; Leithwood & Jantzi, 1997; Leithwood & Jantzi, 2005). However, these theories can still be categorized as task oriented and people oriented leadership.

While breaking leadership down into task oriented and people oriented behavior is useful in helping to understand the components of leadership, I choose to look at leadership as a whole. For leaders and followers to understand leadership, it is important for them to understand the Gestalt of leadership. Yukel (1994) wrote that a leader's effectiveness is measured by how well his or her group accomplishes tasks and achieves a set of predetermined goals. Although this definition of leader effectiveness seems to be task oriented, Yukl goes on to write that effective leaders encourage and accept participation of his or her followers in the decision-making process.

For my study, I look at leadership as perceived through the eyes of the followers. I needed to adopt a definition of leadership that would encompass these goals. The modern definition of leadership that best fits the purpose of my study was developed by Kouzes and Posner (1995). They defined leadership as "the art of mobilizing others to want to struggle for shared aspirations" (p. 30). This definition of leadership has several components which fit nicely within the framework of the principal-teacher relationship. First, it invites one to look at leadership as a whole process by which the leader convinces the followers to accomplish goals. Secondly, it stresses the importance of the followers' perception of the leader's ability to lead. Finally, it differentiates between managers, who coerce subordinates' compliance with rules, and leaders, who through creativity and awareness, inspire the cooperation of their followers.

Importance of the Leader-Follower Relationship

"All theories of leadership emphasize connecting people to each other, and all theories of leadership emphasize connecting people to their work" (Sergiovanni, 1996, p. 33). This implies that a relationship exists between leaders and followers and that the relationship helps to determine the effectiveness of the organization. This echoes the research of Hersey and Blanchard (1993) when they wrote that a leader must be concerned about "human relationships" (p. 89). However, when leadership is discussed, the discussion usually only focuses on the leader and his or her characteristics and actions. However, Hollander (1992) wrote, "The concepts of leader and leadership do not exist in isolation. To be viable, both depend upon followership" (p. 43).

Lord et al. (1999) researched the role of how the followers' self-concepts affected the leader-follower relationship. They, like Hollander (1992), found that the perceptions and actions of the followers played a large role in determining the effectiveness of the leader with whom they worked. While it seems reasonable to study leadership by examining the behavior and characteristics of a leader, both Hollander (1992) and Lord et al. (1999) agreed that the role the follower plays in the leadership process is considerably understudied. Hollander (1992) concluded that most leadership studies focus on the leader because it is easier to focus on one person than on many.

Burns (1978) and Bass (1990) agree that leadership should not be viewed as a "thing" but as a relationship between the leader and the members of his or her group. Goals are achieved through the active participation of both the leader and followers. Gerstner and Day (1997), who conducted a meta-analysis of the Leader-Member Exchange (LMX) Theory, which focuses on the dyadic relationship between a leader and a member, found that "the relationship that develops between a leader and a follower is predictive of outcomes at the individual, group, and organizational levels of analysis" (p. 3). Therefore, the effectiveness of an organization depends on the leader-follower relationship, and that relationship depends on perceptions.

The Importance of Perceptions of Leadership

Researchers (Barker, 1997; Bass, 1990; Hersey & Blanchard, 1993; Jung & Sosik, 2006; Lord et al., 1999) agree that the concept of leadership involves both leaders and followers. However, leaders and followers often have differing perceptions regarding leadership. It is important to understand what contributes to the discrepancy between the leader's self-perceptions of his or her leadership and the followers' perceptions of that same leadership (Becker, Ayman, & Korabik, 2002).

In an effort to better understand leader behavior and the perceptions of leadership, the Bureau of Business Research at Ohio State University initiated studies that attempted to identify various aspects of leader behavior (Hersey & Blanchard, 1993). Up until that time, most research was designed to describe leadership focused on the different traits of leaders. However, data from the Ohio State Leadership Studies made the researchers realize that using the traits of leaders as the criteria for describing leadership ignored the role played by the follower in the leader-follower relationship (Bass, 1990).

The researchers conducting the Ohio State Leadership Studies determined that to understand the concept of leadership, one must not ignore the interaction between leader and follower (Bass, 1990). In their attempt to understand this interaction, the researchers constructed an instrument that could be used to measure the perception of both leaders and followers about leadership.

The Leader Behavior Description Questionnaire (LBDQ) was an instrument that allowed leaders, followers, and supervisors to quantify leader behavior. Researchers found that by using the LBDQ, leader behavior could be categorized into four areas: (1) Consideration, (2) Initiating Structure, (3) Production Emphasis, and (4) Sensitivity. Of these four areas, researchers found that “Consideration and Initiating Structure were by far the most important, accounting for some 83 percent of the variance” (Buros, 1972, p. 1150) in the items.

Over time, other instruments were developed that allowed leaders to describe perceptions of their own leader behavior, while followers could use the same instrument to record their perceptions of the leader’s behavior. Table 3 is a list of some of these instruments.

Discrepancies in the Perceptions of Leadership

Leaders need to be aware of how they are perceived by their followers. In the 2003 MetLife Survey of the American Teacher, researchers found that, teachers and principals perceive their relationship with each other in strikingly different ways. More principals than teachers are pleased with the current state of affairs. Thus, principals may be less motivated to improve a situation where they do not perceive a problem to exist (MetLife, 2003, p. 6).

This is key for principals as leaders. If they do not understand the perception of their teacher followers, they may not initiate change in areas where change is

Table 3

A Survey of Leader Behavior Measurement Instruments for Use with Leaders and Followers

Name of instrument	Acronym	Measures	Completed by	Developed by
Leader Behavior Description Questionnaire	LBDQ	Observed leader behavior	Leader & subordinates	Research staff of the Ohio State Leadership Studies (1957)
Ideal Leader Behavior Description Questionnaire	ILBDQ	Ideal leader behavior	Leader & subordinates	
Supervisor Behavior Description Questionnaire	SBDQ	Observed supervisor behavior	Supervisor & subordinates	
Leader Behavior Description Questionnaire Form XII	LBDQ -- XII	Observed leader behavior—based on LBDQ	Leader & subordinates	Stogdill (1962)
Leadership Practices Inventory	LPI	Inventory of leadership practices	Leader & followers	Kouzes and Posner (1988)

Note. Compiled from Bass, B. M. (1990). *Bass & Stogdill's Handbook of Leadership: Theory, Research, and Managerial Applications*. (3rd ed.). NY: The Free Press; Buros, O. K. (Ed.). (1972). *The Seventh Mental Measurements Yearbook*. Highland Park, NJ: The Gryphon Press; Hersey, R. E. & Blanchard, K. H. (1993). *Management of Organizational Behavior: Utilizing Human Resources*. (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.; Kouzes, J. M. & Posner, B. Z. (1995). *The Leadership Challenge*. (2nd ed.). San Francisco: Jossey-Bass.

needed. The first step in correcting this is for both principals and teachers to understand how they perceive the leadership of the principal.

The data compiled in the 2003 MetLife survey is useful in understanding the discrepancies in the perceptions of leadership that exist between principals and teachers. The results were from a nationally representative sample of 1017 teachers and 800 principals in K-12 public schools. The results clearly indicate that although schools across the country have put more and more emphasis on school leadership, those who are involved in schools have different ideas about what school leadership actually means (MetLife, 2003).

Researchers found that although 78% of all principals surveyed rate themselves as excellent school leaders, only 36% of all teachers share this view. Principals and teachers differed on how well they perceive the principal's ability to motivate students to higher achievement. A majority of principals (59%) rated themselves as excellent in this while only 35% of teachers shared this view (MetLife, 2003).

Principals and teachers disagreed on how well the principal listened to teachers. Only 30% of all teachers rated their principal as being an excellent listener, while 53% of the principals rated themselves as excellent in this area. Another difference in perception occurred in the area of the principals' visibility. Principals (67%) felt that they were highly visible, but only 38% of the teachers agreed (MetLife, 2003).

Throughout the survey, principals were much more likely to perceive and describe their school in more positive terms than teachers. This difference in perception is more evident in the views of secondary teachers. Secondary teachers are "less likely to report that they have a friendly or collaborative relationship with their principal" (MetLife, 2003, p. 4).

A lack of communication may very well be the cause of many of the divergent views held by principals and teachers. Certainly, clear communication between parties is one of the most important aspects of developing understanding. However, data from the 2003 MetLife survey indicate that even the concept of communication itself is an area of misunderstanding between principals and teachers. Nine out of ten principals (91%) felt that there was open communication within their schools while only 58% of the teachers agreed with this assessment.

Written in the negative, these data mean that 42% of all teachers surveyed felt that communication within their schools was either a problem or was certainly not as open as it should be (MetLife, 2003). These data clearly indicate that there is a discrepancy in the perception held by principals and teachers regarding the leadership of principals.

Attribution Theory

Since there is a discrepancy in the perception held by principals and teachers regarding the leadership of principals, one must ask why. Teachers and principals are members of the same organizational and social structure: the school. As members of the school, teachers and principals participate in many of the same events, and, theoretically, share the same goal of educating students. They share a great number of experiences. If they have this commonality, why do they perceive the principal's leadership differently?

Attribution theory helps us to understand why this discrepancy in perception between teachers and principals exists. Attribution theory is used to explain why people act and feel as they do. (<http://www.as.wvu.edu/~sbb/comm221/chapters/attrib.htm>). It is concerned with how people interpret events and how it affects their thinking, behaviors, and perceptions (Weiner, 1996).

“Heider (1958) was the first to propose a psychological theory of attribution” (Attribution Theory, 2004, p. 1). He viewed people as amateur scientists who observed other people’s behavior and then processed those observations to attempt to understand and explain their behavior. “Attribution theory assumes that people try to determine why people do what they do” (Attribution Theory, p. 1).

Attribution is a three-step process: (1) a person observes or perceives a behavior, (2) the person must determine that the behavior was intentional, and (3) the person must decide if they believe the other person was forced to perform the behavior (the behavior is then attributed to the situation, an external attribution) or if the person chose to perform the behavior (the behavior is then attributed to the person, an internal attribution) (Weiner, 1996). This three-step process can be followed formally, as when researchers study leaders’ leadership behavior, or it can be followed informally as when teachers observe their principal’s behavior and develop a perception as to why the principal acted as he or she did.

The informal process, by which teachers observe the principal’s behavior and then come to a conclusion as to the reason for that behavior, is important in understanding why teachers react to their principals as they do. If teachers determine that there was an external attribution for the principal’s behavior, that is, the principal was forced to perform the behavior, they are less likely to assign the behavior, either good or bad, to the principal. However, if the teachers determine that the principal chose to perform the behavior, an internal attribution, they are more likely to assign the behavior, either good or bad, to the principal, which in turn, has a greater effect on shaping the teachers’ perception of the principal’s leadership.

The Relationship of this Study to the Research on Leadership

This review of the literature is evidence that leadership has been, and continues to be, a topic of great interest and study. Theories of leadership are varied and none seem to be comprehensive: Each study adds “one more piece to the puzzle.” I am trying to add more knowledge to the research on leadership by exploring reasons for the discrepancy between teachers’ and principals’ perceptions of the principal’s leader behavior.

CHAPTER III

METHODOLOGY

The methodology is described in this chapter. The population, from which the sample was drawn, and the development and administration of the questionnaires are discussed. The statistical methods used to analyze the data are presented.

Populations

The populations for this study came from the list of public high school principals' names which are included in the database of MCH, a commercial mailing list company founded in 1928 by Dr. Forrest E. Long, Professor of Education at New York University. While at New York University, Dr. Long became the editor and publisher of *The Clearing House*, an educational journal for secondary schools. Distribution of *The Clearing House* led to the development of the first commercial school mailing list. The databases are supported by "a large research staff who compile and update the data continuously, primarily through telephone surveys" (MCH, 2004, p. 3).

For this study, the list of principals in the MCH database served as one population. The other population was the teachers who served in the principals' schools. The names and number of teachers in this population were unknown: However for the purposes of this study, it was not important to know that information.

Samples

In 2005, there were 26,405 public high schools operating in the United States (DIGITALMILL, 2005). Of that number, the MCH database included 19,046 public high schools and the name of the principal for each school. From this list of 19,046 names of public high school principals, a sample of 3000 principal names was systematically selected using the nth name selection process. The names were printed on mailing labels. There were 750 rows of labels with four names per row. I decided to send survey packets to 750 principals. I counted down four rows, used the names from that row, and continued to select every fourth row until I had 750 names. If the name of the principal's school seemed to indicate that the school served a special student population (i.e., vocational, special education, magnet), I dropped that name and selected the next name from the next row. Because of financial considerations, I prepared and

mailed survey packets to the first 640 principals from the 750 names I had selected. This is 167% of the minimum of 384 recommended by Krejcie and Morgan (1970) for populations of the size in this study.

Teachers were purposefully selected by the principals. Principals were asked to select an English, mathematics, science, social studies, vocational, and special education teacher to participate in the research. Therefore, the sample consisted of one principal and six purposefully selected teachers from each high school included in the study.

Participants

Questionnaire packets were sent to the sample of 640 public high school principals with the instructions to purposefully select six teachers. The return was low (18.1%), with 116 principals returning questionnaires. Of those 116 returned, 106 were usable. Ten were returned with only principals' responses making them unusable. The return for usable responses from the schools was 16.6%. Possible reasons for this low return rate are discussed in the limitations section in Chapter V. The number of returned, usable teachers' questionnaires, by principal, is in Table 4.

Instruments

Two questionnaires were developed for this study. The Perceptions of Principal's Leadership Questionnaire has two forms, one for principals (see Appendix A1) and one for teachers (see Appendix A2). These two forms were used to quantify the criterion variables: the discrepancy between principals' and teachers' perceptions of the quality of the principal's leader behavior. The Personal and Environmental Attributes Questionnaire (see Appendix B), completed by the teachers in the school and the demographic questions administered to both teachers and principals, were used to quantify the predictor variables. The final questionnaires are in Appendix C.

Table 4

Number of Returned, Usable Questionnaires

Group	Population		Sample		Second-level sample		Returned		Usable	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Principals	19,046	72.1	3000	15.8	640	21.3	116	18.1	106	16.6
Teachers ¹			18,000		3840	21.3	526	13.7	526 ²	13.7
Principals returning 6 usable teacher responses									42	39.6
Principals returning 5 usable teacher responses									36	34.0
Principals returning 4 usable teacher responses									15	14.2
Principals returning 3 usable teacher responses									8	7.5
Principals returning 2 usable teacher responses									5	4.7
Principals returning 1 usable teacher responses									0	0

¹Note: The number and percentage of teachers in the population associated with the 19,046 principal names is unknown. The sample of teachers is based on six teachers per principal (English, math, science, social studies, vocational education, and special education). The total number of teachers per school is unknown; therefore, the percentage of the total number of teachers represented by the sample of 18,000 teachers is unknown.

²All returned teacher questionnaires were usable.

Construction and Testing of the Perceptions of Principal's Leadership Questionnaires

Described in this section is how the Perceptions of Principal's Leadership Questionnaires were constructed and how the content validity was determined. Also in this section is a description of how the data were reduced by using principal components analyses and how that data reduction influenced a change in the domains. Reliability coefficients and scoring methods are presented.

Construction of the Principal's Leadership Questionnaires

The Perceptions of Principal's Leadership Questionnaire has two forms, one for principals (see Appendix A1) and one for teachers (see Appendix A2). It was necessary to have two forms so I could determine a numerical difference between the perceptions of principals and the perceptions of teachers regarding the principal's leader behavior.

Based on a review of the literature on leadership and on my own experiences as an educational administrator, I named four domains of leadership: (1) Consideration, (2) Creating Culture, (3) Communication, and (4) Adaptability. One hundred twenty-five statements that describe principals' leadership behavior in these four domains were drafted.

Statements on both instruments are the same except for the perspective of the person completing the questionnaire. For example, on the Perceptions of Principal's Leadership Questionnaire for teachers, a statement may be written as, "*My principal believes that education is important,*" while on the questionnaire for the principal that concept would be represented by the statement, "*I believe that education is important.*" Again, because the only difference in the questionnaires is the perspective from which the question is written, content validity was conducted on the Perceptions of Principal's Leadership Questionnaire: Teachers' Edition only.

Content Validation of Items on the Perceptions of Principal's Leadership Questionnaire: Teachers' Edition

A Content Validity Instrument was constructed using the methods of Hitt (1999) (see Appendix F1). A panel of 10 experts was asked to evaluate each of the 125 statements, place the statements into a domain, estimate the strength of association of the statement with the domain, and assess the clarity of the statement. The panel of experts included three secondary school principals, three secondary school assistant principals, one vocational school principal, one assistant superintendent, one director of special education, and one supervisor of facilities and transportation. Statements placed in the expected domain by at least 80% of the panel members (see Appendix F2), estimated to be 3.0 on the four-point strength-of-association scale (see Appendix F3), and assessed to be at least 2.5 on the three-point clarity scale were selected for possible inclusion on the final questionnaire (see Appendix C). There was one exception. Although the item, "*My principal is frustrated by federal educational mandates,*" had a strength-of-association score of 2.67 and a clarity score of 2.33, I chose to retain it for use in the final instrument. From the list of acceptable statements, I used my experience as an educational administrator to choose five from each domain for inclusion on the final questionnaire.

Administration of the Perceptions of Principal's Leadership Questionnaire and the Personal and Environmental Attributes Questionnaire

The Perceptions of Principal's Leadership Questionnaire and the Personal and Environmental Attributes Questionnaire were incorporated into one instrument with two parts (see Appendix C). Part I had the items on the Perceptions of Principal's Leadership Questionnaire which were used to measure the criterion variables. Part II had the items on the Personal and Environmental Attributes Questionnaire, which were used to measure the predictor variables. Participants were asked to provide demographic information about their school size and setting, level of experience, gender, and age. These demographic data were used as predictor variables.

The purpose of the study and the method of surveying the participants were presented to the Institutional Review Board (IRB) at Virginia Tech. The study and method of obtaining data were approved by the IRB (see Appendix D).

The survey was mailed to each selected principal with a letter (see Appendix E) in which I explained the purpose of the research and asked for their participation. The principal was asked to have an English, mathematics, science, social studies, vocational, and special education teacher complete a questionnaire. Each principal received the survey materials in a packet that included envelopes marked for the principal and for each of the six subject area teachers. The packet included an addressed, postage-paid envelope in which to return the completed surveys. Because I wanted the responses to be totally anonymous, there were no follow-up letters to principals who did not return surveys. The principals' and teachers' participation indicated their permission to use their responses in the study.

Principal Components Analyses

Principal components analyses were conducted to confirm the factor structure of the instruments and reduce the items to a set of scales for data analysis. After this data reduction, some items were eliminated and the domains were changed to more accurately represent the constructs underlying the items. The criterion variables were measured by subtracting the mean teachers' response for each school from the principal's response for that school. This numerical difference in perceptions of the principal's leader behavior is the measure of the criterion variables. After performing three principal components analyses, I decided to statistically treat

the data from the surveys in three different ways: (1) by identifying the criterion variables using the difference scores, (2) by identifying the criterion variables using the difference scores when principals' responses only from the Perceptions of Principal's Leadership Questionnaire were used, and (3) by identifying the criterion variables using the difference scores when teachers' responses only from the Perceptions of Principal's Leadership Questionnaire were used .

Principal components analysis of the criterion variables. A principal components analysis was conducted using the numeric difference created by subtracting the average teachers' response for each item from the principal's response for each item using a rotated Varimax solution. Items with a value of .40 or greater, with the exception of items that could not be interpreted meaningfully (Components 3, 4, and 5), were formed into scales. When items loaded in two or more components, both were eliminated. However, there were two exceptions. Item 10, "I challenge both teachers and students to do their best," and item 12, "I help teachers meet their needs," both loaded on the creating culture component and the communication component. As the researcher, I retained both items and placed item 12 in Creating Culture and item 10 in Communication.

Because of the data reduction, certain items were eliminated. The results of this analysis are in Table 5. Items that were formed into scales are shaded. The coding for the data remained the same, but new domains and definitions were developed to match the data as they loaded into the different components (see Table 6).

