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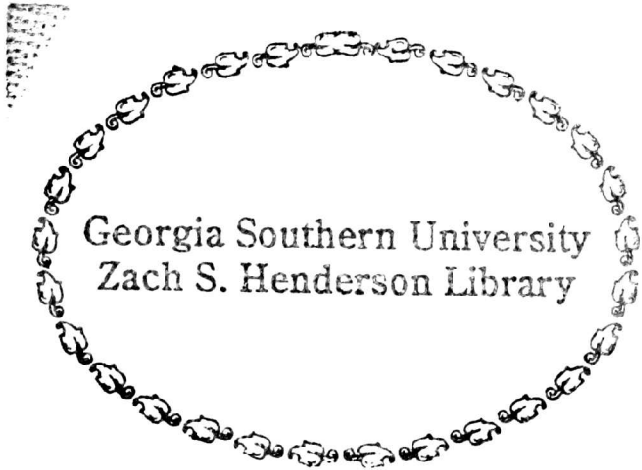
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GEORGIA NORMS FOR THE
TEACHER MOTIVATION DIAGNOSTIC QUESTIONNAIRE

Nancy Bland Norton



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NANCY BLAND NORTON
Georgia Norms for the Teacher Motivation Diagnostic
Questionnaire
(Under the direction of KENNETH M. MATTHEWS)

One purpose of this study was to establish Georgia norms for the Teacher Motivation Diagnostic Questionnaire (TMDQ), an instrument designed to assess four specific aspects of teacher motivation. The four aspects included (a) Principal Expectations, the beliefs teachers have about how much principals value student achievement, (b) Future Utility, how much teachers believe improvement in student achievement would benefit them, (c) Self-Concept of Ability, how much confidence teachers have that they can improve student achievement, and (d) Attitude Toward Principal, the attitudes teachers have about the principal. Another purpose of the study was to determine if there were statistically significant differences in the means of the Georgia sample and the means of a national sample.

Two mailings were used for collecting data. For the first mailing questionnaires were sent to 200 randomly selected public elementary and secondary schools in Georgia. At the request of the principal, teachers in each school were asked to complete the questionnaire, as well as some background questions. A second mailing utilized the same procedures.

Raw score data were converted into normative scores, which included means, standard deviations, percentile ranks, and z scores. A multivariate analysis of variance (MANOVA) was used to determine if a statistically significant

difference existed. Results revealed that in all four aspects of teacher motivation as measured by the TMDQ, the means of the Georgia sample were statistically significantly higher than the national sample.

INDEX WORDS: Motivation, Teacher Motivation, Questionnaires, Attitude Measure, Teacher Attitudes, Teacher Administrator Relationship, Self efficacy, Employer Employee Relationship

GEORGIA NORMS FOR THE
TEACHER MOTIVATION DIAGNOSTIC QUESTIONNAIRE

by

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B. A., Agnes Scott College, 1966

M. Ed., Georgia State University, 1972

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A Dissertation Submitted to the Graduate Faculty
of the University of Georgia in Partial Fulfillment
of the
Requirements for the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

1992

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GEORGIA NORMS FOR THE
TEACHER MOTIVATION DIAGNOSTIC QUESTIONNAIRE

by

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October 9, 1992

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Some might try to tell you that being a woman will handicap you in the business or professional world, but don't let them convince you of this for it is not true. Set your goal early in life, and then let nothing block your way. Remember you can have anything you want if you want it hard enough to fight for it.

Nita Belle Bland,
to her daughter, Nancy (age 2)
March 19, 1947

Setting goals and realizing the satisfaction of achieving them are a part of the human motivational experience. The accomplishment of goals in life are possible only through determination and support from significant others in the life of an individual.

My committee members, Dr. Malcom Katz and Dr. Ralph Kimbrough from Georgia Southern University, and Dr. C. Thomas Holmes and Dr. Kenneth Tanner from the University of Georgia guided me through the process with wisdom and expertise. My major professor, Dr. Kenneth Matthews, met with me for many hours and returned countless phone calls while guiding me through this process. He is a man of high integrity, who has a genuine concern for the welfare of his students. He taught me much about the importance of achieving both personal and professional goals.

It was an unique group that met for the first time the night that hurricane Hugo hit. Our only common goal was completing a doctorate. But, through the process, we grew

close and became a support group for each other. Thanks to my friends Jim, Lynn, Patty, Marianne, Dale, Chris, Ann, Sophia, John, Becky, Larry, and Bobby for the memories of Braves' games, trips to Athens, Underground Atlanta, food groups, and their support during this process. I will never forget our experiences together.

There are numerous others to whom I am grateful. Mark, Steve L., Steve J., Janelle, and Candi were there to help with technical problems. Thanks to my friends in the Candler County School System for their encouragement, especially to my boss Jimmy, who has the patience of Job and to Ronnie and Charlotte who were always there to listen!

Finally, I acknowledge that completion this project would not have been possible without the love and support of my family. Perry and Mimi were there for me after my parents were gone. My sister Polly has always been like a rock. To Wendy and Wichelle, my stepdaughters, thanks for the smiles! A very special acknowledgement to my son Matt, who has stood by me with love through the years and showed me wisdom beyond his years. For the memory of values taught to me by my parents and my uncle Lehman, I will always be grateful. My mother, Nita Belle, was a woman before her time. Most especially, I acknowledge the love and support of my husband, Bill. Thank you, Bill, for your remarkable patience through the past three years! The journey would have been much more difficult without you by my side.

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CHAPTER I

THE PROBLEM

This dissertation was developed as a companion study to another dissertation in which McDonough (1992) established national norms for the Teacher Motivation Diagnostic Questionnaire (Matthews, 1985). Many of the same bibliographical sources have been utilized. However, efforts have been maintained to ensure the uniqueness of each study.

The educational system in America has become increasingly complex. Contributing to this complexity is the recent growth in knowledge about teaching and learning. At the same time, societal demands on the school system have made the educational process more accountable. Glickman (1991) asserted that these issues raise questions about what knowledge should guide professionals in efforts to improve education (p. 4).

Justification for the Study

Lezotte (1982) stated that, in order to find answers to the questions regarding school improvement, educators have increasingly relied on research about effective schools (p. 63). However, according to Rosenholtz (1989), studies on effective schools have been independent. Further, she asserted "student learning gains have been associated with a handful of school characteristics without convincing

rationales and empirical support for how those specific characteristic actually come to affect the internal dynamics of schools" (p. 2). Similarly, D'Amico (1982) reported that an analysis of research on school effectiveness yields inconsistent findings (p. 61). In an earlier report to the President's Commission on School Finance, the Rand Corporation stated, "Research has not identified a variant of the existing system that is consistently related to students' educational outcomes" (Averch, H., Carroll, S., Donaldson, T., Kiesling, H., & Pincus, J., 1974, p. 171). In Purkey's and Smith's (1982) report on effective schools, the authors asserted that conclusions reached in recent literature indicate that differences in schools do affect student achievement (p. 64). Stedman (1988), in a similar report, stated that traditional effective schools' variables bear little relationship to predictions of whether a school is effective or not (p. 442). Rowan (1984) found that "the analysis of specific shamanistic rituals in the effective schools movement raises a number of important questions about the relationship of applied science to pragmatic action" (p. 84). The inconclusive findings of these studies indicate that directions for improving the effectiveness of schools cannot be found in lists of schools' characteristics.

Guskey and Sparks (1991) stated that a multifaceted effort, which addresses all aspects of a system, is critical for school improvement. They emphasized that program

evaluations must be multifaceted and systematic. Higher quality, more prescriptive information will result in better programs, more focused improvement efforts, and more successful students (p. 75). One critical aspect that should be addressed systematically is that of improving teacher motivation.

Teacher motivation is important because it is part of the complex thought processes which affect what teachers do in their classrooms. A large part of teachers' psychological context of teaching is made up of their decision-making, planning, thinking, perception and motivation (Clark & Peterson, 1986, p. 255). More specifically, they stated that teachers' thought processes substantially influence and even determine teacher behavior (p. 255). In a report from the National Conference on Studies in Teaching (Gage, 1975), panelists agreed that

It is obvious that what teachers do is directed in no small measure by what they think. Moreover, it will be necessary for any innovations in the context, practices, and technology of teaching to be mediated through the minds of teachers. (p. 1)

Additionally, the panelists pointed out that, to understand more completely teacher actions in the classroom and influence future behaviors, researchers must study the process by which teachers reflect their own perceptions and thinking, including the aspects of effort and motivation (p.

51). Teachers act on their perceptions and beliefs and, principals must understand the basis of those beliefs in order to respond appropriately (Hoy, Tarter, & Kottkamp, 1991, p. 206). More recently, Sparks-Langer and Colton (1991) wrote that educational experts in staff development, supervision and teacher education have begun to recognize that teaching is a complex, dilemma-ridden, situation-specific process, which should be examined both from outside the teacher and the teacher's interpretations of everyday experiences (p. 37).

Additionally, teacher motivation is important because it gives a focus to the principal-teacher-student achievement relationship. Matthews and Brown (1976) stated that, in order to be effective in improving student achievement, it is vital for principals to influence the behavior of teachers using appropriate leadership strategies (p. 9). According to Duttweiler (1986), the principal's leadership role is crucial to achieving educational excellence. "Educational excellence requires a leader who has the ability to motivate others to change or improve - the ability to gain the commitment of others to organizational goals" (p. 371). Matthews (1979) also pointed out that leadership influences the desire to perform (p. 63). Blumberg and Greenfield (1989) wrote that an effective leader must move others to action (p. 228). Queen (1989) identified the ability to motivate others as one of the essential characteristics for principals (p. 34).

These authors indicate that, as school leaders, principals have the potential and responsibility to motivate teachers.

Others have addressed the school principal-teacher-student achievement linkage. In their study on instructional leadership, Smith and Andrews (1989) emphasized "the role that principals play as they interact with teachers makes a profound impact on teacher behavior and student learning" (p. viii). Blank (1987) found positive associations between math achievement and the leadership indicators of increasing academic learning time and decision making on curriculum (p. 77). Additionally, in a study by Schultz and Teddlie (1989), results indicated positive relationships between the principal's use of power and teacher job satisfaction. Job satisfaction influenced motivation, morale, and "willingness to invest time and effort in the teaching task" (p. 467).

Stressing the need to examine the motivation of teachers, Matthews and Brown (1982) emphasized that a continuing concern of educational leaders is that of improving teacher motivation (p. 22). Good and Tom (1985) argued that motivational researchers raised overly general issues without considering students' levels of motivation and individual teachers' beliefs. The authors concluded that there is a need to specify more systematically teachers' motivational states and the needs of particular learners in context-specific situations so that it will be easier to develop guidelines and informed hypotheses about teacher

behavior (p. 324). Panelists from the National conference on Studies in Teaching (Gage, 1975) stated

As in any occupation, the morale and satisfaction of the the teacher are important determiners of his or her performance in the classroom. . . We must understand the determinants of teacher motivation and effort. This means examining the particular cognitive processes and structures that influence teacher motivation. . . (p. 44)

Clearly, there is a need to examine those specific aspects of teacher motivation that principals can affect in order to improve student learning.

Matthews and Brown (1976) investigated factors that affect student learning and reported that, "The efforts of principals to influence the behavior of teachers toward improving student achievement should be directed at essentially the same variable factors" as those motivational factors affecting student performance (p. 9). They are (a) the teacher's self-concept of ability to affect student achievement, (b) the teacher's attitude toward the principal, and (c) the teacher's beliefs of the principal's value on and expectations for achievement (p. 12). An additional variable was added by Matthews in 1979: the teacher's beliefs about the future utility of improved performance (p. 64). Using these four aspects of teacher motivation, Matthews (1985) developed a teacher motivation diagnostic instrument entitled the Teacher Motivation Diagnostic Questionnaire. This

instrument provides a basis for assessing four specific aspects of teacher motivation.

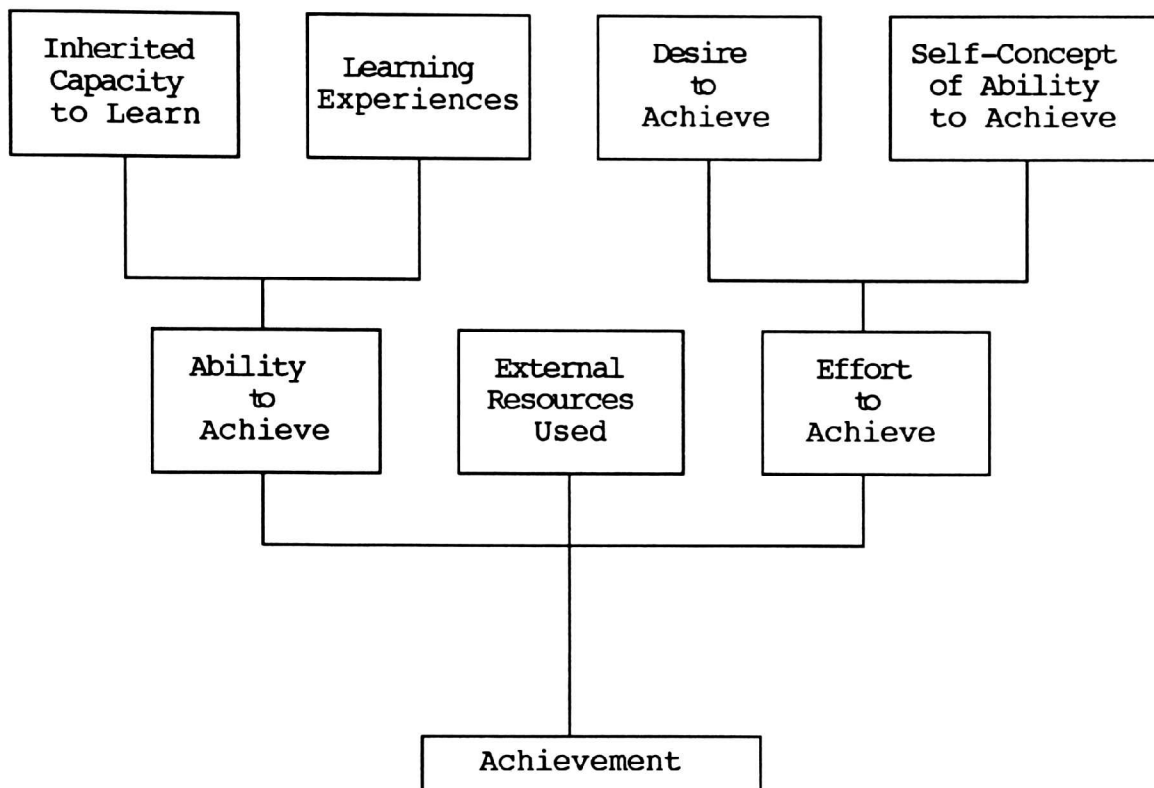
Conceptual Background

The basis for the Teacher Motivation Diagnostic Questionnaire came from the development of a conceptual model of variable factors influencing student achievement (Matthews & Brown, 1976, pp. 6-9). In their review, the authors examined five factors which affect student achievement. These include (a) inherited capacity to learn, (b) learning experiences of the student, (c) the desire of the student to achieve in school, (d) the student's self-concept of ability to achieve in school, and (e) the external resources that the student uses (p. 9). (The Matthews-Brown model is depicted in Figure 1.) To understand the ability of students to learn, the inherited potential to learn (an uncontrollable variable) and learning experiences (a controllable variable) must be considered. The effort a student exerts to learn is influenced by how much the student wants to achieve (desire) and the belief the student has about his or her ability to achieve (self-concept of ability) (pp. 6-9).

Student achievement is impacted by the principal through the relationship of the teacher and principal (Matthews & Brown, p. 9). The authors asserted that the same variables that influence student achievement should be used by the principal when planning strategies to guide teachers toward

Figure 1

Factors Affecting Achievement



From: Matthews, K., & Brown, C. (1976). School and learning -- the principal's influence on student achievement. NASSP Bulletin, 60, p. 9.

higher student achievement (p. 10). Figure 2 shows a modified Matthews-Brown model explaining that effort to perform is a function of desire to perform and self-concept of ability to perform.

