TEACHER MOTIVATION IN SELECTED HIGH AND LOW ACHIEVING

ELEMENTARY SCHOOLS

by

SANDRA KAY JOLLY SHELNUTT

(Under the Direction of C. Thomas Holmes)

ABSTRACT

The purpose of this study was to examine the differences between the components of teacher motivation in high and low achieving elementary schools. This study measured the motivational components influenced by the principal as identified by the *Teacher Motivation Diagnostic Questionnaire* (TMDQ). The four components of the model are: self-concept of ability, attitude toward the principal, principal's expectations, and future utility.

Data used in this study were collected from a randomly selected sample of elementary schools defined as high achieving and low achieving. The defining factor for selection was ranking by the state of Georgia on the Georgia Public Education Report Card. Selected schools were ranked in the top or bottom performing schools for three consecutive years. A total of 144 teachers were mailed the TMDQ. Responses were received from 86 teachers.

The results obtained on comparison of the TMDQ between the low and high achieving elementary schools indicated the following: there is a statistically significant difference between the total motivation mean scores, mean scores for teachers' perceptions of the principal's expectations for student achievement, and mean scores for teachers' perceptions of the future utility of improved performance. Conversely, the results obtained on comparison of the TMDQ between the low and high achieving elementary schools indicated that there is not a statistically significant difference between the mean scores of the teachers' attitude toward the principal and the mean scores of teachers' self-concept of ability. Conclusions from this study recognize that teachers at low achieving elementary schools have different motivational needs than those at high achieving elementary schools. Principals have the task of focusing not just on the demands of today's standards but also on the motivational needs of their teachers.

INDEX WORDS: Motivation, Teacher Motivation, Student Achievement, Self-Concept of Ability, Teacher Efficacy, Principal's Expectations

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CHAPTER 1

THE PROBLEM

Schools in the United States are currently under tremendous pressure to increase student academic achievement levels. Ongoing educational reform initiatives place responsibility for change and improvement directly upon individual schools, and 49 of 50 states have implemented standards-based education to provide schools with specific academic goals that they must meet (Capraro, 2002). As the educational leader in a school, the school principal carries the ultimate responsibility of increasing student academic achievement levels (Trail, 2000).

American schools are accountable for students meeting high stakes benchmarks in the substantive areas of language arts, mathematics, science, technology, and history (Barna, 2002). These benchmarks are the culmination of an educational reform agenda designed to better prepare students for the 21st century and fulfill the mandates set forth by federal and state statutes. Accountability efforts concentrate on training students beyond basic competencies by developing each student's ability to think critically, work cooperatively, and develop technological proficiency (Marzano, Norford, Paynter, Pickering, & Gaddy, 2001).

Requiring accountability by using standards necessitates the exploration and determination of those factors essential to teaching and learning in standards-based education (Capraro, 2002). Capraro suggested that the potential for successful

educational reform may be limited until researchers identify more of the tools and resources necessary to optimally teach identified skill levels.

One factor that researchers identify as critical to fostering improved student academic achievement is the principal's ability to motivate teachers (Rowan, Chiang, & Miller, 1997). Studies indicated that the principal has a key role in initiating and affecting the level of teacher motivation demonstrated in the school. Ultimately, how well a principal supports and encourages teacher motivation may directly affect the degree of student academic achievement that occurs in the school (Weller & Weller, 2000; Williams, 2000).

Current research examines several potential areas of principal influence that may stimulate teacher motivation. Researchers suggest that each of the following factors may individually or collectively contribute to teachers' motivational levels: the principal's leadership that sets the tone of the school, the learning climate, the teachers' level of professionalism, and morale, and the degree of school concern for the students (Blase & Kirby, 2000; Davis & Wilson, 2000; Kealey, Peterson, Gaul, & Dinh, 2000; Matthews & Holmes, 1992; Rowan, et al., 1997; Sultanik, 2000; Weller & Weller, 2000).

The literature indicates that levels of a school's teacher motivation can negatively or positively affect school academic outcomes. Researchers found that high levels of teacher motivation strongly and directly correlate with significant improvement in student achievement (Davis & Wilson, 2000). Motivation may affect the ability of teachers to acquire the new skills and knowledge needed to comply with educational reform guidelines (Kealey et al., 2000).

The application of motivational theory to academic settings is a major challenge for school leaders. According to Lunenburg and Ornstein (1991), school administrators must learn to appropriately initiate motivation in the school climate. Principals promote a climate of excellence by providing a framework for teacher motivation for the express purpose of maximizing teacher performance while promoting teacher professional growth and change.

Justification

Principals as school leaders must be responsible for motivating school personnel and positively influence staff and student behavior (Hersey & Blanchard, 1993). Principals influence positive behaviors by encouraging and motivating staff to complete tasks and to reach personal and organizational goals. Researchers define effective leadership to include the ability to understand what motivates students and staff, to predict responses to leadership attempts, and to direct future behavior. One common component across multiple researchers' definitions of leadership is that the leader exerts influence over the followers (Yukl, 1994).

Researchers make the case that effective leaders should expand leadership skills to include "directing, changing, and controlling behavior" (Hersey & Blanchard, p. 13). The literature indicates that schools with low-achieving students have difficulties in recruiting talented teachers and maintaining high morale among teachers. Yet, high levels of teacher motivation and talent significantly improve student achievement in schools with low-achieving students (Rowan et al., 1997). Schools employ various strategies with mixed success to address this conundrum. For instance, one large (over 96,000 students) suburban school system described by Searcy (2001) enacted a bonus system to motivate

teachers to remain at the low-achieving schools. The district offered a $1,000 bonus to any teacher who chose to not transfer from “such challenging schools”. Rowan et al. (1997) asserted that attention to recruiting and retaining teachers in schools that serve low achieving students must continue to be a priority for educational policy makers.

Current research on the effect of a principal’s influence on teacher motivation has yet to provide adequate models that effectively improve teacher motivation levels. The problem examined in this study focuses on the need to understand the principal’s influence on teacher motivation. In turn, understanding a principal’s influence on teacher motivation may lead to greater understanding of which factors contribute to an increase or decrease of teacher motivation levels.

This study will be modeled after McNeely’s 1996 dissertation *Student Achievement and Teacher Motivation in Elementary Schools.* McNeely examined the differences in aspects of teacher motivation influenced by the principal. In particular, her dissertation studied the complex interrelationship of how the principal’s influence affects motivation in reaction to the schools’ test scores. McNeely’s study was based on the assumption that principals are influenced by test scores and their reactions to the test scores have an influence on teacher motivation.

Conceptual Framework

Leaders who establish positive relationships with followers effectively influence the followers’ behaviors (Matthews & Holmes, 1992). According to Davis and Wilson (2000), the literature indicated that leadership and communication play a pivotal role in creating an empowering environment. An empowering environment is one that is positive and motivating and promotes self-determination and self-sufficiency. Leaders must have

the skills to effectively communicate to be effective. Covey (1989) stressed that the most important life skill is the ability to communicate, but the ability to communicate is dependent on the quality of its component skills of speech, reading, writing, and listening. Listening is essential to understanding others, and therefore a critical component of having effective interactions (Covey). Furthermore, Covey believed that a person's behavior is the most critical aspect of his/her ability to influence others. Covey argued that the perceptions of a person's actions have the greatest power on their ability to influence others.

Positive teacher-student relationships are vital for teachers to be successful in motivating students (Matthews & Holmes, 1992). The literature indicated that positive teacher-student relationships is a means by which teachers can increase the likelihood students will work harder to reach higher levels of academic performance (Matthews & Holmes). To develop teacher-student relationships, the most effective means are frequent interactions that ultimately result in the creation of positive feelings of the participants (Matthews & Holmes).

The teacher/student relationship parallels the principal/teacher relationship, according to Rogers and Renard (1999). Just as the teacher must develop positive relationships with students to promote student motivation, the principal must build positive relationships with teachers to encourage successful teacher motivation. According to Matthews and Brown (1976), a principal can most effectively motivate teachers to stress student achievement in their classrooms when teachers have positive attitudes toward the principal, and teachers believe that the principal highly values

achievement. Additionally, a principal who builds relationships instead of managing teachers is more likely able to enhance teachers' motivation (Rogers & Renard).

Effective principals could theoretically exhibit the same behavioral characteristics of effective teachers identified by Matthews and Holmes (1992). Cheerful personalities are better received than grumpy personalities. Principals who have consistent personalities provide a sense of calm versus those with unpredictable personalities. Finally, principals who are considerate and caring towards their teachers are more likely able to develop positive relationships (Matthews & Holmes). Peters and Waterman (1982) summed the importance of positive relationships between leaders and subordinates with this statement: "There is hardly a more pervasive theme in excellent companies than respect for the individual" (p. 36).

The development of positive relationships between the principal and teachers is insufficient by itself to motivate teachers towards student achievement. The principal must also convey the expectancy of excellence, just as the teacher must convey this expectation in the classroom (Matthews & Holmes, 1992). Research indicated that a clear expression of the principal's expectations facilitates the implementation of these expectations (Blase & Kirby, 2000).

Purpose of the Study

The purpose of this study was to examine the differences between the components of teacher motivation in high achieving and low achieving elementary schools. Elementary schools defined as either high achieving or low achieving are those ranked by the Georgia Department of Education in the top and bottom 100 schools for three previous years based on standardized test scores. This study measured the motivational

components influenced by the principal as identified by Matthews and Holmes (1982). This study sought to investigate the potential differences of principal influence on teacher motivation depending on classification as a high or low achieving school.

Research Questions

The following research questions direct the research process:

1. Are teachers more highly motivated in high achieving elementary schools than in low achieving elementary schools?

2. Are teachers' attitudes toward the principal more positive in high achieving than in low achieving elementary schools?

3. Are the teachers' perceptions of the principals' expectations for student achievement greater in high achieving elementary than in low achieving elementary schools?

4. Do teachers have a greater self-concept of ability in high achieving elementary schools than in low achieving elementary schools?

5. Are the teachers' perceptions of the future utility of improved performance greater in high achieving elementary schools than in low achieving elementary schools?

Constraints

This study is limited to the four motivational components identified by Matthews and Holmes (1982) as found in the Teacher Motivational Diagnostic Questionnaire (TMDQ). These components are those aspects of teacher motivation that are believed by the authors to be influenced by the principal:

1. The teachers' attitude toward the principal.

2. The teachers' perceptions of the principals' expectations for improved student achievement.
3. The teachers' self-concept of ability.
4. The teachers' belief about their future utility of efforts.

In addition to these limitations, this study is constrained by school selection. The elementary schools' selection was based on their rankings found on the Georgia Public Education Report Cards. The criterion chosen was the Iowa Test of Basic Skills (ITBS) Grade 5 Composite Scores for years 1997-2000. Only those schools that appeared in the top or bottom 100 schools for all three years were chosen to participate in the study.

Operational Definitions

High Achieving Elementary Schools – Those schools that had been ranked in the top 100 elementary schools on the Georgia Public Education Report Cards for three consecutive years. The criterion chosen was the Iowa Test of Basic Skills (ITBS) Grade 5 Composite Score for years 1997-2000.

Low Achieving Elementary Schools – Those schools that had been ranked in the bottom 100 elementary schools on the Georgia Public Education Report Cards for three consecutive years. The criterion chosen was the Iowa Test of Basic Skills (ITBS) Grade 5 Composite Score for years 1997-2000.

Motivation refers to the drive or need to fulfill physiological or psychological wants and desires (Maslow, 1954).

Self-concept of ability refers to the teachers' beliefs in their ability to produce a positive outcome in student achievement (Parkay, Olenik, & Proller, 1988). The TMDQ used the following questions to measure this component (Matthews & Holmes, 1982):

4. How much higher could your students' test scores be?

8. How good are you at helping students raise test scores?

9. How much could your students' achievement be raised?

13. How good could you be at improving student achievement?

Attitude toward the Principal refers to the relationship between the school principal and teachers. A positive relationship is one described as trusting and respectful. A negative relationship is one described as hostile and insecure. The TMDQ used the following questions to measure this component (Matthews & Holmes, 1982):

2. How much do you want to please your principal?

6. How much do you want to make your principal happy?

11. How much does your principal try to please you?

15. How much do you like the way your principal works with you?

Principal's Expectations refers to the teachers' perceptions of the principal's expectations for improved student achievement. The TMDQ used the following questions to measure this component (Matthews & Holmes, 1982):

1. How much does your principal want test scores to improve?

5. How much does your principal expect test scores to improve?

12. How important are high-test scores to your principal?

16. How much does your principal want higher test scores?

Future Utility refers to the teachers' perception that they can make a significant difference in their students' future academic performance. The TMDQ used the following questions to measure this component (Matthews & Holmes, 1982):

3. How much would higher student achievement help you?

7. How much would higher achievement be to your advantage?

10. How much would you benefit from higher achievement?

14. How much good would higher test scores do you?

Organization of the Study

Chapter 1 presented an introduction to the study. The introduction included a justification of the study, conceptual framework, the purpose of the study, research questions used in the study, constraints of the study, operational definitions, and the organization of the study.