Table 5

Rotated Components Matrix for Difference Scores on the Items on the Teachers' and Principals' Perceptions of Principal's Leadership Questionnaire, N=106

Item¹	Component 1	Component 2	Component 3	Component 4	Component 5
1	.01	.07	.81	-.17	-.06
2	.20	.14	.47	.05	.41
3	.53	.20	.08	.30	.33
4	.20	.33	.10	.66	-.04
5	.58	.26	.25	.06	.20
6	-.01	.10	-.01	-.03	.82
7	.59	-.01	.23	-.24	.35
8	.61	-.03	.36	.29	-.07
9	.68	.32	.17	-.10	-.02
10	.57	.46	.00	-.21	.05
11	.18	.72	-.06	-.04	.01
12	.41	.66	.06	-.02	-.07
13	.64	.20	-.11	.02	-.18
14	.08	.43	.38	.27	.10
15	.28	.69	.14	.04	.24
16	.52	.46	.10	.09	-.12
17	.51	.52	-.17	.26	.16
18r	.19	.21	.20	-.73	.00
19	.07	.71	.24	.06	.16
20	.63	.25	-.12	-.02	.29

Note. Extraction Method: Principal Components Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 9 iterations.

¹Items are identified in Appendix G.

Table 6

Scale, Items, Definitions, and Coding for Scales Resulting from the Principal Components Analysis of the Differences in Principals' and Teachers' Perceptions of the Principal's Leadership Questionnaire

Scale	Items ¹	Definition	Coding ²
Communication	3, 5, 7, 8, 9, 10, 13, 20	Measure of difference between teachers' and principals' perceptions of the quality of the principal's behaviors related to care of others, communication skills, decision-making process, and openness to change	Difference between principal's and mean teachers' responses.
Creating culture	11, 12, 14, 15, 19	Measure of difference between teachers' and principals' perceptions of the quality of the principal's behaviors related to concern for others, and creating a positive school environment	Difference between principal's and mean teachers' responses.

¹ Items identified in Appendix G.

² Response categories were 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly Agree.

Principal components analysis using principals' data only. A principal components analysis was conducted using only principals' responses on the Perceptions of Principal's Leadership Questionnaire. A rotated Varimax solution was applied using only the principals' scores on each item. Items with a loading of .40 or greater, with the exception of items that could not be interpreted meaningfully (Components 4, 5, 6, and 7), were formed into scales. Components with Eigenvalues of greater than one were accepted as domains. When items loaded on two or more components, the items were eliminated. However, there were two exceptions. Item 12, "*I help teachers meet their needs,*" and item 17, "*I clearly communicate all information to teachers,*" both loaded on the creating culture domain and the communication domain. I retained both items and placed item 12 in Creating Culture and item 17 in Communication.

Because of the data reduction, certain items were eliminated. The results of this analysis are in Table 7. Shaded items were kept and formed into scales. The scale score was the mean score calculated across the items. The new scales and definitions are in Table 8.

Principal components analysis using teachers' data only. A principal components analysis was conducted using only teachers' responses on the Perceptions of Principal's Leadership Questionnaire. A rotated Varimax solution was applied. Items with a value of .40 or greater, with the exception of items that could not be interpreted meaningfully (Component 4), were considered to have loaded in the corresponding component. Components with Eigenvalues of greater than one were identified as domains.

Table 7

Rotated Components Matrix for the Principals' Responses on the Perceptions of Principal's Leadership Questionnaire, N=106

Item ¹	Component 1	Component 2	Component 3	Component 4	Component 5	Component 6	Component 7
1	-.02	.11	.14	.68	.01	.09	.05
2	-.10	.58	.21	.12	.11	-.02	-.02
3	.04	.17	.76	-.04	.15	.20	-.05
4	.04	-.02	.10	-.21	.80	.08	-.06
5	.12	.25	.16	.36	.59	-.01	.16
6	.09	.07	-.03	-.03	.03	.09	.91
7	.04	.57	.20	.25	-.25	-.20	.23
8	.21	.74	.11	-.17	-.06	.18	.00
9	.28	.33	.42	.36	-.16	.17	-.10
10	.44	.24	.53	.33	-.03	.00	.03
11	.82	-.03	.04	-.03	.02	-.04	.01
12	.63	-.12	.43	.18	.24	-.35	-.06
13	.38	.32	.15	.10	-.04	.30	-.20
14	.11	-.07	.22	.14	.09	.82	.10
15	.70	.12	.02	.22	.08	.34	.20
16	.62	.37	-.05	.16	.19	.22	-.34
17	.47	.20	.60	-.06	.28	.08	.08
18r	.11	.01	-.12	.75	-.05	.03	-.09
19	.58	.15	.30	-.05	-.04	.06	.14
20	.21	.68	-.01	.16	.31	-.09	.04

Note. Extraction Method: Principal Components Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 11 iterations.

¹Items are identified in Appendix G1.

Table 8

Scales, Items, Definitions, and Coding - Principals' Responses on the Perceptions of Principal's Leadership Questionnaire

Scale	Items ¹	Definition	Coding ²
Creating culture	11, 12, 15, 16, 19	Measures principal's perceptions of the quality of his or her demonstrated behaviors related to concern for others, and for creating a positive school environment	Difference between principal's and mean teachers' responses.
Change agent	2, 7, 8, 20	Measures principal's perceptions of how well he or she institutes and handles change	Difference between principal's and mean teachers' responses.
Communication	3, 17	Measures principal's perceptions of the quality of his or her demonstrated communication skills	Difference between principal's and mean teachers' responses.

¹ Items identified in Appendix G1.

² Response categories were 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly Agree.

Because of the data reduction, certain items were eliminated. The results of this analysis are in Table 9. Shaded items were kept and formed into scales. The scale score was the mean score calculated across items. The new scales and definitions are in Table 10.

Table 9

Rotated Components Matrix for the Un-weighted, Mean Teachers' Responses on the Perceptions of Principal's Leadership Questionnaire, N=106

Items ¹	Component 1	Component 2	Component 3	Component 4
1	.26	.69	-.02	-.04
2	.01	.87	.17	.07
3	.70	.45	.14	.17
4	.19	.01	.61	.10
5	.75	.28	.11	-.02
6	.10	.01	.09	-.82
7	.36	.75	.12	-.06
8	.01	.18	.74	-.31
9	.83	.22	.25	-.07
10	.48	.58	.36	.15
11	.25	.38	.30	.43
12	.68	.42	.39	.16
13	.49	.26	.54	.17
14	.74	-.03	.10	-.04
15	.81	.35	.12	.17
16	.78	.14	.29	-.03
17	.69	.29	.43	.23
18r	.66	.38	-.15	-.09
19	.45	.44	.32	.27
20	.47	.59	.24	.35

Note. Extraction Method: Principal Components Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.

¹Items identified in Appendix G2.

Table 10

Scales, Items, Definitions, and Coding for Scales Resulting from the Un-Weighted Mean Teachers' Responses on the Perceptions of Principal's Leadership Questionnaire

Scale	Items ¹	Definitions	Coding ²
Consideration	5, 9, 14, 15, 16, 18r	Measures teachers' perceptions of the quality of their principal's demonstrated behaviors related to decision making, concern for others, and creating a positive school environment	Difference between principal's and mean teachers' responses.
Change Agent	2, 7, 20	Measures teachers' perceptions of how well their principal institutes and handles change	Difference between principal's and mean teachers' responses.
Communication	13, 17	Measures teachers' perceptions of the quality of their principal's demonstrated communication skills	Difference between principal's and mean teachers' responses.

¹ Items are identified in Appendix G2.

² Response categories were 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly Agree. Item 18r was reverse coded: 1=4, 2=3, 3=2, 4=1 in calculating the means.

Reliability of the Criterion Measures

Reliability is a measure of how well an instrument measures what it is supposed to measure. A reliability analysis was conducted using the items selected after the principal components analysis. I utilized the *scale if item deleted* function in the analysis to attain the highest alpha possible. The reliability coefficients for the criterion variables are in Table 11. Coefficients were calculated for each scale created from the three principal components analyses.

Scoring of the Scales in the Perceptions of Principal's Leadership Questionnaires

On both forms, participants were asked to rate each statement with:

1 – strongly disagree, 2 – disagree, 3 – agree, or 4 – strongly agree. To calculate the criterion variable, I subtracted the un-weighted mean teachers' score on each item from the principal's score on each item on the Perceptions of the Principal's Leadership Questionnaire for each school. This numeric difference between the principal's score and the un-weighted average teachers' scores served as a measure of the criterion variable and scales were developed from these data (see Table 6).

I used the data from the Perceptions of the Principal's Leadership Questionnaire in two other ways. I used the principal's response on each item for each school on the Perceptions of the Principal's Leadership Questionnaire to develop another set of scales (see Table 8). Un-weighted average teachers' responses for each school on the Perceptions of the Principal's Leadership Questionnaire were used to develop a third set of scales (see Table 10).

Table 11

Alpha Reliability Coefficients for the Scales Developed from the Perceptions of Principal's Leadership Questionnaire

<i>Alpha Reliability Coefficients for the Difference Scores on the Perceptions of Principal's Leadership Questionnaire</i>				
Scale	Items ¹	Number of items in scale	N	Alpha coefficients
Creating Culture	11, 12, 14, 15, 19	5	106	.76
Communication	3, 5, 7r, 8r, 9, 10, 13, 20	8	106	.80
<i>Alpha Reliability Coefficients for Principals' Responses on the Perceptions of Principal's Leadership Questionnaire</i>				
Scale	Items ¹	Number of items in scale	N	Alpha coefficients
Creating Culture	11, 12, 15, 16, 19	5	106	.76
Change Agent	2, 7r, 8r, 20	4	105	.63
Communication	3, 17	2	106	.68
<i>Alpha Reliability Coefficients for Teachers' Responses on the Perceptions of Principal's Leadership Questionnaire</i>				
Scale	Items ¹	Number of items in scale	N	Alpha coefficients
Consideration	5, 9, 14, 15, 16, 18	6	106	.89
Change Agent	2, 7r, 20	3	105	.82
Communication	13, 17	2	106	.83

¹All items identified in Appendix G.

Personal and Environmental Attributes Questionnaire

In this section I describe how the Personal and Environmental Attributes Questionnaire was constructed and how the content validity was determined. I also describe how the data were reduced through principal components analyses and how that data reduction changed the domains and how they were used to determine the predictor variable. Reliability coefficients and scoring methods are presented.

Construction of the Personal and Environmental Attributes Questionnaire

Based on a review of the literature on leadership and on my own experiences as an educational administrator, I identified five personal and environmental attributes: (1) School Culture, (2) Level of Caring, (3) Modeling Ideal Behavior, (4) Level of Control, and (5) Professional Practice. Sixty-five statements that describe leadership behavior in these five domains were drafted.

Content Validation of the Personal and Environmental Attributes Questionnaire

A Content Validity Instrument was constructed using the methods of Hitt (1999) (see Appendix H1). A panel of six experts was asked to evaluate each of the 65 statements and place the statement into a domain, estimate the strength of association of the statement with the domain, and assess the clarity of the statement. The panel of experts included two secondary school principals, two secondary school assistant principals, one assistant superintendent, and one director of special education. Statements placed in the expected domain by at least 80% of the panel members (see Appendix H2), estimated to be 3.0 on the four-point strength-of-association scale (see Appendix H3), and assessed to be 2.5 on the three-point clarity scale were selected for possible inclusion in the final instrument. From these acceptable statements I used my experience as an educational administrator to choose four items in each domain that best fit the purpose of the study to include in the final instrument (see Appendix C2).

Principal Components Analysis of Teachers' Responses to the Personal and Environmental Attributes Questionnaire

A principal components analysis was conducted on teachers' responses on the Personal and Environmental Attributes Questionnaire using a rotated Varimax solution. Items with a value of .40 or greater, with the exception of items that could not be interpreted meaningfully (Component 5), were formed into scales. Components with Eigenvalues of greater than one were

used for the scales. When items loaded in two or more components, both were eliminated. There were two exceptions. Item 24, *“The principal uses the evaluation process as an opportunity to provide teachers with feedback about their job performance,”* and item 30, *“The principal closely follows the established procedure for evaluating teachers,”* both loaded in modeling ideal behavior and evaluation process. I retained both items and placed them in evaluation process.

Because of the data reduction, certain items were eliminated. The results of this analysis are in Table 12. The coding for the data remained the same, but new domains and definitions were developed to match the data as they loaded into the different components (see Table 13).

Table 12

*Rotated Components Matrix for the Personal and Environmental Attributes Questionnaire,
N=526*

Item ¹	Component 1	Component 2	Component 3	Component 4	Component 5
21	.88	.15	.04	.13	.09
22	.07	.19	.82	-.07	.24
23	.25	.14	.47	.33	.46
24	.47	.68	-.03	-.06	.27
25	.08	.06	.17	.01	.81
26	.88	.05	.13	.07	.11
27	.28	.16	.57	.12	-.21
28	.83	.17	.16	.16	.06
29r	.44	.17	.15	.51	-.04
30	.41	.69	.02	-.11	.27
31	.86	.13	.15	-.02	.00
32	-.07	.00	-.01	.85	.05
33	.18	.09	.83	.04	.20
34	.77	.16	.13	.06	.13
35	-.03	.73	.31	.16	-.14
36	.54	.29	.39	.12	.32
37	.22	.84	.24	.13	.03
38r	.66	.38	.25	-.22	-.10
39	.61	.05	.26	.37	.26
40r	.81	.22	.13	-.11	.02

Note. Extraction Method: Principal Components Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 7 iterations.

¹Items identified in Appendix I.

Table 13

Scales, Items, Definitions, and Coding Resulting from the Personal and Environmental Attributes Questionnaire

Scale	Items ¹	Definition	Coding ²
Modeling ideal behavior	21, 26, 28, 31, 34, 36, 38r, 39, 40r	Measures teachers' perceptions of the quality of their principal's demonstrated behaviors related to trust, respect, credibility, concern for others, and open communication	Mean score calculated across all items in the scale.
Principals' performance of teacher evaluation	24, 30, 35, 37	Measures teachers' perceptions of the quality of their principal's professional evaluation of teachers, including the principal's adherence to established evaluation procedures	Mean score calculated across all items in the scale.
Awareness	22, 23, 33	Measures teachers' individual knowledge of the school's history, their individual familiarity with the school's mission, and their individual knowledge of emergency procedures	Mean score calculated across all items in the scale.
Discipline	29r, 32	Measures teachers' perceptions about student discipline in the school	Mean score calculated across all items in the scale.

¹ Items identified in Appendix I.

² Response categories were 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly Agree. Items 29r, 38r, and 40r were reverse coded: 1=4, 2=3, 3=2, 4=1 in calculating the means.

Reliability of the Personal and Environmental Attributes Questionnaire.

An alpha reliability analysis was conducted using the items selected after the principal components analysis. The reliability coefficients for the predictor variables on the Personal and Environmental Attributes Questionnaire are in Table 14.

Table 14

Alpha Reliability Coefficients for Predictor Variables on the Personal and Environmental Attributes Questionnaire

Scale	Items ¹	Number of items in scale	Number of subjects	Alpha coefficients
Modeling ideal behavior	21, 26, 28, 31, 34, 36, 38r, 39, 40r	9	526	.93
Evaluation process	24, 30, 35, 37	4	526	.81
Awareness	22, 23, 33	3	526	.73
Discipline	29r, 32	2	526	.28

¹ Items identified in Appendix I.

² Items 29r, 38r, and 40r were reverse coded: 1=4, 2=3, 3=2, 4=1.

Scoring of the Scales in the Personal and Environmental Attributes Questionnaire

On the Personal and Environmental Attributes Questionnaire, participants were asked to rate each statement with: 1 – strongly disagree, 2 – disagree, 3 – agree, or 4 – strongly agree. To calculate the predictor variables, I calculated the un-weighted mean score on the items in each scale for each teacher from the school and then calculated the average of those means to create one score for all teachers in the school on each scale. These scores served as the measure of the predictor variables.

Methods of Analysis

The SPSS program (version 10.0 for Windows) was used to conduct descriptive and inferential analyses. Multiple regression was used to analyze the relationships between the criterion and predictor variables. Several different combinations of data were used to perform different regressions to find the best explanation for the discrepancy between principals' and teachers' perceptions of the quality of the principal's leader behavior.

CHAPTER IV

RESULTS

The purpose of this chapter is to present the results and analyses of the data compiled from the study to explain the discrepancy between principals' and teachers' perceptions of the principal's leader behaviors. The criterion variables are the discrepancies between the principals' and teachers' perceptions of the quality of the principal's leader behavior. The principal components analysis, using the difference score between the principals' and teachers' responses from the Perceptions of Principal's Leadership Questionnaire resulted in the criterion variables of the principal's skill in creating school culture and the quality of his or her communication skills. The principal components analysis, using principals' responses only from the Perceptions of Principal's Leadership Questionnaire resulted in the criterion variables of the principal's skill in creating school culture, the principal's skill in serving as a change agent, and the quality of the principal's communication skills. The principal components analysis, using teachers' responses only from the Perceptions of Principal's Leadership Questionnaire resulted in the criterion variables of the principal's demonstrated consideration toward teachers, the principal's skill in serving as a change agent, and the quality of the principal's communication skills.

The predictor variables are the mean scores of teacher responses in the categories of the principal's modeling of ideal behavior, the principal's adherence to the established teacher evaluation process, the teachers' awareness of school history and operations, the teachers' knowledge of discipline procedures, the principals' and teachers' experience, the principal's gender, the school size (enrollment), and school type (rural, suburban, urban).

The following question guided the analyses of the data:

What variables explain the discrepancies in the principals' and teachers' perceptions of the principal's leader behavior?

Descriptive Data

Descriptive data for principals and teachers are reported in this section. Demographic data for principals are in Table 15. Data were gathered on age, gender, experience in education, experience as principal, school size (student enrollment), and the school setting (rural, suburban, urban) from 106 high school principals. Demographic data for teachers are in Table 16. Data

were gathered on age, gender, experience in education, and experience with their present principal from 526 high school teachers in six subject areas.

The responding secondary school principals were predominately male with a mean age exceeding fifty years. The respondents had spent almost one-half their total experience in education as secondary school principals. Many may soon be eligible for retirement. Although the average years experience as a principal exceeded eleven, almost two-thirds had served in their present position for less than six years. Over one-half served in schools they categorized as rural. The average school size was less than 1000 students.

Frequencies and percentages of principals' demographic data, organized by categories, are reported in Table 17.

The responding secondary school teachers were predominately female, although the teachers' gender was more evenly distributed than that of principals. The responding teachers had a mean age of almost 45 years and had an average of less than 20 years of experience in education. Teachers were evenly distributed across the subject areas of English, math, science, social studies, vocational education, and special education. The most experienced teachers were between 51 and 55 years of age. Frequencies and percentages of teachers' demographic data, organized by categories, are reported in Table 18.

The mean principals' and the average of the mean teachers' scores on each item of the Perceptions of Principal's Leadership Questionnaire are in Table 19. Principals rated themselves lower than teachers on three items. These items were related to the principal having regular faculty meetings, the principal being sympathetic to teachers' personal problems, and how well the principal operates in a changing environment. Principals rated themselves the same as teachers on only one item, how the principal organized reward programs for students. On the other sixteen items, principals rated themselves higher, or more positively than teachers. The largest discrepancies were in the teachers' perceptions of how frustrated principals were with federal educational mandates, the teachers' perceptions of how the principal cared for them as individuals, and the teachers' perceptions of whether or not their principal promoted an inviting school atmosphere.