The model shows three variables which influence the desire to perform. They include (a) the attitudes of teachers toward the principal, (b) the beliefs about the principal's value of and expectations for student achievement, and (c) their beliefs about the future utility of improved student performance.

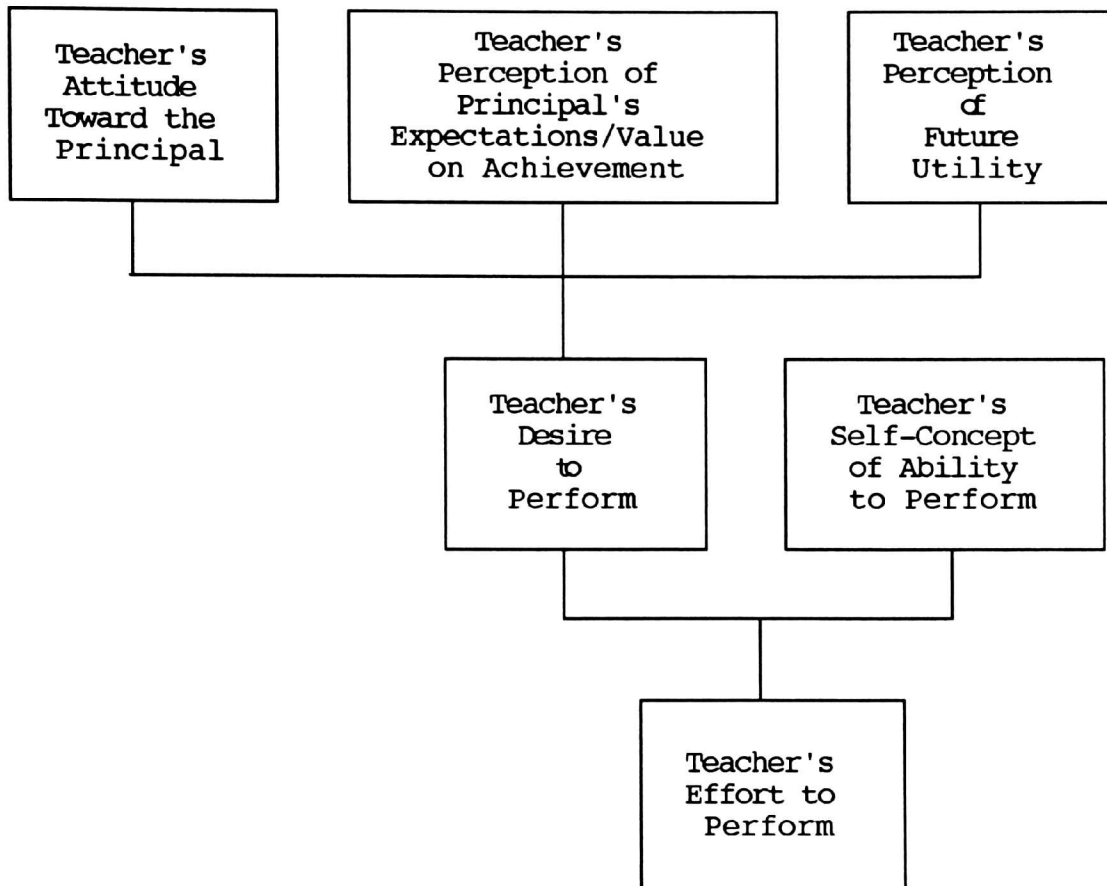
In 1979, Matthews designed an instrument, in the form of a questionnaire, which would enable administrators to measure the four aspects of teacher motivation which he claimed principals could influence. The four aspects were (a) Attitude Toward Principal, (b) Principal's Expectations, (c) Self-Concept of Ability, and (d) Future Utility. This instrument was originally identified as the Student Achievement Diagnostic Questionnaire for Administrators (SADQ for Administrators). Later, the name was changed to the Teacher Motivation Diagnostic Questionnaire. This questionnaire was advocated as a tool with which administrators can efficiently assess the critical aspects of teacher motivation (Matthews & Holmes, p. 27).

Statement of the Problem

The problem was that no Georgia normative data existed for assessing the four critical aspects of teacher

Figure 2

Teacher Motivation and Student Achievement



From: Matthews, K. & Brown, C. (1976). Schooling and learning -- the principal's influence on student achievement. NASSP Bulletin, 60, p.12.

motivation. Because of this, there were no firm means of determining the relative need for improvement among the four aspects of teacher motivation addressed. Even though national norms have been developed, there was no assurance the psychometric characteristics for the state of Georgia resemble those of the United States.

Null Hypotheses

Hypothesis 1 Ho: There will be no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Principal Expectations (PE).

Hypothesis 2 Ho: There will be no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Future Utility (FU).

Hypothesis 3 Ho: There will be no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Self-Concept of Ability (SC).

Hypothesis 4 Ho: There will be no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Attitude Toward Principal (AP).

Constraints

The tests of differences between the Georgia data and the national data were limited to the following variables:

1. The mean school scores on Principal Expectations(PE) questions on the TMDQ of teachers in selected schools.

2. The mean school scores on Future Utility (FU) questions on the TMDQ of teachers in selected schools.

3. The mean school scores on Self-Concept of Ability (SC) questions on the TMDQ of teachers in selected schools.

4. The mean school scores on Attitude Toward Principal (AP) questions on the TMDQ of teachers in selected schools.

Therefore, the generalizations made in this study were limited to the data for sample of Georgia public schools.

Definitions of Terms

Teacher Motivation Diagnostic Questionnaire (TMDQ):

This is a 16-item instrument designed to measure four aspects of teacher motivation. It has four questions for each aspect and uses an Osgood Semantic Differential format with a scale of seven points.

Principal Expectations (PE): Principal expectations refers to the beliefs teachers have about what the principal expects of them and how much principals value student achievement. (The operational definition of PE in this study is the sum of the responses to Questions 1, 5, 12, and 16 on the TMDQ.)

Attitude Toward Principal (AP): Attitude toward principal refers to the beliefs teachers have about how much their principals like them or how much they like their principals. (The operational definition of AP in this study

is the sum of the responses to Questions 2, 6, 11, and 15 on the TMDQ.)

Future Utility (FU): Future utility refers to how much teachers believe that improvement in student achievement would benefit them. (The operational definition of FU in this study is the sum of the responses to Questions 3, 7, 10, and 14 on the TMDQ.)

Self-Concept of Ability (SC): Self-concept of ability refers to how much teachers believe that they have the ability to improve student achievement. (The operational definition of SC in this study is the sum of the responses to Questions 4, 8, 9, and 13.)

General Teacher Motivational Level: This refers to the total mean score on the TMDQ.

Organization of the Study

Chapter I includes an introduction to the problem, the justification for the study, the conceptual background, the statement of the problem, the null hypotheses, the constraints, and the definition of terms. Chapter II includes a review of selected literature and research related to the study. A description of the procedures, research design, population and sample, instrumentation, and data analysis are contained in Chapter III. Chapter IV includes the findings, conclusions, and recommendations.

CHAPTER II

REVIEW OF SELECTED LITERATURE

A review of selected literature and research related to the study of teacher motivation and influence of the principal on teacher motivation is presented in this chapter. The review is presented in five major sections: (a) Search Methodology, (b) Theories of Motivation, (c) Teacher Motivation, (d) Leadership Influence, and (e) Summary.

Search Methodology

Research and literature relevant for this study were identified through a computer search of several data bases, which included the Dissertation Abstracts Online, E.R.I.C. Silver Platter, Business Ondisc and General Periodicals Index. The following search terms and descriptors were used:

1. Motivation
2. Teacher Motivation
3. Teacher Behavior
4. Employee Motivation
5. Achievement
6. Achievement Need
7. School Administration
8. Student Motivation
9. Attitude Measures
10. Employer-Employee Relationship

Additionally, relevant research and literature were identified through a manual search of several references. These references included (a) Comprehensive Dissertation Index, (b) Current Index to Journals in Education, (c) Dissertation Abstracts International, (d) Education Index, (e) Encyclopedia of Educational Research, (f) Resources in Education, and the card catalog. Additional sources were selected from literature located from this search process.

Traditional Theories of Motivation

Understanding the reasons for human behavior has been a topic of inquiry since the beginning of time. Ball (1982) stated that "as long as people have speculated about the reasons for their own behavior there have been theories of motivation (p. 1256). He added that numerous theories of motivation have their roots in our early intellectual history. For example,

Plato in The Republic believed that if we want citizens to behave properly, we should ensure that they receive care and instruction from only the finest people. The motivational essence of the argument was that the mind causally determines out behavior. Cognitive theories of motivation today represent one of the dynamic areas of theoretical and research activity. (p. 1256)

However the scientific study of why people are motivated or are unmotivated has been only a recent development in human history (Mook, 1987, p. 5). Numerous efforts have been

made to apply the conceptual and methodological tools of the behavioral sciences when analyzing the relationship between motivation and work. Frunzi and Savini (1991) wrote that "if managers wish to be successful in getting employees to achieve organizational objectives, they must understand the fundamentals of motivation " (p. 114).

An examination of fundamental theories of motivation is one tool that a researcher may be used in an investigation of human motivation for educational purposes. Miller (1958) explained that using theory provides a rational, systematic view of a situation (p. 61). He added that

The development of theory, rather than the standardization of roles and procedures, is necessary for the development of professional school administration. Standardization of roles and procedures puts the administrator in the position of doing what he must do; adequate theory gives him a basis for contemplating what he can do and how he can do it more effectively. Standardization of roles and procedures invites scape-goating or concern for who or what is to blame. Adequate theory will encourage seeing what can be done and how it can be done better. We do not have the question of how we can put theory into practice, but rather the question of how we can use theory to better understand and thereby improve practice. (p. 63)

Ball (1977) asserted that motivation is a central concept in any educational theory (p. 1). However he cautioned that there are five major problems related to the examination of motivation as a central concept. These are as follows:

First, when motivation is defined in this way, it must be recognized that motivation is a hypothetical construct. A person's motivation cannot be directly observed-only that person's behavior and environment.

Second, motivation tends to be overused as an explanatory concept. We want to explain why people behave as they do. Strictly speaking, we can at this point only describe people and their behavior as they interact with their environment.

A third problem is that motivation is but one set of elements in the web of factors determining human behavior.

A fourth problem is that motivation, as here defined, involves many processes. No current theory can provide a full picture of motivation in education.

Fifth, we wish to emphasize from our definition of motivation that a quite important matter of values is involved. (pp. 3-4)

Further evidence of the complex nature of defining motivation was provided by Bolles (1967) when he stated that one's definition of motivated behavior seems to depend more

on one's theoretical commitments than upon anything else in the behavior itself (pp. 1-2). He further stated that "the most enduring theory of motivation is that which attributes a man's behavior to the results of his own mental processes" (p. 2). Brown (1961) stated that "although a concept of motivation or some similar notion is to be found in nearly every theoretical account of behavior, an amazing divergence of opinion exists as to the nature and the function of motivation" (p. 27). Wlodkowski (1981) wrote that motivational theories are so diverse that they often conflict with each other in basic assumptions and interpretation of similar phenomena (p. 101). Similarly, Frymier (1974) asserted that the concept of motivation is more obscure and ambiguous than many other educational terms (p. 5).

In an attempt to explain the ambiguity, Petri (1981) stated that the problem of understanding the concept of motivation is rooted in the fact that motivation is determined by multiple factors (p. 10). Wlodkowski (1981) wrote that

the most significant reason why theories of motivation differ with one another is because the theorists who created them have based the theories upon assumptions regarding the nature of the universe, human beings and their behavior which are incompatible with and contradictory to one another. (p. 102)

Brown (1961) viewed the problem as one of explaining the nature of motivational variables. He wrote

To bring order to our thinking we need criteria for deciding that a given variable is indeed affecting behavior "motivationally"; we need to know whether motivational variables can be identified in terms of intrinsic properties as well as by means of their effects on behavior; and we need to identify variables that may function both motivationally and nonmotivationally. (p. 25)

If educators are to understand motivation, it is important to examine the variables of motivation. Presented in the following section are several major theories of motivation that are prevalent in educational literature and that have implications for understanding teacher motivation.

Needs Hierarchy

Possibly one of the more widely accepted theories of motivation is Maslow's hierarchy of needs (Frunzi & Savini, 1991, p. 34). Maslow (1954) postulated that a human being is a wanting animal who is rarely satisfied, except for a short time, and his or her wants seem to arrange themselves in a sort of hierarchy of prepotency (pp. 24-25). He listed those needs as ranging from physiological needs, such as hunger and thirst, to self-actualization needs, such as self-fulfillment. Thus, the more basic needs are seen as more powerful than the higher needs given equal deprivation (pp.

35-58). The author stated that "our needs usually emerge only when more prepotent needs have been gratified" (p. 57). Vroom and Deci (1970) added that when needs are gratified, they no longer play an important part as motivators (p. 38). Maslow's hierarchy of needs was organized into five categories. The categories listed in ascending order are as follows:

1. Physiological needs. These most prepotent needs are for food, water, clothing, and shelter.

2. Safety needs. If the physiological needs are met, a new set of needs emerges. These include security, stability, dependency, protection, freedom from fear, anxiety and chaos, need for structure, order, law, and limits.

3. Belonging and love needs. When safety and physiological needs are satisfied, the belonging and love needs will emerge. These needs include love, affection, and a sense of belonging. If a society is to survive and be healthy it must satisfy this need in one way or another.

4. Esteem needs. These needs can be divided into two subsets. The first set includes desire for strength, achievement, adequacy, mastery and competence, for confidence in the face of the world, and for freedom and independence. The second set includes the desire for reputation or prestige, status, fame, glory, attention, dignity, and importance.

5. Self-actualization needs. This need refers to self-fulfillment. (Maslow, 1954, pp. 35-47)

In management theory, Maslow's hierarchy of needs has been one of the more influential attempts to explain human motivation (Theodossin, 1982, p. 4). Maslow (1968) stated that it should be the goal of management to merge the goals of individuals with the goals of the organization. Management must recognize that, while lower need gratification can be bought with money, people are motivated only by higher kinds of "pay" such as affection, dignity, respect, belongingness, appreciation and the opportunity for self-actualization (pp. 221-222). Frunzi and Savini (1991) added that supervisors need to try to identify employee needs and foster satisfaction. By doing so, employees will move toward self-actualization, thus allowing the organization to reach its fullest potential (p. 118).

Malsow (1970) postulated that his theory of self-actualization could be applied to education as well as management. He criticized education for attempting to adapt children to the convenience of adults. "More positively oriented education concerns itself more with the growth and future self-actualization of the child" (p. 282). More specifically, he wrote that helping children become self-actualized by reaching their fullest potential was the ultimate goal of education. In order to help children toward self-actualization, another goal of education should be to

insure that their psychological needs of dignity, belongingness, love, esteem, and respect were satisfied (p. 190).

In contrast to Maslow's theory, "The idea of an individual climbing the hypothetical ladder of need fulfillment and being motivated to the next highest 'rung' is an intuitively appealing one; however, very little evidence exists to support this notion of hierarchical progression" (Terpstra, 1979, p. 376). Wahba and Birdwell (1976) reviewed and evaluated the empirical research related to Maslow's needs hierarchy theory. In an analysis of 10 factor-analytic and three ranking studies testing Maslow's theory, the authors found only partial support for the concept of needs hierarchy (p. 212). They concluded that the nature of the theory defies empirical testing. "Maslow's Need Hierarchy is almost a nontestable theory" (p. 234). The authors indicated that a dual-level hierarchy of need may be an alternative to Maslow's multilevel need hierarchy. They categorized the dual-level hierarchy of human needs as either maintenance needs (physiological and security) or growth needs (belongingness, esteem, and self-actualization) (p. 235-236).

Miskel (1982) suggested two explanations for the fact that little empirical evidence exists to support Maslow's theory. They are definitional clarity and methodological rigor. Specifically, the concepts in the model are vague and

general, and the questionnaires designed to measure the need categories have severe psychometric weaknesses (p. 71).