Chapter 2 consists of a review of literature beginning with a historical review of motivation theories. The implications of motivation include the principal relations to teachers, teacher commitment, vitality, principal's behaviors, student achievement and in-service training. Additionally, this chapter discusses the theoretical framework of this study, which is the Matthews and Holmes Model (1982).

Chapter 3 describes the research procedures. The null hypotheses, population sample, data collection, mean scores, instrumentation, and data analysis are given. Chapter 4 provides an analysis of the findings, conclusions of the study, and recommendations. Chapter 5 summarizes the study and provides a focus for future reflection on teacher motivation and the influence a principal can have on it.

CHAPTER 2

REVIEW OF LITERATURE

Theoretical Considerations

This review of literature focuses on a historical review of motivation theories, the implications of teacher motivation and its influence on student achievement, and a description and discussion of the Matthews and Holmes model (1992). The Matthews and Holmes model includes the following four aspects of teacher motivation found to impact student learning: self-concept of ability, attitude toward the principal, principal's expectations, and future utility.

The literature was acquired through Education Resources Information Clearinghouse (ERIC) searches, Galileo searches, resources found at local university libraries, and personal resources. Articles selected for review come from educational journals and research journals. Books include classical works from the original authors and instructional texts for educational leaders.

Review of Motivation Theories

The study of motivation theory attempts to understand past human behavior for the purpose of predicting, changing, or controlling future behavior (Hersey & Blanchard, 1993). Motivation, derived from the Latin word movere which means 'to move,' refers to "those processes within an individual that stimulate behavior and channel it in ways that should benefit the organization as a whole" (Lunenburg & Ornstein, 1991, p.89). In addition, motivation may be defined as "the person works hard; the person keeps at his or

her work; and the person directs his or her behavior toward appropriate goals" (Lunenburg & Ornstein).

Increasingly, the literature from educational leadership and business portray the importance of examining motivation within the framework of organizational climate and culture to determine the quality, health, and development of private and public institutions (Owens, 1991). Organizational culture is a component of organizational climate, and refers to the ways of thinking that are characteristic of the group of people in the organization. Organizational climate refers to the perceptions of the members of the organization regarding the organization. Owens links climate directly to the satisfaction levels of organization members (Owens).

This study will utilize theoretical underpinnings from Taylor's (1942) work in classical organizational theory, Mayo's (1933) Hawthorne studies, and works by behavioral scientists Argyris (1962), Herzberg (1959), MacGregor (1960), and Maslow (1954). Research by Sergiovanni and Starratt (1993) and Evans (1998) that demonstrated the application of behavioral science theories to the school setting will be analyzed and discussed within the context of teacher motivation.

Owens (1991) suggested that two major theoretical lines of thought can be applied toward organization: classical organizational theory and human relations or resources theory. An examination of each of these approaches in motivation theory helps delineate a model of human behavior that may be applied to describe teacher behaviors in school settings. Owens' classical theoretical orientation is characterized by control, close supervision, vertical communication, detailed rules and regulations, and discouragement of collaboration. The second orientation proposed by Owens is a human relations or

resources orientation that utilizes a process of participant socialization and strong collaboration between the organizational members. The human relations orientation acknowledges extrinsic and intrinsic motivation at the classroom teaching level as critical to accomplishment of organizational goals.

Classical Organizational Theory

Taylor's *Scientific Principles of Management* (1942) described his efforts to determine the most productive ways to lead an organization by conducting research focused on improving employee productivity. His classical work set in motion systematic research to identify the most effective methods for increasing productivity. Taylor introduced time and motion studies, employee performance standards, and job training methods as new strategies to increase employee productivity Taylor's methods emphasized increasing the output of the organization by competition rather than by collaboration.

Critics of the classical organizational theory believe that managers are indifferent to human needs and that Taylor did not consider worker motivation a prioritized factor of production. Furthermore, the efficacy of the classical organizational theory is questionable according to critics who believe that the monetary incentives given by classicists do not provide adequate motivation for employees (Lunenburg & Ornstein, 1991).

Human Relations Approach

Whereas the classical organizational theory focuses on improving human productivity, the human relations approach centers on the interrelationships of workers with each other and with supervisors. The human relations approach began with Mayo's

famous Hawthorne studies, which researched the impact of interpersonal relationships on motivation (Mayo, 1933). These studies indicated that workers are more highly motivated and thus more productive when critical factors contributing to interpersonal relationships are integrated into a job environment. Mayo claimed that employees had critical needs beyond physiological and safety needs that significantly contribute to motivation and productivity, such as positive morale, a feeling of belonging, and the perception of effective management .

Lunenburg and Ornstein (1991) summarized the major assumptions of the human relations approach in four points: 1) Employees are motivated both by compensation and social and psychological needs and that these needs are more essential to influencing productivity than the work environment 2) Work behavior is affected by the employees' values and beliefs 3) Informal social groups are formed within the work environment; these informal groups can be beneficial or detrimental to the achievement of the organizational goals and 4) Employees are more highly motivated when they have supportive managers who communicate effectively (Lunenburg & Ornstein).

Behavioral Science Approach

Behavioral scientists attempted to reconcile the classical organizational theories and the human relations approach by analyzing the individual within the context of how he or she relates to the organization. Researchers consider the classical theory of understanding human motivation developed by Maslow (1954) as the foundation of the behavioral science approach (Lunenburg & Ornstein, 1991). Maslow based his theory on the idea that an organizational leader must attempt to satisfy subordinates' hierarchy of needs. These needs are physiological, safety, belonging and love, desire for self-respect

or self-esteem, and self-actualization. Maslow related that the need hierarchy goes from physiological to self-actualization in sequential order; thus, one need must be fulfilled before the next one can be addressed. Maslow further contended that a person becomes functionally autonomous only when he or she has reached the self-actualized level of motivation (Maslow, 1954). Therefore, from Maslow's view, worker motivation is intrinsically dependent on prior fulfillment of basic needs.

Theory X and Theory Y

Both the Theory X orientation and Theory Y orientation are closely related to MacGregor's Theory X and Theory Y concepts. Based on Maslow's work, MacGregor subsequently proposed a framework for management styles' impact on employee productivity (Deci, 1973). Theory X and Theory Y are dichotomous views of motivation in an organizational setting. A Theory X orientation is one in which employees are viewed as uncommitted to work and the organization. Under Theory X management, policies, rules, and operating procedures are the motivating factors that elicit what gets done and how it gets done. Theory X is based on the assumption that employee motivation is determined by the physiological and safety needs of an individual. The manager's role, therefore, is to provide direct control and supervision. MacGregor believed that this form of management had limited success when the physiological and safety needs of the employee have already been met (MacGregor, 1960). Compliance is the best that can be hoped for from employees.

Contrary to Theory X, Theory Y assumes employees have the ability to be self-directed and self-motivated. Theory Y is characterized by the belief that employees are intrinsically satisfied by work, and encourages shared vision and goals that represent the

culture of the workplace. Employees in a Theory Y environment are empowered to make decisions and share governance cooperatively with management. Management's role within Theory Y is defined as "a preoccupation with the nature of relationships, with the creation of an environment which will encourage commitment to organizational objectives and which will provide opportunities for the maximum exercise of initiative, ingenuity, and self-direction in achieving them" (McGregor, 1960, p. 132). Creativity, responsibility and ownership are hoped for from employees.

Immaturity-Maturity Theory

In an attempt to analyze and explain indications that Theory X is still widely practiced in organizations, Argyris (1962) compared the values of Theory X assumptions about people with an organizational counterpart of Theory Y. The resulting immaturity-maturity theory seeks to explain the application of Theory X and Y to a work environment (Hersey & Blanchard, 1993). According to Argyris (1976), Theory X created a work environment that included "quasi resolutions of conflict, uncertainty avoidance, mistrust, conformity" (p. 20). Argyris' interpretation of the application of Theory Y to an organization is that it encourages trusting relationships, ultimately resulting in improved interpersonal competence, cooperation, and flexibility. Overall, the effect should increase organizational effectiveness (Argyris, 1962). Research conducted by Argyris (1976) indicated that when employees are allowed to assume more responsibility, productivity exponentially increases. "Giving people the opportunity to grow and develop on the job helps them satisfy more than just physiological and safety needs, which, in turn, motivates them and allows them to use more of their potential in accomplishing organizational goals" (Hersey & Blanchard, 1993, p. 69).

Motivation-Hygiene theory

Motivation-hygiene theory from Herzberg (1959) extended human relations theory by identifying and defining specific additional factors called hygiene factors and motivation factors that impact employee motivation. Hygiene factors relate to the work environment and include issues such as salary, interpersonal relationships, and status (Herzberg). Interestingly enough, according to Evans (1998), hygiene factors may cause or create dissatisfaction that may decrease motivation and productivity, but the factors can not satisfy so therefore they cannot positively motivate the employee (Evans). Motivation factors provide job satisfaction and include achievement, recognition, and increased responsibility (Herzberg). Motivators have a positive influence on job satisfaction which can then lead to increased outcome. Herzberg noted, "the profoundest motivation to work comes from the recognition of individual achievement and from the sense of personal growth in responsibility" (p. 125).

Motivation in the School Setting

Herzberg's 1959 work is applied to the school setting by Sergiovanni and Starratt (1993). Sergiovanni and Starratt classify teacher motivation into three groups: (a) what gets rewarded gets done (b) what is rewarding gets done and (c) what is good gets done (p. 71). The first group "what gets rewarded gets done," is based on rewards, consequences, and extrinsic incentives. There are multiple problems with this first form of motivation for teachers. Teaching is a complex practice or art that requires spontaneity and creativity. Rewarding only what gets done may reduce the likelihood that the art of teaching will be practiced. Secondly, this form of motivation requires frequent supervision to effectively reward teachers. This constant interaction may cause teachers

to become dependent on their supervisors, stifling their professionalism (Sergiovanni & Starratt).

The second group, what is rewarding gets done, relies on teachers satisfying their needs in the work experience. Teachers in this group experience intrinsic motivation based on achievement, recognition, and the work. While what is rewarding gets things done, Sergiovanni and Starratt (1993) argue there is yet a higher level teachers can attain. This group of motivation is the "what is good gets done," based on the willingness to self-sacrifice one's own needs. These are the teachers who are willing to set aside their personal time and resources for the needs of their students. They act or behave because it is the right thing to do. At each motivational level there is an increase in efficiency, effectiveness, and autonomy while a need for supervision simultaneously decreases sequentially.

Principals are challenged by Sergiovanni and Starratt (1993) to practice supervision that recognizes the importance of "what is rewarding gets done" and "what is good gets done," which encourage teachers' independent motivation. Actions to initiate practices that encourage these motivational groups when developing a school climate may further enhance student achievement (Sergiovanni & Starratt).

Evans (1998) redefined Herzberg's Motivation-Hygiene theory to apply to the school setting. She defined motivation as "a condition, or the creation of a condition, that encompasses all those factors that determine the degree of inclination towards engagement in an activity" (p. 34). Evans' research of teacher motivation indicates that teachers are motivated by recognition of their efforts or their talents and demotivated by insufficient recognition.

Evans (1998) sub-divided Herzberg's Motivation factor achievement into two groups: job comfort and job fulfillment. Job comfort relates to factors that teachers use to describe a comfortable school, such as "relaxing" and "secure." Job fulfillment was defined as "a state of mind encompassing all the feelings determined by the extent of the sense of personal achievement which the individual attributes to his/her performance of those components of his/her job which s/he values" (p.11). Evans views job fulfillment as a perception of one's achievements, not an objective evaluation that the achievement has been accomplished. Furthermore, Evans declares motivation is individualistic and therefore different for every teacher.

Implications and Promotion of Motivation

The systematic application of motivational theory to academic settings is a major challenge for school leaders. According to Lunenburg and Ornstein (1991), school administrators must learn to appropriately apply the basic theories of motivation to the school climate. Principals promote a climate of excellence by providing a framework for teacher motivation with the express purpose of maximizing performances and promoting professional growth and change. A review of the literature examining the relationship between teacher motivation and teacher commitment, teacher vitality, principal's behaviors, student achievement, and teacher inservice training follows.