Table 15

Distribution of the Demographics of Responding High School Principals, N=106, Missing=0

Principal demographics	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Age	106	100	50.52	9.05	28	69
Total years in education	106	100	26.81	9.26	5	47
Total years as a principal	106	100	11.04	9.18	1	41
Total years in present principalship	106	100	6.05	5.96	1	38
Number of students in school	106	100	886.94	709.70	90	3800
Gender	<i>N</i>	<i>%</i>				
Male	83	78.30				
Female	22	20.75				
Missing	1	.94				
School type served as principal	<i>N</i>	<i>%</i>				
Rural	54	50.94				
Suburban	38	35.85				
Urban	14	13.21				

Table 16

Distribution of the Demographics of Responding High School Teachers, N=526

Teacher demographics	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Age	516	98.10	43.59	10.82	23	76
Missing	10	1.90				
Total years in education	523	99.42	16.90	10.64	1	44
Missing	3	0.58				
Total years with this principal	519	98.67	5.13	4.93	1	34
Missing	7	1.33				
Gender	<i>N</i>	<i>%</i>				
Male	214	40.68				
Female	307	58.37				
Missing	5	0.95				
Subject taught	<i>N</i>	<i>%</i>				
English	88	16.73				
Mathematics	95	18.06				
Science	83	15.78				
Social Studies	84	15.97				
Vocational	82	15.59				
Special Education	92	17.49				
Missing	2	0.38				

Table 17

*Distribution of the Demographics of Responding High School Principals by Categories**N=106, Missing=0*

Demographic categories		<i>N</i>	%
1. Age	28-30	2	1.89
	31-35	4	3.78
	36-40	14	13.21
	41-45	12	11.32
	46-50	13	12.27
	51-55	24	22.65
	56-60	25	23.59
	61-65	10	9.44
	66-69	3	2.83
2. Total years in education	5	1	0.95
	6-10	5	4.72
	11-15	12	11.32
	16-20	13	12.27
	21-25	13	12.27
	26-30	18	16.99
	31-35	30	28.31
	36-40	11	10.38
	41-45	3	2.83
	47	1	0.95
3. Total years as a principal	1-5	30	28.31
	6-10	41	38.68
	11-15	10	9.44
	16-20	9	8.49
	21-25	8	7.55
	26-30	5	4.72
	31-35	1	0.95
	36-40	1	0.95
	41-45	2	1.89

(table continued)

Table 17 (continued)

Demographic categories		<i>N</i>	%
4. Total years in present principalship	1-5	67	63.21
	6-10	24	22.65
	11-15	9	8.49
	16-20	3	2.83
	21-25	3	2.83
	26-30	0	0
	31-35	0	0
	38	1	0.95
5. Number of students in school	90-500	42	39.63
	501-1000	30	28.31
	1001-1500	24	22.65
	1501-2000	7	6.61
	2001-2500	1	0.95
	2501-3000	1	0.95
	3001-3500	1	0.95
	3501-4000	1	0.95

Table 18

*Distribution of the Demographics of Responding High School Teachers by Categories**N=526*

Demographic categories		<i>N</i>	%
1. Age	23-25	21	4.00
	26-30	62	11.79
	31-35	65	12.36
	36-40	59	11.22
	41-45	48	9.13
	46-50	86	16.35
	51-55	103	19.59
	56-60	59	11.22
	61-65	10	1.91
	66-70	2	0.38
	71-75	0	0
	76	1	0.19
Missing		10	1.91
2. Total years in education	1-5	104	19.78
	6-10	86	16.35
	11-15	69	13.12
	16-20	55	10.46
	21-25	69	13.12
	26-30	72	13.69
	31-35	52	9.89
	36-40	15	2.86
	41-45	1	0.19
Missing		4	0.76

(table continued)

Table 18 (continued)

Demographic categories		<i>N</i>	%
3. Total years with this principal	1-5	368	69.97
	6-10	96	18.25
	11-15	30	5.71
	16-20	16	3.05
	21-25	5	0.95
	26-30	1	0.19
	31-35	3	0.57
Missing		7	1.33

Table 19

Descriptives for Principals' and Teachers' Responses on the Criterion Variables

Mean principals' responses						Average of mean teachers' responses					Principals' response minus teachers' response
Item	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	Item	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	
1	106	2.00	4.00	3.81	.42	1	3.00	4.00	3.73	.24	.08
2	106	2.00	4.00	3.39	.58	2	2.00	4.00	3.26	.41	.13
3	106	3.00	4.00	3.50	.50	3	1.83	4.00	3.27	.49	.23
4	106	1.00	4.00	3.42	.73	4	1.67	4.00	3.48	.53	-.06
5	106	2.00	4.00	3.43	.52	5	1.67	4.00	3.24	.45	.19
6	106	2.00	4.00	3.34	.67	6	1.75	4.00	2.79	.46	.55
7	106	1.00	4.00	3.56	.59	7	2.20	4.00	3.40	.35	.16
8	105	2.00	4.00	3.46	.56	8	2.20	4.00	3.39	.69	.07
9	106	3.00	4.00	3.89	.32	9	2.00	4.00	3.51	.36	.38
10	106	2.00	4.00	3.74	.46	10	2.40	4.00	3.49	.37	.25
11	106	1.00	4.00	3.10	.71	11	1.75	4.00	3.10	.51	.00
12	106	2.00	4.00	3.41	.53	12	1.80	4.00	3.28	.40	.13
13	106	2.00	4.00	3.65	.50	13	2.00	4.00	3.41	.38	.24
14	106	2.00	4.00	3.50	.55	14	2.00	4.00	3.42	.39	.08
15	106	2.00	4.00	3.65	.50	15	2.00	4.00	3.38	.43	.27
16	106	3.00	4.00	3.47	.50	16	2.00	4.00	3.42	.35	.05
17	106	2.00	4.00	3.42	.55	17	1.50	4.00	3.20	.45	.22
18r	106	1.00	4.00	3.24	.97	18r	2.00	4.00	3.30	.36	-.06
19	106	2.00	4.00	3.22	.65	19	2.00	4.00	3.13	.42	.09
20	106	2.00	4.00	3.19	.52	20	2.33	4.00	3.24	.40	-.05

Note. Items are in Appendix G.

Regression of the Criterion Variables Derived from Discrepancy Scores on the Predictor Variables¹

The principal components analysis, using the difference in teachers' and principals' perceptions of the principal's leader behavior resulted in two scales: the principal's skill in creating culture in the school and the quality of his or her communication skills. Each of these was regressed in separate analyses on to the teachers' perceptions of principal's modeling of ideal behavior, the principal's performance of teacher evaluation responsibilities, the teachers' awareness of school history and operations, the teachers' perceptions of discipline procedures, the years of experience of the principal, the average years of experience of teachers, the principal's gender, school size (number of students enrolled), and school location (rural, suburban, or urban). The location data were dummy coded with suburban being the reference school location.

Regression of Creating Culture on Principal Leadership Variables and Teacher and Principal Demographic Variables

The linear combination of the predictor variables was significantly related to the differences in the principal's and teachers' perceptions of the principal's leader behavior, $F(13,92) = 2.67, p = .003$. The multiple correlation coefficient was .52, indicating that approximately 27% of the variance in the criterion variable was accounted for by the linear combination of the predictor variables. The ANOVA and correlation tables are in Appendix J1.

Data on the individual predictors are in Table 20. One predictor variable, modeling ideal behavior ($t = -3.84, p = .00$) was statistically significant. The partial correlation coefficient for modeling ideal behavior (-.37) was negative. This indicates that as teachers' mean scores on this predictor variable increase, or becomes more positive, the difference between principals' and teachers' perceptions of the principal's leader behavior decreases.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the principal's skill in creating school culture on the predictor variables, when the difference score between the principals' and teachers' responses from the Perceptions of

¹ In each of the regression analyses, the beta coefficients were used to interpret the data. The beta coefficient indicates the amount of change in the criterion variable that can be attributed to a one standard deviation change in the predictor variable.

Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

Predicted Discrepancy in Perceptions = $-.46$ Modeling ideal behavior $-.19$ Evaluation of teachers $+.17$
Awareness $+.04$ Discipline $-.03$ Principal's total years in education $+.00$ Total years as principal $-.13$
Principal's years in present position $+.04$ Number of students enrolled $+.09$ Principal's gender $-.07$ Teachers'
total years in education $+.02$ Teachers' years with principal $-.03$ Rural $+.02$ Urban

Table 20

Results of the Regression of Creating Culture on the Predictor Variables

	Unstandardized coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	2.12	.50		4.24	.00			
Modeling ideal behavior	-.60	.16	-.46	-3.84	.00	-.46	-.37	-.34
Evaluation of teachers	-.23	.14	-.19	-1.59	.12	-.34	-.16	-.14
Awareness	.19	.12	.17	1.61	.11	-.10	.17	.14
Discipline	.05	.13	.04	.38	.71	-.17	.04	.03
Principal's total years in education	.00	.01	-.03	-.24	.81	-.04	-.02	-.02
Total years as principal	.00	.01	.00	-.03	.98	-.08	.00	.00
Principal's years in present position	-.01	.01	-.13	-.94	.35	-.08	-.10	-.08
Number of students enrolled	.00	.00	.04	.36	.72	.01	.04	.03
Principal's gender	.09	.11	.09	.83	.41	.02	.09	.07
Teachers' total years in education	-.01	.01	-.07	-.71	.48	-.07	-.07	-.06
Teachers' years with principal	.00	.01	.02	.20	.84	-.03	.02	.02
Rural setting	-.03	.10	-.03	-.28	.78	-.04	-.03	-.02
Urban setting	.03	.14	.02	.21	.84	-.01	.02	.02

Note. The criterion variable is the difference score between the principals' and teachers' responses from the Perceptions of Principal's Leadership Questionnaire.

*Regression of Communication on Principal Leadership Variables
and Teacher and Principal Demographic Variables*

The linear combination of the predictor variables was significantly related to the differences in principals' and teachers' perceptions of the principal's leader behavior, $F(13,92) = 5.17, p = .00$. The multiple correlation coefficient was .65, indicating that approximately 42% of the variance in the criterion variable was accounted for by the linear combination of the predictor variables. The ANOVA and correlation tables are in Appendix J2.

The data on the predictors are in Table 21. Two predictor variables—modeling ideal behavior ($t = -4.63, p = .00$) and teacher evaluation ($t = -2.63, p = .01$) were statistically significant. The partial correlation coefficients for modeling ideal behavior (-.43) and teacher evaluation (-.26) were both negative. This indicates that as teachers' mean scores on these predictor variables increase, or become more positive, the differences between principals' and teachers' perceptions of the principal's leader behavior decreases. That is, as the principal modeled the ideal behavior and conformed to the teachers' expectations in applying the evaluation process within the school, the teachers and principal were more likely to agree with how well the principal communicated within the school.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the quality of the principal's communication on the predictor variables, when the difference score between the principals' and teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

$$\begin{aligned} \text{Predicted Discrepancy in Perceptions} = & -.50 \text{ Modeling ideal behavior} -.28 \text{ Evaluation of teachers} +.10 \\ & \text{Awareness} +.06 \text{ Discipline} +.06 \text{ Principal's total years in education} +.05 \text{ Total years as principal} -.09 \\ & \text{Principal's years in present position} +.02 \text{ Number of students enrolled} +.00 \text{ Principal's gender} +.04 \\ & \text{Teachers' total years in education} -.17 \text{ Teachers' years with principal} -.01 \text{ Rural} -.01 \text{ Urban} \end{aligned}$$

Table 21

Results of the Regression of Communication on the Predictor Variables

	Unstandardized coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	2.60	.41		6.26	.00			
Modeling ideal behavior	-.60	.13	-.50	-4.63	.00	-.59	-.43	-.37
Evaluation of teachers	-.31	.12	-.28	-2.63	.01	-.48	-.26	-.21
Awareness	.10	.10	.10	1.05	.29	-.22	.11	.08
Discipline	.06	.11	.06	.58	.57	-.24	.06	.05
Principal's total years in education	.00	.01	.06	.54	.59	.05	.06	.04
Total years as principal	.00	.01	.05	.38	.70	-.02	.04	.03
Principal's years in present position	-.01	.01	-.09	-.76	.45	-.10	-.08	-.06
Number of students enrolled	.00	.00	.02	.20	.84	-.04	.02	.02
Principal's gender	.00	.09	.00	-.02	.99	-.12	.00	.00
Teachers' total years in education	.00	.01	.04	.46	.65	.00	.05	.04
Teachers' years with principal	-.02	.01	-.17	-1.53	.13	-.13	-.16	-.12
Rural setting	-.01	.09	-.01	-.09	.93	.02	-.01	-.01
Urban setting	-.01	.12	-.01	-.05	.96	-.02	-.01	.00

Note. The criterion variable is the difference score between the principals' and teachers' responses from the Perceptions of Principal's Leadership Questionnaire.

Regression of the Criterion Variables Derived from the Principals' Responses on the Perceptions of Principal's Leadership Questionnaire on the Predictor Variables

The principal components analysis, using only principals' responses on the Perceptions of Principal's Leadership Questionnaire, resulted in the following criterion variables: the principal's skill in creating culture in the school, the principal's skill in serving as a change agent, and the principal's demonstrated skill in communicating within the school (see Table 8). Each criterion variable was regressed on the teachers' perceptions of the principal's modeling of ideal behavior, the principal's performance of teacher evaluation responsibilities, the teachers' awareness of school history and operations, the teachers' perceptions of discipline procedures, the years of experience of the principal, the average years of experience of teachers, the principal's gender, school size (number of students enrolled), and school location (rural, suburban, or urban). The location data were dummy coded with suburban being the reference school location.

Regression of Creating Culture on Principal Leadership Variables and Teacher and Principal Demographic Variables

The linear combination of the predictor variables was significantly related to the differences in the principal's and teachers' perceptions of the principal's leader behavior in creating culture, $F(13,92) = 2.74, p = .00$. The multiple correlation coefficient was .53, indicating that approximately 28% of the variance of the discrepancy measure in creating culture can be accounted for by the linear combination of the predictor variables. The ANOVA and correlation tables are in Appendix J3.

Data on the individual predictors are in Table 22. Only one predictor variable, modeling ideal behavior ($t = -4.03, p = .00$), was statistically significant. The partial correlation coefficient for modeling ideal behavior (-.39) was negative. As the teachers' mean score on modeling ideal behavior increases, the difference between the principal's and teachers' responses on the criterion variable of creating culture decreases, indicating that as the teachers' perceptions that the principal models ideal behavior becomes more positive, the perceptions of the teachers and principal become more closely aligned on the principal's efforts to create a positive school environment and on his or her demonstrated concern for others.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the principal's skill in creating school culture on the predictor variables, when only the principals' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

$$\begin{aligned} \text{Predicted Discrepancy in Creating Culture} = & -.49 \text{ Modeling ideal behavior} - .15 \text{ Evaluation of teachers} \\ & + .12 \text{ Awareness} + .05 \text{ Discipline} - .01 \text{ Principal's total years in education} + .02 \text{ Total years as principal} - .12 \\ & \text{Principal's years in present position} + .08 \text{ Number of students enrolled} + .04 \text{ Principal's gender} - .09 \\ & \text{Teachers' total years in education} + .05 \text{ Teachers' years with principal} - .02 \text{ Rural} + .06 \text{ Urban} \end{aligned}$$

Table 22

Results of the Regression of Creating Culture on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Component Analysis

	Unstandardized coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	2.27	.51		4.42	.00			
Modeling ideal behavior	-.65	.16	-.49	-4.03	.00	-.48	-.39	-.36
Evaluation of teachers	-.18	.15	-.15	-1.27	.21	-.35	-.13	-.11
Awareness	.14	.12	.12	1.13	.26	-.15	.12	.10
Discipline	.06	.13	.05	.43	.67	-.19	.05	.04
Principal's total years in education	.00	.01	-.01	-.06	.95	.03	-.01	-.01
Total years as principal	.00	.01	.02	.16	.87	-.02	.02	.01
Principal's years in present position	-.01	.01	-.12	-.91	.37	-.04	-.09	-.08
Number of students enrolled	.00	.00	.08	.69	.49	.06	.07	.06
Principal's gender	.05	.11	.04	.42	.67	-.01	.04	.04
Teachers' total years in education	-.01	.01	-.09	-.90	.37	-.07	-.09	-.08
Teachers' years with principal	.01	.02	.05	.41	.68	.01	.04	.04
Rural setting	-.02	.11	-.02	-.18	.86	-.06	-.02	-.02
Urban setting	.07	.15	.06	.50	.62	.05	.05	.04

Note. The criterion variable is the difference between the principal's and teachers' perceptions of the principal's leader behavior in creating culture when only the principals' responses were used in the principal components analysis of the Perceptions of Principal's Leadership Questionnaire.

*Regression of Serving as a Change Agent on Principal Leadership Variables
and Teacher and Principal Demographic Variables*

The linear combination of the predictor variables was significantly related to the differences in the principals' and teachers' perceptions of the principal's leader behavior in serving as a change agent, $F(13,92) = 3.19, p = .00$. The multiple correlation coefficient was .56, indicating that approximately 31% of the variance in the discrepancy measure of the principal's behavior in serving as a change agent can be accounted for by the linear combination of the predictor variables. The ANOVA and correlation tables are in Appendix J4.

Data for the individual predictors are in Table 23. Only one predictor, modeling ideal behavior ($t = -3.41, p = .00$), was statistically significant. The partial correlation coefficient for modeling ideal behavior (-.34) was negative. As the teachers' mean score on modeling ideal behavior increases, the difference between principals' and teachers' responses on the criterion variable of change agent decreases, indicating that as the teachers' perceptions become more positive, they become more closely aligned with the principal's perceptions.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the principal's behaviors in serving as a change agent on the predictor variables, when only the principals' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

Predicted Discrepancy in Change Agent = $-.40$ Modeling ideal behavior $-.19$ Evaluation of teachers
 $+.03$ Awareness $+.04$ Discipline $+.04$ Principal's total years in education $+.11$ Total years as principal $-.09$
 Principal's years in present position $-.04$ Number of students enrolled $-.08$ Principal's gender $-.01$ Teachers'
 total years in education $-.15$ Teachers' years with principal $-.05$ Rural $-.06$ Urban

Table 23

Results of the Regression of Serving as a Change Agent on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	Unstandardized coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	2.60	.52		5.00	.00			
Modeling ideal behavior	-.56	.16	-.40	-3.41	.00	-.49	-.34	-.30
Evaluation of teachers	-.25	.15	-.19	-1.68	.10	-.40	-.17	-.15
Awareness	.03	.12	.03	.27	.79	-.23	.03	.02
Discipline	.05	.13	.04	.34	.73	-.20	.04	.03
Principal's total years in education	.00	.01	.04	.36	.72	.04	.04	.03
Total years as principal	.01	.01	.11	.78	.44	.00	.08	.07
Principal's years in present position	-.01	.01	-.09	-.63	.53	-.09	-.07	-.06
Number students enrolled	.00	.00	-.04	-.34	.73	-.10	-.04	-.03
Principal's gender	-.09	.11	-.08	-.78	.44	-.16	-.08	-.07
Teachers' total years in education	.00	.01	-.01	-.10	.92	-.04	-.01	-.01
Teachers' years with principal	-.02	.02	-.15	-1.25	.21	-.14	-.13	-.11
Rural setting	-.04	.11	-.05	-.41	.68	.04	-.04	-.04
Urban setting	-.08	.15	-.06	-.52	.60	-.07	-.05	-.05

Note. The criterion variable is the difference between the principal's and teachers' perceptions of the principal's leader behavior in serving as a change agent when only the principals' responses were used in the principal components analysis of the Perceptions of Principal's Leadership Questionnaire.

*Regression of Communication on Principal Leadership Variables
and Teacher and Principal Demographic Variables*

The linear combination of the predictor variables was significantly related to the differences in the principal's and teachers' perceptions of the principal's leader behavior in the area of communication, $F(13,92) = 4.13, p = .00$. The multiple correlation coefficient was .61, indicating that approximately 37% of the variance in the discrepancy in communication can be accounted for by the linear combination of the predictor variables. The ANOVA and correlation tables are in Appendix J5.