Miskel (1982) concluded that, despite the absence of strong empirical support, the literature in educational administration focusing on educator motivation continues to be influenced by Maslow's theory (p. 70). In making recommendations to educational leaders, Theodossin (1982) referred to Maslow's theory when he stated that "if people have a hierarchy of needs, then there ought to be a promotional ladder upon whose rungs they are able to ascend" (p. 5). Weller (1982) stated that a behavior-oriented approach, using Maslow's hierarchy of needs, provides a vehicle that principals can use to meet the essential needs of teachers (p. 32). He concluded that "the principal has the professional responsibility and the moral obligation to support teachers' quests for professional development and personal growth as well as to provide the means to fulfill these needs" (p. 35). Terpstra (1979) concluded that the primary value of Maslow's theory is its focus on the recognition and identification of individual needs. In order to motivate employees, a manager must identify their most important needs and link the satisfaction of those needs to effort or performance (p. 376).

Motivation-Hygiene Theory

Herzberg (1966) conducted a series of studies that focused on needs such as esteem and self-actualization. From

those studies, Herzberg developed a theory of work motivation that has broad implications for management and its efforts toward effective utilization of human resources (Herzberg, 1966).

Herzberg (1966) proposed that individuals have two sets of needs. They are (a) a need as an animal to avoid pain and (b) a need as a human to grow psychologically (p. 71). In his study, 200 engineers and accountants, representing a cross-section of Pittsburgh's industry, were interviewed. They were asked to recall specific events at work which had led to a marked improvement in their job satisfaction or had resulted in a marked reduction in job satisfaction. The interviewers further probed for reasons why the engineers and accountants reported as they did. Finally the workers were asked if their feelings of satisfaction or dissatisfaction about their work affected their personal relationships, performance, and well-being (p. 71).

From his findings, Herzberg (1966) concluded that there are five factors that are strong determiners of job satisfaction: achievement, recognition, work itself, responsibility, and advancement (p.72-73). These satisfiers describe a person's relationship to what he does (p. 74). In their dual factor theory, Herzberg, Mausner, and Snyderman (1959) stated that job satisfiers leading to "positive job attitudes do so because they satisfy the individual's need for self-actualization in his work (p. 114). Hersey and

Blanchard (1988) summarized that the factors which involve beliefs about accomplishment, professional growth, and recognition are called motivators. "Herzberg used this term because these factors seem capable of having a positive effect on job satisfaction, often resulting in an increase in one's total output capacity (pp. 64-65).

In contrast, the major factors involved in job dissatisfaction were found to be company policy and administration, supervision, salary, interpersonal relations and working conditions (Herzberg, 1966, p. 74). Hersey and Blanchard (1988) summarized that

These are not an intrinsic part of a job, but they are related to the conditions under which a job is performed. Herzberg related his original use of the work hygiene to its medical meaning (preventative and environmental). He found that hygiene factors produced no growth in worker output capacity; they only prevented losses in worker performance due to work restriction. (p. 64)

According to Hersey and Blanchard (1988), there is a connection between Maslow's needs hierarchy theory and Herzberg's dual factor theory. The authors stated that it has been found that money and benefits tend to satisfy needs at the physiological and security levels; interpersonal relations and supervision are examples of hygiene factors that tend to satisfy social needs;

increased responsibility, challenging work, and growth and development are motivators that tend to satisfy needs at the esteem and self-actualization levels. (pp. 66-67)

Similarly, Morphet, Johns, and Reller (1982) indicated some similarity between the models of Maslow and Herzberg. The motivators in Herzberg's model are similar to the higher-level need motivators of the Maslow model and the hygienes are similar to the lower-level needs of Maslow's model. They concluded that Herzberg's theory is applicable to education in that the motivators are more likely to be gratified in pluralistic, collegial educational organizations (p. 89).

Numerous researchers have concurred that Herzberg's dual factor theory has implications for education. In his study on factors which related to satisfaction and dissatisfaction of teachers, Sergiovanni (1967) found that factors appearing as sources for high job feelings tended to differ from factors appearing as sources of low job feelings. Additionally, satisfaction factors tended to focus on the work itself, while dissatisfaction factors tended to focus on work conditions (p. 81).

Kaiser (1982) discussed the relationship of Herzberg's theory to hygiene and motivation factors that improve teacher performance. He stated that

as school boards provide increased hygiene factors, teachers can be expected to increase their performance

to that of a day's work for a day's pay, but can not be expected to be satisfied or motivated to do anything more than that. (p. 42)

Kaiser (1981) concluded that enriched job responsibility motivates and motivation increases performance (p. 43).

Silver (1982) indicated that there is a strong probability that educational leaders can have a considerable impact on teachers' degree of satisfaction and levels of motivation. They can accomplish this by influencing "the sense of achievement, recognition, challenge, responsibility, advancement, and growth possibilities that teachers and other staff members experience at work" (p. 551).

Kaufman's (1984) study focused on the contention of Herzberg that there are individuals who are primarily concerned with one set of needs or the other. Her questionnaire was designed to measure (a) motivation/satisfaction, (b) hygiene/dissatisfaction, and (c) commitment/activities. From reliability studies, Kaufman explained that the theory could be used to distinguish between groups in this study and the instrument did make a distinction between groups of respondents. From her findings, Kaufman concluded that using Herzberg's theory in education it is possible to distinguish between motivation seekers and hygiene seekers. Additionally, the data from the study indicated that motivation seekers are more committed to the teaching profession than are hygiene seekers.

Schmidt (1976) conducted a study using Herzberg's Motivation-Hygiene Theory. The sample for the study consisted of principals in 25 randomly selected high schools in suburban Chicago, their immediate subordinates, and immediate supervisors. The conclusions of the author indicated that the theory applies to the management level of public education. He found that "administrators are highly motivated by achievement, recognition, and advancement, but not very much by salary, good interpersonal relations, effective policy and administration and supervision..." (p. 68).

Jones (1981) concurred with Herzberg when she stated that his theory could be applied to the administration of early childhood programs. She stated that hygiene factors are usually chosen for improvement when an administrator wants to strengthen motivation in an organization. However, even if all of these factors are excellent, the excellence will only prevent an employee from being dissatisfied (p. 9). Further, she stated that motivators are some of the things that can be developed by an administrator, so that employees have a sense of satisfaction in their work, not just an absence of dissatisfaction (p. 12). She concluded by stating

This theory of motivation parallels what early childhood educators believe in: the importance of building a child's self-esteem, and of helping a child to reach his or her potential. Good theory about people can apply to

any age: child or adult. Adults respond to those who believe in them and who recognize their potential, just as children do. Adults like to be helped to create and achieve, to be responsible and grow, also. (p. 18)

Thompson (1979) concluded that by providing job enrichment that includes the motivators of achievement, responsibility, advancement, and recognition workers will be enabled to more fully develop and use their abilities (p. 16).

Theory X and Theory Y

McGregor (1960) developed one of the more popular theories of management behavior. He stated that successful management depends significantly on the ability to predict and control human behavior. In order to be successful the professional manager must draw upon a growing body of knowledge of social sciences, as well as personal experience and observation. (p. 3-4)

McGregor (1960) based his theory on sets of assumptions he called Theory X and Theory Y. He stated that every managerial action or decision has assumptions about human nature and human behavior (p. 33). Theory X is based on the following assumptions:

1. The average human being has an inherent dislike of work and will avoid it if he can.
2. Because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment to get them to put

forth adequate effort toward the achievement of organizational objectives.

3. The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all. (pp. 33-34)

Theory Y is based on the following assumptions:

1. The expenditure of physical and mental effort in work is as natural as play or rest.
2. External control and the threat of punishment are not the only means for bringing about effort toward organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed.
3. Commitment to objectives is a function of the rewards associated with their achievement.
4. The average human being learns under proper conditions, not only to accept but to seek responsibility.
5. The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solutions of organizational problems is widely, not narrowly, distributed in the population.
6. Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partially utilized. (pp. 47-48)

McGregor (1960) stated that the central principle of organization which derives from Theory X is that of direction and control through the exercise of authority (p. 49). People will only work under external coercion and control (p. 34). Further, McGregor (1960) compared Theory X to the "carrot and stick theory of motivation when he stated that the means for satisfying physiological and safety needs can be provided or withheld by management. However, he warned that

The "carrot and stick" theory does not work at all once man has reached an adequate subsistence level and is motivated primarily by higher needs. Management cannot provide a man with self-respect, or with the respect of his fellows, or with the satisfaction of needs for self-fulfillment. We can create conditions such that he is encouraged and enabled to seek such satisfactions for himself, or we can thwart him by failing to create those conditions. (p. 41)

According to McGregor (1960), the philosophy of management by direction and control is inadequate to motivate because based on this approach human needs are relatively insignificant motivators of behavior in society today (p. 42). Wilkinson, Orth and Benfari (1986) indicated that the result of the Theory X approach is low motivation, low performance and low job satisfaction leading to low morale, high turnover, and excessive training costs (p. 31).

Goldstein (1986) concurred when he related it to the concept of quality circles. He stated that "circles operating under duress caused by autocratic middle management in a Theory X environment will eventually expire as the result of lack of acceptance of (even more destructive of circle longevity) outright opposition" (p. 43).

Relating McGregor's Theory X to education, Mattaliano (1982) explained that it is common to encounter employees who lack interest in organizational goals. This lack of interest occurs "when people in the organization feel that the hierarchy of the organization is restrictive and unresponsive to them as individuals" (p. 38). Professional educators must be highly involved in setting objectives if they are to help the organization reach its goals (p. 38).

Hanson (1985) discussed implications for education of Theory X management. He stated that if the needs of a student, teacher, or administrator are primarily esteem, social, or self-actualization, the coercion, threats and pressures associated with Theory X are useless in motivating behavior (p. 234). McGregor (1960) concluded that "so long as the assumptions of Theory X continue to influence managerial strategy, we will fail to discover, let alone utilize, the potentialities of the average human being" (p. 43).

Finding the assumptions of Theory X to be unnecessarily limiting, McGregor (1960) formulated Theory Y. He stated

that the central principal of Theory Y is "the creation of conditions such that the members of the organization can achieve their own goals best by directing their efforts toward the success of the enterprise" (p. 49). Vroom and Deci (1970) described Theory Y as participative management. They stated that when there is participative management, individuals will become more ego-involved with their jobs, more emotionally committed to doing them well, and take pride that they are furthering the objectives of the company (p. 15).

Rogers (1969) analyzed the implications of Theory X and Theory Y for education. He stated that educational administration is responsible for organizing the resources of the institution so that all persons involved can work together toward defining and achieving their own educational goals. The major principle of this type organization is the motivation for development and learning which is inherent in each person. He concluded that "the task of the administrator is to so arrange the organizational conditions and methods of operation that people can best achieve their own goals by also furthering the jointly defined goals of the institution" (pp. 207-208).

Sergiovanni and Starratt (1979) advocated a similar management theory for education. "An alternate management philosophy based on more adequate assumptions of human nature is needed in order for schools to meet their professional

growth commitment to teachers and to improve the intellectual, social, and emotional welfare of their young clients" (p. 102).

Expectancy Theory

Vroom (1964) developed an approach to motivation known as the expectancy theory. He proposed that the level of performance is an increasing function of the amount of motivation (p. 204). Frunzi and Savini (1991) explained that according to expectancy theory, human motivation is influenced by anticipated rewards and costs (p. 120).

Vroom (1964) used the concepts of valence, expectancy, and force to explain his motivation theory. Valence refers to the affective orientations of an individual toward particular outcomes. Expectancy is defined as a belief about the likelihood that a specific act will be followed by a specific outcome. Force relates to the fact that the behavior of a person is a result of a field of forces each of which has magnitude and direction (p. 15-18). He contended that

the force on a person to perform an act is a monotonically increasing function of the algebraic sum of the products of the valences of all outcomes and the strength of his expectancies that the act will be followed by the attainment of these outcomes. (p. 18)

Porter, Lawler, and Hackman (1975) explained that the "expectancy theory provides one way of analyzing and

predicting which courses of action individuals will take when they have the opportunity to make choices about their behavior". They explained that "the model posits that the motivational 'force' to engage in a behavior is a multiplicative function of (1) the expectancies the person holds about what outcomes are likely to result from that behavior and (2) the valence of these outcomes" (p. 56). Symbolically, the model is expressed as follows:

$$MF = E \times V$$

where MF = motivational force

E = expectancy

V = valence. (p. 56)

Nash (1985) believed that expectancy theory has practical implications for companies seeking to improve productivity. He listed four useful and practical recommendations when he stated that managers should

1. collect systematic information regarding the rewards employees want from their jobs as well as their perceptions of the probability of obtaining those rewards on the basis of their efforts.
2. make sure employees understand their responsibilities, so that their efforts are focused on what is important.
3. tie reward to performance, establishing a contingency between behavior and reward to increase

expectations and avoid making across-the-board wage and salary increases.

4. monitor employees' attitudes and shape the compensation programs to fit those attitudes. (p. 21)

Quick (1987) concurred that a manager can put the expectancy theory into practice. "What people do is a function of the reward they expect to gain from doing it." The key word is expect, because the reward must be seen as attainable" (p. 15). Thus, if managers want employees to work well for them, they should make those individuals believe that they will be rewarded for their work (p. 15).

Hackman and Porter (1968) conducted a study of 82 telephone employees using expectancy theory to predict work effectiveness. The results and methodology of the study have implications for diagnosing a performance situation in terms of motivation and changing aspects of the situation in order to obtain higher levels of effort from the performers. Applying expectancy theory to this research, the authors concluded that there are three factors which affect the level of effort an individual exerts in a specific performance situation. These factors are (a) the particular outcomes which the performer perceives as occurring as a result of hard work on the job, (b) the level of certainty which the performer has that particular outcomes will be obtained as a result of working hard (strength of expectancy, and (c) the evaluations which the performer makes of the perceived

outcomes (valence). The authors explained that using a methodology, such as the one in this study, would allow "an investigator to identify those aspects of a performer's perceptions and evaluations which tend to enhance his motivation to work hard, and those which detract from it" (p. 424). The authors concluded that once a diagnosis of a situation is obtained, changes can be made to improve the performer's motivation to work hard (p. 424).

Utilizing the expectancy theory in education, Wright (1984) conducted a study of 215 full-time classroom teachers. Based on the premise that teachers and students benefit from direct teacher participation in curriculum development, she examined the nature of incentives that foster such participation. She claimed that expectancy theory provided a framework for identifying incentives most appropriate for motivating teacher involvement. She concluded that administrators should not limit incentives to the traditional increases in pay. They should clarify the exact nature of activities in which they want teachers to engage, then identify the incentives that will motivate involvement (p. 29).

In another education study, Miskell, DeFrain, and Wilcox (1980) studied a group of secondary teachers and graduate students in a higher education program. They found that rewards (anticipated outcomes) were the major factors in the prediction of satisfaction and performance (p. 87). "The

parallel findings for the different samples suggest that the theory promises to be generalizable to other educational settings or levels" (Miskell, DeFrain, & Wilcox, 1980, p. 88).

Achievement Motivation Theory

Achievement motivation theory grew out of the pioneer motivation studies of Murray (1938). More than anyone else he is given credit for introducing the concept of need and giving it a prominent position in modern psychology (Madsen, 1968, p. 153). Murray (1938) defined need as

a construct (a convenient fiction or hypothetical concept) which stands for a force (the physico-chemical nature of which is unknown) in the brain region, a force which organizes perceptions, apperception, intellection, conation and action in such a way as to transform in a certain direction an existing, unsatisfying situation...it persists and gives rise to a certain course of overt behavior (or fantasy), which (if the organism is competent and external opposition not insurmountable) changes the initiating circumstance in such a way as to bring about an end situation which stills (appeases or satisfies) the organism. (pp. 123-124)

Murray (1938) constructed a list of 20 basic human needs, one of which he called achievement need (n Ach). He defined this need as

a desire to accomplish something difficult. To master, manipulate or organize physical objects, human beings, or ideas. To do this as rapidly, and as independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent. (p. 164)

In addition, Murray (1938) explained that the environment, as well as human needs, impact human behavior. He stated that "an organism is within an environment which largely determines its behaviour, and since the environment changes...the conduct of an individual cannot be formulated without a characterization of each confronting situation, physical and social" (p. 39).