Teacher Motivation and Commitment

Motivated teachers are teachers who love their profession and this motivation, in turn, motivates student learning (Czubaj, 1996). According to Firestone and Pennel (1993), committed and motivated teachers maximize their contributions to their students and schools. "The committed person believes strongly in the object's goals and values,

complies with orders and expectations voluntarily, exerts considerable effort beyond minimal expectations for the good of the object, and strongly desires to remain affiliated with the object" (p. 491). Firestone and Pennell further argue that committed teachers who believe they are doing meaningful work are intrinsically motivated. They assert that meaningful work is intrinsically motivating, and consequently more likely to result in commitment than work that is not meaningful, and therefore not intrinsically motivating.

Several factors may contribute to the meaningfulness of work to help build teacher commitment (Firestone & Pennell, 1993). Research indicates that teachers committed to their students are described as those who have high teacher efficacy, high expectations, and organizational commitment. Moreover, the researchers report teacher commitment is important for teachers to adopt new, more effective, teaching strategies. Teaching commitment enhances the teachers' desire to try new methods and the willingness to exert the required extra effort.

A motivated teacher is someone who is "very enthusiastic about his pupils' work, about his teaching in general and about the school in which he was employed" (Atkinson, 2000, p. 53). Further, the motivated teacher encourages his students and believes he could produce positive outcomes. A teacher defined as demotivated "tended to see his pupils' ability, their progress and their outcomes in a negative light" (p. 53). In addition, this teacher "indicates he found it difficult to be enthusiastic about his pupils' work, about his teaching in general and about the school in which he taught" (p. 53).

Teacher Motivation and Teacher Vitality

Teacher motivation must be analyzed in terms of its effects on teacher vitality. Vitality is defined as "an essential, intangible, positive quality of individuals (and

institutions) that is synonymous with purposeful production, dedicated to the beliefs that produce action and sustained commitment" (Sederberg & Clark, 1990, p. 6). Sederberg and Clark added that motivation includes "dedication and missionary zeal" (p. 6). Teachers who lacked motivation in Sederberg and Clark's study were described as those who had a sense of need and unimportance. They believed that maintaining teacher vitality is a critical component to encourage the promotion and reinforcement of teacher motivation.

Teacher Motivation and Principal's Behaviors

The relationship between teacher motivation and principal behavior may also impact actions of the teacher. "Leadership plays an important role in creating an empowering environment, one that is positive and motivating, one that promotes self-determination and self efficacy" (Davis & Wilson, 2000, p. 350). The researchers found "the more principals participate in empowering behaviors, the greater the impact teachers feel they are able to make by fulfilling work-related tasks" (p. 351). In addition, Davis and Wilson's study indicates that teachers "see that they have choices in selecting actions that will lead toward positive outcomes" (p. 351). The researchers conclude, "that principals' empowering behaviors are associated with teacher job satisfaction and job stress in an indirect manner, through teacher motivation" (p. 351).

Teacher Motivation and Student Achievement

Researchers studied the potential relationship of teacher effects on student achievement (Rowan et al. 1997). The authors characterized teacher effects as teaching ability, teacher motivation, and the teaching environment. Rowan et al. found a statistically significant indication of the impact of teachers' expectations on student

achievement. The "teachers' general force of motivation" (p. 274) variable was found to be not statistically significant. The researchers concluded that teacher expectations have a larger effect on student achievement than a "teacher's general force of motivation" (p. 275). Furthermore, the researchers examined the motivation variables in relation to the achievement level of students. The authors reported that the effects of teacher motivation decline as the average ability level of the student increases. The researchers substantiated these findings with previous research that indicated that teacher effects had a greater impact on low-achieving students than high-achieving students.

Teacher Motivation and Inservice Training

Motivation may be an important factor in the ability to change teacher behaviors when implementing inservice programs. Kealey et al. (2000) found that the teacher motivational component was the most significant factor in affecting change in their study. The authors concluded, "When teachers feel that they are perceived as valuable agents for effecting important changes in their communities, the steps of motivating them to implement a curriculum come more easily" (p. 71).

The study integrated strategies for motivating teachers as part of the inservice training curriculum to examine whether the efficacy of inservice training could be improved. In addition to selected strategies, the authors included specific activities to encourage the building interpersonal relationships with the teachers and between the teachers. This intent was to lead to connections between teachers and instructors and the teachers with each other. Teachers were led by the trainers to view the importance of what they were learning through connections to prior knowledge and relevancy. In addition, the inservice training was held in an environment that was comfortable and

appealing (Kealey et al. 2000). The authors deliberately included the creation of a pleasant environment for training as an action to demonstrate and reinforce appreciation and respect that the trainers had towards the teachers. This was included to contribute to the goal of helping teachers perceive that they are valuable agents to create change.

The researchers found that by intentionally influencing the motivational components of inservice training, successful behavioral changes could be significantly improved. In fact, Kealey et al. (2000) reported a 99% success rate increase with inservice training when motivational components were systematically included as integral parts of the training. The authors attributed the success rate to the effect of "The information, practice, and positive reinforcement from trainers and peers experienced during inservice sessions provide teachers with the ability, confidence, and motivation to practice a new behavior" (p. 272).

Matthews and Holmes Model

In addition to many other responsibilities, principals have the ultimate responsibility of promoting student achievement in their roles as instructional leaders of their schools (Blase & Kirby, 2000). Yet, administrators who attempt to determine efficacious programs to improve student academic performance in their schools by the application of research findings have found little guidance in the literature (Matthews & Holmes, 1992). The literature indicates no variants that consistently produce improved student educational outcomes, and worse, the literature indicates that the same approach may affect different students in diametrically opposing ways. Matthews and Holmes point out that educators sometimes seem to have the choice between no action or action based on an inadequate research models.

To remedy this gap in the literature, Matthews and Holmes (1992) developed a conceptual framework that focuses on factors influenced by educators to use as a model when determining an action plan for increased student academic achievement. The purpose of the model is to define and explain the relationship of specific factors and their effects on student achievement to guide as a specific action plan for school improvement.

The Matthews and Holmes model identifies eight critical assumptions identifying the critical factors supported by the foundation of current educational literature. The model focuses on factors that educators can influence and demonstrates the interactive effects of these factors as contributors toward successful academic improvement. The theoretical underpinnings of the research supporting each assumption will be briefly discussed.

Ability and Performance

The Matthews and Holmes model begins with the assumption that the ability to achieve is a result of the interactional effects between life experiences and the ability to benefit from these experiences (1992). While researchers have argued the "nature versus nurture" controversy for decades, educators must assume that educators do not alter the inherited potential of students, and that educators can and do significantly influence a student's organization of learning experiences. Matthews and Holmes assert that students should either receive instruction in the areas that testing is designed to measure or lower test performance levels should be expected.

The Model's second assumption, that the ability to achieve in school is a threshold variable, underscores the importance of challenging students with learning

experiences that increase ability. The authors point out that the relationship between ability and performance varies by task and that the threshold for each task may be unique.

Effort and Performance

Assumption Three of the Matthews and Holmes model asserts that the motivations of students in school are directly related to their self-concepts of academic ability and desire to achieve in school. The authors state that self concept is as closely related to academic performance as mental ability but that self-concept of ability is a better predictor of achievement that self-esteem as a general construct. Accordingly, Assumption Three reminds educators to focus efforts to increase achievement towards students' self-concepts of ability to succeed academically and to consider efforts to increase the students' desire to succeed in school. Focusing on increasing motivation provides direction to influence student effort.

Nonlinear Relationships

Assumption Four proposes that relationships between affecting student motivation and achievement are not linear. The authors stress that the influence of motivation and motivational factors on effort, and the subsequent effect of effort on student performance are more complex than these factors alone. The research indicates that the levels most conducive to academic effort are actually optimally presented in the moderate range. Accordingly, educators need to carefully design academic performance plans to ensure that minimal levels are provided, but that students are not so highly motivated that anxiety inhibits productive effort.

Resources and Performance

The Matthews and Holmes Model addresses the issues of resources and performance by proposing Assumption Five, which states that the achievement of students in school is affected by the use of resources. Because the literature has not demonstrated a clearly defined influence of resources on student academic achievement, the authors include this assumption in the Model with the caveat that "best judgment" may be the desired direction of resource inclusions in a proposed school action plan.

Leadership

Leadership has been extensively discussed in the literature and within the scope of this paper. While strategies defining effective leadership have not been clearly differentiated within the literature, the authors point out that the literature does indicate that a focus on motivation, performance, and individuality are important characteristics of effective leaders. School leadership by a principal has a great deal of influence on staff and student attitude. Attitudes are significant factors in predicting human behavior. The Matthews and Holmes Model emphasizes the importance of school leadership by proposing their Assumption Six: student attitudes toward their teachers, beliefs about their teachers' expectations and the value their teachers put on learning, and beliefs about the personal relevance of school achievement all impact the student's level of desire to achieve in school. Matthews and Holmes hypothesize that these factors are useful and important considerations when developing plans to improve academic performance.

Interactive Effects

Assumption Seven, that there are interactive effects among factors affecting academic performance, takes into account that cumulative interactive effects are more

critical than the individual effects of ability, effort, and external resources. The authors stress that strategies that focus on only one or two of the six factors presented in the model are unlikely to result in improved academic achievement in any consistent manner. Matthews and Holmes suggest that a comprehensive school improvement plan that integrates components to account for all six factors is a more logical approach to improve academic performance.

Differential Effects

The eighth assumption of the Matthews and Holmes Model considers the differential effects that may occur when an academic intervention produces positive effects on one factor, but negative effects on others. The authors stated that specific interventions have differential effects on the factors that affect student achievement and that the complexity of the numerous interactive combinations of the factors may make accurate predictions difficult. Because of this, focus on two significant factor pairs when planning a school achievement plan is critical. These pairs are 1) students' perceptions of the utility of school and learning, and 2) students' perceptions of ability and the value teachers assign to academic performance. These pairs present educators with the dilemma of teaching to activate prior knowledge and relevancy, referred to by the authors as "future utility of schooling," with teaching towards content assessment. The implications of this assumption are sobering. If the content has no relevancy to the students' lives, mastery will be more difficult and motivation may decrease because the learning is not meaningful. On the other hand, if the content taught is pragmatic, but results in lower test score results, motivation may decrease due to students' perceptions of futility of academic effort.

Matthews and Holmes' (1982) examination of the correlation between student achievement and teacher motivation resulted in their development of an assessment instrument that measures the components of teacher motivation influenced by the principal, the Student Achievement Diagnostic Questionnaire for Administrators (SADQ). Matthews and Holmes identify critical components to measure as the 1) attitude toward the principal, 2) perceptions of the principals' expectations for improved student achievement, 3) perceptions of the probability of success in improving student achievement and 4) perceptions of future utility of improved performance.

The SADQ is instrumental in helping administrators identify areas of teacher motivational strengths and weaknesses that are impacted by relationships with administrators (Matthews & Holmes, 1982). The analysis of these identified strengths and weaknesses is designed to serve as a guide for administrators to plan for improvement in teacher motivational levels. Matthews and Holmes utilized the motivational elements addressed in the SADQ to suggest an action plan to address academic performance using (P) as a function of the interaction of learning experiences (L), external resources (R), students' attitudes toward teachers (T), perceptions of teacher values (V), perceptions of the future utility of school (U), and self-concept of ability (C). This hypothetical formula may be expressed as: $Ps = f (L \times R \times T \times V \times U \times C)$.

The importance of developing an action plan to address each of the six component factors to improve student achievement is stressed throughout the Matthews and Holmes model. Particularly critical is the consideration and caution that each factor has a direct causal relationship with one another. Positively influencing one factor may actually create a negative impact on another factor. For instance, if a teacher made better grades

easier to obtain, this might, in turn, increase student attitude toward the teacher and improve students' self-concept of abilities. Or, conversely, student perception of teacher expectations could be lowered, ultimately decreasing student effort to perform. If there is a moral to the Matthews and Holmes model, it is that every factor and the impact of every factor must be considered carefully to accurately predict an outcome for each component.

An illustration of the Matthews and Holmes (1992) model is found in Figure 1.0. The model graphically emphasizes the importance of systematically focusing upon multiple factors to achieve maximum academic performance. The correlation and interrelationships of factors affected student performance are clearly demonstrated by following connections. The model begins by demonstrating the future utility of schooling as directly correlated to the attitude toward teachers. Central to this are the teachers' expectations and the relationship of the expectations of student desire to perform. Student desire, in turn, is reliant on the student's self concept of ability, which creates the effort (or lack thereof) to perform, which in turn affects the student's ability to perform. Ability is additionally influenced by a combination of learning experiences and inherited capacity. The addition of external resources to this complicated dance is the final contribution to the student's ultimate resulting academic performance.

Insertion of any hypothetical factor in each of the model's components impacts each of the other components in a predicable manner. Thus, the model is a key tool in assessing the future impacts of proposed changes within a school system, and a useful assistant in identification of unwanted outcomes before they potentially might occur. Although the model was initially designed to improve student outcome, it also parallels the model for teacher motivation.