Data for the individual predictors are reported in Table 24. Two variables, modeling ideal behavior ($t = -3.39, p = .00$) and principal's performance of teacher evaluation ($t = -2.76, p = .01$) were statistically significant predictors of the quality of the principal's communication. The partial correlation coefficients for modeling ideal behavior (-.33) and principals' performance of teacher evaluation (-.28) were both negative. As the teachers' mean scores on these two predictor variables increase, or become more positive, the difference between the principals' and teachers' perceptions of the quality of the principal's communication decreases, indicating that teachers' perceptions become more closely aligned with the principal's perceptions.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the quality of the principal's communication on the predictor variables, when only the principals' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

$$\begin{aligned} \text{Predicted Discrepancy in Communication} = & -.38 \text{ Modeling ideal behavior} - .30 \text{ Evaluation of teachers} \\ & + .10 \text{ Awareness} - .05 \text{ Discipline} - .04 \text{ Principal's total years in education} + .04 \text{ Total years as principal} + .00 \\ & \text{Principal's years in present position} + .06 \text{ Number of students enrolled} + .00 \text{ Principal's gender} - .05 \\ & \text{Teachers' total years in education} - .12 \text{ Teachers' years with principal} + .12 \text{ Rural} + .08 \text{ Urban} \end{aligned}$$

Table 24

Results of the Regression of the Quality of the Principal's Communication on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	Unstandardized coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	3.57	.59		6.08	.00			
Modeling ideal behavior	-.63	.18	-.38	-3.39	.00	-.53	-.33	-.28
Evaluation of teachers	-.46	.17	-.30	-2.76	.01	-.47	-.28	-.23
Awareness	.14	.14	.10	.98	.33	-.22	.10	.08
Discipline	-.08	.15	-.05	-.51	.61	-.31	-.05	-.04
Principal's total yrs in education	.00	.01	-.04	-.33	.74	.00	-.04	-.03
Total years as principal	.00	.01	.04	.31	.76	.00	.03	.03
Principal's years in present position	.00	.01	.00	.00	1.00	-.03	.00	.00
Number of students enrolled	.00	.00	.06	.50	.62	-.03	.05	.04
Principal's gender	.00	.13	.00	.01	.99	-.11	.00	.00
Teachers' total years in education	.00	.01	-.05	-.50	.62	-.09	-.05	-.04
Teachers' years with principal	-.02	.02	-.12	-1.06	.29	-.11	-.11	-.09
Rural setting	.13	.12	.12	1.07	.29	.09	.11	.09
Urban setting	.13	.17	.08	.78	.44	.03	.08	.07

Note. The criterion variable is the difference between the principal's and teachers' perceptions of the principal's leader behavior in quality of communication when only the principals' responses from the Perceptions of Principal's leadership questionnaire were used in the principal components analysis.

Regression of the Criterion Variables Derived from the Teachers' Responses on the Perceptions of Principal's Leadership Questionnaire on the Predictor Variables

A principal components analysis, using the mean teachers' responses on the Perceptions of Principal's Leadership Questionnaire, resulted in the following criterion variables: the principal's consideration toward teachers, the principal's serving as a change agent, and the quality of the principal's communication skills (see Table 10). Each criterion variable was regressed on the following predictor variables: how the principal modeled ideal behavior, how the principal performed teacher evaluations, how aware teachers were of school history and operations, how teachers' viewed the school's discipline procedures, the years of experience of the principal, the average years of experience of teachers, the principal's gender, school size (number of students enrolled), and school location (rural, suburban, or urban). The location data were dummy coded with suburban being the reference school location.

Regression of Consideration on Principal Leadership Variables and Teacher and Principal Demographic Variables

The linear combination of the predictor variables was significantly related to the differences in the principal's and teachers' perceptions of the principal's consideration for teachers, $F(13,92) = 3.36, p = .00$. The multiple correlation coefficient was .57, indicating that approximately 32% of the variance of the discrepancy in consideration can be accounted for by the linear combination of the predictor variables. The ANOVA and correlation tables are in Appendix J6.

Data on the individual predictors are reported in Table 25. Only one predictor, modeling ideal behavior ($t = -4.49, p = .00$), was statistically significant. The partial correlation coefficient for modeling ideal behavior (-.42) was negative, indicating that as the teachers' perceptions of the principal's leader behavior on the criterion variable of consideration become more positive, they become more closely aligned with those of the principal's.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the quality of the principal's consideration of teachers on the predictor variables, when only the teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

Predicted Discrepancy in Consideration = $-.52$ Modeling ideal behavior $-.15$ Evaluation of teachers
 $+.08$ Awareness $+.20$ Discipline $+.12$ Principal's total years in education $-.10$ Total years as principal $-.03$
Principal's years in present position $-.05$ Number of students enrolled $-.05$ Principal's gender $-.01$ Teachers'
total years in education $-.07$ Teachers' years with principal $-.11$ Rural $+.07$ Urban

Table 25

Results of the Regression of the Principal's Consideration for Teachers on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	Unstandardized Coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	1.89	.44		4.33	.00			
Modeling ideal behavior	-.61	.14	-.52	-4.49	.00	-.49	-.42	-.39
Evaluation of teachers	-.16	.12	-.15	-1.32	.19	-.36	-.14	-.11
Awareness	.08	.10	.08	.81	.42	-.17	.08	.07
Discipline	.21	.11	.20	1.84	.07	-.10	.19	.16
Principal's total yrs in education	.01	.01	.12	.99	.33	.08	.10	.09
Total years as principal	.00	.01	-.10	-.70	.48	-.07	-.07	-.06
Principal's years in present position	.00	.01	-.03	-.26	.80	-.06	-.03	-.02
Number of students enrolled	.00	.00	-.05	-.44	.66	-.04	-.05	-.04
Principal's gender	-.05	.10	-.05	-.54	.59	-.10	-.06	-.05
Teachers' total years in education	.00	.01	-.01	-.14	.89	.00	-.02	-.01
Teachers' years with principal	-.01	.01	-.07	-.63	.53	-.06	-.07	-.05
Rural setting	-.09	.09	-.11	-.98	.33	-.09	-.10	-.08
Urban setting	.08	.13	.07	.68	.50	.04	.07	.06

Note. The criterion variable is the difference between the principal's and teachers' perceptions of the principal's leader behavior in the principal's consideration for teachers when only the teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis.

*Regression of Serving as a Change Agent on Principal Leadership Variables
and Teacher and Principal Demographic Variables*

The linear combination of the predictor variables was significantly related to the differences in the principals' and teachers' perceptions of the principal's service as a change agent, $F(13,92) = 3.83, p = .00$. The multiple correlation coefficient was .59, indicating that approximately 35% of the variance in the discrepancy in change agent can be accounted for by the linear combination of the predictor variables. The ANOVA and multiple correlations tables are in Appendix J7.

Data on the individual predictors are in Table 26. One variable, modeling ideal behavior ($t = -4.03, p = .00$), was statistically significant. The partial correlation coefficient for modeling ideal behavior (-.39) was negative. As the teachers' mean score on modeling ideal behavior increases, the difference between the principal's and teachers' perceptions of the principal as a change agent decreases, indicating that as the teachers' perceptions become more positive, the teachers' perceptions of the principal's behavior as a change agent become more closely aligned with the principal's perceptions of that same behavior.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the quality of the principal's serving as a change agent on the predictor variables, when only the teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

Predicted Discrepancy in Change Agent = $-.46$ Modeling ideal behavior $-.22$ Evaluation of teachers
 $+.02$ Awareness $+.13$ Discipline $+.03$ Principal's total years in education $+.04$ Total years as principal $-.10$
Principal's years in present position $-.06$ Number of students enrolled $-.10$ Principal's gender $-.07$ Teachers'
total years in education $+.00$ Teachers' years with principal $+.01$ Rural $+.03$ Urban

Table 26

Results of the Regression of the Principal's Behavior of Serving as a Change Agent on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	Unstandardized Coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	2.62	.48		5.44	.00			
Modeling ideal behavior	-.61	.15	-.46	-4.03	.00	-.54	-.39	-.34
Evaluation of teachers	-.26	.14	-.22	-1.93	.06	-.45	-.20	-.16
Awareness	.02	.12	.02	.17	.87	-.27	.02	.01
Discipline	.15	.12	.13	1.19	.24	-.16	.12	.10
Principal's total yrs in education	.00	.01	.03	.28	.78	.03	.03	.02
Total years as principal	.00	.01	.04	.26	.80	-.02	.03	.02
Principal's years in present position	-.01	.01	-.10	-.80	.43	-.06	-.08	-.07
Number of students enrolled	.00	.00	-.06	-.54	.59	-.12	-.06	-.05
Principal's gender	-.11	.11	-.10	-1.06	.29	-.15	-.11	-.09
Teachers' total years in education	-.01	.01	-.07	-.75	.46	-.06	-.08	-.06
Teachers' years with principal	.00	.01	.00	.02	.98	-.05	.00	.00
Rural setting	.01	.10	.01	.07	.94	.07	.01	.01
Urban setting	.04	.14	.03	.27	.79	-.05	.03	.02

Note. The criterion variable is the difference between the principal's and teachers' perceptions of the principal's leader behavior as a change agent when only the teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis.

*Regression of Communication on Principal Leadership Variables
and Teacher and Principal Demographic Variables*

The linear combination of the predictor variables was significantly related to the differences in the principals' and teachers' perceptions of the principal's communication, $F(13,92) = 3.34, p = .00$. The multiple correlation coefficient was .57, indicating that approximately 32% of the variance of the discrepancy in communication can be accounted for by the linear combination of the predictor variables. The ANOVA and multiple correlations tables are in Appendix J8.

Data on the individual predictors are reported in Table 27. Two variables, modeling ideal behavior ($t = -2.42, p = .02$) and principal's performance of teacher evaluation ($t = -3.44, p = .00$) were statistically significant predictors of the discrepancy in the quality of the principal's communication. The partial correlation coefficient for modeling ideal behavior (-.24) and principal's performance of teacher evaluation (-.34) were both negative. As the teachers' mean scores on these two predictor variables increase, or become more positive, the discrepancy between the principal's and teachers' perceptions of the principal's leader behavior in communication decreases indicating that the teachers' perceptions become more closely aligned with the principal's perceptions.

The equation for the regression of the discrepancy in teachers' and principals' perceptions of the quality of the principal's communication on the predictor variables, when only the teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis to identify the criterion variables, was:

$$\begin{aligned} \text{Predicted Discrepancy in Communication} = & -.28 \text{ Modeling ideal behavior} - .39 \text{ Evaluation of teachers} \\ & + .15 \text{ Awareness} - .04 \text{ Discipline} - .06 \text{ Principal's total years in education} + .12 \text{ Total years as principal} - .07 \\ & \text{Principal's years in present position} + .03 \text{ Number of students enrolled} + .05 \text{ Principal's gender} - .02 \\ & \text{Teachers' total years in education} - .11 \text{ Teachers' years with principal} + .12 \text{ Rural} + .07 \text{ Urban} \end{aligned}$$

Table 27

Results of Regression of the Principal's Quality of Communication on the Predictor Variables When Only Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	Unstandardized Coefficients		Beta	t	Sig.	Correlations		
	B	SE				Zero-order	Partial	Part
(Constant)	2.77	.54		5.10	.00			
Modeling ideal behavior	-.41	.17	-.28	-2.42	.02	-.45	-.24	-.21
Evaluation of teachers	-.53	.15	-.39	-3.44	.00	-.46	-.34	-.30
Awareness	.20	.13	.15	1.52	.13	-.15	.16	.13
Discipline	-.06	.14	-.04	-.40	.69	-.25	-.04	-.03
Principal's total yrs in education	.00	.01	-.06	-.52	.61	.00	-.05	-.04
Total years as principal	.01	.01	.12	.86	.39	.04	.09	.07
Principal's years in present position	-.01	.01	-.07	-.49	.63	-.03	-.05	-.04
Number of students enrolled	.00	.00	.03	.30	.77	-.03	.03	.03
Principal's gender	.06	.12	.05	.49	.63	-.07	.05	.04
Teachers' total years in education	.00	.01	-.02	-.19	.85	-.07	-.02	-.02
Teachers' years with principal	-.01	.02	-.11	-.94	.35	-.09	-.10	-.08
Rural setting	.12	.11	.12	1.04	.30	.09	.11	.09
Urban setting	.10	.16	.07	.66	.51	.01	.07	.06

Note. The criterion variable is the difference between the principal's and teachers' perceptions of the principal's leader behavior in communication when only the teachers' responses from the Perceptions of Principal's Leadership Questionnaire were used in the principal components analysis.

CHAPTER V
CONCLUSIONS, DISCUSSION, LIMITATIONS, IMPLICATIONS, AND
RECOMMENDATIONS

The purpose of this study was to identify factors that contribute to differences in principals' and teachers' perceptions of the principal's leader behavior. In this chapter, I report the conclusions drawn from the research and discuss the limitations of the study. I include a discussion of the results of the study, the implications for practice, and recommendations for further research.

Conclusions and Discussion

Based on the results of this study, several conclusions can be drawn about the discrepancy between principals' and teachers' perceptions of the principal's leader behavior.

Conclusions and Discussion Based on Analyses of Demographics

In this sample, the position of principal was dominated by males. The ratio of male principals to female principals was almost 4:1. The dominate gender for teachers was female, although not by a large margin. The ratio of female teachers to male teachers was about 3:2. Although I report the gender of the principal, it was not related to teachers' perceptions of the principal's leader behavior. This conclusion was supported by Leithwood and Jantzi (2005). In a review of transformational school leadership from 1996 to 2005, they reported that the principal's gender had no relationship to teachers' perceptions of their principal's transformational leadership. It would be interesting to see if this apparent "gender equality" in the perceptions of leader behavior would hold true in other aspects of our society, such as business, the military, or the faith community.

Teachers, on average, were about seven years younger than principals. This is not surprising since most principals were teachers before going into administration. It is also not surprising that 46% of principals were between the ages of 51 and 60.

Many principals are approaching retirement age and may be leaving education soon. These data seem to indicate that several experienced principals have already retired and been replaced by less experienced administrators. This conclusion is supported by the research of Fink and Brayman (2006) who wrote that "as the baby boom generation moves on" (p. 62) many

localities are experiencing an “insufficient pool of capable, qualified, and prepared replacements” (pp. 62-63).

Twenty-eight percent of the principals in this sample had one to five years experience in the position. Another interesting statistic is that 71% of all the teachers surveyed had less than six years experience working with their present principal. This may be because principals are retiring and being replaced, principals are moving from school to school, or new teachers are coming into the school. Whatever the reason, there seems to be a great deal of change that affects the time teachers and their principals have spent together. This could have affected principals’ and teachers’ responses on the questionnaires they completed for this study. The lack of shared experiences between principals and teachers could have a negative effect on schools. Fink and Brayman (2006) reported that in many Ontario schools, principals are routinely rotated from school to school. They wrote that as teachers see principals come and go, they “quickly learn how to resist and ignore” (p.63) their principal’s efforts.

I was somewhat surprised that the demographics for principals, teachers, and schools, when used as predictor variables, did not have a large enough effect to be statistically significant in explaining the difference in the principals’ and teachers’ perceptions of the principal’s leader behavior. The number of students enrolled and the location of the school did not have any effect on any of the criterion variables. Because of my experience as an educational administrator and my own prejudice as a researcher, I expected to find that school size (number of students enrolled) and school location (rural, suburban, or urban) would have been strong predictor variables. I thought that the perceptions of the principal’s leader behavior would have been more closely aligned between principals and teachers in small, rural schools. I found this was not the case.

Conclusions and Discussion Based on the Multiple Regression Analyses

After conducting principal components analyses on the data gathered on the principals’ and teachers’ perceptions of the principal’s leader behavior, I decided to run three sets of regression analyses. The first set was run by regressing the criterion variables found when the difference scores were used in the principal components analysis on to the predictor variables. The second was run by regressing the criterion variables found when only the principals’ scores were used in the principal components analysis. And, the third was run by regressing the criterion variables found when only the teachers’ scores were used in the principal components

analysis. Following the principal components analyses, I used the data to develop new scales for the criterion variables (see Tables 6, 8, & 10).

In the first set of regression analyses, two models were tested. The two criterion variables identified when the difference scores were used in the principal components analysis—the behavior of the principal in creating culture and the quality of the principal’s communication skills—were regressed on to the predictor variables (see Tables 20 & 21). In the second set of regression analyses, three models were tested. The three criterion variables identified when only the principals’ scores were used in the principal components analysis—the behavior of the principal in creating culture, the principal’s service as a change agent, and the quality of the principal’s communication—were regressed on to the predictor variables (see Tables 22, 23, & 24). In the third set of regression analyses, three models were tested. The three criterion variables identified when only the teachers’ responses were used in the principal components analysis—the principal’s consideration of teachers, the principal’s service as a change agent, and the quality of the principal’s communication—were regressed on to the predictor variables (see Tables 25, 26, & 27)

Each regression model was statistically significant. However, when I examined the significance level for each predictor variable, I found that the demographic variables, the teachers’ awareness of school history and operations and the teachers’ perceptions of discipline procedures were shown not to be significant in predicting the criterion variables.

In reflecting on why this may have occurred, I decided that part of the problem was the reliability of the measures, the scale for school awareness had a reliability coefficient, or alpha, of .73. Only three statements loaded in this domain. One statement was, “*Everyone in our school knows what to do in an emergency.*” However, the other two were related in such a way that a negative response on one, would require a negative response or no response on the other. One statement was, “*Our school has a written mission statement.*” The other was, “*Our school’s mission statement is displayed prominently throughout the school.*” As the researcher, I was trying to find out how aware teachers were of their school’s mission, however, these two statements had valid responses only if the first statement was answered with “Agree” or “Strongly Agree.”

The scale for measuring the teachers’ perceptions of discipline procedures had a low reliability coefficient ($\alpha = .29$). Only two statements loaded in this domain. They were,

“Discipline is a problem at our school” and *“Teachers take care of discipline in their classrooms.”* I was trying to measure the teachers’ perceptions of discipline in their school, but after conducting the principal components analyses, I realized that these two statements are measuring different perceptions: the teacher’s perceptions of the overall discipline in the school and the teacher’s perceptions of how well he or she handles discipline in his or her own classroom. A teacher may feel that discipline is a problem at his or her school, but that he or she does a good job taking care of discipline problems in his or her own classroom.

The perceptions of the principal’s teacher evaluation procedures were a significant predictor of communication in all three treatments of the data. Teacher evaluation is a form of communication between principal and teacher. The principal may evaluate teachers, meet with them to go over the evaluation, and discuss the teacher’s performance. This is a model of good communication between principal and teacher which helps to form the teachers’ perceptions of the principal’s leader behavior.

However, the principal may not follow an ideal evaluation procedure and may not even follow the evaluation procedures established by policy. In either, or both, of these cases, the lack of communication between principal and teacher is also an important factor in helping to form the teachers’ perceptions of the principal’s leader behavior.

Only one predictor variable, the principal’s modeling of ideal behavior, was significant for every criterion variable in every regression model. This was not a surprise to me, as the researcher. In my career as a school administrator, I found that the teachers, staff, students, and community were more influenced by what they saw me do than what they heard me say. I feel that this domain strikes at the very essence of leadership. As a principal, or as any leader, the positive or negative perceptions of your leader behaviors are established by what your followers see you do, what they see you value, and how they see you treat others. This conclusion is supported by the research of Barnett and McCormick (2004) who found that most perceptions of the principal’s leadership occurs at the teacher level and is influenced by the one-to-one relationship between principal and teacher.

Summary of Conclusions

Modeling ideal behavior was a significant predictor of all the criterion variables in each treatment of the data. When the difference scores in teachers’ and principals’ responses on the Perceptions of Principal’s Leadership Questionnaire were used to identify the criterion variables,

modeling ideal behavior was a significant predictor of the principal's skill in creating school culture and in the quality of the principal's communication. When only principals' responses on the Perceptions of Principals' Leadership Questionnaire were used to identify the criterion variables, modeling ideal behavior was a significant predictor of the principal's skill in creating school culture, the principal's skill in serving as a change agent, and the quality of the principal's communication skills. When only teachers' responses on the Perceptions of Principals' Leadership Questionnaire were used to identify the criterion variables, modeling ideal behavior was a significant predictor of the principal's consideration of teachers, the principal's skill in serving as a change agent, and in the quality of the principal's communication skills.

The variable of teacher evaluation procedures was a significant predictor of one criterion variable, the quality of the principal's communication, in every treatment of the data. If principals follow established teacher evaluation procedures, they are very likely to communicate with teachers as they seek to improve teachers' instructional techniques or as they seek to recognize teachers for good teaching practices.

Limitations

This study was mailed to 640 randomly selected secondary schools throughout the United States. The return percentage of completed, usable questionnaires was low (17%), therefore the results of this study cannot be generalized to the population of secondary schools in the United States. One factor that may have caused a low return rate was the amount of activity required by the principal of each school. The principal had to fill out his or her part of the questionnaire and then select and distribute a questionnaire to an English, mathematics, science, social studies, vocational education, and special education teacher in his or her school. After giving them enough time to complete the questionnaires, the principals were asked to collect them and mail them back in a prepaid envelope.

Another reason for the low return rate was that I conducted no follow-up. I wanted the responses to be totally anonymous. Based on my own experience as a principal, I thought teachers would report their perceptions more accurately if they knew that the researcher had no way to connect their responses with their principal or their school.