Murray constructed an instrument for studying personality and needs called the Thematic Apperception Test (TAT). The test contains a group of pictures about which an individual tells a story. Different scoring schemes applied to the stories are designed to detect certain themes considered indicative of the needs and personality of the individual telling the story (Beck, 1978, p. 317).

Unlike many motivational constructs, the basic definition and primary concepts of achievement motivation (often called "need for achievement" or "n-ach") have not been disputed. This agreement exists primarily because the study of achievement motivation has been the work of one

school of thought and a few theorists and researchers. These individuals have worked under the general leadership of McClelland (Vidler, 1977, p. 67).

McClelland, Atkinson, Clark, and Lowell (1976), drawing from the work of Murray, asserted that the purpose of their work was to "develop a method of measuring human motives and to use the method in collecting data which would contribute to a theory of motivation" (p. 2). This theory evolved into achievement motivation theory.

McClelland et al. (1976) maintained that their work was based on psychoanalytic thinking about motivation and experimental investigations of animal motivation (pp. 2-3). Alschuler (1973) explained that, according to Freud, motivation is reflected in the fantasy lives of individuals. Psychoanalysts use interpretation of dream fantasy as a principle method of assessing an individual's motivation. He stated that a second method of used to elicit fantasies is Murray's Thematic Apperception Test. He further wrote that McClelland integrated the Freudian approach with a scientific method by designing a method of quantifying human motivation reflected in TAT stories (p. 20). As a result of their initial findings, McClelland et al. (1976) concluded that fantasy stories could reflect the presence and intensity of motives (p. 4).

Proceeding from their initial study, McClelland et al. (1976) investigated a uniquely human motive, achievement (p.

4). By giving different instructions to groups of individuals immediately before they wrote their TAT stories, the researchers varied the intensity of achievement. They concluded that when given ego-involving instructions, the "achievement" group generated specific kinds of thoughts not present in the other two groups. These specific kinds of thoughts became the operational definition of achievement motivation (Alschuler, 1973, p. 21).

The operational definition of achievement motivation, as defined by McClelland et al. (1976) stated that

By achievement goal is meant success in competition with some standard of excellence. That is, the goal of some individual in the story is to be successful in terms of competition with some standard of excellence. The individual may fail to achieve this goal, but the concern over competition with a standard of excellence still enables one to identify the goal sought as an achievement goal. (pp. 110-111)

Vidler (1977) explained that although achievement motivation involves planning and striving for excellence, it is the attitude toward achievement that is important, not the accomplishments per se (p. 67).

Atkinson (1964) refined achievement motivation theory considerably by (a) placing the theory into the framework of expectancy-value theory and (b) emphasizing the role of conflict, especially between achievement and fear of failure.

(Beck, 1978, p. 319) Explaining Atkinson's theory, Good and Brophy (1986) stated that

the tendency to approach an achievement goal (T_s) is a product of three factors: the need for achievement or the motive for success (M_s); the probability of success (P_s); and the incentive value of success (I_s). However, the fear of failure can also be aroused in an achievement-related situation. Thus, there is also a tendency to avoid failure (T_{af}), which is the product of three factors: the motive to avoid failure (M_{af}); the probability of failure (P_f); and the incentive value of failure ($-I_f$). M_s is conceptualized as the capacity to experience pride in task achievement and T_{af} is the capacity to experience embarrassment or shame in the face of task failure...A person's achievement motivation for any particular task is the strength of the tendency to approach the task minus the strength of the tendency to avoid failure. Thus, a person is high in resultant achievement motivation when M_s exceeds M_{af} ($M_s > M_{af}$).

(p. 416)

Utilizing Atkinson's theory, Weiner (1980) stated that for persons low in resultant achievement motivation all achievement tasks are aversive in that they generally elicit fear. Whereas, with persons high in resultant motivation, tasks of moderate difficulty produce maximum motivation (p. 200).

From their study, Atkinson and Litwin (1960) found results that supported Atkinson's theory. They concluded that persons high in resultant achievement motivation are more likely to prefer tasks of intermediate difficulty than persons low in resultant achievement motivation (p. 62).

McClelland et al. (1976) studied achievement motivation as it related to learning and performance. They concluded that a high n Achievement (need for achievement) score is associated with learning when learning is required (or possible) and with speed of performance when it is not (p. 237). deCharms (1976) studied the relationship of achievement motivation training and academic performance. He concluded that "project data indicate the motivation training enhances academic achievement" (p. 211). Wang and Weisstein (Fyans, 1980) studied the effects of teacher expectancy on the achievement motivation of children. They found that in learning environments where students are taught to control their own learning behavior, teacher expectancies did not adversely affect student motivation (p. 440). The authors concluded that utilizing strategies such as self-management skills to improve and maintain achievement motivation, especially in low achieving students, will minimize teacher expectancy effects on student achievement and achievement motivation (p. 442-443).

In summary, general findings of research on achievement motivation in education are often discussed more from other

perspectives, than from increased academic performance. (Vidler, 1977, p. 84). McClelland (Alschuler, 1973) summarized the value of achievement motivation training. "Achievement motivation training may work, not by increasing n-Ach, but by improving classroom and life management techniques" (p. 264). If the ultimate purpose of school is to teach students those skills that will enable them live more effective lives as adults, then the findings are encouraging (Alschuler, 1973).

Path Goal Theory

According to Evans (1974), "path-goal theory provides a rather complete framework for understanding motivation in organizational settings" (p. 172). In developing the theory, House and Dessler (1974) stated that it was intended to explain the relationship between leader behavior and motivation of subordinates (p. 30).

House and Dessler (1974) proposed that one of the strategic functions of a leader is to enhance the psychological states of subordinates that in turn motivate them to perform and lead to increased job satisfaction. They inferred from previous research that the strategic functions of the leader consist of

1. recognizing and/or arousing subordinate's needs for outcomes over which the leader has some control,
2. increasing personal payoffs to subordinates for work goal attainment,

3. making the path to these payoffs easier to travel by coaching and direction,
4. helping the subordinates clarify expectancies,
5. reducing frustrating barriers, and
6. increasing the opportunities for personal satisfaction contingent on effective performance. (p. 30)

Stated less formally, the motivational functions of the leader consist of increasing the number and kinds of personal payoffs to subordinates for work-goal attainment and making paths to these payoffs easier to travel by clarifying the paths, reducing the road blocks and pitfalls and increasing the opportunities for personal satisfaction en route. (House & Mitchell, 1974, p. 85)

Because these functions are stated in paths and goals, the theory is known as the path-goal theory (House & Dessler, 1974, pp. 30-31).

Downey, Sheridan and Slocum (1975) explained that the effectiveness of performing these motivational functions is contingent upon the structure of the task. They stated that when a task is unstructured, an effective leader will initiate structure in the work environment in order to help subordinates successfully accomplish the task and clarify how their performance will be rewarded. Thus, subordinates will

be satisfied with intrinsic demands of the unstructured task and motivated by extrinsic rewards (p. 254).

In order to test for generalizability, Stinson and Johnson (1975) extended the path-goal theory by obtaining evidence from a more homogeneous sample with respect to hierarchical level and education. The subjects in their study were military officers, Civil Service personnel and project engineers (p. 245). According to Hersey and Blanchard (1988) an important aspect of Stinson and Johnson was the assertion that

although leader relationship is more important if followers are performing highly structured tasks, the amount of task behavior the leader should use depends on the nature of the followers as well as the type of task the followers are performing". (p. 111)

In a more recent application of the path-goal leadership theory, Keller (1989) studied the effect of need for clarity on initiating structure (IS) and job satisfaction. He used highly educated subjects, who enjoyed substantial autonomy and discretion in their jobs (p. 209). Keller (1989) concluded that

professionals with low need for clarity generally should be allowed to structure their own work, consistent with organizational and task needs, and the supervision should tend to limit his or her IS behavior with these employees. Professionals with high need for clarity,

however, generally should receive more IS behavior from their supervisions for unclear tasks, to enhance satisfaction and performance. In effect, the supervisor should determine the job-person fit each professional has attained on the basis of a combination of need for clarity and task structure; then the supervision can provide the appropriate IS behavior. (p. 211)

Teacher Performance-Motivation Theory

Blase and Greenfield (1980-81) reported that numerous studies of teaching as an occupation and teaching as work have failed to generate a systematic theory which integrates teacher performance and related factors, including teacher work effectiveness, motivation, satisfaction, involvement, and stress into a unifying framework. As a result, they formulated an interactive cyclical theory of teacher performance, the teacher performance-motivation theory (p. 1). It differs from existing theories of teacher work performance in that it (a) is based almost exclusively on data from teachers, (b) emphasizes the importance of "cycles of interaction" between teachers and students, and (c) it reflects elements of both content and process motivation-performance theories (p. 1).

The teacher performance-motivation theory highlights the dynamic and reciprocal nature of the teacher-student relationship in terms of understanding cycles of teacher work

performance (Blase & Greenfield, 1981-82, p. 2). They explained that

the positive performance cycle argues that increases in teacher satisfaction, involvement, motivation, and effort result when, in the teacher's perception, teacher effort leads to the achievement of valued outcomes with students. This in turn increases teacher responsiveness to students. The positive performance cycle has a regenerative impact on teachers and on students...The negative performance cycle argues that decreases in teacher satisfaction, involvement, motivation, and effort occur when, in the teacher's perception, teacher effort fails to achieve valued outcomes with students...The negative performance cycle has a degenerative impact on teachers and students. (p. 2)

More specifically, Blase, Strathe and Pajak (1986) stated that "variations in teacher performance are viewed as resulting primarily from the teacher's perception of his/her effectiveness in working with students within a context of personal, social, and organizational factors" (p. 139).

Blase, Strathe and Pajak (1986) explained that seven major concepts serve as the basis for a positive performance cycle. They are effort, stressors, valued outcomes, rewards, satisfaction, involvement, and motivation. Effort refers to the individual teacher's expenditure of mental, physical, or emotional energy toward the achievement of valued student

outcomes. The concept of stressors refers to those work related factors which tend to interfere with teacher performance. Teacher perceptions of student needs constitute the concept of valued outcomes. The concept of rewards refers to what teachers value as payment for effort. Rewards can be intrinsic or extrinsic. Satisfaction is defined as a subjective feeling state associated with obtaining intrinsic rewards from achievements of students. Involvement is the amount of time spent in creative-innovative, social-emotional, intellectual, managerial, and technical aspects of work. The concept of motivation refers to the driving, directing, energizing, and sustaining force behind individual behavior (pp. 139-141).

Blase, Strathe, and Pajak (1980-1981) summarized that the best way to improve teacher motivation and satisfaction is not through a system of extrinsic rewards unrelated to the teacher's relationship with students, but rather, by (a) helping the teacher improve his/her achievement of valued outcomes in the classroom and (b) helping the teacher recognize and identify evidence of success with students. (p. 142)

Recognizing that no one theory of motivation meets all needs, a summary of selected motivation theories has been presented in this section. "By selectively choosing from several sources, a more complete understanding of the process

and problems of motivating individuals can be achieved" (Terpstra, 1979, p. 379).

From a review of traditional theories of motivation, Franks (1992) concluded that, while motivation is strongly influenced by environmental factors, it lies primarily within the individual. "However, the supervisor is part of the environment and therefore influences the motivation of the subordinates. Through the reactions and interpretations of subordinates, the effects of specific leadership acts of supervisors are individualized and internalized." (Franks, 1992, p. 29). Because teacher motivation is a complex, multi-faceted concept, a more efficient method of examining it is to focus on aspects of motivation that can be influenced in the educational environment.

Teacher Motivation

A major goal of education is that of increasing the academic achievement of students. Teachers are viewed as the primary facilitators of student learning and achievement in school. Discovering the factors that motivate teachers to facilitate the goal of increased student achievement has been the goal of numerous researchers.

In their study of teacher motivation, Ames and Ames (1984) stated that motivation involves how teachers think, including interpretations, perceptions, and patterns of self-regulation. They stated that teacher motivation is characterized by showing how three systems of motivation

evolve from specific teacher goal orientations. The three systems of motivation include ability-evaluative, task mastery, and moral responsibility (p. 535). Explaining the ability-evaluative system they stated that

the protection of the teacher's self-esteem and self-concept of ability are the most important concerns for the teacher. Teachers tend to focus more on themselves, become more self-aware, and become more concerned with whether they are able...If situational factors emphasize an ability focus, teachers are concerned with demonstration of high ability and avoidance of demonstration of low ability. (p. 457)

The moral responsibility motivational system is associated with "a value for the concern of the welfare of the pupil, attributions to the teacher's ability and effort for student failure or to factors outside of the student's volitional control, and strategy beliefs associated with a general helping orientation" (p. 549). Under the task-mastery motivational system, the teacher's primary concern is on accomplishing valued goals for student mastery. The motivation of a teacher to engage in certain actions is based not on a cost to their esteem, but on a determination of which action is likely to increase the probability of success toward a valued learning goal (p. 549). Ames and Ames (1984) summarized that the differing motivational states of teachers are derived from certain constructions of social reality

which involve different goals and values, attributions, perceptions, and strategy beliefs (p. 552).

Lortie (1975) completed a sociological study of approximately 6,000 teachers in Dade County, Florida that dealt with numerous issues in the organization of teaching work and sentiments teachers hold toward their daily tasks. He argued that there is a special combination of orientations and sentiments among teachers that derives from the structure of the occupation and the meanings teachers give to their work (p. viii).

Regarding the structure of the organization and extrinsic rewards, Lortie (1975) pointed out that "compared with most other kinds of middle-class work, teaching is relatively 'career-less'. There is less opportunity for the movement upward which is the essence of career" (p. 84). He argued that in the short run teachers can do little to increase benefits (annual increases in pay) other than acquire seniority and take courses. In the long run, the primary opportunity for making major gains is by leaving the classroom for full-time administration (pp.99-102).

Lortie (1975) stated that psychic (intrinsic) rewards "consist entirely of subjective valuations made in the course of work engagement" (p. 101). While these valuations can vary from person to person they are also constrained by the nature of the occupation (p. 101). He found that teachers consider psychic (intrinsic) rewards their major source of

job satisfaction (p. 104). "It is of great importance to teachers to feel they have 'reached' their students--their core rewards are tied to that perception" (Lortie, 1975, p. 106).

Kottkamp, Provenzo and Cohn (1986) replicated Lortie's (1975) study of teacher attitudes and motivation. A comparison of the studies yields some interesting results. While Lortie (1975) chose virtually the entire teaching population of Dade County and collected his data on a single day, Kottkamp et al. (1984) and Cohn (1986) chose a stratified random sample of classroom teachers from each school in the same county and collected the data by questionnaires distributed through school mail (p. 560).

Kottkamp et al. (1984) reported findings that supported those of Lortie (1975). Overall job satisfaction rates remained relatively high with respect to workplace and conditions of work (p. 561). Additionally, "the opportunities to study, plan, master, classroom management, 'reach' students, and associate with colleagues and children" (intrinsic rewards) were listed as the most important category of rewards to teachers (p. 565).

Erlandson and Pastor (1981) examined the relationship between motivation of teachers and their job satisfaction. They analyzed the presence, intensity and fulfillment of higher order need strengths (similar to Maslow's hierarchy of needs) in 150 high school teachers. The findings indicated

that (a) approximately two-thirds of the teachers surveyed had a predominance of higher order need strengths over lower order need strengths, (b) of the six higher order need strengths possessed by the teachers, the freedom of responsibility for one's own goals and to see these goals to completion was expressed as the strongest need strength, and (c) schools do better at satisfying teachers' lower order needs than satisfying higher order needs (pp. 6-7). The authors concluded that the principal has considerable influence "to shape the communication, influence, and decision-making patterns of the school and to allocate significant instructional areas to the control of higher order need teachers" (p. 8).