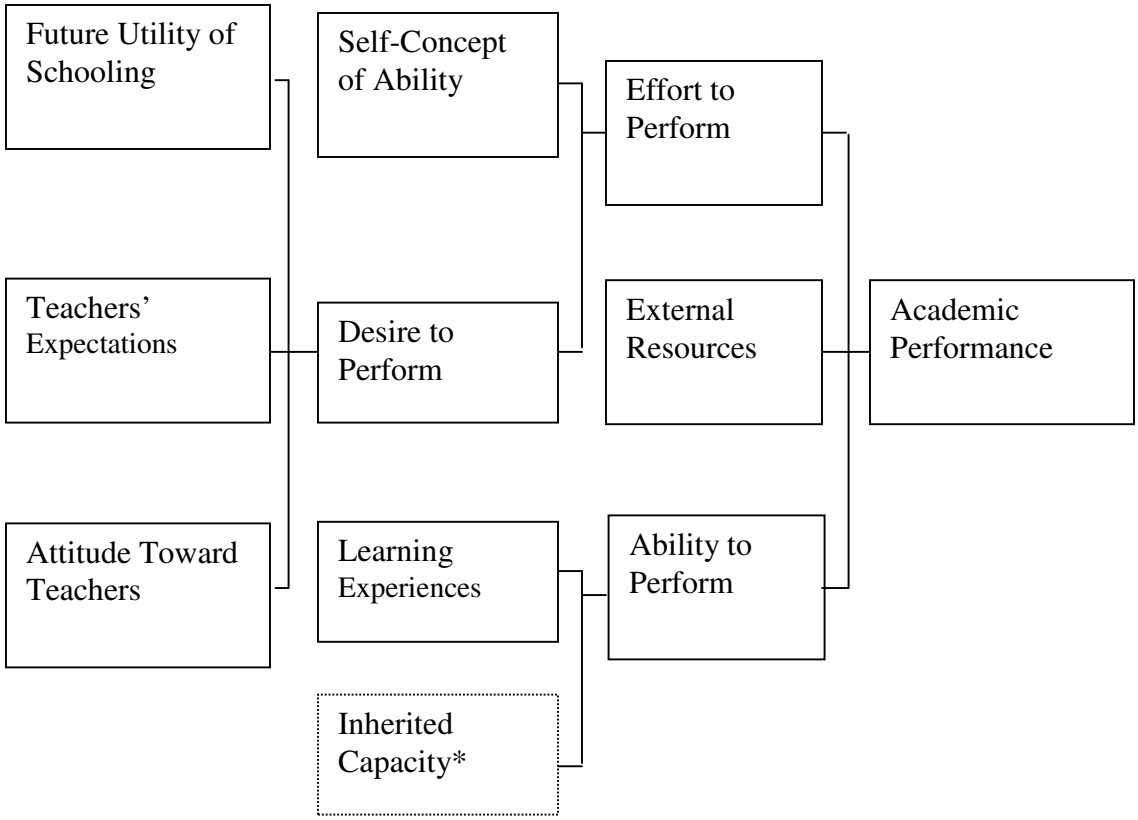

Figure 1.0. The interaction of factors that influence academic performance (Matthews & Holmes, 1992, p. 10). Reprinted with permission by the authors.

Components of the SADQ

As previously stated, Matthews and Holmes (1982) identify four critical components for assessment of teacher motivation which are 1) attitude toward the principal, 2) perceptions of the principals' expectations for improved student achievement, 3) perceptions of the probability of success in improving student achievement and 4) perceptions of future utility of improved performance. A review of literature including definitions and research for each of the four components follows.

Self Concept of Ability

The first component that SADQ Matthews and Holmes (1982) identify for assessment of teacher motivation is self-concept of ability. Coladarci (1992) defines self-concept of ability as "a person's estimate that a given behavior will lead to certain outcomes" (p.324).

The literature indicated that a teacher's self-concept of ability or efficacy has a significant relationship to student achievement, teacher stress, and professional commitment. Additionally, teachers' self-concept of ability impacts student performance in a unique manner in urban and disadvantaged schools (Parkay et al., 1988). Extensive research indicated that urban and low income areas strongly impact school efficacy. The significant research highlighting these factors and other factors that contribute to school efficacy are next summarized to provide depth to this discussion.

Achievement

The relationship of the level of teacher efficacy to student achievement has been well documented throughout the research. Research by Parkay et al. (1988) revealed a direct correlation between teacher self-concept of ability and student achievement. The

authors concluded from the results of this study that a greater level of teacher belief produces a greater positive outcome. Conversely, it can be assumed that a lesser level of teacher belief likewise produces a lesser positive outcome. Ashton, Webb, and Doda (1983) found that teachers' self-concept of ability has a significant relationship to student achievement data as measured by the Metropolitan Student Achievement Test (MSAT). Research by Coladarci (1992) contributed to the documentation with results that indicate that teachers with higher efficacy have higher achieving students than those with lower efficacy.

Stress

Research by Parkay et al. in 1988 also measures the relationship between teacher efficacy and stress and indicates that teachers with a lesser self-perception of efficacy experience more stress in reaction to the job environment and a greater feeling of hopelessness. Conversely, teachers with a higher self-perception of efficacy felt a greater sense of control. Ashton et al. (1983) concurred, stating that teachers with feelings of inefficacy may experience increased stress levels and be less effective with students.

Professional commitment

An examination of the relationship between teacher efficacy and teachers' commitment to the profession by Coladarci (1992) indicated a correlation between teachers with higher levels of efficacy and a higher level of commitment to the teaching profession. Interestingly enough, teachers who participated in graduate work in education produced scores indicating a higher efficacy than those who had not taken graduate work. Likewise, Coladarci reported that elementary teachers had higher efficacy than high school teachers. According to the author, this higher level of commitment strengthens the

schools and leads to a higher level of parental involvement, typically found in schools exhibiting high levels of teacher commitment. Higher levels of efficacy were additionally related to increased teacher retention. Ashton et al. (1993) reported that teachers with higher self-concepts of ability are more attentive to students' individual needs and respond to students in a positive, accepting, supportive style that encourages student enthusiasm and involvement in decision-making.

Urban and disadvantaged schools

Research measuring staff perceptions in urban schools indicates that teachers' self-concept of ability may have a negative impact on student performance (Manning, Lucking, & MacDonald, 1995). The authors identify the failure of many teachers in urban schools to understand the unique needs of their learners, which results in lowered expectations for students. Manning et al. found that urban teachers with a thorough knowledge of student characteristics, learning theory, teaching strategies and curricular materials along with a strong commitment to creating democratic learning environments are more likely to demonstrate positive attitudes and enthusiasm with urban students. Implementing teaching strategies and applying theory enables teachers to promote lofty expectations for academic achievement and behavior.

Systemic reform has been recognized as a means of addressing the concerns for teachers' self-concept of ability in urban schools (Haycock, 1997). Haycock (1997) asserts "Clear goals for student learning should drive virtually everything within the education system rather than the detailed prescriptions of educational inputs that have been in the driver's seat for decades" (p.12). Haycock suggested four strategies that should be implemented to meet the needs of urban students. These strategies are 1) Have

clear goals for student learning and provide examples of expectations to teachers, parents, and students, 2) Provide a challenging curriculum based on standards for all students, 3) Provide professional development to guarantee teacher proficiency is equal in all schools and, 4) Use data to continuously monitor progress. Reward progress and make curriculum adjustments as needed. Publicize the information to parents, students, and the community.

Blase and Kirby (2000) addressed the concern for teacher self-concept of ability in teaching disadvantaged students and make a case that principals must verbally and liberally express the beliefs that all students should be treated with respect and dignity and that all students can achieve. Blase and Kirby found that teachers have a higher level of self-concept of ability in schools where a commitment to professionalism, dedication, and diligence is fostered by the school principal. Principals who work to support teachers and reduce instructional disruptions further increased teachers' level of self-concept of ability.

Contributing factors to low efficacy

Ashton et al. (1983) identified five factors that contribute to a low level of teacher efficacy and proposes that acknowledgment of these factors may help lead administrators to proactive remedies. These factors include: 1) Teachers' value of their professional worth is questioned due to the low compensation teachers receive in relation to other professional careers, 2) The multiple roles teachers must assume (i.e., instructor, evaluator, counselor, substitute parent, mediator, and disciplinarian) can be more than some teachers are capable of handling, 3) There is not a clear measure of teacher effectiveness; standardized test scores that are frequently published are not a true

reflection of the teachers' efforts, 4) Isolation in the classroom is a common concern for teachers; there is a lack of peer support for social and professional needs, and 5) Teachers' initial idealism upon entering the profession can be diminished by bureaucratic constraints.

Attitude Toward Principal

The teacher's attitude toward the principal is identified as the second component in the SADQ. The establishment of a relationship between the principal and teachers is a critical aspect of the principal's role (Sergiovanni, Burlingame, Coombs, & Thurston, 1999). "Regardless of how leadership is exerted, if principals are to influence teachers toward improved student achievement, the teachers must respond in a positive manner to the leadership acts of the principal" (Matthews & Brown, 1976, p. 10). Evans described this effect in her teacher observations and interviews that, "not a single day passed without my having witnessed some teachers' manifestations of concern about the quality of leadership and the repercussions which this was perceived to have upon the way in which the school functioned" (Evans, 1998, p. 62).

A discussion of the attitude toward the school's principal, based on the works of Weller and Weller, and Covey can be analyzed within the context of school culture and trust. Sergiovanni's value-added leadership additionally clarifies the significance of the teachers' attitudes and perceptions of and toward the principal.

Principals and school culture

The definition of leadership includes influencing, persuading, and directing individuals or groups to achieve the goals of the leader and the organization, according to Weller and Weller (2000). Weller and Weller propose that culture is a primary factor that

influences the leader's ability to bring about successful change. The teachers' attitudes and perceptions of the principals' leadership yield differing metaphors to describe the school culture. One description of a school culture refers to the climate as a "family culture", and is one where there is respect shown for the leader. The leader is viewed as the "parent" or "coach" of the school and school goals are achieved by everyone working together (Weller & Weller). A second type of school culture observed is one in which principals are viewed as workaholics or dictators, sometimes called a machine culture. These schools are bureaucratic in structure and the principal functions as a manager. School goals are achieved by regulations (Weller & Weller). School cultures where the principal is viewed as domineering or threatening may be described as the "little ship of horrors culture" (Weller & Weller). Teacher attitudes toward the "little ship of horrors" culture reveal a high stress climate. Teachers in these schools are isolated and feel victimized by their principals (Weller & Weller).

Principals and Trust

Weller and Weller (2000) suggest that an important criterion of leadership is that leaders must develop trust with employees to motivate attainment of the organizational goals. The authors describe leaders who develop trust as catalysts who inspire and energize teachers and students to excel and to maximize potentials. The perceived personality of the leader has a great deal of influence on the interactions between the followers and leaders. The followers must perceive the leader as fair to fully respond to their expectations. Weller and Weller assert that moral leadership is primarily a relationship between leader and subordinates, a relationship of interaction with common purpose and motivation.

The importance of the issue of developing trust between the principal and teachers is emphasized by Covey (1989) when he asserts that "without trust, the best we can do is compromise; without trust, we lack the credibility for open, mutual learning and communication and real creativity" (p. 220). Relationships between leaders and followers can be enhanced with a situation enhancement that Covey expounds as his "Win/Win" philosophy (1989). A Win/Win philosophy as described by Covey first requires a relationship of trust between the leader and followers. Both leader and followers can accomplish their goals and meet their needs only when the belief is: "It's not your way or my way; it's a better way, a higher way" (p. 207). Covey's Win/Win Philosophy requires both parties to listen longer and clearly communicate their perspective.

Value-added leadership

Sergiovanni (1990) emphasizes the relationship between the leader and follower in value-added leadership. His four stages of value-added leadership are contingent upon positive teacher attitudes towards their principals. The first stage, bartering, is based upon an agreement of a mutual exchange of desires for the followers to be led by the leader. Building, the second stage, is provided by support and interpersonal exchanges from the leader to enable the follower to meet their needs and be able to effectively achieve. Bonding, the next stage, is in effect the circumstances in which the leader and follower are able to come together to meet their common goals. The final stage in Sergiovanni's value-added leadership is banking. Banking refers to the acceptance of school improvements as values for the school's bank of characteristics, and serves to stimulate motivation for future improvements (Sergiovanni, 1990).

Principal's Expectations

Positive teacher attitudes towards a principal enable a principal to be an effective leader (Matthews & Brown, 1976). However, if the perception of the teaching staff is that the principal does not have high expectations towards improved student achievement, there may be an actual resulting negative effect on teacher motivation (Matthews & Brown, 1976). The teacher's perception of the principal's expectations therefore is the third component in the SADQ.