Principals were asked to select six teachers to complete the survey. They were asked to select an English, mathematics, science, social studies, vocational, and special education teacher to participate in the research. I had no control over which teachers the principal selected. Since

the study was designed to evaluate teachers' perceptions of the principal's leader behavior, the principal may have selected teachers whom he or she felt had positive perceptions of his or her leader behaviors.

Evaluation of the Theory

I found that the theory presented in Chapter I (see Figure 1) did not completely fit the data. After performing data reduction on the predictor variables, I found that the proposed unalterable predictor variables did not significantly predict the criterion variable. Their effects were too small. I also reduced the proposed alterable six variables of school culture, level of caring, modeling ideal behavior, level of control, decision-making, and professional practice to the four variables of modeling ideal behavior, teacher evaluation process, school awareness, and disciple procedures. Of these four variables, modeling ideal behavior was a significant predictor of the criterion variable in all models. The teacher evaluation process was a significant predictor of the quality of the principal's communication in all three treatments of the data.

Based on the results of this study, I have changed the theory. The new theory is in Figures 2 through 4.

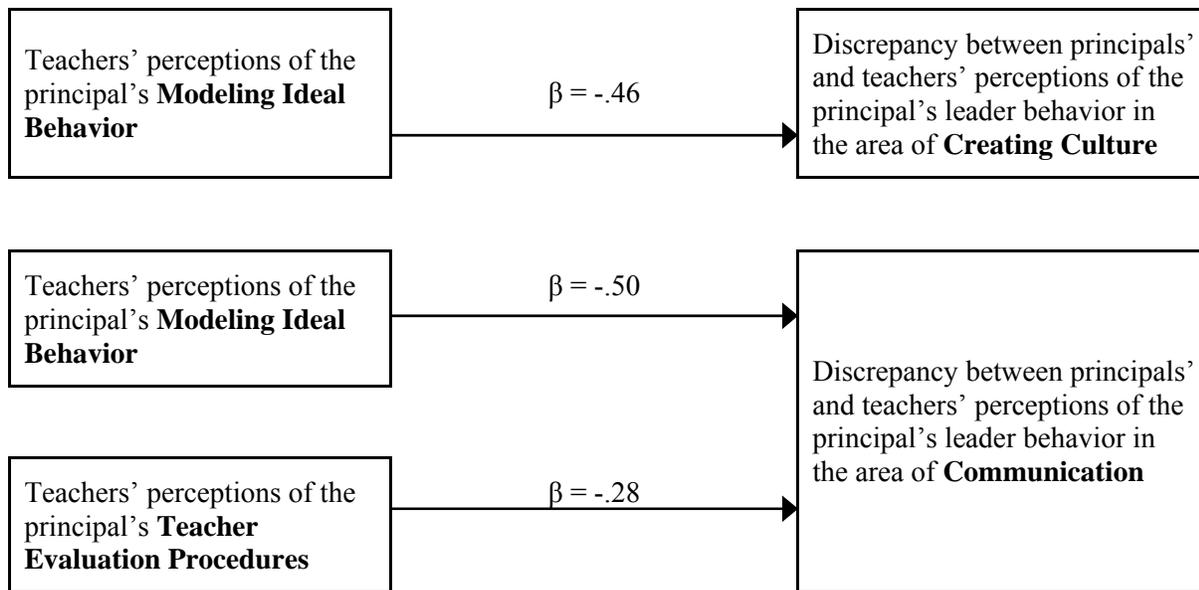


Figure 2. Variables explaining the discrepancy between teachers' and principals' perceptions of the principal's leader behavior when the difference score on each item was used in the principal components analysis of the Perceptions of Principals' Leadership Questionnaire.

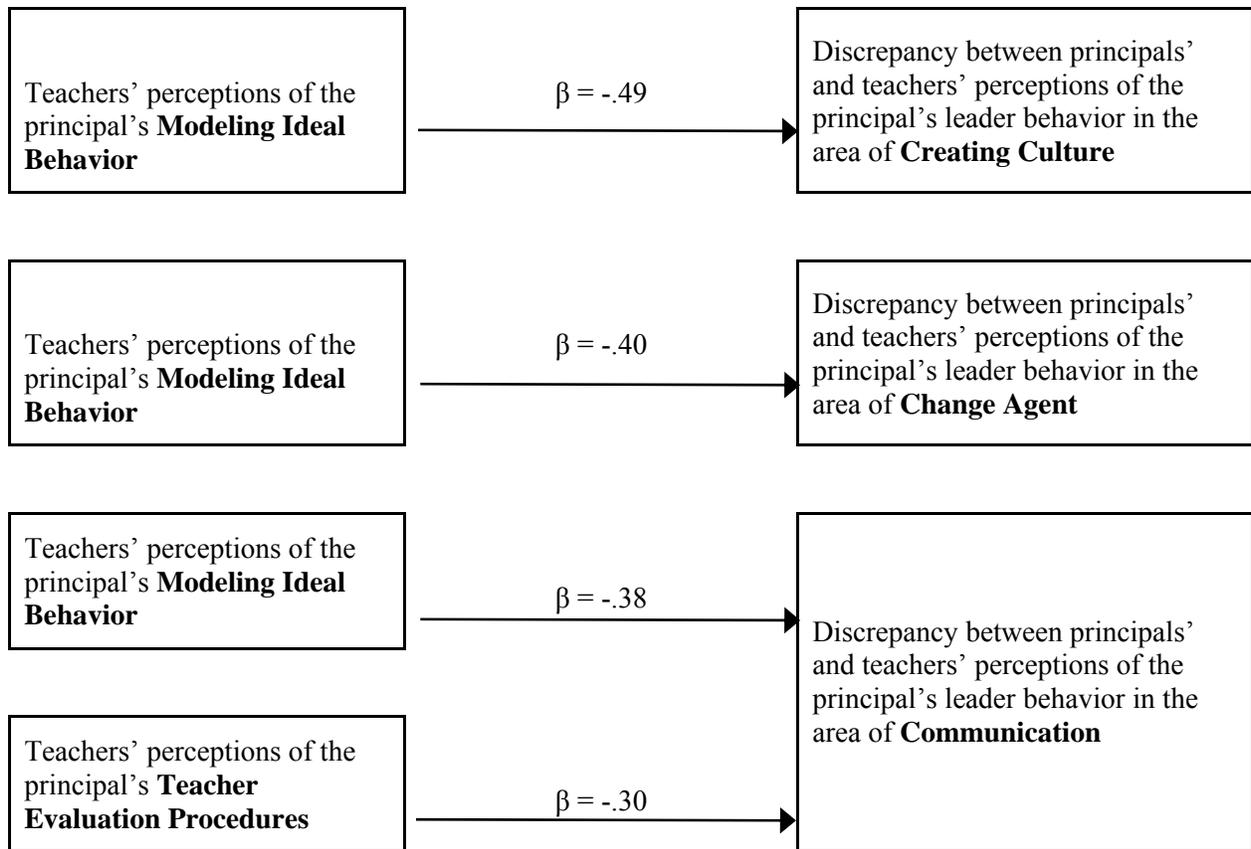


Figure 3. Variables explaining the discrepancy between teachers' and principals' perceptions of the principal's leader behavior when only the principals' responses were used in the principal components analysis of the Perceptions of Principal's Leadership Questionnaire.

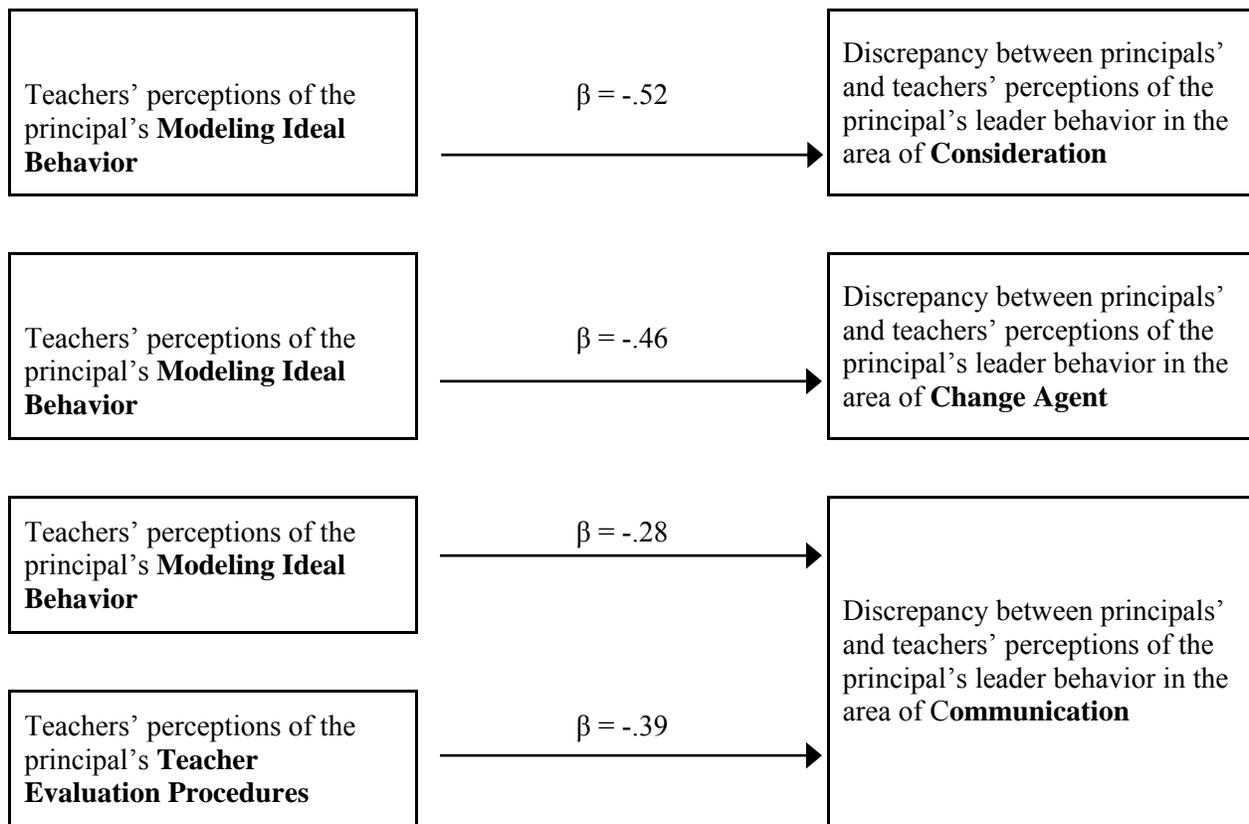


Figure 4. Variables explaining the discrepancy between teachers' and principals' perceptions of the principal's leader behavior when only the teachers' responses were used in the principal components analysis of the Perceptions of Principal's Leadership Questionnaire.

Implications for Practice

The significant findings in this research are the importance of principals following teacher evaluation procedures and modeling ideal behavior in forming teachers' perceptions of the principal's leader behavior and the less important role demographics serve in forming those same perceptions. As teachers' and principal's agreement that the principal is following established teacher evaluation procedures become more closely aligned, the teachers' perceptions of the quality of their principal's communication skills improve. Because communication between leaders and followers is important, principals should be aware that one way to improve teachers' perceptions of the quality of their communication skills is to follow the teacher evaluation procedures that have been established by their school or school division.

It is very important that principals model ideal leader behavior. Teachers' perceptions of the principal's leadership are influenced more by what the principal does than by what he or she says. The discrepancy between principals' and teachers' perceptions of the principal's leader behavior can be reduced by actions of the principal. To reduce this discrepancy in perceptions, principals should be aware of how well they model ideal behavior in the areas of trust, respect, credibility, concern for others, and open communication. As teachers' and principal's agreement that the principal is modeling ideal behavior become more closely aligned, the teachers' perceptions of the quality of the principal's ability to create a positive and caring school culture, the quality of the principal's ability to serve as a change agent, and the quality of the principal's ability to communicate improve. As principals take steps to improve in these areas, teachers' perceptions of the principal's leader behavior should become more positive. Staff personnel responsible for professional development for administrators should be aware of this research and offer administrators help and training in closely following established teacher evaluation procedures and in modeling ideal behavior.

Based on the limited data in this research, principals may want to concentrate on these two areas to improve teachers' perceptions. Because demographic data are shown not to be significant in predicting the discrepancy between the perceptions held by principals and teachers, principals probably should not spend time being concerned with these factors. Additionally, these factors are beyond the control or influence of the principal.

Institutions of higher learning should be aware of this research and consider these findings in evaluating their educational leadership programs. The findings in this study indicate

that teachers are influenced by what they see principals do. When principals model ideal behavior in the areas of trust, respect, credibility, concern, and communication, teachers are more likely to have positive perceptions of the principal's leadership. Colleges and universities should include instruction in these areas in their principal training programs. Part of this training could be related to how to assess teachers' perceptions and, if necessary, how to influence changes in teachers' perceptions. States may wish to consider these findings in establishing criteria for approving principal training programs.

Recommendations for Further Research

The purpose of this section is to make recommendations for other research that will add to the general knowledge of the principal's leadership and of leadership in general.

Research should be conducted in schools that have changed from a negative school climate to a positive school climate to see if the teachers' perceptions of the principal's leader behavior had changed and why. What change in leader behaviors did the principal employ? Was there a change in the principalship, and if so, how was the new principal's leader behavior different? This research could be done quantitatively or qualitatively. It would be important data in helping school divisions improve any negative school climate.

Gender was found not to be a significant predictor in the discrepancy between the principals' and teachers' perceptions of the principal's leader behavior. It would be interesting to explore how the leader's gender influences followers' perceptions of their leader's behavior in the working world beyond the schoolhouse doors. There seems to be little difference in how male and female principals are viewed, but does this hold true in the manufacturing, finance, or medical communities? If there is a difference in perceptions because of the leader's gender in these or other professional communities, research should be conducted to explain why those discrepancies exist in these organizations, but do not appear to exist in schools. This could have societal implications.

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APPENDIX A
 PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE:
 PRINCIPAL'S EDITION

Directions: Circle the most appropriate number on the following four-point scale to indicate your agreement with all items:

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1. I believe that all children can learn.				1 2 3 4
2. I am a strong advocate for change.				1 2 3 4
3. I have good communication skills.				1 2 3 4
4. I have regular faculty meetings.				1 2 3 4
5. I am flexible in my decision-making.				1 2 3 4
6. I am frustrated by federal educational mandates.				1 2 3 4
7. I am not afraid to try new ideas.				1 2 3 4
8. I do not hide bad news.				1 2 3 4
9. I care about teachers.				1 2 3 4
10. I challenge both teachers and students to do their best.				1 2 3 4
11. I organize reward programs for students.				1 2 3 4
12. I help teachers meet their needs.				1 2 3 4
13. I relay important information from the central office administration to the teachers.				1 2 3 4
14. I know teachers personally.				1 2 3 4
15. I promote an inviting school atmosphere.				1 2 3 4
16. I support teachers' decisions.				1 2 3 4

- | | | | | |
|--|---|---|---|---|
| 17. I clearly communicate information to all teachers. | 1 | 2 | 3 | 4 |
| 18. I am not sympathetic to teachers' personal problems. | 1 | 2 | 3 | 4 |
| 19. I formally recognize teachers for doing well. | 1 | 2 | 3 | 4 |
| 20. I operate well in a changing environment. | 1 | 2 | 3 | 4 |

APPENDIX A2
 PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE:
 TEACHERS' EDITION

Directions: Circle the most appropriate number on the following four-point scale to indicate your agreement with all items:

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1. My principal believes that all children can learn.				1 2 3 4
2. My principal is a strong advocate for change.				1 2 3 4
3. My principal has good communication skills.				1 2 3 4
4. My principal has regular faculty meetings.				1 2 3 4
5. My principal is flexible in his or her decision-making.				1 2 3 4
6. My principal is frustrated by federal educational mandates.				1 2 3 4
7. My principal is not afraid to try new ideas.				1 2 3 4
8. My principal does not hide bad news.				1 2 3 4
9. My principal cares about me.				1 2 3 4
10. My principal challenges both teachers and students to do their best.				1 2 3 4
11. My principal organizes reward programs for students.				1 2 3 4
12. My principal helps teachers meet their needs.				1 2 3 4
13. My principal relays important information from the central office administration to the teachers.				1 2 3 4
14. My principal knows me personally.				1 2 3 4
15. My principal promotes an inviting school atmosphere.				1 2 3 4
16. My principal supports my decisions.				1 2 3 4
17. My principal clearly communicates information to all teachers.				1 2 3 4

- | | | | | |
|---|---|---|---|---|
| 18. My principal is not sympathetic to my personal problems. | 1 | 2 | 3 | 4 |
| 19. My principal formally recognizes teachers for doing well. | 1 | 2 | 3 | 4 |
| 20. My principal operates well in a changing environment. | 1 | 2 | 3 | 4 |

APPENDIX B

PERSONAL AND ENVIRONMENTAL ATTRIBUTES QUESTIONNAIRE

Directions: Circle the most appropriate number on the following four-point scale to indicate your agreement with all items:

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1.	The principal of our school takes time to listen to teachers.		1 2 3 4
2.	Our school's mission statement is displayed prominently throughout the school.		1 2 3 4
3.	Everyone in our school knows what to do in an emergency.		1 2 3 4
4.	The principal uses the evaluation process as an opportunity to provide teachers with feedback about their job performance.		1 2 3 4
5.	I am aware of the history of our school.		1 2 3 4
6.	The principal shows concern for the teachers.		1 2 3 4
7.	The principal or assistant principal are the main disciplinarians in the school.		1 2 3 4
8.	In our school, there is open communication between the principal and teachers.		1 2 3 4
9.	Discipline is a problem at our school.		1 2 3 4
10.	The principal closely follows the established process for evaluating teachers.		1 2 3 4
11.	In our school, the principal shows respect for the teachers.		1 2 3 4
12.	Teachers take care of discipline in their classrooms.		1 2 3 4
13.	Our school has a written mission statement.		1 2 3 4
14.	The principal shows concern for students.		1 2 3 4
15.	The principal evaluates teachers informally by "wandering around".		1 2 3 4

16. The community understands the principal's vision for our school. 1 2 3 4
17. The principal is often seen visiting classrooms. 1 2 3 4
18. Our principal does not always tell teachers the truth. 1 2 3 4
19. Teachers show concern for the principal. 1 2 3 4
20. The principal's actions do not always match how he or she says one should behave. 1 2 3 4

APPENDIX C
PRINCIPAL SURVEY – PART I

Thank you for taking the time to complete this survey.

When you are finished, please seal it in the envelope you were provided, collect the sealed teachers' surveys, and mail them back in the addressed, postage paid envelope provided.

This survey should take you about ten minutes to complete. Returning the completed surveys will indicate your permission to use your data in the study. All responses will be kept completely confidential. No school or person will be identified in the report of the study.

DIRECTIONS: Please circle the number which best describes your agreement with each statement.

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4	
1. I believe that all children can learn.	1	2	3	4
2. I am a strong advocate for change.	1	2	3	4
3. I have good communication skills.	1	2	3	4
4. I have regular faculty meetings.	1	2	3	4
5. I am flexible in my decision-making.	1	2	3	4
6. I am frustrated by federal educational mandates.	1	2	3	4
7. I am not afraid to try new ideas.	1	2	3	4
8. I do not hide bad news.	1	2	3	4
9. I care about teachers.	1	2	3	4
10. I challenge both teachers and students to do their best.	1	2	3	4
11. I organize reward programs for students.	1	2	3	4
12. I help teachers meet their needs.	1	2	3	4

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4	
13. I relay important information from the central office administration to the teachers.	1	2	3	4
14. I know teachers personally.	1	2	3	4
15. I promote an inviting school atmosphere.	1	2	3	4
16. I support teachers' decisions.	1	2	3	4
17. I clearly communicate information to all teachers.	1	2	3	4
18. I am not sympathetic to teachers' personal problems	1	2	3	4
19. I formally recognize teachers for doing well.	1	2	3	4
20. I operate well in a changing environment.	1	2	3	4

PART – II

21. I take time to listen to teachers.	1	2	3	4
22. Our school's mission statement is displayed prominently throughout the school.	1	2	3	4
23. Everyone in our school knows what to do in an emergency.	1	2	3	4
24. I use the evaluation process as an opportunity to provide teachers with feedback about their job performance.	1	2	3	4
25. I am aware of the history of our school.	1	2	3	4
26. I show concern for teachers.	1	2	3	4
27. The assistant principal and I are the main disciplinarians in the school.	1	2	3	4
28. In our school, there is open communication between teachers and me.	1	2	3	4
29. Discipline is a problem at our school.	1	2	3	4

(continued)

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
30. I closely follow the established process for evaluating teachers.			
			1 2 3 4
31. In our school, I show respect for the teachers.			
			1 2 3 4
32. Teachers take care of discipline in their classrooms.			
			1 2 3 4
33. Our school has a written mission statement.			
			1 2 3 4
34. I show concern for students.			
			1 2 3 4
35. I evaluate teachers informally by “wandering around.”			
			1 2 3 4
36. The community understands my vision for our school.			
			1 2 3 4
37. I often visit classrooms.			
			1 2 3 4
38. I do not always tell teachers the truth.			
			1 2 3 4
39. Teachers show concern for me.			
			1 2 3 4
40. My actions do not always match how I say one should behave.			
			1 2 3 4

Please fill in the following information:

41. Age: _____
42. Counting this year, total number of years in education: _____
43. Counting this year, total years experience as a principal: _____
44. Counting this year, total years in your present position: _____
45. Approximate number of students in your school: _____

Please circle the appropriate response on the following:

45. Gender: Male Female
46. Setting which best describes your school:
- Rural Suburban Urban

APPENDIX C

TEACHER SURVEY – PART I

Thank you for taking the time to complete this survey.