Frase (1989) tested potential implications for education using Herzberg's motivation-hygiene theory with 38 high-performing elementary and junior high school teachers (p. 52). When compared with teachers choosing cash as a reward, those who chose professional travel for training as a reward experienced greater opportunities for job enrichment in the forms of conducting workshops for teachers and redesigning curricula. These two opportunities are representative of Herzberg's intrinsic motivators labeled "responsibility" and "possibilities for growth". Additionally, teachers who chose travel rather than cash, reported more advice seeking from peers. Herzberg labeled this internal motivator "recognition" (p. 56). Frase (1989) summarized that

intrinsic motivators such as professional travel, as opposed to extrinsic motivators such as cash, appear to lead to greater intrinsic motivation, job enrichment, and involvement in professional activities. This study supports the earlier contention that intrinsic rewards yield a greater motivational effect than external rewards. (p. 56)

However, Frase (1989) cautioned that salary levels and other extrinsic rewards must be adequate to satisfy hygiene needs. Summarizing the implications of the study for policy makers and administrators, he concluded that "although improvement in hygiene factors often is needed or desirable, legislation must provide for flexibility at the local level and ensure that motivational factors and hygiene concerns are considered" (p. 56).

Adopting the Herzberg interviewing format, Sergiovanni (1967) studied the responses of 71 elementary and secondary teachers in Monroe County, New York to determine the causes of work satisfaction and dissatisfaction (p. 70). He found that achievement, recognition, and responsibility were factors which contributed predominantly to job satisfaction and motivation. Of these three factors, achievement was predominant and was explained by the teachers as a feeling that they had reached and affected students in a positive way. Recognition varied and included feedback from principals, supervisors, parents, and students in the form of

letters, gifts, oral statements, and committee appointments. Responsibility, while found to be a significant satisfier, was limited and fell within the framework of rules and regulations of the school, the district, and the school board (p. 76-77). Appearing as satisfiers in Herzberg's study, advancement and work itself (intrinsic motivation) were absent in Sergiovanni's (1967) study. He speculated that advancement within teaching was not an opportunity available to teachers. Work itself was seen to be both a satisfier and dissatisfier. "The job of teacher (although potentially able to provide unlimited opportunity for creative and varied work) requires considerable attention to maintenance type activity...attendance and scheduling details, daily health checks, study hall assignments, and lunch duty" (p. 78). Sergiovanni (1967) found that the most important dissatisfiers related to interpersonal relations, particularly with students. He concluded that while a happy relationship with a student is not potent enough to by itself to be a source of job satisfaction, a poor relationship can cause considerable teacher dissatisfaction (p. 79).

Modifying Herzberg's framework for use in an educational setting, Jaycox and Tallman (1967) surveyed 226 Los Angeles City School teachers in order to identify positive and negative motivating factors in the teaching profession. They determined that the five most important factors in job satisfaction among teachers were

1. interpersonal relations with students
2. achievement
3. recognition
4. interpersonal relations with peers
5. interpersonal relations with the principal

Those factors leading to job dissatisfaction were

1. district/school policy
2. interpersonal relations with peers
3. working conditions
4. recognition
5. interpersonal relations with students (p. 81)

In contrast with industrial findings, the authors found that the same factors operate both as satisfiers and dissatisfiers.

Conclusions reached by Jaycox and Tallman (1967) were

1. because some factors act as both job satisfiers and dissatisfiers, a school administrator working to eliminate dissatisfiers may also be providing conditions of motivation
2. because subgroups of teachers differed significantly in responses, no one motivational program will be successful with all teachers.
3. factors related to organization are more important influences on teachers' satisfaction than salary or status (p. 81).

Thompson (1979) concluded that "the answer to teacher motivation lies in intrinsic motivation. And intrinsic

motivation belongs to self-determining and effective teachers. It does not come from money and controls (p, 43).

Mitchell and Peters (1988) stated that research studies clearly demonstrate the importance of intrinsic rewards for teachers that are linked their relationships with students and co-workers. They emphasized that

while extrinsic benefits play an important role in encouraging good teachers to enter and remain in he profession, day-to-day teaching efforts are more effectively stimulated by a sense of pride in student achievement and pleasure derived from working with students who appreciate the opportunity to learn. Conversely, material benefits are no match for the negative effects of distasteful working relationships, a sense of hopelessness in schools, or uncooperative and low achieving students. (p. 75)

Reflecting Vroom's, expectancy model, Mitchell and Peters (1988) added that reward potency alone does not control motivation. Rewards that are less potent may have higher incentive value if teachers believe that they can be achieved. The incentive value of a reward refers to how willing teachers are to reshape their work efforts in order to obtain it (p. 76). "...the most potent rewards for good teaching are intrinsic and symbolic rather than extrinsic and material (p. 74). They added that intrinsic teaching rewards

can be distributed not only to individuals, but to collegial work groups and organization units (p. 78).

A growing number of research studies have focused on the relationship between teacher motivation and aspects of the organizational structure in which teachers work. While most research has focused on individual characteristics and relationships to job satisfaction, these studies are inquiries into cultural and structural correlates of motivation (Kottkamp and Mulhern 1987). Herrick (1973) examined the relationship between teacher motivation to perform, as conceptualized through expectancy theory, and organizational variables. He found that those schools with an open climate and a less centralized authority structure were more conducive to teacher motivation. In his recommendations, Herrick (1973) suggested that principals could increase teacher motivation by (a) involving teachers in decision making and (b) demonstrating that rewards can be distributed fairly and justly (p. 111). Similarly, Kottkamp and Mulhern (1987) suggested

the logical congruity between a functional and flexible climate encompassing both task achievement and satisfaction of social needs and the subjective estimates of faculty that effort will result in successful performance and that performance will result in receiving valued rewards. (p. 16)

In his study of organizational structure and teacher motivation, Hopkins (1991) concluded that the reinforcement of factors such as self-knowledge and self-determination "are important in motivating teachers to expend more effort...Such reinforcement is more likely to occur in a climate that supports self-actualisation..."(p. 62).

Ellis (1988) and McLaughlin and Yee (1988) discussed the factors of teaching as a career that support teacher motivation. McLaughlin and Yee (1988) found that two factors emerged as critical to job satisfaction, level of opportunity and level of capacity. Level of opportunity refers to the "chance to develop basic competence; the availability of stimulation, challenge, and feedback about performance; and the support for efforts to try new techniques and acquire new skills" (p. 26). Level of capacity refers to the ability of teachers to secure needed resources and influence the directions and goals of the organization (p. 28). They concluded that teacher who possess these factors "tend to pursue effectiveness in the classroom, express commitment to the organization and career, and report a high level of professional satisfaction" (p. 29). Ellis (1988) stated that teacher motivation could be enhanced by restructuring the job of teaching so that a greater degree of challenge and a greater outlet for need to achieve, advance and become self-actualized (p. 20).

From the findings of his study, Fox (1988) listed 13 conditions conducive to increased teacher motivation. These are conditions over which principals have influence. The conditions included

1. Teaching - the primary task; helping teachers understand that teaching and student learning are the primary functions of the school;

2. Teaching - a stimulating activity; including teachers in decisions involving and encouraging and supporting teachers in their efforts to try new and improved methods and materials;

3. A sense of involvement; promoting leadership activities and decision making by teachers;

4. Teacher independence; demonstrating trust and respect for instructional decisions made within the classroom;

5. Affiliation; encouraging mutual respect among staff members and with the principal;

6. Reward system; recognizing and conveying both intrinsic and extrinsic rewards;

7. Success; setting expectations that are realistic, and measurable and relate to primary functions of the school;

8. Recognition; rewarding successes and efforts of the teachers in both formal and informal ways;

9. Feedback; offering feedback that is clear, accurate, sensitive and helpful;

10. Opportunities for growth; providing both personal and professional opportunities to enhance the teacher's job and personal life;

11. Safe school; reducing distractions to teaching and and providing physical and emotional safety;

12. Confidence in principal; respecting and trusting individuals, maintaining positive attitude about self, and displaying professional competence;

13. Use of resources; facilitating instruction by securing and allocating adequate resources (6-20).

Bredeson, Fruth, and Kasten (1983) summarized that the most powerful motivational forces which attract, maintain, and keep successful teachers in the classroom are a complex of intrinsic rewards which come together in the ideal occupational combination of working with students, seeing students learn and succeed, believing in one's job in service to others is valuable and being able to continue growing personally and professionally. (p. 57)

Leadership Influence on Teacher Motivation

The purpose of this section is to present a review of literature and research related to leadership influence and its role in the principal-teacher relationship. Emphasis will be focused on the principal's influence on teacher motivation.

Bass (1990) defined leadership as an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and perceptions and expectations of the members...Leaders are agents of change...Leadership occurs when one member modifies the motivation or competencies of others in the group. (p. 20)

According to Matthews (1991), leadership is the act of influencing the desire of others to perform (p. 6).

Numerous methods of studying leadership have evolved over the past 50 years. Researchers completing early studies concentrating on the leadership trait approach, suggested that certain traits were essential for effective leadership. Individuals possessing those inherent traits would be considered potential leaders (Hersey & Blanchard, 1988, p. 88). While the possession of certain traits are associated with effective leadership, the trait approach is no longer accepted because (a) leadership traits exhibited in one situation may not be appropriate in another situation and (b) the trait approach does not include the interaction variable believed to be a factor in the emergence to leadership status in a group (Kimbrough & Burkett, 1990, p. 108).

Hersey and Blanchard (1988) stated that "current organizational behavior theory views leadership ...as situational, or contingent in nature" (p. 105-106). While there are numerous situational approaches, a common theme to

each one is that "all situational approaches require the leader to behave in a flexible manner, to be able to diagnose the leadership style appropriate to the situation, and to be able to apply the appropriate style" (Hersey & Blanchard, 1988, p. 106). Explaining the concept of situational leadership, Fiedler and Chemers (1976) stated that there are three components that control and influence the situation.

They are

1. Leader-member relations: The degree to which the group supports the leader.
2. Task structure: The degree to which the task clearly spells out goals, procedures and specific guidelines.
3. Position power: The degree to which the position gives the leader authority to reward and punish subordinates. (p. 26)

Blake and Mouton (1964) utilized the situational approach in developing their managerial grid theory of leadership. They stated that leadership is a function of two concerns, concern for production and concern for people. How these concerns are linked together by a leader defines a particular leadership style described by Blake and Mouton (1964) on their managerial grid. They suggested that in an organization where there is a high concern for people and a high concern for production, there is greater organizational accomplishment.

Using a social systems framework, Kimbrough and Burkett (1990) stated that "leadership accrues to one through the effective influence over valued resources and group legitimation of the person to use these resources to influence policy" (p. 109). Those resources may be anything material or nonmaterial valued by faculty, staff, or students which the principal may possess or influence. These may include personal traits, such as physical appearance, fluency of speech, persistence, charisma, etc. and leadership skills, such as initiating and maintaining organization, decision making, communicating, and motivating faculty and staff to work hard (pp. 110-125).

Bennis and Nanus (1985) stated that leaders have "the capacity to relate a compelling image of a desired state of affairs-the kind of image that induces enthusiasm and commitment in others" (p. 33).

Burns (1978) emphasized the importance of linking leadership to followership when he defined leadership as leaders inducing followers to act for certain goals that represent the values and the motivations-the wants and needs, the aspirations and expectations-of both leaders and followers. And the genius of leadership lies in the manner in which leaders see and act on their own and their followers' values and motivations. (p. 19)

He developed the concept of transformational leadership which occurs when

one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality...It raises the level of human conduct and ethical aspiration of both leader and led, and thus has a transforming effect on both. (p. 20)

Sergiovanni (1990), stated that transformational leaders have the power to inspire commitment and performance by developing followers who "think for themselves, exercise self-control, and are able to accept responsibility and obligation ...and are self-motivated" (p. 27). Leithwood (1992) suggested that teachers' motivation for development is enhanced when they internalize a set of goals for growth. He stated that school leaders should help to ensure that such growth goals are challenging, but not unrealistic. School leaders should also provide opportunities for problem solving related to school improvement within a culture that values continuous professional growth (p. 10).

Matthews and Brown (1976) stated that "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 leadership acts of the principal" (p. 10). Bredo (1977) studied the influence of principals over classroom activities of teachers. She found that principals' task emphasis, involving the personal participation in teachers' current classroom work, was the

main predictor of actual influence, while social behavior was the strongest predictor of willingness to comply with future attempts to influence teacher actions.

Glasman (1984) contended that the role of the principal is central to school improvement, not only because the principal is accountable for what goes on at the school level, but because of the current call for the principal to be specifically accountable for student performance. He indicated that the school principal-student achievement linkage has not been studied in sufficient depth. In one set of studies, student achievement was not included in in-school correlates of school principal attributes. In a second set of studies, in-school correlates of student achievement either included no principal attributes or only principal attributes in schools where student achievement was high (p. 283). However, he concluded that principals have indirect influence on student achievement through communication with teachers and exchanging resources with them (p. 294).

Andrews, Basom, and Basom (1991) examined supervisory activities of principals that have been found to promote increases in student achievement. They found four areas of strategic interaction that make a difference in student achievement. These areas include

1. resource provider - both tangible (supplies and staff development) and intangible (respect and concern)

2. instructional resource - feedback about performance and interpretation of information about assessment results

3. communicator - ability to use all communication skills effectively

4. visible presence - model behaviors consist with school's vision

In their study of the principal's influence on student achievement, Matthews and Brown (1976) proposed aspects of teacher motivation which principals can influence. They stated that a teacher's effort to affect student achievement is a function of the teacher's self-concept of ability to affect achievement and desire to affect achievement. The desire to affect achievement is influenced by the teacher's attitude toward the principal and the teacher's perception of the principal's value on achievement. Matthews (1979) added another dimension of subordinate motivation - perceived future utility of improved achievement. Thus, there are four aspects of teacher motivation which related to a teacher's effort and desire to perform. They are (a) teacher's attitude toward principal, (b) teacher's belief about principal's expectations for improved achievement, (c) teacher's self-concept of ability to affect achievement, and (d) future utility of improved performance. In the following discussion, each of the four aspects of teacher motivation will be reviewed.

Attitude Toward Superior/Teacher Attitude Toward Principal

An attitude is "an internal state which affects an individual's choice of action toward some object, person, or event" (Gagné & Briggs, 1979, p. 85). They implied that attitudes should be measured in terms of personal action taken by an individual. An indirect method of establishing or changing attitudes is human modeling. The human model must be someone whom the learner respects or with whom he or she can identify (pp. 86-88).

Vroom (1964) explained that attitudes of subordinates toward supervisors could be examined from two approaches; the personality (intelligence, dominance, etc.) of the supervisor and the behavior of the supervisor in the work situation (p. 107). In his research, Fiedler (1958) found that an important predictor of group productivity was the subordinates' attitude toward the leader (p. 43). He concluded that while the subordinates' acceptance of the leader does not by itself affect group performance, it does provide the leader with a communication channel through which to communicate messages related to productivity (p. 45).

Attitudes are significant factors in motivation.

Matthews (1979) stated that

The direction of subordinates' response predispositions is influenced by their perceptions of the direction of the superior's leadership. If perceived as leading toward improved academic performance, then subordinates'

attitudes toward the superior will have a positive effect on their desire to improve academic performance. (p. 64)

Bass (1990) reviewed studies related to consideration (the extent to which a leader shows concern for other members of the group) and initiation of structure (the extent to which the leader initiates and organizes, and defines the way work is to be done). He stated that both consideration and initiation of structure by principals as reported by teachers were positively and significantly related to achievement scores (p. 531). From his analyses of the studies, he concluded that "consideration both increases the satisfaction of subordinates and is increased by it" (p. 543). Riordan (1987) concluded that consideration that principals show to teachers is important in maintaining teacher work motivation. She indicated that teachers seem to be more highly motivated when they believe their principals to be both task oriented and caring.

In her discussion of effective instructional leadership, Blair (1991) commented on the importance of considering what teachers need and want in order to function as professionals. She stated that teachers have positive views of supervisors who make constructive comments on management techniques and teaching skills (p. 103). Blase (1990) examined principals' use of control and protection and the impact of these strategies on teacher performance. He noted that classroom

and school-wide performance was negatively affected.

"Relationships among teachers, between teachers and principals, and between teachers and students also suffered as a result of the use of these tactics ..." (p. 746).

Fairholm and Fairholm (1984) studied tactics that principals use to improve effectiveness. They reported that personality (the response or respect that others have for one's character traits, presence, or method of operating) was perceived by secondary school principals as the most effective tactic used to influence others.