An examination of teachers' perceptions of principal's expectations reveals the extent to which teachers and heads share a vision or even a mission will clearly influence job-related attitudes. Dissonance may give rise to dissatisfaction and low morale while congruence in relation to the images towards whose realization staff wants to work is likely to motivate. Those teachers who recognize and share their heads' visions manifest high levels of job satisfaction, morale and motivation (Evans, 1998).

The relationship between teachers' attitude toward the principal and the perception of the principal's expectations is depicted in Figure 2.0. By examining Figure 2.0, we can see that positive attitude towards the principal is not conducive to student achievement without positive perception of the value the principal has on achievement. Conversely, positive perception of the value the principal has on achievement is not conducive to student achievement without a positive attitude towards the principal. Principals are depicted as having a high effect on teacher motivation when the teachers have a positive attitude toward the principal and perceive the principal highly values achievement.

The importance of effective communication of principal's expectations and consistent behaviors must be reviewed in the literature within the context of its effects on teacher

motivation. Additionally, avenues of recognition and praise examined in the literature highlight the issues of further teacher motivation to comply with principal expectations. The contribution and significance of the works of Blase and Kirby (2000) on teacher motivation are summarized. In addition, Williams' (2000) work on teacher's perceptions of principal's expectations and the impact on student achievement will be addressed from the perspective of motivation.

Communication and consistency

The research of Blase and Kirby (2000) found strong evidence that the principal's expectations have a significant influence on teachers' behaviors. Teachers were reported to respond positively to clear communications and consistent behaviors from the principals. Repetition by the principal was stated to be essential when expressing expectations. This provided clarification and further facilitated implementation of the expectations by the teachers. Teachers expressed appreciation in knowing the principals' expectations, and Blase and Kirby (2000) report that teachers said that they usually conform to principals' expectations. The authors summarized their findings by stating that the teachers in the study appreciated knowing what was expected, what was important, and what was valued. Additionally, "they [teachers] associate the use of expectations with positive outcomes such as being able to 'see students and faculty growing'" (p. 30). The authors assert that their findings indicated that a principal's expectations enhance teachers' sensitivity to and respect for students in matters of discipline.

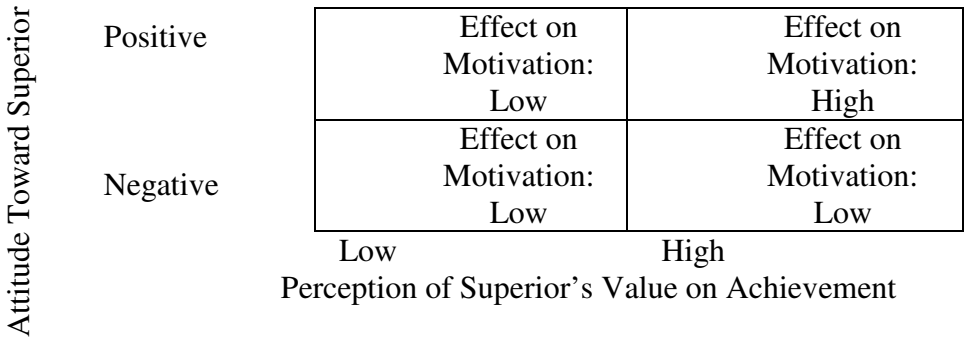

Figure 2. Relationship between attitudes and perception of leader's expectations (Matthews & Brown, 1976, p. 11). Reprinted with permission from the authors.

Recognition

School recognition should be dependent on observation of strong leadership and effective working relationships among the school, the parents, and community, according to Williams (2000). The author compares the difference in teachers' perceptions of principal's effectiveness in secondary schools. His study indicates that teachers in schools that had been nominated as exemplary had a significantly higher perception of the principal's expectations for student achievement. The researcher notes that "They provide better leadership in organizational direction with faculty to develop goals, establish expectations and promote appropriate changes" (p. 274).

Praise

There are many avenues through which principals can communicate their expectations and thereby promote teacher motivation. According to Evans (1998), recognition is a key motivator because of its effects on the process of job fulfillment, and an effective tool for recognition is praise. Blase and Kirby (1992) concurred, and stated that praise is an important method for principals to recognize teachers and motivate them to comply with their expectations for student achievement. "Praise is an effective strategy for improving school climate because it enhances teacher morale and teachers' attitude toward students. It also enhances teachers' instructional practices and the amount of effort they put forth" (p. 72). Blase and Kirby additionally found that teachers reported increased levels of motivation in response to principals' praise for their professional competence. Praise was also found to affect teachers' behaviors in time on task and instructional practices (Blase & Kirby). They authors report one teacher said her response

to praise by her principal was: “I try harder to be creative in my teaching … I work harder. This means I don’t put in eight hours a day. I work until I’m finished” (p. 72).

Blase and Kirby (1992) presented seven suggestions for principals to utilize to successfully convey high expectations in the form of praise to teaching staff. The authors say that praise must be sincere; nonverbal communication during classroom observations, such as a smile, indicates approval without disruption of class; and that it is important to plan for times to recognize staff members such as assemblies, announcements, or staff meetings. Additionally, personalized handwritten notes are effective means for communicating praise, and principals should praise teachers often to others in the school community. These praises will get back to the teachers. Blase and Kirby emphasize that praise takes only a few moments, yet still has an impact. Praise should be specifically related to teachers’ competencies.

Future Utility

Motivation is influenced by one’s belief about their future utility of efforts (Matthews & Holmes, 1992). The fourth and final component of the SADQ is the teacher’s belief in their future utility. When students perceive their educational efforts will benefit them in the future they are more likely to strive harder (Matthews & Holmes, 1992). This relationship parallels teachers’ view of future utility. When teachers perceive that they can make a significant difference in their students’ academic performance, their motivation is positively influenced (Matthews & Holmes, 1982). Incentives for influencing teachers’ view of future utility have been investigated by researchers. The literature indicated that typical incentives include career ladders and incentive pay plans.

Career Ladders

Luce (1998) defines incentive as "a stimulant, an inducement for further effort, or a catalyst which influences or motivates a person to action" (p. 16), and encourages incentives to be used to promote teachers' future utility. The author proposes that career ladders for teachers are one method of future utility that motivates teachers and encourages future utility. He asserts that career ladders may provide opportunities for teachers to participate in professional enrichment such as mentoring and incentives. Firestone and Pinnell (1993) found similar evidence that career ladders had a positive impact on teacher commitment.

Incentive pay

A controversial plan recently implemented in a Pennsylvania school district seeks to enhance teacher future utility by providing incentive pay for improving student achievement (Sultanik, 2000). The plan was designed to measure teacher performance with objective data in the form of test scores or rubrics designed by outside consultants. The plan was created based on the following philosophical framework of assumptions: 1) incentive plans in public schools can be similar to those in private businesses; 2) traditional salary increases based on experience and degrees do not improve teaching performance; 3) effective teachers should be paid more than ineffective teachers; and 4) monetary incentives for teachers will improve teaching and therefore student achievement. While the results of the incentive pay plan as of this date have not been concluded, the plan merits mention in a discussion of the factors influencing teacher motivation. The results of the plan may have profound implications and significantly

contribute to better in-depth knowledge on the influences that may significantly affect teacher motivation in the educational system (Sultanik).

Summary

Motivation is the study of human behaviors and the factors that stimulate action. There are three major categories of motivation theories. The three categories discussed are classical organizational theory, human relations approach, and behavioral science approach. The classical organization theory developed by Taylor (1942) emphasized scientific management for organizational productivity. The human relations approach begun by Mayo's (1933) Hawthorne studies considered human social factors as significant for meeting the organizational goals. Behavioral scientists sought to reconcile the classical organizational theories and human relations approach. The four theorists discussed were Maslow (1954), MacGregor (1960), Argyris (1962), and Herzberg (1959). In addition, application of the behavioral science theories to the school setting by Sergiovanni and Starratt (1993) and Evans (1998) were discussed. Maslow's hierarchy of needs are physiological, safety, belonging and love, desire for self-respect or self-esteem, and self-actualization. These needs must be met in sequential order. MacGregor's Theory X and Theory Y assume two polar views of human motivation. Theory X assumes employee motivation is determined by physiological and safety needs, therefore management's role is provide direct control and supervision. Theory Y assumed employees have the ability to be self-directed and self-motivated. The manager's role is to provide opportunities for employee achievement. Argyris' immaturity-maturity theory seeks to apply Theory Y to organizations. He asserts that allowing employees more responsibility increases productivity.

Herzberg's motivation-hygiene theory views motivation in the workplace as driven by hygiene factors which serve to prevent dissatisfaction and motivating factors. These factors, in turn, provide job satisfaction. Motivators were considered by Herzberg to increase organizational outcome. Sergiovanni and Starratt, and Evans apply behavioral science motivation theories in the school setting. School leaders are challenged to create a school climate that is motivational. Teacher motivation is interactive with teacher commitment, teacher vitality, principal's behaviors, student achievement, and teacher inservice training.

The Matthews and Holmes (1982) model was designed to measure the components of teacher motivation that are influenced by the principal which in effect influence student achievement. The four components of the model are: self-concept of ability, attitude toward the principal, principal's expectations, and future utility. Teachers' self-concept of ability or efficacy is related to student achievement, teacher stress, and professional commitment. Additionally, teacher self-concept of ability impacts students' performance in urban and disadvantaged schools uniquely. The teachers' attitude toward the principal has an influence on the school culture. A relationship of trust between the principal and teachers is necessary for an effective organization. The principal's expectations must be communicated and demonstrated by consistent behaviors. Recognition and praise further motivates teachers to comply with the principal's expectations. One's belief about their future utility of efforts influences their motivation. Career ladders and incentive pay plans have been considered as potential tools for enhancing teachers' future utility.

CHAPTER 3

RESEARCH PROCEDURES

Increasing pressure on schools about what students should know and be able to do, the implementation of state standards and high stakes testing, breakthroughs in research on how children learn, and the increasing diversity of the student population have significantly influenced the knowledge and skills teachers must have to meet educational goals for the 21st century (Falk, 2002). Fundamental to acquisition of these skills as precursors to successfully improving student achievement is the basic motivation of each teacher. The literature indicates that the principal has a key role in facilitating the level of teacher motivation demonstrated in the school (Marzano, 2003). Ultimately, the principal's facilitation of teacher motivation directly affects the actual improvement levels of student academic achievement (Williams, 2000).

Public school systems have traditionally emphasized accountability via assessment scores. Eisner (2001) believed that education's serious focus on test scores reinforces the public's view that test scores actually indicate the quality of education a school provides. He further asserted that the public believes that the mathematical scoring process of test results promotes objectivity, increases precision in assessment, and promotes vigor and intensity in students' mastery goals. How this view of assessment results impacts school principals and teachers within the context of increasing or decreasing teacher motivation is the focus of this research.

The procedures utilized in this research are detailed in this chapter. Headings within the chapter are: Research Design, Null Hypotheses, Sampling Procedures, Data Collection, Instrumentation, Definition of Variables, and Levels of Significance.

Research Design

This study was undertaken to determine if there are statistically significant differences in motivation scores between teachers at high achieving elementary schools and teachers at low achieving elementary schools. The design for this study was comparison of the means of those scores obtained by the two groups on the TMDQ. These differences will be examined in five null hypotheses.

Null Hypotheses

Five null hypotheses were developed for this research. All five of the null hypotheses are stated below.

H_0:1

There is no statistically significant difference between the mean scores for motivation for teachers in high achieving elementary schools and for teachers in low achieving elementary school.

H_0:2

There is no statistically significant difference between the mean scores of the teachers' attitude toward the principal for teachers in high achieving elementary schools and for teachers in low achieving elementary schools.

H_0:3

There is no statistically significant difference between the mean scores of teachers' perceptions of the principal's expectations for student achievement for teachers

in high achieving elementary schools and for teachers in low achieving elementary schools.

H_0:4

There is no statistically significant difference between the mean scores of teachers' self-concept of ability for teachers in high achieving elementary schools and for teachers in low achieving elementary schools.

H_0:5

There is no statistically significant difference between the mean scores of teachers' perceptions of the future utility of improved performance for teachers in high achieving elementary schools and for teachers in low achieving elementary schools.

Population and Sampling Procedure

Population

Elementary schools selected for this study are those defined as high achieving and low achieving. The decisive factor for this definition was that the state of Georgia ranked the schools within either the top 100 performing schools in the state of Georgia or the bottom 100 schools in the state of Georgia for three consecutive years, per the Georgia Public Education Report Card. The criteria chosen from the Georgia Public Education Report Card was the Iowa Test of Basic Skills Grade 5 Composite Score for the years 1997-2000.