When you are finished, please seal it in the envelope you were provided and return it to your principal.

This survey should take you about ten minutes to complete. Returning the completed surveys will indicate your permission to use your data in the study. All responses will be kept completely confidential. No school or person will be identified in the report of the study.

DIRECTIONS: Please circle the number which best describes your agreement with each statement.

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
------------------------	---------------	------------	---------------------

- | | | | | |
|---|---|---|---|---|
| 1. My principal believes that all children can learn. | 1 | 2 | 3 | 4 |
| 2. My principal is a strong advocate for change. | 1 | 2 | 3 | 4 |
| 3. My principal has good communication skills. | 1 | 2 | 3 | 4 |
| 4. My principal has regular faculty meetings. | 1 | 2 | 3 | 4 |
| 5. My principal is flexible in his or her decision-making. | 1 | 2 | 3 | 4 |
| 6. My principal is frustrated by federal educational mandates. | 1 | 2 | 3 | 4 |
| 7. My principal is not afraid to try new ideas. | 1 | 2 | 3 | 4 |
| 8. My principal does not hide bad news. | 1 | 2 | 3 | 4 |
| 9. My principal cares about me. | 1 | 2 | 3 | 4 |
| 10. My principal challenges both teachers and students to do their best. | 1 | 2 | 3 | 4 |
| 11. My principal organizes reward programs for students. | 1 | 2 | 3 | 4 |
| 12. My principal helps teachers meet their needs. | 1 | 2 | 3 | 4 |
| 13. My principal relays important information from the central office administration to the teachers. | 1 | 2 | 3 | 4 |

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4	
14. My principal knows me personally.	1	2	3	4
15. My principal promotes an inviting school atmosphere	1	2	3	4
16. My principal supports my decisions.	1	2	3	4
17. My principal clearly communicates information to all teachers.	1	2	3	4
18. My principal is not sympathetic to my personal problems.	1	2	3	4
19. My principal formally recognizes teachers for doing well.	1	2	3	4
20. My principal operates well in a changing environment	1	2	3	4

PART – II

- | | | | | |
|--|---|---|---|---|
| 21. The principal of our school takes time to listen to teachers. | 1 | 2 | 3 | 4 |
| 22. Our school’s mission statement is displayed prominently throughout the school. | 1 | 2 | 3 | 4 |
| 23. Everyone in our school knows what to do in an emergency. | 1 | 2 | 3 | 4 |
| 24. The principal uses the evaluation process as an opportunity to provide teachers with feedback about their job performance. | 1 | 2 | 3 | 4 |
| 25. I am aware of the history of our school. | 1 | 2 | 3 | 4 |
| 26. The principal shows concern for teachers. | 1 | 2 | 3 | 4 |
| 27. The principal and assistant principal are the main disciplinarians in the school. | 1 | 2 | 3 | 4 |
| 28. In our school, there is open communication between the principal and teachers. | 1 | 2 | 3 | 4 |
| 29. Discipline is a problem at our school. | 1 | 2 | 3 | 4 |

(continued)

Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4	
30. The principal closely follows the established process for evaluating teachers.	1	2	3	4
31. In our school, the principal shows respect for the teachers	1	2	3	4
32. Teachers take care of discipline in their classrooms	1	2	3	4
33. Our school has a written mission statement.	1	2	3	4
34. The principal shows concern for students.	1	2	3	4
35. The principal evaluates teachers informally by "wandering around."	1	2	3	4
36. The community understands the principal's vision for our school.	1	2	3	4
37. The principal is often seen visiting classrooms.	1	2	3	4
38. Our principal does not always tell teachers the truth.	1	2	3	4
39. Teachers show concern for the principal.	1	2	3	4
40. The principal's actions do not always match how he or she says one should behave.	1	2	3	4

Please circle the appropriate response on the following:

44. Gender: Male Female
45. Setting which best describes your school:
 Rural Suburban Urban
46. Teaching subject area:
 English
 Math
 Science
 Social Studies
 Vocational
 Special Education

Please fill in the following information:

41. Age: _____

42. Counting this year, total number of years in education:

43. Counting this year, total years working with current principal:

APPENDIX D
INSTITUTIONAL REVIEW BOARD APPROVAL



Institutional Review Board

Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice President for Research Compliance
CVM Phase II- Duckpond Dr., Blacksburg, VA 24061-0442
Office: 540/231-4991; FAX: 540/231-5033
email: moored@vt.edu

DATE: March 4, 2005

MEMORANDUM

TO: David J. Parks ELPS 0302
Gary Houseman

FROM: David Moore 

SUBJECT: **IRB Exempt Approval:** "Explaining the Discrepancy between Principals' and Teachers' Perceptions of Principals' Leadership" IRB # 05-162

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of March 4, 2005.

Virginia Tech has an approved Federal Wide Assurance (FWA00000572, exp. 7/20/07) on file with OHRP, and its IRB Registration Number is IRB00000667.

cc: File

Department Reviewer: M. D. Alexander

APPENDIX E
LETTER TO PRINCIPALS

The *2003 MetLife Survey of the American Teacher: An Examination of School Leadership* demonstrates that principals and teachers perceive principals' leadership differently. The researchers found that principals were much more likely than teachers to view the principal-teacher relationship in positive terms. Principals were more likely to view their relationships with teachers as open, collaborative, friendly, mutually respectful, and supportive than were teachers. Although the researchers documented the discrepancy in the perception of the principal-teacher relationship, they offered no explanation as to why it exists.

We would like to ask you and six teachers at your school to participate in a study designed to determine why this discrepancy exists. I (Gary) served as a high school principal for twelve years and found that when teachers had a clear understanding of my leadership, we, as a school, were more productive and positive than when teachers did not understand my leader behavior.

We are asking you to participate in this leadership study by:

1. Completing the enclosed Principal Survey.
2. Randomly selecting an English, math, science, and social studies teacher as well as a vocational teacher and special education teacher, if they are in your building, to complete the enclosed surveys.
3. Collect the sealed envelopes from each teacher containing their completed survey.
4. Return all completed surveys by April 30, 2005, in the pre-addressed, postage paid envelope provided.

Each survey should take participants about ten minutes to complete. Returning the completed surveys will indicate your permission to use your data in the study. All responses will be kept completely confidential. No school or person will be identified in the report of the study.

Thank you for your participation and for helping me complete this study which should help both teachers and principals have a clearer understanding of how each view the principal's leadership.

Sincerely,

Gary M. Houseman
Doctoral Candidate

David J. Parks, PhD
Professor of Education

APPENDIX F1

CONTENT VALIDATION OF PERCEPTIONS OF PRINCIPAL’S LEADERSHIP QUESTIONNAIRE: TEACHERS’ EDITION

Directions: Circle the number of the appropriate response

Domain 1 - Consideration - contains leadership behaviors related to personal and professional relationships based on awareness of needs and demonstrated care and support

Domain 2 - Creating Culture - contains leadership behaviors related to creating a school culture based on personal beliefs about education; serving as an advocate for the school, children, and teachers; recognizing and rewarding children, teachers, and staff for their works; and effectively dealing with failures

Domain 3 - Communication - contains leadership behaviors related to creating and communicating a clear vision and goals for the school; communicating effectively with teachers both formally, in written and oral language, and informally, through modeling appropriate behavior

Domain 4 - Adaptability - contains leadership behaviors related to the ability to adapt behaviors to situations and how well the principal copes with and manages change

Association Ratings: 1=very weak 2=weak 3=strong 4=very strong

Clarity Ratings: 1=very unclear, delete 2=somewhat clear, revise 3=clear, leave as written

Questionnaire statements	Domain	Association	Clarity
1. My principal believes that education is important for everyone.	1 2 3 4	1 2 3 4	1 2 3
2. My principal has a clear vision of what he or she wants for our school.	1 2 3 4	1 2 3 4	1 2 3
3. My principal carefully evaluates situations.	1 2 3 4	1 2 3 4	1 2 3
4. My principal clearly communicates information to all teachers.	1 2 3 4	1 2 3 4	1 2 3
5. My principal believes that all children can learn.	1 2 3 4	1 2 3 4	1 2 3
6. My principal evaluates teachers fairly.	1 2 3 4	1 2 3 4	1 2 3
7. My principal is frustrated by state/federal educational mandates.	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
8. My principal makes sure that teachers are informed of issues that affect them.	1 2 3 4	1 2 3 4	1 2 3
9. My principal has integrity.	1 2 3 4	1 2 3 4	1 2 3
10. My principal helps teacher meet their needs.	1 2 3 4	1 2 3 4	1 2 3
11. My principal supports my decisions.	1 2 3 4	1 2 3 4	1 2 3
12. My principal is not afraid to challenge the central office administration.	1 2 3 4	1 2 3 4	1 2 3
13. My principal is aware of who the informal student leaders are.	1 2 3 4	1 2 3 4	1 2 3
14. My principal has a value system very close my own.	1 2 3 4	1 2 3 4	1 2 3
15. My principal is aware of the social climate of the school.	1 2 3 4	1 2 3 4	1 2 3
16. My principal encourages teachers to join professional educational organizations.	1 2 3 4	1 2 3 4	1 2 3
17. My principal makes sure that I am aware his or her vision for our school.	1 2 3 4	1 2 3 4	1 2 3
18. My principal meets with me to discuss new ideas in education.	1 2 3 4	1 2 3 4	1 2 3
19. My principal makes decisions alone.	1 2 3 4	1 2 3 4	1 2 3
20. My principal fights for our school programs.	1 2 3 4	1 2 3 4	1 2 3
21. My principal helps me when I need help.	1 2 3 4	1 2 3 4	1 2 3
22. My principal wants parents to visit our school.	1 2 3 4	1 2 3 4	1 2 3
23. My principal works hard to help me succeed.	1 2 3 4	1 2 3 4	1 2 3
24. My principal encourages me to adopt new educational strategies.	1 2 3 4	1 2 3 4	1 2 3
25. My principal encourages a family-like atmosphere among the faculty and staff.	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
26. My principal is often seen in the hallways.	1 2 3 4	1 2 3 4	1 2 3
27. My principal is considered to be a maverick.	1 2 3 4	1 2 3 4	1 2 3
28. My principal inspires me to do my best.	1 2 3 4	1 2 3 4	1 2 3
29. My principal has regular faculty meetings.	1 2 3 4	1 2 3 4	1 2 3
30. My principal involves our school in community activities.	1 2 3 4	1 2 3 4	1 2 3
31. My principal works well with our community leaders.	1 2 3 4	1 2 3 4	1 2 3
32. My principal believes that our school is the best school in our division.	1 2 3 4	1 2 3 4	1 2 3
33. My principal defers to parents.	1 2 3 4	1 2 3 4	1 2 3
34. My principal has good communication skills.	1 2 3 4	1 2 3 4	1 2 3
35. My principal provides me with meaningful professional development activities.	1 2 3 4	1 2 3 4	1 2 3
36. My principal often meets with me to discuss my performance.	1 2 3 4	1 2 3 4	1 2 3
37. My principal evaluates me fairly.	1 2 3 4	1 2 3 4	1 2 3
38. My principal takes time to talk to me.	1 2 3 4	1 2 3 4	1 2 3
39. My principal focuses daily on our school's mission.	1 2 3 4	1 2 3 4	1 2 3
40. My principal is well liked.	1 2 3 4	1 2 3 4	1 2 3
41. My principal has a good working relationship with our central office administration.	1 2 3 4	1 2 3 4	1 2 3
42. My principal believes that being a teacher is a very important job.	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
43. My principal is flexible in his or her decision-making.	1 2 3 4	1 2 3 4	1 2 3
44. My principal challenges both students and teachers to do their best.	1 2 3 4	1 2 3 4	1 2 3
45. My principal knows me personally.	1 2 3 4	1 2 3 4	1 2 3
46. My principal is often seen talking to students in the hallways.	1 2 3 4	1 2 3 4	1 2 3
47. My principal tells people that our school has good students.	1 2 3 4	1 2 3 4	1 2 3
48. My principal wants teachers to change their instructional practices if those practices are not working well.	1 2 3 4	1 2 3 4	1 2 3
49. My principal does not accept mediocrity.	1 2 3 4	1 2 3 4	1 2 3
50. My principal openly advocates for the school.	1 2 3 4	1 2 3 4	1 2 3
51. My principal often brags about our students.	1 2 3 4	1 2 3 4	1 2 3
52. My principal uses a faculty advisory council to help him or her make certain decisions.	1 2 3 4	1 2 3 4	1 2 3
53. My principal operates well in a changing environment.	1 2 3 4	1 2 3 4	1 2 3
54. My principal informally recognizes teachers for doing well.	1 2 3 4	1 2 3 4	1 2 3
55. My principal adapts well to all situations.	1 2 3 4	1 2 3 4	1 2 3
56. My principal takes time to talk to students.	1 2 3 4	1 2 3 4	1 2 3
57. My principal does not like to change from the status quo.	1 2 3 4	1 2 3 4	1 2 3
58. My principal confronts people when they fail.	1 2 3 4	1 2 3 4	1 2 3
59. My principal is viewed by teachers as a manager.	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
60. My principal asks me for input on decisions that need to be made.	1 2 3 4	1 2 3 4	1 2 3
61. My principal often visits my classroom.	1 2 3 4	1 2 3 4	1 2 3
62. My principal has faculty meetings that are worthless.	1 2 3 4	1 2 3 4	1 2 3
63. My principal is not afraid to try new ideas.	1 2 3 4	1 2 3 4	1 2 3
64. My principal knows the history of our school.	1 2 3 4	1 2 3 4	1 2 3
65. My principal does not have a clear vision of what he or she wants for our school.	1 2 3 4	1 2 3 4	1 2 3
66. My principal knows the names of my immediate family.	1 2 3 4	1 2 3 4	1 2 3
67. My principal keeps up with new ideas in education.	1 2 3 4	1 2 3 4	1 2 3
68. My principal believes that our school is the best that it can be.	1 2 3 4	1 2 3 4	1 2 3
69. My principal tells people that our school has a good faculty.	1 2 3 4	1 2 3 4	1 2 3
70. My principal is honest.	1 2 3 4	1 2 3 4	1 2 3
71. My principal is often seen in public places.	1 2 3 4	1 2 3 4	1 2 3
72. My principal shows favoritism to a few teachers.	1 2 3 4	1 2 3 4	1 2 3
73. My principal encourages students to participate in student organizations.	1 2 3 4	1 2 3 4	1 2 3
74. My principal tells the community that we have a good school.	1 2 3 4	1 2 3 4	1 2 3
75. My principal and I attend some of the same social functions.	1 2 3 4	1 2 3 4	1 2 3
76. My principal is aware of the informal hierarchy that exists between teachers within our school	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
77. My principal brags about the faculty.	1 2 3 4	1 2 3 4	1 2 3
78. My principal relays important information from the central office administration to the teachers.	1 2 3 4	1 2 3 4	1 2 3
79. My principal is aware of teachers' needs.	1 2 3 4	1 2 3 4	1 2 3
80. My principal encourages teachers to try new techniques.	1 2 3 4	1 2 3 4	1 2 3
81. My principal formally recognizes me for doing well.	1 2 3 4	1 2 3 4	1 2 3
82. My principal brags about the school.	1 2 3 4	1 2 3 4	1 2 3
83. My principal is a positive role model.	1 2 3 4	1 2 3 4	1 2 3
84. My principal takes risks.	1 2 3 4	1 2 3 4	1 2 3
85. My principal works with the appropriate stakeholders to evaluate the need for changes in our school.	1 2 3 4	1 2 3 4	1 2 3
86. My principal builds on the traditions of the past.	1 2 3 4	1 2 3 4	1 2 3
87. My principal cares about me.	1 2 3 4	1 2 3 4	1 2 3
88. My principal works well with parents.	1 2 3 4	1 2 3 4	1 2 3
89. My principal does not easily change his or her mind.	1 2 3 4	1 2 3 4	1 2 3
90. My principal organizes award programs for students.	1 2 3 4	1 2 3 4	1 2 3
91. My principal is an ethical leader.	1 2 3 4	1 2 3 4	1 2 3
92. My principal is a strong advocate for change.	1 2 3 4	1 2 3 4	1 2 3
93. My principal formally recognizes teachers for doing well.	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
94. My principal changes his or her leadership style as necessary.	1 2 3 4	1 2 3 4	1 2 3
95. My principal acts as a change agent in the school.	1 2 3 4	1 2 3 4	1 2 3
96. My principal is an authoritarian.	1 2 3 4	1 2 3 4	1 2 3
97. My principal does not respond to my input regarding school problems.	1 2 3 4	1 2 3 4	1 2 3
98. My principal inspires me to want to succeed.	1 2 3 4	1 2 3 4	1 2 3
99. My principal is not aware of the social stratification among our students.	1 2 3 4	1 2 3 4	1 2 3
100. My principal encourages me to pursue advanced degrees.	1 2 3 4	1 2 3 4	1 2 3
101. My principal believes his job is important.	1 2 3 4	1 2 3 4	1 2 3
102. My principal has old fashioned ideas about education.	1 2 3 4	1 2 3 4	1 2 3
103. My principal always agrees with the superintendent regarding instructional issues.	1 2 3 4	1 2 3 4	1 2 3
104. My principal does not help me when I struggle with student discipline.	1 2 3 4	1 2 3 4	1 2 3
105. My principal knows the names of my immediate family.	1 2 3 4	1 2 3 4	1 2 3
106. My principal lets new teachers know exactly what is expected of them.	1 2 3 4	1 2 3 4	1 2 3
107. My principal and I often discuss my goals and aspirations as an educator.	1 2 3 4	1 2 3 4	1 2 3
108. My principal gives some teachers special treatment.	1 2 3 4	1 2 3 4	1 2 3
109. My principal allows me to have a voice in school-wide decisions.	1 2 3 4	1 2 3 4	1 2 3
110. My principal is aware of the problems I have in my classroom.	1 2 3 4	1 2 3 4	1 2 3

(continued)

APPENDIX F1 (continued)

Questionnaire statements	Domain	Association	Clarity
111. My principal thinks the subject I teach is important.	1 2 3 4	1 2 3 4	1 2 3
112. My principal acts appropriately in helping me solve conflicts.	1 2 3 4	1 2 3 4	1 2 3
113. My principal promotes an inviting school atmosphere.	1 2 3 4	1 2 3 4	1 2 3
114. My principal uses manipulation to get me to do what he or she wants.	1 2 3 4	1 2 3 4	1 2 3
115. My principal admits when he or she has made a mistake.	1 2 3 4	1 2 3 4	1 2 3
116. My principal and I share a common vision for our school.	1 2 3 4	1 2 3 4	1 2 3
117. My principal makes me feel good about being a teacher.	1 2 3 4	1 2 3 4	1 2 3
118. My principal tells me the truth about the school's resources.	1 2 3 4	1 2 3 4	1 2 3
119. My principal would not lie even to protect himself or herself.	1 2 3 4	1 2 3 4	1 2 3
120. My principal is a democratic leader.	1 2 3 4	1 2 3 4	1 2 3
121. My principal takes time to listen to my problems.	1 2 3 4	1 2 3 4	1 2 3
122. My principal is clearly the "boss."	1 2 3 4	1 2 3 4	1 2 3
123. My principal acts as though he or she believes teachers are his or her subordinates.	1 2 3 4	1 2 3 4	1 2 3
124. My principal does not hide bad news.	1 2 3 4	1 2 3 4	1 2 3
125. My principal is not sympathetic to my personal problems.	1 2 3 4	1 2 3 4	1 2 3