Miller (1977) emphasized that "leader behavior is a powerful force in influencing teacher behavior" (p. 33). He stated that role modeling is an effective way for principals to communicate the way they would like to see teachers relate to students in the classroom. Fox (1986) reported that the confidence in the principal can influence teacher motivation in at least two ways. The first way is how the principal relates to others. "If the principal respects teachers and trusts them the teachers' attitude will be positive in return" (p. 17-18). A second way principals can influence teachers' attitude of confidence is through the principal's own positive attitude about self. "The principal who is a positive thinker who sees opportunities rather than problems, and who has a healthy sense of humor, instills confidence in others" (p. 18). Fox (1986) concluded that through these attitudes and behaviors, the principal is viewed by teachers

as committed to school success. "An attitude of group loyalty grows, of which the principal is a part, the principal grows in influence with the teachers, while developing as a role model to teachers" (p. 19).

Superior's Expectations/Principal Expectations

Knezevich (1969) defined an expectation as "an evaluative standard applied to an incumbent of a particular position; a responsibility of obligation placed upon a person who occupies a given position in the organization. It is anticipatory in nature" (p. 105).

Matthews and Brown (1976) assumed that teachers' beliefs about the value principals place on student performance affect efforts to improve the performance of students. They hypothesized that leadership acts of principals will be most effective when teachers have positive attitudes toward the principal and believe that the principal values student performance highly (p. 11).

Bass (1990) stated that what leaders expect of their subordinates strongly influences the subordinate's performance and progress (p. 212). House (1977) added that leaders who simultaneously communicate high expectations of, and confidence in followers are more likely to have followers who accept the goals of the leader and believe that that can contribute to goal accomplishment and are more likely to have followers who strive to meet

specific and challenging performance standards. (p. 201)

The implications of this theory for education were examined by Rosenthal and Jacobsen (1968) in their well-known study, Pygmalion in the Classroom. The results of their study indicated that teacher expectations did influence student academic performance. In their study of student achievement in selected Michigan elementary schools, Brookover, Schweitzer, Schneider, Beady, Flood, and Wisenbaker (1978) concluded that principal and teacher expectations of students and student beliefs about these expectations and success in school are clearly related to student achievement (p. 317). From their studies, Mortimore, Sammons, Stoll, Lewis and Ecob (1988) implied that the area of expectations is extremely complex and that they are transmitted in direct and subtle ways. They stated that "if teachers believe that pupils can change and that learning can become easier in the right climate, then they will transmit that positive view the their pupils" (p. 286). In a speech at the Georgia Compensatory Leaders annual conference, Proctor (1992) expressed the belief that "all children can learn" if expectations are clearly stated by school leaders to teachers and students.

The importance of principal expectations and student achievement is reflected in numerous studies of effective schools and principals. Robinson and Block (1982) summarized

22 studies of the relationship of principal behavior to academic achievement of students. They found that "principals who are strong instructional leaders; who emphasize educational goals; who communicate high expectations for achievement to students, staff, and parents; who work to maintain a good learning environment; and who support the instructional process lead higher achieving schools" (p. 53).

Batsis (1987) described a set of five characteristics shared by effective principals. They included (a) a sense of vision, (b) clearly stated expectations for staff and student; (c) effective formal and informal communication skills; (d) a high degree of visibility; and (e) technical knowledge of curricula and instruction. Further explaining expectations, he stated that It is not important that teachers are always in agreement with the principal's expectations, rather that "they understand what is expected and can then discuss this matter on an objective basis with their supervisor" (p. 5).

Zimmerman (1990) gathered suggestions for school improvement from 22 elementary school principals who comprise the charter membership of the National Association for Schools of Excellence. He reported that

high expectations of students and staff was unanimously identified as the first critical element in achieving academic excellence and equity. There must be a firm

belief that all children can learn. Principal, teachers and other school staff must believe all children can learn and must have high expectation for themselves, their students and their school. (p. 13)

Fox (1986) concluded that clearly communicated high expectations on the part of the principal would influence teacher motivation. In relating success to expectations and achievement, he stated that expectations must be realistic in terms of student potential, obtainable with available resources, and held in common by teachers and the principal (p. 12). Fox concluded that "sharing values, holding high expectations, consistency in how one relates with others and optimism on the part of the principal all contribute to the positive emotional climate of the school" (p. 17). Clark and Lotto (Strother, 1983) compiled a list of 53 aspects of a principal's role and asked a group of 11 analysts, researchers, and policy makers to indicate which of these aspects were more important. Ranked according to importance, the top aspects included

1. emphasize student achievement as the primary outcome of school,...
2. hold high expectations for student behavior and achievement, and
3. hold (and convey) high expectations for teachers' performance in the classroom. (p. 292)

Barth (1991) explained that just as high expectations have been associated with unexpected learning on the part of students, high expectations on the part of principals may influence the emergence of leadership tendencies of teachers (p. 139). Matthews (1982) concluded that "both the attitudes of teachers toward the principal and perceptions of the principal's expectations in terms of productivity are important aspects of teacher motivation" (p. 23).

Self-Concept of Ability

Purkey (1970) explained self-concept in terms of four characteristics. They are that

1. the self is organized and dynamic;
2. to the experiencing individual the self is the center of his personal universe;
3. everything is observed, interpreted, and comprehended from this personal vantage point; and
4. human motivation is a product of the universal striving to maintain, protect, and enhance the self.

(p. 13)

Linking motivation to job productivity, Gellerman (1963) explained that an individual's ultimate motivation is to make the self-concept real: "to live in a manner that is appropriate to one's preferred role, to be treated in a manner that corresponds to one's preferred rank, and to be rewarded in a manner that reflects one's estimate of his own abilities" (p. 290).

Purkey (1970) stated that if, according to the theory of self concept, individuals behave according to beliefs, it follows that the teacher's beliefs about self and students are critical factors in determining classroom effectiveness. If teachers have positive attitudes about themselves, they are better able to build positive and realistic self concepts in students (pp. 45-46). He stated that "teacher attitudes and opinions regarding students have a significant influence on their success in school" (p. 47). Factors conducive to developing positive self concepts include (a) challenge, (b) freedom, (c) respect, (d) warmth, (e) control, and (f) success. He concluded that teachers cannot build positive self concepts in students without building their own (50-65).

Brookover and Erickson (1975) further defined self-concept related to academic achievement as self-concept of ability. They stated that self-concept of ability is "the individual's assessment of his or her competency to carry out the behaviors appropriate to the role" (p. 275). Matthews and Brown (1982) stated that self-concept of ability referred to teachers' beliefs about the probability of success in improving student performance (p. 23-24). Ashton and Webb (1986) stated that teachers' situation-specific expectation that they can help students learn is referred to as efficacy (p. 3)

Two studies from the Rand Corporation confirmed that teachers high in teaching efficacy have students who perform

better academically. In the first study, Armor, Conry-Oseguera, Cox, King, McDonnell, Pascal, Pauly and Zellman (1976) reported that teachers' sense of efficacy was "strongly and significantly" related to increases in student achievement (p. 24). In the second study, Berman, McLaughlin, Bass, Pauly, and Zellman (1977) concluded that "teachers attitudes about their own professional competence, in short, appear to have major effects on what happens to projects and how effective they are" (p. 137). Midgley (1991) suggested that if teachers feel positively about their potential for affective student achievement and motivation, then their students would have higher expectancies for success (p. 12-13).

Marsh and Holmes (1990) studied multi-dimensional aspect of self-concept. They found that children's positive or negative feelings about themselves is not uniform in different areas. For example, children who feel positively about their math skills may not feel positively about verbal skills. They concluded that "researchers and practitioners seeking to understand self-concept are cautioned not to rely primarily on global, undifferentiated notions of self-concept (p. 113). Similarly, Dembo and Gibson (1985) found that teacher efficacy is multi-dimensional. They indicated that efficacy may be related to different organizational designs and patterns of classroom behavior shown to yield achievement gains (p. 181).

Ashton (1985) indicated that teachers' sense of efficacy is influenced by principals through recognition, support, and allocation of resources (p. 151-152). Andrews, et al. (1991) stated that the principal should "encourage staff members to analyze strengths and use those strengths to build satisfaction in their professional role..."(p. 98). "The way in which school principals interact with their staff, influence school climate, and provide opportunities for decision making affects teachers' sense of efficacy" (Dembo & Gibson, 1985, p. 181). Kushman (1992) explained the importance of a positive relationship between organizational commitment and job satisfaction and efficacy. He stated that

when teachers feel in control of the learning process, they are more likely to perceive their own professional worth and efficacy, seek and find solutions to students' learning difficulties, and in the end, experience more success in the classroom leading to greater intrinsic satisfaction with teaching. (p. 36)

Sergiovanni and Carver (1980) studied the levels of job satisfaction of secondary school teachers in an examination of levels of need and found that esteem remains a significant motivator for teachers. "Esteem needs are particularly important, for they involve the concept of self. Teachers need to feel important as persons (self concept) and as recognized, respected, and competent professionals (professional concept)" (p. 94). They concluded that

teachers accept ideas, things, and cues (principal's expectations) that are consistent with their self image and reject those that are not. Those teachers with low self-concepts devote their energies primarily to ego defense and self-protection. On the other hand, success seekers continually seek reinforcement for their competence needs, expressions of autonomy, and self-actualization (p. 97).

In her synthesis of research on teacher motivation, Silver (1982) concluded that

principals who link teacher effectiveness with teachers' favorable recognition, sense of achievement, appropriately challenging work, responsibility career advancement and learning opportunities will have the most professionally motivated teachers (p. 553).

Professional development becomes its own reward when teachers experience an enhanced sense of their own capacity or competence. A pride of accomplishment is the most important incentive to encourage teachers to accept direct personal accountability for the quality of their work. (Mitchell & Peters, 1988, p. 78)

From her studies, Rosenholtz (1989) found that when teachers believe students are capable learners and themselves as capable teachers vested with a technical culture to help them grow and learn, "they are more likely to persevere, to define problem students as a challenge, to seek outside resources to

conquer that challenge, and, in this way to actually foster students' academic gains" (p 138).

Future Utility

Vroom (1967) made several observations related to the aspect of future utility. He stated that

1. the level of workers' performance is related the the extent to which that performance is instrumental in obtaining higher wages;
2. individuals will perform better if they believe that the job requires abilities which they value or believe they possess; and
3. persons will perform at a higher level if they are given an opportunity to participate in making decisions which have future effects on them. (p. 266-267)

Gellerman (1963) explained that if other things are equal, young people will be primarily motivated by what they believe the future holds for them. They will be tolerant of the present if they have occasional evidence that their future will be worth the wait (p. 204). Explaining expectancy theory Nash (1985) stated that the anticipation of reward motivates behavior and the perceived value of the outcome of behavior gives it direction. "Expectancy theory says that what drives people to work and to produce is the belief that if they behave in certain ways, they can then expect positive results" (p. 102).

Miskel (1982) found support for the expectancy theory in educational organizations. He stated that people generally work hard when they think that hard work will likely lead to desirable organizational rewards. Miskel, DeFrain, and Wilcox (1980) further explained that expectancy is high when a teacher believes that intense effort in lesson preparation will result in more positive student attitudes and higher student achievement (p. 72). Parks (1983) added that teachers must be able to see a close relationship between their instructional tasks and goals they are expected to achieve (p. 13).

Matthews and Holmes (1991) stated that what an individual believes about future utility of performance affects performance. "Individuals tend to attach more importance to those aspects of organizational roles they perceive as contributing to their welfare" (p. 8). Matthews and Holmes (1982) implied that the principal is able to influence teachers' beliefs about the future utility of improved performance (p. 24).

Summary

Numerous theories, models and methods of motivation have been presented in this review of literature. No one theory of motivation has all the answers (Terpstra, 1979, p.379). Good and Tom (1985) stated that motivational researchers in the past have raised general issues and applied theories without consideration of individual teachers' beliefs and

motivational levels of student. Developing guidelines and informed hypotheses about teacher behavior will be facilitated by more systematically specifying teachers' motivational states and individual student needs. The means by which instructional processes enhance student motivation can be identified as researchers gather more context-specific information (p. 324).

The first section of this chapter described a number of current theories of motivation. Theoretical frameworks are needed to link concepts and improve predictions of motivation (Good & Brophy, 1986, p. 422). The second part section of this chapter described selected aspects of teacher motivation and principal influence. However, Wlodkowski (1982) stated that one of the most significant problems continuing to face researchers and educators is that of synthesizing the vast amount of knowledge about motivation into a cohesive manageable approach for daily practice (p. 35).

Matthews and Brown (1976) developed a model depicting the aspects of teacher motivation that principals could influence through appropriate leadership strategies. They proposed that teachers with positive attitudes toward the principal will be more inclined to respond leadership acts. Once positive attitudes toward the principal are in place, then teachers will be inclined to exert effort in directions they believe the principal values highly. In addition, the principal can promote a belief on the part of teachers that

they are able to improve student achievement (self-concept of ability). Matthews (1979) added the aspect of future utility (the belief of teachers in the future utility of increased student achievement).

An instrument designed to measure aspects of teacher motivation was developed from this model (Matthews, 1982, 1985). Matthews and Holmes (1982) conducted a study using the instrument and suggested that principals could use it as a tool to assess critical aspects of teacher motivation (p. 27).

Numerous studies affirm the general knowledge that effective instructional leadership begins with the principal. It is also general knowledge that it is the responsibility of the principal to provide staff development for learning opportunities. Using descriptive statistics derived from this study of the Teacher Motivation Diagnostic Questionnaire will enable principals to focus on critical aspects of teacher motivation in order to promote learning opportunities for improved instruction.

CHAPTER III

PROCEDURES

The purposes of this study were to establish Georgia norms for an instrument designed to assess teacher motivation and to determine if significant differences exist between those norms and national norms. The four aspects of teacher motivation on which data were collected are (a) teachers' beliefs about the principal's expectations for improved student achievement, (b) the attitudes of teachers toward their principals, (c) teachers' self-concepts of ability to improve student performance, and (d) teachers beliefs about the future utility of improved student achievement.

The procedures used to collect statistics on the Teacher Motivation Diagnostic Questionnaire (TMDQ) are described in this chapter. The procedures used to standardize data will also be described. Much of the content of Chapter III parallels materials developed by Lynn McDonough (1992) in format and substance. The results of this study were compared to those of McDonough to determine if there is a significant difference between the means of the Georgia sample and the means of the national sample. This chapter is organized into the following sections: (a) research design, (b) population and sample, (d) instrumentation, and (e) data analysis.

Research Design

This study is descriptive and inferential research. Best (1981) stated that descriptive research involves describing conditions, which may include opinions held, that exist at the time of the study (p. 93). The data gathered were used to develop state normative measures of the beliefs and attitudes of teachers.

Descriptive statistics were used in the first part of this study. The term descriptive statistics was defined by Fraenkel and Wallen (1990) as "data analysis techniques enabling the researcher to meaningfully describe data with numerical indices or in graphic form" (p. 475). The data gathered on the TMDQ were standardized in numerical form for meaningful understanding. The second part of this study involved the use of inferential statistics, which was defined by Fraenkel and Wallen (1990) as "data analysis techniques for determining how likely it is that results based on a sample or samples are similar to results that would have been obtained for an entire population" (p. 477). According to Best (1981), "drawing conclusions about populations based on observations of samples is the purpose of inferential statistics" (p. 222). Therefore, by using inferential statistics, it is possible to make inferences about differences between the results based on the Georgia sample of teachers and those obtained in the McDonough sample of teachers throughout the United States.

A multivariate analysis of variance (MANOVA) was used to simultaneously compare the four aspects of teacher motivation and determine if a significant difference between the means of the Georgia sample in this study and the national sample in the study done by McDonough (1992). Bray and Maxwell (1985) stated that there are several reasons for using a multivariate analysis of variance (MANOVA). They are (a) researchers are generally interested in evaluating mean differences on numerous variables, rather than a single variable, (b) researchers frequently want evaluate the mean differences simultaneously, while controlling for intercorrelations among them, and (c) interpretation of results may be enhanced by considering variables simultaneously (pp. 10-11). Univariate t tests were then used to test the difference between the two groups on each of the four aspects of teacher motivation.