Samples

There were a total of 1084 elementary schools ranked on the year 2000 Georgia Public Education Report Card. Of the1084 schools, 64 schools met the criteria for high achieving elementary schools and 25 schools met the criteria for low achieving

elementary schools. Borg and Gall (1971) found random sampling in their research design provided the most scientific results for educational researchers. Therefore, in order to strengthen the research design, random sampling of the elementary schools was used. 12 high achieving elementary schools and 12 low achieving elementary schools were asked to participate in the study. Additionally, fifth grade teachers at each of the selected schools were asked to complete the TMDQ. The selection of fifth grade teachers most closely aligned this study with the one it models: McNeely's, *Student Achievement and Teacher Motivation in Elementary Schools* (1996).

Georgia Public Education Report Card

The Georgia Department of Education (DOE) has published the Georgia Public Education Report Card each year since 1995. Quantifiable data from the entire state of Georgia, which included 180 local school systems and over 1,800 individual schools was collected for the Report Card. Superintendent Schrenko in her 2000 DOE report stated:

> Students, teachers, administrators, and parents use this vital tool to compare their individual school and system to the rest of the state. The Report Cards are an important accountability measure in that they indicate both improvement and potential progress goals. (Georgia DOE, 2000)

Superintendent Schrenko went on to say: "The Report Cards provide a wealth of information for those who are working to improve school performance and student achievement and also those working to enhance the ability of local systems and local schools that serve their communities" (Georgia DOE).

According to the Georgia DOE, the Reports Cards have two major purposes. "First, they promote informed long-term and short-term educational planning and decision making based on real data pertinent to schools. Secondly, they serve as a means

of accountability at the state, system and school level for the taxpayers of Georgia" (Georgia DOE).

Iowa Test of Basic Skills

The state of Georgia has utilized the Iowa Test of Basic Skills (ITBS) to rank public schools on the Georgia Public Education Report Card from 1995 to 2000. Grades 3, 5, and 8 were administered the complete battery yielding composite scores. The ITBS is a norm-referenced test, which means that scores show the level at which a school or system is performing compared to the national average for the year in which the test was normed (ITBS). The ITBS form utilized by the state of Georgia was renormed in the 1991-1992 school year. According to ITBS literature, the percentile scores rank students in comparison to all the students in the norming group who scored lower than the average student did in that school or system did.

Data Collection

Survey packets were sent to 12 randomly selected high achieving elementary schools and 12 randomly selected low achieving elementary schools. To accurately track the response rates of the questionnaires, each school's TMDQ questionnaires were coded with a number. Also, the high and low achieving schools' questionnaires were distinguished by different colored paper. No additional identification was placed on the TMDQ questionnaires in order to ensure anonymity.

The TMDQ questionnaires were mailed in packets to the school principals. The principals' packets included a cover letter for the principal and instructions for distribution of teacher packets. Within each principal's packet were 6 teachers' packets.

The teachers' packets included a cover letter, instructions, TMDQ, and a postage-paid return addressed envelope.

Instrumentation

Teacher Motivation Diagnostic Questionnaire

Matthews and Holmes (1992) created the Teacher Motivation Diagnostic Questionnaire (TMDQ, see Appendix A) as a tool to efficiently assess critical aspects of teacher motivation. The TMDQ uses the Osgood Semantic Differential format to assess the four critical aspects of teacher motivation. Each aspect has four questions that are randomly reversed to avoid response habits or response patterns. Administration of the instrument by Matthews and Holmes (1982) yielded "odd-even correlations of teacher responses corrected by the Spearman-Brown Prophesy Formula resulted in a reliability index for the instrument of .90" (Matthews & Holmes, 1982, p. 24).

Callaway (1994) conducted research into the face and construct validity of the TMDQ. Her study found the TMDQ could be used to measure the teachers' attitudes towards their principals. The terms and the questions in the TMDQ were found to be relevant to the job of a teacher and his/her motivation. Additionally, Callaway found the TMDQ correlated with the *Purdue Teacher Opinionaire* section, which dealt with teacher rapport with the principal.

Matthews and Holmes (1982) proposed that there are four critical aspects of teacher motivation that are influenced by the principal:

1. The teachers' attitude toward the principal.
2. The teachers' perceptions of the principals' expectations for improved student achievement.

3. The teachers' self-concept of ability.

4. The teachers' belief about their future utility of efforts.

Self-concept of Ability refers to the teachers' belief in their ability to produce a positive outcome in student achievement (Parkay et al. 1988). The TMDQ utilizes the following questions to measure this component (Matthews & Holmes, 1982):

4. How much higher could your students' test scores be?

8. How good are you at helping students raise test scores?

9. How much could your students' achievement be raised?

13. How good could you be at improving student achievement?

Attitude toward the Principal refers to the relationship between the school principal and teachers. A positive relationship is one described as trusting and respectful. A negative relationship is one described as hostile and insecure. The TMDQ utilizes the following questions to measure this component (Matthews & Holmes, 1982):

2. How much do you want to please your principal?

6. How much do you want to make your principal happy?

11. How much does your principal try to please you?

15. How much do you like the way your principal works with you?

Principal's Expectations refers to the teachers' perceptions of the principal's expectations for improved student achievement. The TMDQ utilizes the following questions to measure this component (Matthews & Holmes, 1982):

1. How much does your principal want test score to improve?

5. How much does your principal expect test scores to improve?

12. How important are high test scores to your principal?

16. How much does your principal want higher test scores?

Future Utility refers to the teachers' perception that they can make a significant difference in their students' future academic performance. The TMDQ utilizes the following questions to measure this component (Matthews & Holmes, 1982):

3. How much would higher student achievement help you?

7. How much would higher achievement be to your advantage?

10. How much would you benefit from higher achievement?

14. How much good would higher test scores do you?

Definition of Variables

Dependent Variables

Dependent variables in this study were the responses to the TMDQ given by the teachers who participated in the study. This researcher used these responses in the data analysis to compare the statistical significance between the two groups' motivational components.

Independent Variables

Independent variables in this study were the rankings of the individual school. Ordinal data directed the placement of the schools to within the top 100 schools in the state of Georgia or within the bottom 100 schools in the state and determined the school ranking. This researcher assumed that the responses to the TMDQ questionnaire were dependent upon the school rankings within the state of Georgia.

Levels of Significance

The questionnaires were sent to 12 randomly selected schools that met the criterion for high achieving elementary schools and 12 randomly selected schools that

met the criterion for low achieving elementary schools. 2 sample t-tests were used for each of the five null hypotheses. McNeely (1996) selected .05 for the level of significance for her study. The level of significance for this study was set at .05 to align the McNeely study. This level of significance indicated there was a 5 in 100 chance that the difference in means was not due to chance.

According to Bartz (1999), four assumptions must have been met in order for the t-tests to be interpreted meaningfully. These assumptions follow:

1. The scores must be interval or ratio in nature.
2. The scores must be measures on random samples from the respective populations.
3. The populations from which the samples were drawn must be normally distributed.
4. The populations from which the samples were drawn must have approximately the same variability (p. 246).

Summary

This chapter includes a description of the research procedures utilized in this study. Included in this chapter are the research design, null hypotheses, sampling procedures, data collection, survey instrument, definition of variables, and levels of significance. The results of the research are presented in Chapter 4. Chapter 5 presents summary, conclusions, and recommendations for further study.

CHAPTER 4

FINDINGS

The purpose of this study was to examine the differences between the components of teacher motivation in high achieving and low achieving elementary schools. Elementary schools defined as either high achieving or low achieving were those ranked by the Georgia Department of Education in the top and bottom 100 schools for three previous years based on standardized test scores. This study measured the motivational components influenced by the principal as identified by Matthews and Holmes (1982). This study sought to investigate the potential differences of principal influence on teacher motivation depending on classification as a high or low achieving school.

Procedure

Data used in this study were collected from a randomly selected sample of those schools defined as high achieving or low achieving. Questionnaire packets were mailed to the principals of 12 randomly selected high achieving elementary schools and 12 randomly selected low achieving elementary schools. The principals were asked to distribute the *Teacher Motivation Diagnostic Questionnaire (TMDQ)* to their fifth grade teachers in order to assist a doctoral study. The teachers were asked to complete the 16 questions of the *TMDQ* and return the questionnaire in the self-addressed stamped envelope. Anonymity was assured to all participants.

Return Rate of Questionnaire

As indicated by Table 1, 86 questionnaires were returned by sampled participants. Of the sampled participants, 43 responses were received from high performing elementary school teachers and 43 were received from low performing elementary school teachers. This yielded a 60% response rate of return.

Null Hypotheses

Five null hypotheses were selected for the study. The mean score for each null hypothesis was calculated. A 2 sample t-test was used to determine the level of significance. The null hypotheses were accepted or rejected using a .05 level of significance.

H_0:1

There is no statistically significant difference between the mean scores for motivation for teachers in high achieving elementary schools and for teachers in low achieving elementary school. As indicated in Tables 2 and 3, the mean score for the high achieving elementary schools was 5.36 and the mean score for the low achieving elementary schools was 5.89. The t-test showed a t-value of -3.027. This t-value is statistically significant at the .05 level. Therefore, Null Hypothesis 1 is rejected.

H_0:2

There is no statistically significant difference between the mean scores of the teachers' attitude toward the principal for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. As indicated in Table 4, the mean score for the high achieving elementary schools was 5.55. The mean score for the low achieving elementary schools was 5.29. The t-test showed a t-value of .864 (see Table 5).

Table 1
Summary of Return Rate of Questionnaires Mailed

	Total Mailed	Responses Received	Percentage
High Achieving Schools	72	43	60%
Low Achieving Schools	72	43	60%
Total	144	86	60%

Table 2
Mean Scores for Total TMDQ

	Mean	Number	Std. Deviation	Std. Error Mean
High Achieving E.S.	5.3600	16	.67727	.16932
Low Achieving E.S.	5.8944	16	.56189	.14047

Table 3
2 Sample t-Test for Total TMDQ

	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	sig. (2-tailed)
High Ach. - Low Ach.E.S.	-.5344	.70621	.17655	-.9107	-.1581	-3.027	15	.008

Table 4
Mean Scores for Attitude Toward the Principal

	Mean	Number	Std. Deviation	Std. Error Mean
High Achieving E.S.	5.5475	4	.51526	.25763
Low Achieving E.S.	5.2900	4	.68196	.34098

Table 5
2 Sample t-Test for Attitude Towards the Principal

	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	sig. (2-tailed)
High Ach.	.2575	.59590	.29795	-.6907	1.2057	.864	3	.451

This t-value is not statistically significant at the .05 level. Therefore, Null Hypothesis 2 is accepted.

H_0:3

There is no statistically significant difference between the mean scores of teachers' perceptions of the principal's expectations for student achievement for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. As indicated in Table 6, the mean score for the high achieving elementary schools was 5.87. The mean score for the low achieving elementary schools was 6.40. The t-test showed a t-value of -3.596 (see Table 7). This t-value is statistically significant at the .05 level. Therefore, Null Hypothesis 3 is rejected.

H_0:4

There is no statistically significant difference between the mean scores of teachers' self-concept of ability for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. As indicated in Table 8, the mean score for the high achieving elementary schools was 4.97. The mean score for the low achieving elementary schools was 5.93. The t-test showed a t-value of -2.702 (see Table 9). This t-value is not statistically significant at the .05 level. Therefore, Null Hypothesis 4 is accepted.

H_0:5

There is no statistically significant difference between the mean scores of teachers' perceptions of the future utility of improved performance for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. As indicated in Table 10, the mean score for the high achieving elementary schools was

Table 6

Mean Scores for Principal's Expectations

	Mean	Number	Std. Deviation	Std. Error Mean
High Achieving E.S.	5.8700	4	.46051	.23025
Low Achieving E.S.	6.4025	4	.18355	.09178

Table 7
2 Sample t-Test for Principal's Expectations

	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	sig. (2-tailed)
High Ach. - Low Ach.E.S.	-.5325	.29613	.14806	-1.0037	-.0613	-3.596	3	.037

Table 8
Mean Scores for Self-Concept of Ability

	Mean	Number	Std. Deviation	Std. Error Mean
High Achieving E.S.	4.9700	4	.99870	.49935
Low Achieving E.S.	5.9325	4	.38973	.19487

Table 9
2 Sample t-Test for Self-Concept of Ability

	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	sig. (2-tailed)
High Ach. - Low Ach.E.S.	-.9625	.71248	.35624	-2.0962	.1712	-2.702	3	.074

Table 10
Mean Scores for Future Utility

	Mean	Number	Std. Deviation	Std. Error Mean
High Achieving E.S.	5.0525	4	.30977	.15489
Low Achieving E.S.	5.9625	4	.30037	.15019

5.05. The mean score for the low achieving elementary schools was 5.95. The t-test showed a t-value of -3.374 (see Table 11). This t-value is statistically significant at the .05 level. Therefore, Null Hypothesis 5 is rejected.