APPENDIX F2

CONTENT VALIDATION OF PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE: TEACHERS' EDITION

CLASSIFICATION OF ITEMS INTO DOMAINS BY EXPERTS, NOVEMBER 2004

Item	Expected domain	Missing		Consideration		Creating culture		Communication		Adaptability	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1	Creating culture					10	100				
2	Communication							9	90	1	10
3	Adaptability			1	10	1	10	2	20	6	60
4	Communication							10	100		
5	Creating Culture					9	90			1	10
6	Consideration			5	50	2	20	3	30		
7	Adaptability									10	100
8	Communication			1	10			9	90		
9	Communication			3	30	4	40	3	30		
10	Consideration			9	90	1	10				
11	Consideration			8	80	2	20				
12	Creating Culture			5	50	5	50				
13	Creating Culture			2	20	6	60	1	10	1	10
14	Communication			2	20	4	40	4	40		
15	Creating Culture			3	30	6	60	1	10		
16	Creating Culture			5	50	3	30	2	20		
17	Communication							10	100		
18	Communication			2	20	1	10	7	70		
19	Communication			1	10	1	10	4	40	4	40
20	Creating Culture			2	20	3	30	4	40	1	10
21	Consideration			6	60	3	30	1	10		
22	Creating Culture					8	80	2	20		
23	Consideration			6	60	4	40				
24	Adaptability			2	20	2	20	1	10	5	50

(continued)

APPENDIX F2 (continued)

Item	Expected domain	Missing		Consideration		Creating culture		Communication		Adaptability	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
25	Creating Culture			2	20	5	50	3	30		
26	Communication			1	10	7	70	2	20		
27	Adaptability	1	10			3	30			6	60
28	Consideration			2	20	5	50	3	30		
29	Communication					1	10	9	90		
30	Creating Culture					8	80	2	20		
31	Creating Culture			2	20	6	60	1	10	1	10
32	Creating Culture					8	80	2	20		
33	Communication					3	30	1	10	6	60
34	Communication							10	100		
35	Consideration			5	50	4	40	1	10		
36	Communication			2	20		8	80			
37	Communication			2	20	2	20	6	60		
38	Consideration			2	20	1	10	7	70		
39	Creating Culture			2	20	6	60	2	20		
40	Consideration			5	50	3	30			2	20
41	Communication			4	40	1	10	3	30	2	20
42	Creating Culture			2	20	7	70	1	10		
43	Adaptability									10	100
44	Creating Culture					9	90	1	10		
45	Consideration			9	90					1	10
46	Communication			2	20	6	60	2	20		
47	Creating Culture					6	60	4	40		
48	Adaptability			1	10	3	30	1	10	5	50
49	Creating Culture					7	70	2	20	1	10
50	Creating Culture					7	70	3	30		

(continued)

APPENDIX F2 (continued)

Item	Expected domain	Missing		Consideration		Creating culture		Communication		Adaptability	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
51	Creating Culture					9	90	1	10		
52	Adaptability			1	10	4	40	3	30	2	20
53	Adaptability									10	100
54	Creating Culture					6	60	3	30	1	10
55	Adaptability									10	100
56	Consideration			1	10	5	50	4	40		
57	Adaptability									10	100
58	Creating Culture					5	50	4	40	1	10
59	Adaptability			2	20	3	30			5	50
60	Communication			1	10	1	10	8	80		
61	Communication			2	20	3	30	4	40	1	10
62	Communication			1	10	2	20	7	70		
63	Adaptability							1	10	9	90
64	Creating Culture			3	30	6	60	1	10		
65	Communication			1	10	2	20	6	60	1	10
66	Consideration			6	60	2	20	2	20		
67	Adaptability			1	10	4	40	1	10	4	40
68	Creating Culture			3	30	6	60	1	10		
69	Creating Culture					8	80	2	20		
70	Communication			4	40			6	60		
71	Creating Culture			2	20	5	50	3	30		
72	Consideration			7	70	2	20	1	10		
73	Creating Culture					9	90	1	10		
74	Creating Culture					9	90	1	10		
75	Consideration			6	60	3	30	1	10		

(continued)

APPENDIX F2 (continued)

Item	Expected domain	Missing		Consideration		Creating culture		Communication		Adaptability	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
76	Creating Culture			2	20	6	60	2	20		
77	Creating Culture					9	90	1	10		
78	Communication							10	100		
79	Consideration			8	80	1	10	1	10		
80	Adaptability			1	10	2	20	3	30	4	40
81	Creating Culture			1	10	7	70	1	10	1	10
82	Creating Culture					9	90	1	10		
83	Communication	1	10			4	40	5	50		
84	Adaptability			1	10	1	10			8	80
85	Adaptability					1	10	3	30	6	60
86	Creating Culture					8	80	1	10	1	10
87	Consideration			10	100						
88	Creating Culture			2	20	7	70			1	10
89	Adaptability							1	10	9	90
90	Creating Culture					9	90	1	10		
91	Communication			2	20	2	20	6	60		
92	Adaptability			1	10	1	10			8	80
93	Creating Culture					9	90	1	10		
94	Adaptability			1	10			1	10	8	80
95	Adaptability					3	30	1	10	6	60
96	Communication			3	30	1	10	4	40	2	20
97	Communication			4	40	1	10	4	40	1	10
98	Consideration			4	40	3	30	3	30		
99	Creating Culture			1	10	8	80			1	10
100	Consideration			4	40	2	20	4	40		

(continued)

APPENDIX F2 (continued)

Item	Expected domain	Missing		Consideration		Creating culture		Communication		Adaptability	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
101	Creating Culture			3	30	3	30	4	40		
102	Creating Culture			2	20	5	50			3	30
103	Adaptability					2	20			8	80
104	Consideration			5	50	3	30	2	20		
105	Consideration			6	60	3	30	1	10		
106	Communication					3	30	7	70		
107	Consideration			4	40			6	60		
108	Communication			4	40	1	10	3	30	2	20
109	Communication			1	10	4	40	5	50		
110	Consideration			6	60	1	10	3	30		
111	Creating Culture			2	20	6	60	2	20		
112	Consideration			2	20	1	10	2	20	5	50
113	Creating Culture					10	100				
114	Consideration			5	50			4	40	1	10
115	Communication			2	20	4	40	3	30	1	10
116	Communication			2	20	3	30	5	50		
117	Communication			2	20	5	50	3	30		
118	Communication							9	90	1	10
119	Communication			3	30			5	50	2	20
120	Communication			1	10	5	50	1	10	3	30
121	Consideration			5	50	1	10	3	30	1	10
122	Communication			2	20	3	30	4	40	1	10
123	Creating Culture			5	50	1	10	4	40		
124	Communication					1	10	8	80	1	10
125	Consideration			9	90			1	10		

Note. Items are in Appendix F1.

APPENDIX F3

ASSOCIATION AND CLARITY FOR ITEMS WITH AT LEAST 80% AGREEMENT ON CONTENT VALIDATION OF PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE: TEACHERS' EDITION, NOVEMBER 2004

CONSIDERATION	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
10. My principal helps teacher meet their needs.	9	3.33	0.50	9	3.00	0.00
11. My principal supports my decisions.	8	2.78	0.83	8	2.78	0.44
45. My principal knows me personally.	9	3.56	0.53	9	3.00	0.00
79. My principal is aware of teachers' needs.	8	3.33	0.87	8	2.89	0.33
87. My principal cares about me.	10	3.33	0.50	10	3.00	0.00
125. My principal is not sympathetic to my personal problems.	9	2.89	0.78	9	2.78	0.67
CREATING CULTURE	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
1. My principal believes that education is important for everyone.	10	3.22	0.44	10	3.00	0.00
5. My principal believes that all children can learn.	9	3.44	0.53	9	2.78	0.44
22. My principal wants parents to visit our school.	8	2.78	0.67	8	2.89	0.33
30. My principal involves our school in community activities.	8	3.11	0.93	8	2.78	0.67
32. My principal believes that our school is the best school in our division.	8	3.13	0.83	8	3.00	0.00
44. My principal challenges both students and teachers to do their best.	9	3.44	0.53	9	3.00	0.00
51. My principal often brags about our students.	9	3.44	0.73	9	3.00	0.00
69. My principal tells people that our school has a good faculty.	8	3.44	0.53	8	3.00	0.00
73. My principal encourages students to participate in student organizations.	9	3.38	0.52	9	2.89	0.33
74. My principal tells the community that we have a good school.	9	3.89	0.33	9	3.00	0.00
77. My principal brags about the faculty.	9	3.33	0.50	9	3.00	0.00
82. My principal brags about the school.	9	3.33	0.71	9	2.78	0.67
86. My principal builds on the traditions of the past.	8	2.56	0.73	8	2.67	0.71
90. My principal organizes award programs for students.	9	3.67	0.50	9	3.00	0.00

(continued)

APPENDIX F3 (continued)

CREATING CULTURE (continued)	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
93. My principal formally recognizes teachers for doing well.	9	3.44	0.53	9	3.00	0.00
99. My principal is not aware of the social stratification among our students.	8	2.78	0.67	8	2.44	0.73
113. My principal promotes an inviting school atmosphere.	10	3.78	0.44	10	3.00	0.00
COMMUNICATION						
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
2. My principal has a clear vision of what he or she wants for our school.	9	3.67	0.71	9	3.00	0.00
4. My principal clearly communicates information to all teachers.	10	3.89	0.33	10	3.00	0.00
8. My principal makes sure that teachers are informed of issues that affect them.	9	3.33	0.50	9	2.89	0.33
17. My principal makes sure that I am aware his or her vision for our school.	10	3.89	0.33	10	2.88	0.35
29. My principal has regular faculty meetings.	9	3.33	0.50	9	3.00	0.00
34. My principal has good communication skills.	10	3.78	0.44	10	3.00	0.00
36. My principal often meets with me to discuss my performance.	8	3.56	0.53	8	2.89	0.33
60. My principal asks me for input on decisions that need to be made.	8	2.89	0.33	8	2.78	0.44
78. My principal relays important information from the central office administration to the teachers.	10	3.78	0.44	10	3.00	0.00
118. My principal tells me the truth about the school's resources.	9	3.22	0.44	9	3.00	0.00
124. My principal does not hide bad news.	8	3.22	0.44	8	3.00	0.00
ADAPTABILITY						
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
7. My principal is frustrated by federal educational mandates.	10	2.67	0.71	10	2.33	1.00
43. My principal is flexible in his or her decision-making.	10	3.44	0.73	10	2.89	0.33
53. My principal operates well in a changing environment.	10	3.78	0.44	10	3.00	0.00
55. My principal adapts well to all situations.	10	3.78	0.71	10	3.00	0.00
57. My principal does not like to change from the status quo.	10	3.33	0.87	10	2.78	0.67
63. My principal is not afraid to try new ideas.	9	3.67	0.50	9	2.89	0.33

(continued)

APPENDIX F3 (continued)

ADAPTABILITY (continued)	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
84. My principal takes risks.	8	3.25	1.16	8	2.45	0.71
89. My principal does not easily change his or her mind.	9	3.22	0.83	9	2.67	0.50
92. My principal is a strong advocate for change.	8	3.56	.53	8	3.00	.00
94. My principal changes his or her leadership style as necessary.	8	3.56	.53	8	3.00	.00
103. My principal always agrees with the superintendent regarding instructional issues.	8	2.33	1.12	8	2.78	.67

APPENDIX G1

ITEM NUMBERS FOR PRINCIPALS' RESPONSES ON THE CRITERION VARIABLES

Item	Statement
1	I believe that all children can learn.
2	I am a strong advocate for change.
3	I have good communication skills.
4	I have regular faculty meetings.
5	I am flexible in my decision-making.
6	I am frustrated by federal mandates.
7	I am not afraid to try new ideas.
8	I do not hide bad news.
9	I care about teachers.
10	I challenge both teachers and students to do their best.
11	I organize reward programs for students.
12	I help teachers meet their needs.
13	I relay important information from the central office administration to the teachers.
14	I know teachers personally.
15	I promote an inviting school atmosphere.
16	I support teachers' decisions.
17	I clearly communicate information to all teachers.
18r ¹	I am not sympathetic to teachers' personal problems.
19	I formally recognize teachers for doing well.
20	I operate well in a changing environment.

¹ recoded item

APPENDIX G2

ITEM NUMBERS FOR TEACHERS' RESPONSES ON THE CRITERION VARIABLES

Item	Statement
1	My principal believes that all children can learn.
2	My principal is a strong advocate for change.
3	My principal has good communication skills.
4	My principal has regular faculty meetings.
5	My principal is flexible in his or her decision-making.
6	My principal is frustrated by federal mandates.
7	My principal is not afraid to try new ideas.
8	My principal does not hide bad news.
9	My principal cares about me.
10	My principal challenges both teachers and students to do their best.
11	My principal organizes reward programs for students.
12	My principal helps teachers meet their needs.
13	My principal relays important information from the central office administration to teachers.
14	My principal knows me personally.
15	My principal promotes an inviting school atmosphere.
16	My principal supports my decisions.
17	My principal clearly communicates information to all teachers.
18 ^{r1}	My principal is not sympathetic to my personal problems.
19	My principal formally recognizes teachers for doing well.
20	My principal operates well in a changing environment.

¹ recoded item

APPENDIX H1

CONTENT VALIDATION INSTRUMENT FOR PERSONAL AND ENVIRONMENTAL ATTRIBUTES

Directions: Circle the number of the appropriate response

Domain 1 - School Culture - contains items related to the history of the school and community; the vision and mission for the school; the morale of the school; and how people are recognized for their contributions

Domain 2 - Level of Caring - contains items related to how well listening occurs in the school, the concern for others, and how friendly and inviting the school environment is

Domain 3 - Modeling Ideal Behavior - contains items related to trust, respect, credibility, and open communication

Domain 4 - Level of Control - contains items related to discipline, safety, volunteerism, scheduling, and allocating resources

Domain 5 - Professional Practice - contains items related to the evaluation of and feedback to school personnel; how encouragement and motivation is demonstrated; the principal's visibility within the school; a collaborative environment; and the decision-making process

Association Ratings: 1=very weak 2=weak 3=strong 4=very strong

Clarity Ratings: 1=very unclear, delete 2=somewhat clear, revise 3=clear, leave as written

Questionnaire statements	Domain	Association	Clarity
1. The principal of our school takes time to listen to teachers.	1 2 3 4 5	1 2 3 4	1 2 3
2. The principal closely follows the established process for evaluating teachers.	1 2 3 4 5	1 2 3 4	1 2 3
3. The principal is often seen visiting teachers' classrooms.	1 2 3 4 5	1 2 3 4	1 2 3
4. Our school is an inviting school.	1 2 3 4 5	1 2 3 4	1 2 3
5. Discipline is a problem at our school.	1 2 3 4 5	1 2 3 4	1 2 3

(continued)

APPENDIX H1 (continued)

Questionnaire statements	Domain	Association	Clarity
6. There is an atmosphere of collaboration in this school.	1 2 3 4 5	1 2 3 4	1 2 3
7. I am aware of the history of our school.	1 2 3 4 5	1 2 3 4	1 2 3
8. In our school, the relationship between the principal and teachers is friendly.	1 2 3 4 5	1 2 3 4	1 2 3
9. I know who wrote our school's mission statement.	1 2 3 4 5	1 2 3 4	1 2 3
10. In our school, the principal does not show respect to the students.	1 2 3 4 5	1 2 3 4	1 2 3
11. Teacher evaluations are important at our school.	1 2 3 4 5	1 2 3 4	1 2 3
12. The principal is often seen in the hallways.	1 2 3 4 5	1 2 3 4	1 2 3
13. The principal and teachers share in the decision making process.	1 2 3 4 5	1 2 3 4	1 2 3
14. Teachers take care of the discipline in their classrooms.	1 2 3 4 5	1 2 3 4	1 2 3
15. The principal shows concern for the students.	1 2 3 4 5	1 2 3 4	1 2 3
16. The principal's vision for our school is shared by the teachers.	1 2 3 4 5	1 2 3 4	1 2 3
17. The principal is responsible for setting the schedule for teachers.	1 2 3 4 5	1 2 3 4	1 2 3
18. The principal uses the evaluation process as an opportunity to provide teachers with feedback about their job performance.	1 2 3 4 5	1 2 3 4	1 2 3
19. The principal fairly distributes the resources available to the school.	1 2 3 4 5	1 2 3 4	1 2 3
20. The principal tells the truth.	1 2 3 4 5	1 2 3 4	1 2 3
21. Teachers are often recognized for their achievements.	1 2 3 4 5	1 2 3 4	1 2 3
22. In our school, there is open communication between the principal and teachers.	1 2 3 4 5	1 2 3 4	1 2 3
23. The principal's actions do not always match how he or she says one should behave.	1 2 3 4 5	1 2 3 4	1 2 3

(continued)

APPENDIX H1 (continued)

Questionnaire statements	Domain	Association	Clarity
24. The principal encourages volunteerism.	1 2 3 4 5	1 2 3 4	1 2 3
25. Our school has a written mission statement.	1 2 3 4 5	1 2 3 4	1 2 3
26. Teachers understand the principal's vision for the school.	1 2 3 4 5	1 2 3 4	1 2 3
27. In our school, the principal and teachers often clash.	1 2 3 4 5	1 2 3 4	1 2 3
28. In our school, there is open communication between teachers and students.	1 2 3 4 5	1 2 3 4	1 2 3
29. The administration encourages teachers to enroll in graduate programs.	1 2 3 4 5	1 2 3 4	1 2 3
30. Teacher morale in our school is poor.	1 2 3 4 5	1 2 3 4	1 2 3
31. The principal shows concern for the teachers.	1 2 3 4 5	1 2 3 4	1 2 3
32. Students feel good about attending this school.	1 2 3 4 5	1 2 3 4	1 2 3
33. Once teacher evaluations are done, they are filed and never discussed again.	1 2 3 4 5	1 2 3 4	1 2 3
34. The principal evaluates teachers informally by “wandering around.”	1 2 3 4 5	1 2 3 4	1 2 3
35. There is a feeling of mutual respect in our school.	1 2 3 4 5	1 2 3 4	1 2 3
36. Students are often recognized for their achievements.	1 2 3 4 5	1 2 3 4	1 2 3
37. Our school's mission statement is displayed prominently throughout the school.	1 2 3 4 5	1 2 3 4	1 2 3
38. The principal of our school is a good listener.	1 2 3 4 5	1 2 3 4	1 2 3
39. Teachers do not like to work at this school.	1 2 3 4 5	1 2 3 4	1 2 3
40. In our school, there is open communication between the principal and students.	1 2 3 4 5	1 2 3 4	1 2 3
41. The principal or assistant principal are the main disciplinarians in the school.	1 2 3 4 5	1 2 3 4	1 2 3
42. At our school, too many resources are allocated to athletics.	1 2 3 4 5	1 2 3 4	1 2 3

(continued)

APPENDIX H1 (continued)