Population and Sample

The population for the first part of this study was all public elementary and secondary schools in the state of Georgia. The second population was be the population of elementary and secondary schools in the United States.

A sample size of 300 was used in the Georgia portion of the study. Fraenkel and Wallen (1990) asserted that a sample size with 100 as a minimum number is essential (p. 81). Best (1981) observed that (a) survey studies should have larger samples than experimental studies, (b) the larger the

sample, the smaller the size of sampling error, and (c) in mailed questionnaire studies, because response may be low, a larger initial sample mailing is indicated (p. 14).

The process for determining the sample for this study was as follows: (a) a list of all Georgia public schools from the 1991 Georgia Public Education Directory were entered in a computer, (b) all schools were assigned a random number and ranked in ascending order, (c) the first 300 schools selected were entered into a data base, (d) the first 200 schools in the data base were used for the initial mailing; (e) the remaining 100 schools were used in the second mailing, (e) the number of questionnaires needed for each school were determined from the number of teachers indicated in the 1991 Georgia Public Information Directory. Two schools were initially included in the sample of Georgia schools that were also included in McDonough's sample; to eliminate this contamination, the schools were dropped from the sample of Georgia schools

Instrumentation

The instrument used is the Teacher Motivation Diagnostic Questionnaire (TMDQ), which is designed to measure four aspects of teacher motivation. These aspects include (a) teacher's beliefs about the principal's expectations for improved student achievement (PE), (b) the attitudes teachers have about the principal (AP), (c) how much confidence teachers have in their ability to improve student performance

(SC), and what teachers believe about the future utility of improved student achievement (FU). The reasons this instrument was chosen include (a) the short time it takes to complete and score, (b) the ease with which it may be administered, and (c) the fact that it is the only instrument which measures aspects of the influence of principals on teacher motivation (McDonough, 1992).

The TMDQ is based on a comprehensive model developed by Matthews and Brown (1976). The authors asserted that the principal is able to influence three critical aspects of teacher motivation. These are Self-Concept of Ability (SC), Attitude toward Principal (AP), and Principal Expectations (PE) (Matthews & Holmes, 1982, p. 24). In 1979, Matthews added a fourth aspect, Future Utility (FU) (p. 63).

The TMDQ is similar to an instrument designed to measure student motivation, the SMDQ. The dimensions of motivation of the SMDQ closely parallel the four aspects of teacher motivation. Therefore, it was chosen as a model for the TMDQ because of its high reliability estimate and its effectiveness in discriminating between groups (Matthews & Holmes, 1982, p. 24).

A total of 16 questions constitute the TMDQ. The four critical aspects of teacher motivation are each measured by four questions. PE is reportedly measured by questions 1, 5, 12, and 16. AP is reportedly measured by questions 2, 6, 11, and 15. FU is measured by questions 3, 7, 10, and 14. SC is

reportedly measured by questions 4, 8, 9, and 13. The response directions of the questions are randomly reversed. With responses assigned a value of one through seven, one has the least positive and seven has the most positive value (Matthews & Holmes, p. 24).

The format used in the TMDQ is the Semantic Differential developed by Osgood and his associates (1957). According to Osgood et al., concepts are measured and represented in dimensions of meaning, known as semantic space (pp. 31-75). By using this technique an individual's attitude about a particular concept can be measured and quantified within the semantic space of the instrument (Osgood, 1969, p. 36).

TMDQ Reliability

The TMDQ (formerly the Student Achievement Diagnostic Questionnaire for Administrators) was administered in Georgia to 1,278 teachers in 36 public schools. Using the Spearman-Brown Prophecy Formula, odd-even correlations of teacher responses were corrected. This resulted in a reliability index of .90 (Matthews & Holmes, 1982, p. 24).

TMDQ Validity

Fraenkel and Wallen (1990) defined construct validity as "the degree to which an instrument measures an intended hypothetical psychological construct, or nonobservable trait (p. 474). Achievement motivation is an example of a commonly used construct (Stanley & Hopkins, 1972, p. 111). In a teacher motivation study by Matthews and Holmes (1982), there

were significantly different scores on the different scales among schools. The comparisons showed evidence of discrimination on critical aspects of teacher motivation among the schools (Matthews & Holmes, 1982, p. 24). The results of this study provide some evidence of the construct validity of the TMDQ. In a personal interview, Matthews indicated the best evidence of the construct validity of the TMDQ can be found by comparing each of the four constructs with the four questions designed to elicit teacher responses about the construct.

One construct included on the TMDQ is teachers' beliefs about their principal's expectations for higher student performance. The four questions designed to assess this construct are as follows:

1. How much does your principal want test scores to improve?
2. How much does your principal expect test scores to improve?
3. How important are high test scores to your principal?
4. How much does your principal want higher test scores?

A second construct included on the TMDQ is the attitudes of teachers toward their principals. The four questions designed to assess this construct are as follows:

1. How much do you want to please your principal?
2. How much do you want to make your principal happy?
3. How much does your principal try to please you?

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

A third construct is teachers' self-concept of ability to improve student performance. The four questions designed to assess this construct are as follows:

1. How much higher could your students' test scores be?
2. How good are you at helping students raise test scores?
3. How much could your students' achievement be raised?
4. How good could you be at improving student achievement?

A fourth construct is teachers' beliefs about the future utility of improved student achievement. The four questions designed to assess this construct are as follows:

1. How much would higher student achievement help you?
2. How much would higher achievement be to your advantage
3. How much would you benefit from higher achievement?
4. How much good would higher test scores do you?

Data Collection

A packet was sent to the principal of each selected school. Included in the packet was an introductory letter to the principal, directions for the principal, directions for the teachers, copies of the questionnaire and background data for each teacher, and a stamped, self-addressed envelope for

returning the questionnaires. Schools were identified on the return envelope, but questionnaires remained anonymous.

The principals were asked to return the questionnaires within a month. At the end of five weeks, the second list of 100 randomly selected schools was used for the second mailing.

Data Analysis

Quantitative data in descriptive statistics, as defined by Fraenkel and Wallen (1990), is "data that differs in amount or degree, along a continuum from less to more" (p. 480). Raw scores were gathered from the responses of each teacher completing the TMDQ. Mean scores were calculated for each school on each of the critical aspects. Centiles, z scores, and standard deviations were also computed.

Games and Klare (1967) stated that "the term centile is actually a more accurate word usage than percentile, since cent means 100 and we are dividing the score scale into 100 intervals by means of the centile points" (p. 63). The national data were organized in centiles by McDonough (1992). The Georgia data were organized into centiles as a part of this study.

Centiles on the four aspects of teacher motivation will enable Georgia administrators to compare the standing of their schools relative to the norms for schools in Georgia.

There are limitations to using centiles (or percentiles) in reporting scores. Hinkle, Wiersma, and Jurs (1979)

cautioned that percentiles are an example of an ordinal scale of measurement. Therefore, there is no uniformity in the differences between percentile points. The authors contended that, if statistical manipulations are conducted, percentiles should be converted into some other kind of scores (p. 28).

Percentiles are generally not appropriate for making statistical comparisons across distributions. Percentiles are on the ordinal scale, and are not at equal intervals (Hinkle, Weirisma & Jurs, p. 51). Therefore, standardizing the scores in terms of mean and standard deviation becomes necessary in order to make appropriate comparisons.

Minium (1978) stated that the mean should be used when the measure of central tendency should reflect the total of the scores and when further statistical computation is to be done (p. 68-69). From the TMDQ scores, the arithmetic average (mean) was computed in five areas: Future Utility (FU), Self-Concept of Ability (SC), Principal's Expectations (PE), Attitude Toward Principal (AP), and the Total.

According to Fraenkel and Wallen (1990), the standard deviation is the most useful index of variability (p. 151). The authors referred to variability as "the extent to which the scores on a quantitative variable in a distribution are spread out" (p. 153) If scores are more spread out, the deviation score will be larger. The closer the scores are together around the mean, the smaller the standard deviation (Fraenkel & Wallen, 1990, p. 153).

Fraenkel and Wallen (1990) defined z score as "the most basic standard score that expresses how far a score is from a mean in terms of standard deviation units" (p. 483). If a z score is computed for each raw score in a distribution of scores, the z scores will have the same shape as the distribution of raw scores, but with a standard deviation equal to one and a mean of zero (Hinkle, Wiersma, & Jurs, 1979, p. 54). Hinkle et al. (1979) reported that a positive z-score indicates that the raw score is above the mean, while a negative z-score indicates that the raw score is below the mean (p. 52).

Inferential statistics were used to determine if there is a significant difference between the means of the Georgia sample and the means of the national sample. Borg and Gall (1989) stated that the MANOVA is a commonly used technique for determining where two groups differ on more than one dependent variable (p. 557). The authors stated that the a commonly used test is the Wilks Lambda, which yields an F value which can be looked up in an F ratio table to determine the level of significance. They added that, if a significant MANOVA F is obtained, then an analysis of variance on each dependent variable can be done to determine which of the variable is statistically significant and contributes to the overall MANOVA F (pp. 557-558). Therefore, multivariate analysis of variance (MANOVA) was used to determine if a

statistically significant difference exists between the means of two samples, the Georgia sample and the national sample.

Minium (1978) stated that there are certain conditions which must be met if statistical inference about two means is to be precisely correct. They are that (a) each sample must be drawn at random from its respective population; (b) both samples are drawn with a replacement plan; (c) the sampling distribution of the differences between pairs of sample means follows the normal curve; and (d) for each population, the standard deviation of the set of scores is known (p. 304).

Best (1981) reported that for scores to be statistically significant, "the difference must be greater than that reasonably attributed to sampling error" (p. 269). He further indicated that in educational research, the 5 % (.05) alpha level of significance is generally used (p. 271). The .05 level of significance was be used in this study.

CHAPTER IV

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

One purpose of this study was to establish Georgia norms for the Teacher Motivation Diagnostic Questionnaire (TMDQ), an instrument designed to assess teacher motivation. Means, standard deviations, percentile ranks and z score ranges for the four aspects of teacher motivation measured by the TMDQ were determined. A second purpose of the study was to determine if there is a statistically significant difference between means for the Georgia data and means for the national data on each of the four aspects. The statistically significant differences between the Georgia means and national means were determined through multivariate analysis of variance (MANOVA).

Findings

Response Rate

The population for the first part of this study consisted of all Georgia public elementary and secondary schools. A random sample of 300 schools was selected from a list of all elementary and secondary schools included in the 1991 Georgia Public Education Directory. Questionnaires were mailed to the first 200 schools on October 15, 1991. A second mailing to the remaining 100 randomly selected schools was done on November 14, 1991.

As school data were received and entered into the computer, schools were assigned an identification (I.D) number. For example, the first school for which data was entered was assigned I.D. number 1. School I.D. numbers began with 1 and ended with 128 (n = 128).

A total of 90 usable responses were received from the first mailing to 200 schools. From the second mailing to 100 schools 38 usable responses were received. The lower rate to the second mailing was probably due to the time of the year (included Thanksgiving and Christmas vacations). Usable responses were received from 128 (about 43%) of the 300 schools. See Appendix A for (a) Letter to the Principal, (b) Directions to the Principal, (c) Directions to the Teacher, (d) Teacher Motivation Diagnostic Questionnaire, and (e) Background Survey Data.

From the combined first and second mailings for a total of 300 schools, 25 (8%) of the principals responded that they would not to participate. Seventeen (6%) of these principals cited various reasons for not participating including needing permission from district office, not enough time, and staff participating in numerous other studies. A principal in a college town stated that "our teachers are constantly bombarded with requests to complete forms relative to projects, etc. that professors and students are involved in at the college." Another principal wrote, "I do not use faculty time to gather information such as this." A high

school principal concluded that "with the abundance of work already done by our faculty, I feel that even one more thing would be too much to ask." Eight (3%) of principals responding returned the blank questionnaires with no comment. There was no response received from 142 (47%) of the schools in the combined mailings.

As a response to principal comments, regarding the need for district permission, letters were sent to four large districts in a major metropolitan area requesting permission prior to the second mailing. Permission was granted in three districts. The letter from the district where the request was not approved stated that the research committee expressed concern that too much teacher time was involved.

Criteria for Inclusion

To be included in the sample a minimum teacher response rate of 20% was required. The number of teachers in each school was obtained from the 1991 Georgia Public Education Directory. Usable data were collected from schools returning the number of questionnaires equal to or greater than 20% of the number of teachers in those schools. There were five schools where less than 20% of the questionnaires for each school were returned.

Freeman (1983) wrote that incomplete data problems often occur in statistics (p. 48). The method used for handling incomplete data was an imputation-based procedure where means from sets of recorded values in that aspect are substituted

(Freeman, 1983, p. 49). For example, if a teacher marked questions 2, 11, and 15 (the Attitude Toward Principal aspect) with scores of 5, 7, 6, respectively, and did not mark question 6, a 6 score would be substituted for question 6. (The known mean value of the other three questions would be 6.)

Teacher Comments

There were comments on 92 (3%) of the questionnaires (n = 2802) used in this study. For the purpose of discussion these comments were divided into four groups. The groups are those with (a) comments related to background data, (b) comments about specific questions in each aspect of the questionnaire, (c) comments pertaining to testing and achievement, and (d) comments related to the format of the questionnaire.

Comments in the first group related to teacher concerns about anonymity and age. After completing the background data, one teacher wrote, "And from all this you don't know who I am?" There were more comments related to the question "How old are you?" than any other question on background data. Comments included "old enough," "age irrelevant," "old enough to sleep by myself," "too old," "40+," and "guess." McDonough (1992) reported similar results in a national study.

Comments related to the specific aspect of Future Utility were more numerous than with the other four aspects.

The comments pertained to personal satisfaction. Examples of comments included "personal satisfaction a lot," "personal satisfaction, not money," and "personal satisfaction that I helped my students achieve, not please the principal or powers that be." Attitude Toward Principal questions generated comments that ranged from concern about trying to the principal "and back her up in his/her effort to work with the whole child" to "why should he try to please me."

Comments pertaining to Self-Concept of Ability questions and Principal Expectations questions were related to confusion about answering the questions. Examples of Self Concept of Ability comments included "not sure I understand," "too many interpretations," and "unknown.". Comments generated by Principal Expectations comments included "unknown," "I don't know, ask her," and "I can only guess what the principal feels."

Comments on testing and achievement reflected teacher concern over equating test scores and achievement. Examples of comments included "the fallacy of this survey is in its equation of higher standardized test scores with achievement," "we would like for test scores to prove their knowledge, but I'm not so sure tests do that," "test scores do not matter to me, helping the child reach his/her highest potential is what is important," and "I don't care about test scores."

Comments regarding the format of the questionnaire reflected concern about its usefulness and repetitive nature. Examples of comments related to repetition included "I hate it when you ask the same questions over and over. We aren't that stupid," "this survey is repetitive," "how many different ways can you ask a question," and "this is a redundant survey." Concern over the value of the instrument was reflected in comments such as "I don't know how these answers could possibly be beneficial to anyone," "what is the real purpose of this thing," and "what are you really looking for." (Appendix B contains teacher comments.)

In a study establishing national norms for this instrument, McDonough (1992) reported results that indicated similar concerns about redundancy of formatting (p. 119). She suggested that "if repeated concerns about formatting persist in future uses of the instrument, a review of the questionnaire format might be necessary to help address these issues, such as the issue of redundancy" (p. 119).

Background Data

Demographic data were gathered using a background survey on the back of the Teacher Motivation Diagnostic Questionnaire. (The background survey is found in Appendix A.)

Of the respondents who completed the questionnaire (n = 2802), 79% were identified as female (2203) and 14% were identified as male (385). In McDonough's (1992) study

establishing national norms, the percentages were similar (77% - female, 20% - male) (p. 120). There was no response from 7% of the teachers to the question "What is your sex?" Of those teachers who reported their age, the average age was 32. In the study by McDonough (1992), the average age was 39 (p. 120). Teachers reported an average number of years of teaching experience (including this year) of 11.6 years. The number of years of teaching experience in the national study by McDonough (1992) was 14.8 years (p. 120).