Summary

A summary of the five null hypotheses follows on Table 12. As indicated by Table 12 Null Hypotheses 1, 3, and 5 were rejected. Null Hypotheses 2 and 4 were accepted.

Table 11
2 Sample t-Test for Future Utility

	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	sig. (2-tailed)
High Ach. - Low Ach.E.S.	-.9000	.53342	.26671	-1.7488	-.0512	-3.374	3	.043

Table 12
Summary of Null Hypotheses

	t-value	significance
Null Hypothesis 1	-3.027	.008 *
Null Hypothesis 2	.864	.451
Null Hypothesis 3	-3.596	.037 *
Null Hypothesis 4	-2.702	.074
Null Hypothesis 5	-3.374	.043 *

* Indicates t-value was found to be statistically significant at .05 level.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary of the Study

The review of literature of this study presented and discussed research on human motivation. There are three major categories of motivation theories. The three categories discussed were classical organizational theory, human relations approach, and behavioral science approach. The Matthews and Holmes (1982) model was designed to measure the components of teacher motivation that are influenced by the principal which in effect influence student achievement. The four components of the model are: self-concept of ability, attitude toward the principal, principal's expectations, and future utility.

The purpose of this study was to examine the differences between the components of teacher motivation in high achieving and low achieving elementary schools. Elementary schools defined as either high achieving or low achieving are those ranked by the Georgia Department of Education in the top and bottom 100 schools for three previous years based on standardized test scores. This study measured the motivational components influenced by the principal as identified by Matthews and Holmes (1982). This study sought to investigate the potential differences of principal influence on teacher motivation depending on classification as a high or low achieving elementary school.

Conclusions of the Study

Five null hypotheses were developed for this study. Two of the null hypotheses were accepted and three of the null hypotheses were rejected. Those null hypotheses found to be accepted were: there is no statistically significant difference between the mean scores of the teachers' attitude toward the principal for teachers in high achieving elementary schools and for teachers in low achieving elementary schools; and there is no statistically significant difference between the mean scores of teachers' self-concept of ability for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. The null hypotheses found to be rejected were: there is no statistically significant difference between the total mean scores for motivation for teachers in high achieving elementary schools and for teachers in low achieving elementary schools; there is no statistically significant difference between the mean scores of teachers' perceptions of the principal's expectations for student achievement for teachers in high achieving elementary schools and for teachers in low achieving elementary schools; and there is no statistically significant difference between the mean scores of teachers' perceptions of the future utility of improved performance for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. As a result of this study, the following eight conclusions were reached:

1. There was not a significant difference between the mean scores of the teachers' attitude toward the principal for teachers in high achieving elementary schools and for teachers in low achieving elementary schools. It is concluded from these findings that teachers from low and high achieving elementary schools have similar attitudes towards their principals.

2. There was not a statistically significant difference between the mean scores of teachers' self-concept of ability for teachers selected for this study in high achieving elementary schools and for teachers in low achieving elementary schools. It is concluded from this finding that teachers' self-concept of ability is not significantly different between low achieving and high achieving elementary schools.

3. There was a statistically significant difference between the mean scores of teachers' perception of the future utility of improved performance for teachers selected for this study in high achieving elementary schools and for teachers in low achieving elementary schools. It is concluded from this finding that teachers' perception of future utility of improved performance is significantly different between low and high performing elementary schools.

4. There was a statistically significant difference between the mean scores of teachers' perceptions of the principal's expectations for student achievement for teachers selected for this study in high achieving elementary schools and for teachers in low achieving elementary schools. It is concluded from this finding that teachers' perception of the principal's expectations for student achievement is significantly different between low and high performing elementary schools.

5. There was a statistically significant difference between the mean scores for motivation for teachers selected for this study in high achieving elementary schools and for teachers in low achieving elementary schools. It is concluded from this finding that there is a difference in the motivation levels of teachers in low achieving elementary schools and high achieving elementary schools. A comparison of the means follows in finding number 7.

6. Findings from this study concurred with the major finding of McNeely's (1996) study, *Student Achievement and Teacher Motivation in Elementary Schools.* McNeely found statistically significant differences between the mean scores in teacher motivation, whereas this study also found statistically significant differences between the mean scores in teacher motivation. Additionally, the two studies correlated with statistically significant differences between the mean scores in teachers' perceptions of principal's expectations and teachers' perceptions of the future utility of improved performance. Neither of the two studies found significant difference in the mean scores of teachers' attitude toward the principal.

7. The mean scores for total TMDQ for this study and McNeely's study are similar. Table 13 illustrates these similarities. The TMDQ format utilized a 1 to 7 scale to measure motivation. An answer of 1 on the scale was considered low motivation and an answer of 7 was considered high motivation. The conclusion taken from this data was teachers from low achieving elementary schools are more highly motivated then teachers from high achieving elementary schools.

8. A comparison of the means for each of the TMDQ components and total mean from this study to McNeely's study (1996), and the Georgia (Norton, 1992) and national norms (McDonough, 1992) follows on Table 14. With the exception of Attitude Toward the Principal, the means for all other components and the total mean were found to be highest in Shelnutt's study.

Implications of the Study

The *No Child Left Behind Act* (NCLB) of 2001 signed into law by President Bush on January 8, 2002 changed the role of the federal government in public schools. The act

Table 13
Comparison of Total TMDQ Means for McNeely and Shelnutt

	High Achieving Mean	Low Achieving Mean
McNeely	5.23	5.92
Shelnutt	5.36	5.89

Table 14
Comparison of TMDQ Means

	Total Mean	Attitude Toward Principal	Principals' Expectations	Self-concept of Ability	Future Utility
Shelnutt	5.63	5.42	6.14	5.45	5.51
NcNeely	5.49	5.45	6.02	5.29	5.28
Georgia Norms	NA	5.49	5.75	5.31	5.36
National Norms	5.20	5.29	5.36	5.11	4.96

contained stronger accountability for results and consequences for schools that do not make the required results (NCLB, 2001). Bush was quoted saying, "Educators are embracing a new level of accountability, which is creating a new culture for our nation's schools, a culture of achievement" (Greene, 2003, p. 1).

This new culture has had a significant impact on all educators. The findings from this study, which indicated a progressive increase in teacher motivation in the areas of principals' expectations, self-concept of ability and future utility, are an indication of changes that will occur in teacher motivation. As school accountability tightens and consequences become reality for schools that do not meet the required results, teachers' perceptions of future utility might be negatively affected. Before NCLB, the success or failure of students had little to no direct impact on teachers. Now with schools and teachers held accountable, teachers' employment and salary is at stake. The implication of this could be huge on low performing schools. Many low performing schools already face difficulty in hiring and retaining highly qualified teachers. This author is concerned that it will become even more difficult for low performing schools to employ and retain highly qualified teachers if the teachers' perception of future utility is changed.

Elementary school principals have the daunting task of leading their staff to meet the standards while supporting and motivating their teachers. The Matthews and Holmes model graphically depicts the non-linear influence each teacher motivation component has on one another. The integral components of teacher motivation must be considered in the context of our changing school culture to maximize student achievement.

REFERENCES

Argyris, C. (1962). *Interpersonal competence and organizational effectiveness*. Homewood, IL: Dorsey Press.

Argyris, C. (1976). *Increasing leadership effectiveness*. New York: Wiley.

Atkinson, E. (2000). An investigation into the relationship between teacher motivation and pupil motivation. *Educational Psychology*, *20*(1), 45-57.

Ashton, P., Webb, R., & Doda, N. (1983). *A study of teachers' sense of efficacy*. Gainesville: University of Florida, Department of Education.

Barna, E. (2002, Winter). High noon for high stakes: Alfie Kohn at Middlebury College. *Paths of Learning: Options for Families & Communities, 11*, 11-17.

Bartz, A. (1999). *Basic statistical concepts* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Blase, J., & Kirby, P. C. (1992). The power of praise: A strategy for effective principals. *NASSP Bulletin*, *76*(548), 69-72.

Blase, J., & Kirby, P. (2000). *Bringing out the best in teachers: What effective principals do* (2nd ed.). Thousand Oaks, CA: Corwin Press, Inc.

Borg, W. & Gall M. (1971). *Educational Research: An introduction* (2nd ed.). New York: McKay.

Capraro, R. M. (2002). Conventional wisdom is wrong: Anyone cannot teach and teachers are not born. East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED463259)

Callaway, C. (1994). The validity of the Teacher Motivation Diagnostic Questionnaire. *Dissertation Abstracts International*. (UMI No.9422699).

Coladarci, T. (1992). Teachers' sense of efficacy and commitment to teaching. *Journal of Experimental Education*, *60*(4), 323-334.

Covey, S. (1989). *The seven habits of highly effective people*. New York: Simon & Schuster.

Czubaj, C. (1996). Maintaining teacher motivation. *Education, 116*(3), 372-379.

Davis, J., & Wilson, S. (2000). Principals' efforts to empower teachers: Effects on teacher motivation and job satisfaction and stress. *The Clearing House, 73*(6), 349-353.

Deci, E. (1975). *Intrinsic motivation.* New York: Plenum Press.

Eisner, E. W. (2001, January). What does it mean to say a school is doing well? *Phi Delta Kappan, 82*(5), 367-382.

Evans, L. (1998). *Teacher morale, job satisfaction, and motivation*. London: Paul Chapman Publishing, Ltd.

Falk, B. (2002). Standards-based reforms: Problems and possibilities. *Phi Delta Kappan*, *83*(8), 612-620.

Firestone, W., & Pennell, J.(1993). Teacher commitment, working conditions, and differential incentive policies. *Review of Educational Research*, *63*(4), 489-525.

Georgia Department of Education. (n.d.). Georgia Public Education Report Card. [Online].
Retrieved October 5, 2002, from *http://techservices.doe.k12.ga.us/reportcard/*

Georgia Department of Education. (n.d.). Georgia Public Education Directory. [Online]. Retrieved October 5, 2002, from *http://www.doe.k12.ga.us/legislation/GADOEDirectory.pdf*

Greene, D. (2003). *Bush hails education reform, some balk.* Retrieved July 7, 2003, from *http://www.sunspot.net/news/printedition/bal-te.education02jul02,0,6933365.story?coll=bal-pe-asection*

Haycock, K. (1997). Eliminate gross disparities under your control. *School Administration 54*(5), 30-31.

Hersey, P., & Blanchard, K. (1993). *Management of organizational behavior: Utilizing human resources*. Englewood Cliffs, NJ: Prentice Hall.

Herzberg, F. (1959). *The motivation to work*. New York: Wiley.

Kealey, K., Peterson, A., Gaul, M., & Dinh, K. (2000). Teacher training as a behavior change process: Principles and results from a longitudinal study. *Health Education and Behavior*, *27*(1), 64-81.

Luce, J. (1998). Career ladders: Modifying teachers' work to sustain motivation. *Education*, *119*(1), 15-19.

Lunenburg, F., & Ornstein, A. (1991). *Educational administration: Concepts and practices*. Belmont, CA: Wadsworth Publishing Co.

MacGregor, D. (1960). *The human side of enterprise*. New York: McGraw-Hill.

Manning, M., Lucking, R., & MacDonald, R. (1995). What works in urban middle schools. *Childhood Education*, *71*(4), 221-231.

Marzano, R., Norford, J. S., Paynter, D. E., Pickering, D. J., & Gaddy, B. B. (Eds.). (2001). *A handbook for classroom instruction that works*. Alexandria VA: Association for Supervision & Curriculum Development.

Marzano, R. (2003). *What works in schools: Translating research into action.* Alexandria, VA: ASCD.

Maslow, A. (1954). *Motivation and personality* (2nd ed.). New York: Harper & Row.

Matthews, K., & Brown, C. (1976). The principals' influence on student achievement. *NAASP Bulletin*, *60*(402), 1-15.

Matthews, K.M., & Holmes, C.T. (1982). A tool for principals: A method for assessing teacher motivation. *NASSP Bulletin*, *66*(458), 22-28.

Matthews, K.M., & Holmes, C.T. (1992). *Managing classroom learning: A guide for improving student achievement*. Athens, GA: University of Georgia.

Mayo, E. (1933). *The human problems of an industrial civilization.* New York: The MacMillan Co.

McDonough, M.B. (1992). *Norms of the Teacher Motivation Diagnostic Questionnaire* (Doctoral dissertation, University of Georgia, 1992).

McNeely, C. (1996). *Student achievement and teacher motivation in elementary schools* (Doctoral dissertation, University of Georgia, 1996).