Questionnaire statements	Domain	Association	Clarity
43. Support staff are often recognized for the contribution they make to our school.	1 2 3 4 5	1 2 3 4	1 2 3
44. I am not aware of the history of our community.	1 2 3 4 5	1 2 3 4	1 2 3
45. The principal shows concern for the community.	1 2 3 4 5	1 2 3 4	1 2 3
46. In our school, the principal shows respect for teachers.	1 2 3 4 5	1 2 3 4	1 2 3
47. Our school is a safe environment.	1 2 3 4 5	1 2 3 4	1 2 3
48. Teachers collaborate with each other.	1 2 3 4 5	1 2 3 4	1 2 3
49. Following our school's mission statement will help achieve our principal's vision for our school.	1 2 3 4 5	1 2 3 4	1 2 3
50. Students do not understand the principal's vision for their school.	1 2 3 4 5	1 2 3 4	1 2 3
51. When important issues arise, the principal asks teachers for their input before making a decision.	1 2 3 4 5	1 2 3 4	1 2 3
52. Everyone in our school knows what to do in case of an emergency.	1 2 3 4 5	1 2 3 4	1 2 3
53. Support staff understand the principal's vision for the school.	1 2 3 4 5	1 2 3 4	1 2 3
54. Our principal listens to the concerns of our students.	1 2 3 4 5	1 2 3 4	1 2 3
55. The principal makes decisions alone.	1 2 3 4 5	1 2 3 4	1 2 3
56. The teachers show concern for the principal.	1 2 3 4 5	1 2 3 4	1 2 3
57. The principal and teachers do not collaborate about important issues.	1 2 3 4 5	1 2 3 4	1 2 3
58. In our school, teachers show respect to the principal.	1 2 3 4 5	1 2 3 4	1 2 3
59. I trust our principal.	1 2 3 4 5	1 2 3 4	1 2 3
60. The community understands the principal's vision for the school.	1 2 3 4 5	1 2 3 4	1 2 3

(continued)

APPENDIX H1 (continued)

Questionnaire statements	Domain	Association	Clarity
61. Teachers feel comfortable having volunteers in their classrooms.	1 2 3 4 5	1 2 3 4	1 2 3
62. The principal asks teachers to evaluate his or her performance.	1 2 3 4 5	1 2 3 4	1 2 3
63. At our school, there are not enough resources allocated to academics.	1 2 3 4 5	1 2 3 4	1 2 3
64. Our principal does not always tell teachers the truth.	1 2 3 4 5	1 2 3 4	1 2 3
65. The principal is democratic.	1 2 3 4 5	1 2 3 4	1 2 3

APPENDIX H2

CONTENT VALIDATION OF QUESTIONNAIRE ASSESSING THE ATTRIBUTES OF PRINCIPALS' LEADERSHIP:
CLASSIFICATION OF ITEMS INTO DOMAINS BY EXPERTS

ITEMS WITH AT LEAST 80% AGREEMENT REPORTED, NOVEMBER 2004 (N=6)

Item	Expected domain	School culture		Level of caring		Model ideal behavior		Level of control		Professional practice	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1	Level of caring			5	83.3			1	16.7		
2	Professional practice			1	16.7					5	83.3
3	Professional practice							1	16.7	5	83.3
5	Level of control	1	16.7					5	83.3		
7	School culture	6	100								
9	School culture	6	100								
11	Professional practice									6	100
12	Professional practice	1	16.7							5	83.3
13	Professional practice					1	16.7			5	83.3
14	Level of control							6	100		
15	Level of caring			6	100						
18	Professional practice									6	100
21	School culture	6	100								
22	Model ideal behavior			1	16.7	5	83.3				
23	Model ideal behavior					5	83.3	1	16.7		
25	School culture	6	100								

(continued)

APPENDIX H2 (continued)

Item	Expected domain	School culture		Level of caring		Model ideal behavior		Level of control		Professional practice	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
26	School culture	5	83.3			1	16.7				
28	Model ideal behavior					6	100				
30	School culture	6	100								
31	Level of caring			5	83.3					1	16.7
33	Professional practice									6	100
34	Professional practice									6	100
36	School culture	6	100								
37	School culture	6	100								
38	Level of caring			5	83.3	1	16.7				
40	Model ideal behavior			1	16.7	5	83.3				
41	Level of control							6	100		
42	Level of control					1	16.7	5	83.3		
43	School culture	5	83.3							1	16.7
44	School culture	6	100								
46	Model ideal behavior					5	83.3			1	16.7
49	School culture	6	100								
50	School culture	5	83.3			1	16.7				
52	Level of control					1	16.7	5	83.3		

(continued)

APPENDIX H2 (continued)

Item	Expected domain	School culture		Level of caring		Model ideal behavior		Level of control		Professional practice	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
53	School culture	5	83.3			1	16.7				
56	Level of caring			5	83.3					1	16.7
58	Model ideal behavior			1	16.7	5	83.3				
59	Model ideal behavior			1	16.7	5	83.3				
60	School culture	5	83.3			1	16.7				
62	Professional practice							1	16.7	5	83.3
63	Level of control					1	16.7	5	83.3		
64	Model ideal behavior					6	100				

Note. Items are in Appendix H1.

APPENDIX H3

ASSOCIATION AND CLARITY FOR ITEMS WITH AT LEAST 80% AGREEMENT ON CONTENT VALIDATION
 INSTRUMENT FOR THE QUESTIONNAIRE ASSESSING PERSONAL AND ENVIRONMENTAL ATTRIBUTES,
 DECEMBER 2004

	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
SCHOOL CULTURE						
7. I am aware of the history of the school.	6	3.67	0.52	6	3.00	0.00
9. I know who wrote our school's mission statement.	6	3.50	0.55	6	2.50	0.84
21. Teachers are often recognized for their achievements.	6	3.40	0.55	6	2.83	0.41
25. Our School has a written mission statement.	6	3.67	0.52	6	3.00	0.00
26. Teachers understand the principal's vision for the school.	5	3.50	0.55	5	2.83	0.41
30. Teacher morale in our school is poor.	6	3.17	1.17	6	2.50	0.84
36. Students are often recognized for their achievements	6	3.67	0.52	6	2.83	0.41
37. Our school's mission statement is displayed prominently throughout the school.	6	3.83	0.41	6	3.00	0.00
43. Support staff are often recognized for the contribution they make to the school.	5	3.50	0.55	5	2.83	0.41
44. I am not aware of the history of our community.	6	3.17	0.98	6	2.50	0.84
49. Following our school's mission statement will help achieve our principal's vision for our school.	6	3.17	0.75	6	2.83	0.41
50. Students do not understand their principal's vision for their school.	5	3.00	0.89	5	2.33	0.82
53. Support staff understand the principal's vision for the school.	5	3.33	0.52	5	2.83	0.41
60. The community understands the principal's vision for the school.	5	3.67	0.52	5	3.00	0.00
	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
LEVEL OF CARING						
1. The principal of our school takes time to listen to teachers.	5	3.83	0.41	5	3.00	0.00
15. The principal shows concern for the students.	6	3.33	0.52	6	2.83	0.41
31. The principal shows concern for the teachers.	5	3.17	0.41	5	2.67	0.52
38. The principal of our school is a good listener.	5	3.50	0.55	5	2.83	0.41
56. The teachers show concern for the principal.	5	3.50	0.55	5	2.67	0.82

(continued)

APPENDIX H3 (continued)

	Association			Clarity		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
MODELING IDEAL BEHAVIOR						
22. In our school there is open communication between the principals and teachers.	5	3.17	0.41	5	2.83	0.41
23. The principal's actions do not always match how he or she says one should behave.	5	3.17	0.75	5	2.17	0.98
28. In our school, there is open communication between the teachers and students.	6	3.50	0.55	6	2.83	0.41
40. In our school, there is open communication between the principal and students.	5	3.50	0.55	5	2.83	0.41
46. In our school, the principal shows respect to the teachers.	5	3.50	0.55	5	2.83	0.41
58. In our school, teachers show respect to the principal.	5	3.50	0.55	5	2.83	0.41
59. I trust our principal.	5	3.50	0.55	5	2.67	0.82
64. Our principal does not always tell teachers the truth.	6	3.33	0.82	6	2.50	0.55
LEVEL OF CONTROL						
5. Discipline is a problem at our school.	5	3.17	0.98	5	2.33	0.52
14. Teachers take care of the discipline in their classrooms.	6	3.50	0.55	6	2.83	0.41
41. The principal or assistant principal are the main disciplinarians in the school.	6	3.50	0.55	6	2.83	0.41
42. At our school, too many resources are allocated to athletics.	5	3.33	0.52	5	2.50	0.84
52. Everyone in school knows what to do in an emergency.	5	3.50	0.55	5	3.00	0.00
63. At our school, there are not enough resources allocated to academics.	5	3.50	0.55	5	2.83	0.41
PROFESSIONAL PRACTICE						
2. The principal closely follows the established process for evaluating teachers.	5	3.50	0.55	5	2.83	0.41
3. The principal is often seen visiting classrooms.	5	3.33	0.52	5	3.00	0.00
11. Teacher evaluations are important at our school.	6	3.50	0.55	6	3.00	0.00
12. The principal is often seen in the hallways.	5	3.67	0.52	5	3.00	0.00
13. The principal and teachers share in the decision making process.	5	3.67	0.52	5	3.00	0.00
18. The principal uses the evaluation process as an opportunity to provide teachers with feedback on their job performance.	6	3.50	0.55	6	2.83	0.41
33. Once teacher evaluations are done, they are filed and never discussed again.	6	3.17	0.98	6	2.50	0.84
34. The principal evaluates teachers informally by "wandering around".	6	3.33	0.82	6	2.67	0.52
62. The principal asks teachers to evaluate his or her performance.	5	3.67	0.52	5	3.00	0.00

APPENDIX I

ITEM NUMBERS FOR TEACHERS' RESPONSES ON THE PREDICTOR VARIABLES

Item	Statement
21	The principal of our school takes time to listen to teachers.
22	Our school's mission statement is displayed prominently throughout the school.
23	Everyone in our school knows what to do in an emergency.
24	The principal uses the evaluation process as an opportunity to provide teachers with feedback about their job performance.
25	I am aware of the history of our school.
26	The principal shows concern for the teachers.
27	The principal or assistant principal are the main disciplinarians in the school.
28	In our school, there is open communication between the principal and teachers.
29r ¹	Discipline is a problem at our school.
30	The principal closely follows the established process for evaluating teachers.
31	In our school, the principal shows respect for the teachers.
32	Teachers take care of discipline in their classrooms.
33	Our school has a written mission statement.
34	The principal shows concern for the students.
35	The principal evaluates teachers informally by "wandering around."
36	The community understands the principal's vision for our school.
37	The principal is often seen visiting classrooms.
38r ¹	Our principal does not always tell teachers the truth.
39	Teachers show concern for the principal.
40r ¹	The principal's actions do not always match how he or she says one should behave.

¹ recoded item

APPENDIX J1
ANOVA AND CORRELATION COEFFICIENTS
FOR THE REGRESSION OF CREATING CULTURE ON THE PREDICTOR VARIABLES

Table J1-1
Model Summary of the ANOVA for the Regression of Creating Culture on the Predictor Variables

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	Change Statistics		<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² Change	<i>F Change</i>			
1	.52	.27	.17	.40	.27	2.67	13	92	.00

Table J1-2
Results of the ANOVA for the Regression of Creating Culture on the Predictor Variables

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	5.56	13	.43	2.67	.00
	Residual	14.74	92	.16		
	Total	20.29	105			

Table J1-3

Correlation Coefficients for the Variables in the Regression of Creating Culture on the Predictor Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Creating culture	1.00	-.46**	-.34**	-.10	-.17*	-.04	-.08	-.08	.01	.02	-.07	-.03	-.04	-.01
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.17*	-.14	.30*	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.20*	.27*
7. Total years as principal							1.00	.63**	.17*	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J1-3 (continued)

10. Principal's gender	1.00	-.18	.20*	-.06	-.07
11. Teachers' total years in education		1.00	.24*	-.02	.15
12. Teachers' total years with principal			1.00	-.11	.05
13. Rural				1.00	-.40**
14. Urban					1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J2
ANOVA AND CORRELATION COEFFICIENTS
FOR THE REGRESSION OF COMMUNICATION ON THE PREDICTOR VARIABLES

Table J2-1
Model Summary of the ANOVA for the Regression of Communication on the Predictor Variables

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	Change Statistics		<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² Change	<i>F Change</i>			
1	.65	.42	.34	.33	.42	5.17	13	92	.00

Table J2-2
Results of the ANOVA for the Regression of Communication on the Predictor Variables

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	7.43	13	.57	5.17	.00
	Residual	10.16	92	.11		
	Total	17.60	105			

Table J2-3

Correlation Coefficients for the Variables in the Regression of Communication on the Predictor Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Communication	1.00	-.59**	-.48**	-.22*	-.24*	.05	-.02	-.10	-.04	-.12	.00	-.13	.02	-.02
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16*	-.14	.30**	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.19*	.27*
7. Total years as principal							1.00	.63	.17	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J2-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18*	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J3

ANOVA AND CORRELATION COEFFICIENTS FOR THE REGRESSION OF CREATING CULTURE ON THE PREDICTOR VARIABLES WHEN ONLY THE PRINCIPALS' RESPONSES FROM THE PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE WERE USED IN THE PRINCIPAL COMPONENTS ANALYSIS

Table J3-1

Model Summary of the ANOVA for the Regression of Creating Culture on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	<i>Change Statistics</i>		<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² <i>Change</i>	<i>F Change</i>			
1	.53	.28	.18	.41	.28	2.74	13	92	.00

Table J3-2

Results of the ANOVA for the Regression of Creating Culture on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	6.02	13	.46	2.74	.00
	Residual	15.55	92	.17		
	Total	21.57	105			

Table J3-3

Correlation Coefficients for the Variables in the Regression of Creating Culture on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Creating culture	1.00	-.48**	-.35**	-.15	-.19*	.03	-.02	-.04	.06	-.01	-.06	.01	-.06	.05
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16*	-.14	.30*	.03	.16	.07	-.27
6. Principal's total years in education						1.00	.64	.43**	.27*	.00	.16	.34**	-.19	.27
7. Total years as principal							1.00	.63**	.17	.18	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J3-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J4

ANOVA AND CORRELATION COEFFICIENTS FOR THE REGRESSION OF SERVING AS A CHANGE AGENT ON THE PREDICTOR VARIABLES WHEN ONLY THE PRINCIPALS' RESPONSES FROM THE PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE WERE USED IN THE PRINCIPAL COMPONENTS ANALYSIS

Table J4-1

Model Summary of the ANOVA for the Regression of Serving as a Change Agent on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	<u>Change Statistics</u>		<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² Change	<i>F Change</i>			
1	.56	.31	.21	.42	.31	3.19	13	92	.00

Table J4-2

Results of the ANOVA for the Regression of Serving as a Change Agent on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	7.16	13	.55	3.19	.00
	Residual	15.89	92	.17		
	Total	23.05	105			

Table J4-3

Correlation Coefficients for the Variables in the Regression of Serving as a Change Agent on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Change agent	1.00	-.49**	**-.40	-.23*	-.20*	.04	.00	-.09	-.10	-.16	-.04	-.14	.04	-.07
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16	-.14	.30*	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.19	.27*
7. Total years as principal							1.00	.63**	.17	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J4-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18*	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J5

ANOVA AND CORRELATION COEFFICIENTS FOR THE REGRESSION OF COMMUNICATION ON THE PREDICTOR VARIABLES WHEN ONLY THE PRINCIPALS' RESPONSES FROM THE PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE WERE USED IN THE PRINCIPAL COMPONENTS ANALYSIS

Table J5-1

Model Summary of the ANOVA for the Regression of Communication on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	<i>Change Statistics</i>		<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² <i>Change</i>	<i>F Change</i>			
1	.61	.37	.28	.47	.37	4.13	13	92	.00

Table J5-2

Results of the ANOVA for the Regression of Communication on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	11.92	13	.92	4.13	.00
	Residual	20.41	92	.22		
	Total	32.34	105			

Table J5-3

Correlation Coefficients for the Variables in the Regression of Communication on the Predictor Variables When Only the Principals' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Communication	1.00	-.53**	-.47**	-.22*	-.31*	.00	.00	-.03	-.03	-.11	-.09	-.11	.09	.03
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16*	-.14	.30*	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.19*	.27*
7. Total years as principal							1.00	.63**	.17	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J5-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18*	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J6

ANOVA AND CORRELATION COEFFICIENTS FOR THE REGRESSION OF CONSIDERATION ON THE PREDICTOR VARIABLES WHEN ONLY THE TEACHERS' RESPONSES FROM THE PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE WERE USED IN THE PRINCIPAL COMPONENTS ANALYSIS

Table J6-1

Model Summary of the ANOVA for the Regression of Consideration on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	<i>Change Statistics</i>			<i>df</i> ₁	<i>df</i> ₂	<i>Sig. F Change</i>
					<i>R</i> ² <i>Change</i>	<i>F Change</i>				
1	.57	.32	.23	.35	.32	3.36	13	92	.00	

Table J6-2

Results of the ANOVA for the Regression of Consideration on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	5.31	13	.41	3.36	.00
	Residual	11.20	92	.12		
	Total	16.51	105			

Table J6-3

Correlation Coefficients for the Variables in the Regression of Consideration on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Consideration	1.00	-.49**	-.36**	-.17*	-.10	.08	-.07	-.06	-.04	-.10	.00	-.06	-.09	.04
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16*	-.14*	.30*	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.19*	.27*
7. Total years as principal							1.00	.63**	.17*	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J6-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18*	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J7

ANOVA AND CORRELATION COEFFICIENTS FOR THE REGRESSION OF SERVING AS A CHANGE AGENT ON THE PREDICTOR VARIABLES WHEN ONLY THE TEACHERS' RESPONSES FROM THE PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE WERE USED IN THE PRINCIPAL COMPONENTS ANALYSIS

Table J7-1

Model Summary of the ANOVA for the Regression of Serving as a Change Agent on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	<i>Change Statistics</i>			<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² <i>Change</i>	<i>F Change</i>				
1	.59	.35	.26	.39	.35	3.83	13	92	.00	

Table J7-2

Results of the ANOVA for the Regression of Serving as a Change Agent on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	7.41	13	.57	3.83	.00
	Residual	13.68	92	.15		
	Total	21.09	105			

Table J7-3

Correlation Coefficients for the Variables in the Regression of Serving as a Change Agent on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Change agent	1.00	-.54**	-.45**	-.27*	-.16*	.03	-.02	-.05	-.12	-.15	-.06	-.05	.06	-.05
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16*	-.14	.30*	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.19*	.27*
7. Total years as principal							1.00	.63**	.17*	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J7-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18*	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.

APPENDIX J8

ANOVA AND CORRELATION COEFFICIENTS FOR THE REGRESSION OF COMMUNICATION ON THE PREDICTOR VARIABLES WHEN ONLY THE TEACHERS' RESPONSES FROM THE PERCEPTIONS OF PRINCIPAL'S LEADERSHIP QUESTIONNAIRE WERE USED IN THE PRINCIPAL COMPONENTS ANALYSIS

Table J8-1

Model Summary of the ANOVA for the Regression of Communication on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>SE</i>	<i>Change Statistics</i>		<i>df1</i>	<i>df2</i>	<i>Sig. F Change</i>
					<i>R</i> ² <i>Change</i>	<i>F Change</i>			
1	.57	.32	.23	.43	.32	3.34	13	92	.00

Table J8-2

Results of the ANOVA for the Regression of Communication on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

<i>Model</i>		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	8.19	13	.63	3.34	.00
	Residual	17.37	92	.19		
	Total	25.56	105			

Table J8-3

Correlation Coefficients for the Variables in the Regression of Communication on the Predictor Variables When Only the Teachers' Responses from the Perceptions of Principal's Leadership Questionnaire Were Used in the Principal Components Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Communication	1.00	-.45**	-.46**	-.15	-.25*	.00	.03	-.03	-.03	-.07	-.07	-.09	.09	.01
2. Modeling ideal behavior		1.00	.55**	.44**	.41**	-.02	.01	.00	.11	.09	-.01	.01	-.08	.02
3. Evaluation process			1.00	.42**	.27*	-.13	-.06	-.11	-.02	.16	.13	-.11	.05	.06
4. School awareness				1.00	.23*	-.04	-.05	-.02	.10	.05	.11	-.01	-.03	-.01
5. Discipline procedures					1.00	.03	.12	.16*	-.14	.30*	.03	.16	.07	-.27*
6. Principal's total years in education						1.00	.64**	.43**	.27*	.00	.16	.34**	-.19*	.27*
7. Total years as principal							1.00	.63**	.17*	.18*	.09	.40**	.07	.15
8. Principal's total years in present position								1.00	.11	.26*	-.01	.60**	.03	.06
9. Number of students in school									1.00	.05	.12	.22*	-.56**	.46**

(continued)

Table J8-3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Principal's gender										1.00	-.18*	.20*	-.05	-.07
11. Teachers' total years in education											1.00	.24*	-.02	.15
12. Teachers' total years with principal												1.00	-.11	.05
13. Rural													1.00	-.40**
14. Urban														1.00

Note. * $p < .05$. ** $p < .001$.