No Child Left Behind Act of 2001. [Online]. Retrieved May 25, 2003 from, http://www.nclb.gov

Norton, N.B. (1992). *Georgia norms for the Teacher Motivation Diagnostic Questionnaire* (Doctoral dissertation, University of Georgia, 1992).

Owens, R. (1991). *Organizational behavior in education: Instructional leadership and school reform* (7th ed.). Boston: Allyn and Bacon.

Parkay, F., Olejnik, S., & Proller, N. (1988). A study of the relationships among teacher efficacy, locus of control and stress. *Journal of Research and Development in Education*, *21*(4), 13-21.

Peters, T. J., & Waterman, R. M. (1982). *In search of excellence*. New York: Warner Books.

Rogers, S., & Renard, L. (1999). Relationship-driven teaching. *Educational Leadership*, *57*(1), 34-37.

Rowan, B., Chiang, F., & Miller, R. J. (1997). Using research on employees' performance to study the effects of teachers on student achievement. *Sociology of Education*, *70*(4), 256-284.

Searcy: Total focus is on student achievement. (2001, February 22). *Atlanta Journal Constitution*, p. JG4.

Sederberg, C., & Clark, S. (1990). Motivation and organizational incentives for high vitality teachers: A qualitative perspective. *Journal of Research and Development in Education*, *24*(1), 6-13.

Sergiovanni, T. (1990). *Value added leadership: How to get extraordinary performance in schools*. New York: Harcourt Brace Jovanovich.

Sergiovanni, T., Burlingame, M., Coombs, F., & Thurston, P. (1999). *Educational governance and administration*. Boston: Allyn and Bacon.

Sergiovanni, T., & Starratt, R. (1993). *Supervision: A redefinition* (5th ed.). New York: McGraw-Hill.

Sultanik, J. (2000). Bonus pay for teachers. *American School Board Journal*, *187*(2), 34-36.

Taylor, F. (1942). *The scientific principles of management.* New York: Harpers and Brothers.

Trail, K. (Ed.). (2000). *Taking the lead: The role of the principal in school reform.* East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED451604)

Weller, L., & Weller, S. (2000). *Quality human resources leadership: A principal's handbook*. Lanham, MD: Scarecrow Press, Inc.

Williams, H. (2000). Teacher's perception of principal effectiveness in selected secondary schools in Tennessee. *Education*, *121*(2), 264-275.

Yukl, G. (1994). *Leadership in organizations* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

APPENDIX A

Teacher Motivation Diagnostic Questionnaire

TEACHER MOTIVATION
DIAGNOSTIC QUESTIONNAIRE

1. How much does your principal want test scores to improve?
   STRONG 0 0 0 0 0 0 0 WEAK

2. How much do you want to please your principal?
   STRONG 0 0 0 0 0 0 0 WEAK

3. How much would higher student achievement help you?
   SMALL 0 0 0 0 0 0 0 LARGE

4. How much higher could your students' test scores be?
   HIGH 0 0 0 0 0 0 0 LOW

5. How much does your principal expect test scores to improve?
   LARGE 0 0 0 0 0 0 0 SMALL

6. How much do you want to make your principal happy?
   WEAK 0 0 0 0 0 0 0 STRONG

7. How much would higher achievement be to your advantage?
   SMALL 0 0 0 0 0 0 0 LARGE

8. How good are you at helping students raise test scores?
   BAD 0 0 0 0 0 0 0 GOOD

9. How much could your students' achievement be raised?
   LOW 0 0 0 0 0 0 0 HIGH

10. How much would you benefit from higher achievement?
    LARGE 0 0 0 0 0 0 0 SMALL

11. How much does your principal try to please you?
    LOW 0 0 0 0 0 0 0 HIGH

12. How important are high test scores to your principal?
    LOW 0 0 0 0 0 0 0 HIGH

13. How good could you be at improving student achievement?
    GOOD 0 0 0 0 0 0 0 BAD

14. How much good would higher test scores do you?
    LARGE 0 0 0 0 0 0 0 SMALL

15. How much do you like the way your principal works with you?
    LARGE 0 0 0 0 0 0 0 SMALL

16. How much does your principal want higher test scores?
    WEAK 0 0 0 0 0 0 0 STRONG

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APPENDIX B

Principals' Letter

January, 2003

Dear Principal,

I am conducting a doctoral study to determine the motivation levels of teachers of fifth grade students in Georgia.

Please have your fifth grade teachers complete the enclosed Teacher Motivation Diagnostic Questionnaire (TMDQ) for me. This should take no more than five minutes of your teachers' time and could easily be distributed by you with no additional explanation. I have selected only 100 total schools so it is very important that your teachers participate. If you cannot participate in this study, please let me know as soon as possible, so I can try to find a replacement.

I foresee no risks to you or your teachers if your teachers complete this questionnaire. ALL RESPONSES ON THIS QUESTIONNAIRE WILL BE ANONYMOUS. Each questionnaire contains a school number for tracking the rate of return. NO individual responses will be identified and no scores will be reported for individual schools.

If you have any questions about the research being conducted, please feel free to contact me at (XXX) XXX-XXXX, ext. XXX (Work) or (XXX) XXX-XXXX (Home). Thank you very much for your time and consideration. Please let me know if you would like to receive a copy of the results of my study.

Sincerely,

Sandra Shelnutt

Thanks,

Dr. L. David Weller, Professor
Department of Educational Leadership

For questions or problems about your rights please call or write: Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-6514; E-Mail Address IRB@uga.edu.

APPENDIX C

Principals' Instructions

PRINCIPAL INSTRUCTIONS FOR DISTRIBUTION

- ENCLOSED IS A PACKET FOR EACH FIFTH GRADE TEACHER

- EACH PACKET CONTAINS:

  TEACHER INSTRUCTIONS
  TMDQ QUESTIONNAIRE
  SELF-ADDRESSED, STAMPED ENVELOPE

- PLEASE GIVE EACH FIFTH GRADE TEACHER A PACKET

PLEASE DO NOT HAVE TEACHERS SIGN OR IDENTIFY HIM/HERSELF

THANK YOU AGAIN FOR YOUR ASSISTANCE

YOU HAVE BEEN AN ASSET TO THIS RESEARCH!

APPENDIX D

Teachers' Letter

January, 2003

Dear Fifth Grade Teacher,

I am conducting a doctoral study to determine the motivation levels of teachers of fifth grade students in Georgia.

Please take the time to complete the enclosed Teacher Motivation Diagnostic Questionnaire (TMDQ) for me. I anticipate your time for completion of the survey should take no more than five minutes. I have selected only 100 total schools so it is very important that you participate.

I foresee no risks to you if you complete this questionnaire. ALL RESPONSES ON THIS QUESTIONNAIRE WILL BE ANONYMOUS. Each questionnaire contains a school number for tracking the rate of return. NO individual responses will be identified and no scores will be reported for individual schools.

If you have any questions about the research being conducted, please feel free to contact me at (XXX) XXX-XXXX, ext. XXX (Work) or (XXX) XXX-XXXX (Home). Thank you very much for your time and consideration. Please let me know if you would like to receive a copy of the results of my study.

Sincerely,

Sandra Shelnutt

Thanks,

Dr. L. David Weller, Professor
Department of Educational Leadership

For questions or problems about your rights please call or write: Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-6514; E-Mail Address IRB@uga.edu.

APPENDIX E

Teachers' Instruction

TEACHER INSTRUCTIONS FOR ANSWERING QUESTIONNAIRE (TMDQ)

- EACH FIFTH GRADE TEACHER IN YOUR SCHOOL WILL RECEIVE AN IDENTICAL PACKET FROM YOUR PRINCIPAL

- EACH PACKET CONTAINS:

  TEACHER INSTRUCTIONS
  TMDQ QUESTIONNAIRE
  SELF-ADDRESSED, STAMPED ENVELOPE

- PLEASE RESPOND TO EACH OF THE 16 QUESTIONS BY MARKING ONE CIRCLE PER QUESTION, THAT BEST REPRESENTS YOUR OPINION. YOUR OPINION IS VALUABLE FOR EACH QUESTION!

  PLEASE DO NOT SIGN OR IDENTIFY YOURSELF

- UPON COMPLETION:
  - PLACE TMDQ IN THE PROVIDED SELF-ADDRESSED STAMPED ENVELOPE
  - PLACE IN THE U.S. MAIL

- PRINCIPALS MAY REQUEST THE FINAL DATA IF YOU WISH TO SEE RESULTS

THANK YOU AGAIN FOR YOUR ASSISTANCE

YOU HAVE BEEN AN ASSET TO THIS RESEARCH!

APPENDIX F

Low Achieving Elementary Schools TMDQ Results

Low Achieving Elementary Schools TMDQ Results

Rating	1	2	3	4	5	6	7	
1. strong	33	7	2	0	1	0	0	weak
2. strong	24	7	7	3	1	1	0	weak
3. small	2	2	0	0	6	3	30	large
4. high	20	11	8	3	0	1	0	low
5. large	28	7	3	1	3	0	1	small
6. weak	0	3	4	6	5	4	21	strong
7. small	0	1	2	4	5	7	24	large
8. bad	0	1	1	2	9	12	18	good
9. low	0	0	2	4	13	3	21	high
10. large	24	7	2	3	3	2	2	small
11. low	6	5	3	5	6	8	10	high
12. low	0	1	1	2	3	5	31	high
13. good	22	15	4	2	0	0	0	bad
14. large	25	10	3	2	1	1	1	small
15. large	15	8	4	7	2	3	4	small
16. weak	0	1	2	1	3	6	30	strong

APPENDIX G

Low Achieving Elementary Schools TMDQ Component Results

Low Achieving Elementary Schools TMDQ Component Results

Self-Concept of Ability									Mean
high	20	11	8	3	0	1	0	low	6.05
good	18	12	9	2	1	1	0	bad	5.95
high	21	3	13	4	2	0	0	low	5.40
good	22	15	4	2	0	0	0	bad	6.33
Attitude Toward the Principal									
strong	24	7	7	3	1	1	0	weak	6.09
strong	21	4	5	6	4	3	0	weak	5.53
high	10	8	6	5	3	5	6	low	4.49
large	15	8	4	7	2	3	4	small	5.05
Principal's Expectations									
strong	33	7	2	0	1	0	0	weak	6.65
large	28	7	3	2	3	0	1	small	6.21
high	31	5	3	2	1	1	0	low	6.40
strong	30	6	3	1	2	1	0	weak	6.35
Future Utility									
large	30	3	6	0	0	2	2	small	6.14
large	24	7	5	4	2	1	0	small	6.02
large	24	7	2	3	3	2	2	small	5.51
large	25	10	3	2	1	1	1	small	6.14

APPENDIX H

High Achieving Elementary Schools TMDQ Results

High Achieving Elementary Schools TMDQ Results

Rating	1	2	3	4	5	6	7	
1. strong	28	11	3	1	0	0	0	Weak
2. strong	20	13	7	1	0	2	0	Weak
3. small	1	6	5	4	7	10	10	Large
4. high	2	11	12	9	1	3	5	Low
5. large	15	14	7	1	1	4	1	small
6. weak	1	8	3	3	5	5	18	strong
7. small	3	5	6	4	4	11	10	large
8. bad	0	4	3	2	6	14	14	good
9. low	1	11	8	7	6	8	2	high
10. large	11	13	9	3	5	1	1	small
11. low	0	4	5	5	6	14	9	high
12. low	1	3	2	0	4	13	20	high
13. good	14	20	7	2	0	0	0	bad
14. large	10	15	8	2	4	3	1	small
15. large	19	11	7	3	2	1	0	small
16. weak	0	8	0	4	2	7	22	strong

APPENDIX I

High Achieving Elementary Schools TMDQ Component Results

High Achieving Elementary Schools TMDQ Component Results

Self-Concept of Ability									Mean
high	2	11	12	9	1	3	5	low	4.42
good	14	14	6	2	3	4	0	bad	5.51
high	2	8	6	7	8	11	1	low	3.88
good	14	20	7	2	0	0	0	bad	6.07
Attitude Toward the Principal									
strong	20	13	7	1	0	2	0	weak	6.07
strong	18	5	5	3	3	8	1	weak	5.09
high	9	14	6	5	5	4	0	low	5.12
large	19	11	7	3	2	1	0	small	5.91
Principal's Expectations									
strong	28	11	3	1	0	0	0	weak	6.53
large	15	14	7	1	1	4	1	small	5.58
high	20	13	4	0	2	3	1	low	5.84
strong	22	7	2	4	0	8	0	weak	5.53
Future Utility									
large	10	10	7	4	5	6	1	small	4.86
large	10	11	4	4	6	5	3	small	4.72
large	11	13	9	3	5	1	1	small	5.35
large	10	15	8	2	4	3	1	small	5.28