Teachers were asked to indicate the highest degree they had earned. Bachelor's degrees were held by 43% of those responding. Master's degrees were held by 39% of the respondents. Specialist and doctorate degrees were held by 8% and 1% of the teachers, respectively. Nine per cent of the teachers did not respond. Similar results reported in the national study by McDonough (1992) were (a) bachelor's degree held by 51%, (b) master's degree held by 41%, (c) specialist's degree held by 4%, and (d) doctorate degree held by .5% (p. 120).

Additionally, teachers were asked to indicate the grade levels they taught. Categories were represented by each grade level, K-12 (a total of 13 categories), grades K-5 (1 category), grades 6-8 (1 category), grades 9-12 (1 category), and other (1 category). The other category was any combination of grades that did not fit the first 16 categories. There were the least number of responses in

grades 10, 11 and 12, with .5%, .3% and .4% respectively. The category other received about 23%, which indicated that there are various combinations of grades that teachers taught. Approximately 10% of the teachers did not indicate a grade level on the background survey. In a national study by McDonough (1992) percentages of teachers teaching in each category were proportionately similar (pp. 120-121). The number and percentage of responses for each category are reported in Table 1.

Table 1
Grade Level Categories

Grade Category	Number of Responses	Percentage of Responses
Kindergarten	180	6.42
1	155	5.53
2	146	5.21
3	187	6.67
4	180	6.42
5	141	5.03
6	135	4.82
7	114	4.07
8	102	3.64
9	19	.68
10	14	.50
11	9	.32
12	10	.36
K-5	214	7.64

(table continues)

Grade Category	Number of Responses	Percentage of Responses
6-9	181	6.46
10-12	100	3.57
Other	632	22.56
No Response	283	10.10

Norms

Fraenkel and Wallen (1990) defined descriptive statistics as "data analysis techniques enabling the researcher to meaningfully describe the data with numerical indices or in graphic form" (p. 475). In this study the means, standard deviation, percentile rank, and z scores were utilized to describe and summarize the data.

Means

The means from the Georgia study for the four aspects of teacher motivation and the national means as reported by McDonough (1992) from the TMDQ are reported in Table 2.

Table 2

Means

	National	Georgia
	n = 155	n = 128
Principal Expectations	5.36	5.75
Future Utility	4.96	5.36
Self Concept of Ability	5.11	5.31
Attitude Toward Principal	5.29	5.49

The highest mean value in Georgia was Principal Expectations (5.75) followed by Attitude Toward Principal (5.49). The next highest value was Future Utility (5.36). The lowest mean value was Self Concept of Ability (5.31). In the national study, McDonough (1992) found that Principal Expectations had the highest mean value (5.36). Additionally, Matthews and Holmes (1982) reported a Georgia assessment and found Principal Expectations to have the highest mean score (5.71). In McDonough's (1992) study, the lowest mean value was Future Utility (4.96). In their assessment, Matthews and Holmes (1982) found that Attitude Toward Principal had the lowest mean value (5.15).

The means by school is found in Appendix C. The mean scores for each of the aspects of teacher motivation in the Georgia and national studies are shown in bar graphs in Appendix D.

Standard Deviations

The standard deviations from the Georgia study and the standard deviations from the national study reported by McDonough (1992) for the four aspects of teacher motivation from the TMDQ are reported in Table 3.

Table 3
Standard Deviations

	National	Georgia
	n = 155	n = 128
Principal Expectations	.82	.53
Future Utility	.70	.47
Self Concept of Ability	.56	.35
Attitude Toward Principal	.72	.69

In the Georgia data, attitude Toward Principal had the greatest standard deviation (.69). Principal Expectations had the next highest standard deviation (.53), followed by Future Utility (.47), and Self Concept of Ability with the lowest score (.35). McDonough (1992) reported that Principal Expectations had the greatest standard deviation (.72) in a national study of teacher motivation and Self Concept of Ability had the lowest (p. 124).

Percentile Ranks

Games and Klare (1967) stated that the terms centile and centile rank are frequently used to report relative standing

of an individual to a known group. The authors commented that these are more accurate than percentile, since cent means 100 and the scale is divided into 100 intervals by centile points (p. 63). However, in this study, the term percentile was used.

Two terms used to report information about the standing of an individual within a group are percentile rank and percentile (point). Games and Klare (1967) defined percentile rank as the percentage of individuals scoring below a given score. The authors explained that percentile ranks can never be equal to 100 or negative (p. 65). Fraenkel and Wallen (1990) stated that the percentile is the point below which a certain percentage of the scores fall (p. 114).

The percentile ranks were derived using the mean scores of each of the four aspects of teacher motivation. The percentile ranks for the Georgia data and selected points for the national data are reported in Tables 4 through 7.

Table 4

Percentile Ranks For Principal Expectations (PE)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
0	1.00	4.03		
1	4.04	4.16		
2	4.17	4.38		
3	4.39	4.64		
4	4.65	4.70		
5	4.71	4.75		
6	4.76	4.80		
7	4.81	4.89		
8	4.98	4.95		
9	4.96	5.00	4.33	4.37
10	5.01	5.05		
11	5.06	5.05		
12	5.07	5.20		
13	5.21	5.23		
14	5.24	5.25		
15	*	*		
16	5.26	5.29		
17	5.30	5.20		
18	5.31	5.33		
19	5.34	5.37	4.64	4.70
20	5.38	5.39		
21	5.40	5.42		
22	5.43	5.43		
23	*	*		
24	5.44	5.46		
25	5.47	5.48		
26	5.49	5.52		
27	*	*		
28	5.53	5.55		
29	5.56	5.56	*	*
30	5.57	5.58		
31	*	*		
32	5.59	5.59		
33	5.60	5.60		

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
34	5.61	5.61		
35	5.62	5.62		
36	5.63	5.63		
37	5.64	5.64		
38	5.65	5.65		
39	5.66	5.66	5.21	5.22
40	5.67	5.68		
41	5.69	5.69		
42	5.70	5.70		
43	5.71	5.71		
44	5.72	5.72		
45	*	*		
46	5.73	5.73		
47	5.74	5.74		
48	5.75	5.75		
(49	*	*	5.46	5.47
50	*	*		
51	5.76	5.77		
52	*	*		
53	5.78	5.80		
54	*	*		
55	*	*		
56	5.82	5.82		
57	5.83	5.87		
58	5.88	5.88		
59	*	*	5.56	5.57
60	5.89	5.89		
61	5.90	5.90		
62	*	*		
63	5.91	5.92		
64	5.93	5.96		
65	*	*		
66	5.97	5.98		
67	5.99	5.99		
68	6.00	6.00		
69	6.01	6.04	5.79	5.81
70	6.05	6.06		

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
71	6.07	6.08		
72	*	*		
73	6.09	6.11		
74	6.12	6.13		
75	6.14	6.15		
76	6.16	6.16		
77	6.17	6.17		
78	6.18	6.21		
79	*	*	6.11	6.11
80	6.22	6.22		
81	*	*		
82	6.23	6.26		
83	6.27	6.27		
84	6.28	6.29		
85	6.30	6.30		
86	6.31	6.31		
87	6.32	6.34		
88	*	*		
89	6.35	6.36	6.39	6.39
90	*	*		
91	*	*		
92	6.37	6.41		
93	6.42	6.45		
94	6.46	6.51		
95	6.52	6.52		
96	6.53	6.55		
97	6.56	6.56		
98	6.57	6.66		
99	6.67	7.00	6.81	7.00

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Table 5

Percentile Ranks For Future Utility (FU)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
0	1.00	3.87		
1	3.88	4.08		
2	4.09	4.29		
3	4.30	4.32		
4	4.33	4.39		
5	4.40	4.40		
6	4.41	4.53		
7	5.54	4.58		
8	4.59	4.63		
9	4.64	4.65	3.92	3.94
10	4.66	4.67		
11	4.68	4.77		
12	*	*		
13	4.78	4.80		
14	4.81	4.84		
15	*	*		
16	4.85	4.88		
17	4.89	4.89		
18	4.91	4.91		
19	4.92	4.92	4.47	4.48
20	*	*		
21	4.93	5.02		
22	*	*		
23	5.03	5.08		
24	5.09	5.10		
25	5.11	5.11		
26	5.12	5.15		
27	*	*		
28	5.16	5.18		
29	5.19	5.19	*	*
30	*	*		
31	5.20	5.20		
32	5.21	5.25		

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
33	5.26	5.26		
34	5.27	5.28		
35	5.29	5.31		
36	*	*		
37	5.32	5.32		
38	*	*		
39	5.33	5.34	*	*
40	5.35	5.35		
41	*	*		
42	*	*		
43	*	*		
44	*	*		
45	5.36	5.36		
46	5.37	5.37		
47	5.38	5.39		
48	5.40	5.40		
49	*	*	4.95	4.97
50	5.41	5.42		
51	*	*		
52	5.43	5.43		
53	5.44	5.44		
54	5.45	5.46		
55	5.47	5.48		
56	5.49	5.49		
57	5.50	5.50		
58	*	*		
59	5.51	5.51	5.15	5.15
60	*	*		
61	5.52	5.53		
62	5.54	5.55		
63	*	*		
64	5.56	5.57		
65	5.58	5.59		
66	5.60	5.60		
67	5.61	5.62		
68	5.63	5.63		
69	*	*	5.32	5.34

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
70	5.64	5.64		
71	5.65	5.66		
72	5.67	5.67		
73	5.68	5.69		
74	5.70	5.72		
75	5.73	5.73		
76	*	*		
77	5.74	5.74		
78	5.75	5.76		
79	*	*	5.51	5.51
80	*	*		
81	5.77	5.77		
82	5.78	5.78		
83	*	*		
84	5.79	5.79		
85	*	*		
86	*	*		
87	5.80	5.80		
88	*	*		
89	5.81	5.83	5.74	5.79
90	*	*		
91	5.84	5.86		
92	5.87	5.90		
93	5.91	5.94		
94	*	*		
95	5.95	5.97		
96	5.98	6.00		
97	6.01	6.07		
98	*	*		
99	6.08	7.00	6.47	7.00

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Table 6

Percentile Ranks For Self Concept of Ability (SC)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
0	1.00	4.22		
1	4.23	4.38		
2	4.39	4.58		
3	4.59	4.72		
4	4.73	4.74		
5	*	*		
6	4.75	4.75		
7	4.76	4.77		
8	4.78	4.78		
9	4.79	4.84	4.58	4.61
10	4.85	4.89		
11	4.90	4.90		
12	4.91	4.92		
13	4.93	4.94		
14	4.95	4.95		
15	4.96	4.96		
16	4.97	4.97		
17	4.98	4.98		
18	4.99	4.99		
19	5.00	5.00	*	*
20	5.01	5.04		
21	5.05	5.07		
22	5.08	5.08		
23	*	*		
24	5.09	5.09		
25	5.10	5.13		
26	5.14	5.15		
27	5.16	5.16		
28	5.17	5.17		
29	5.18	5.18	4.92	4.92
30	*	*		
31	*	*		
32	5.19	5.19		

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
33	*	*		
34	*	*		
35	5.20	5.21		
36	5.22	5.23		
37	*	*		
38	*	*		
39	5.24	5.24	5.01	5.01
40	*	*		
41	*	*		
42	5.25	5.25		
43	5.26	5.27		
44	*	*		
45	*	*		
46	5.28	5.28		
47	*	*		
48	5.29	5.29		
49	*	*	5.14	5.15
50	5.30	5.32		
51	5.31	5.33		
52	*	*		
53	5.34	5.35		
54	5.36	5.36		
55	*	*		
56	*	*		
57	5.37	5.37		
58	*	*		
59	5.38	5.38	*	*
60	5.39	5.40		
61	5.41	5.41		
62	*	*		
63	5.42	5.42		
64	5.43	5.45		
65	*	*		
66	*	*		
67	5.46	5.46		
68	*	*		
69	5.47	5.47	5.37	5.37

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
70	5.48	5.48		
71	*	*		
72	*	*		
73	*	*		
74	5.49	5.50		
75	5.51	5.52		
76	5.53	5.58		
77	*	*		
78	5.59	5.61		
79	5.62	5.62	5.46	5.48
80	5.63	5.63		
81	5.64	5.64		
82	5.65	5.65		
83	5.66	5.66		
84	5.67	5.67		
85	5.68	5.68		
86	*	*		
87	*	*		
88	*	*		
89	5.69	5.71	5.63	5.65
90	5.71	5.75		
91	5.76	5.76		
92	5.77	5.77		
93	5.78	5.80		
94	5.81	5.81		
95	*	*		
96	5.82	5.88		
97	5.89	5.96		
98	5.97	5.98		
99	5.99	7.00	6.24	7.00

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Table 7

Percentile Ranks For Attitude Toward Principal (AP)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
0	1.00	1.96		
1	1.97	3.70		
2	3.71	4.22		
3	4.23	4.29		
4	4.30	4.41		
5	*	*		
6	*	*		
7	4.42	4.52		
8	4.53	4.60		
9	4.61	4.63	4.42	4.42
10	4.64	4.70		
11	4.71	4.71		
12	4.72	4.76		
13	4.77	4.77		
14	4.78	4.81		
15	*	*		
16	4.82	4.91		
17	4.92	4.98		
18	4.99	5.05		
19	*	*	4.63	6.64
20	*	*		
21	5.06	5.07		
22	*	*		
23	5.08	5.08		
24	5.09	5.13		
25	5.14	5.18		
26	5.19	5.19		
27	5.20	5.20		
28	5.21	5.21		
29	5.22	5.25	4.94	4.96
30	5.26	5.27		
31	*	*		
32	5.28	5.28		

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
33	5.29	5.29		
34	5.30	5.31		
35	5.32	5.35		
36	*	*		
37	5.36	5.36		
38	5.37	5.37		
39	5.38	5.38	5.18	5.18
40	5.39	5.39		
41	5.40	5.42		
42	*	*		
43	5.43	5.45		
44	5.46	5.46		
45	*	*		
46	5.47	5.48		
47	5.49	5.51		
48	5.52	5.52		
49	*	*	5.38	5.38
50	5.53	5.56		
51	5.57	5.57		
52	*	*		
53	5.58	5.59		
54	5.60	5.61		
55	5.61	5.63		
56	5.64	5.65		
57	5.66	5.66		
58	5.67	5.69		
59	5.70	5.70	5.49	5.50
60	5.71	5.71		
61	5.72	5.76		
62	5.77	5.78		
63	*	*		
64	5.79	5.83		
65	*	*		
66	5.84	5.84		
67	5.85	5.85		
68	5.86	5.86		
69	5.87	5.88	5.67	5.68

(table continues)

Percentile Rank	Georgia Mean Score Range		National Mean ¹ Score Range	
70	*	*		
71	*	*		
72	5.89	5.89		
73	5.90	5.90		
74	5.91	5.91		
75	5.92	5.94		
76	5.95	5.95		
77	5.96	5.96		
78	5.97	5.97		
79	*	*	5.88	5.89
80	*	*		
81	5.98	5.99		
82	*	*		
83	5.99	6.03		
84	*	*		
85	6.04	6.08		
86	6.09	6.10		
87	6.11	6.15		
88	6.16	6.20		
89	6.21	6.24	6.18	6.19
90	*	*		
91	6.25	6.27		
92	6.28	6.28		
93	6.29	6.33		
94	6.34	6.34		
95	6.35	6.39		
96	6.40	6.40		
97	6.41	6.53		
98	6.54	6.65		
99	6.66	7.00	6.57	7.00

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

z Scores

Minium (1978) stated that standard scores provide a standard frame of reference in which the meaning of a score can be better understood (p. 124). z scores, the simplest form of standard scores, express how far a raw score is from the mean in standard deviation units. For example, a raw score exactly on the mean corresponds to a z score of zero, a raw score exactly one standard deviation below the mean equals a z score of -1, and a raw score of exactly one standard deviation above the mean equals a z score of +1 (Fraenkel and Wallen, 1990, p. 155).

Minium (1978) stated that z scores make it possible to compare scores from different instruments (p. 124). Therefore, it is possible for principals to use z scores obtained from the Teacher Motivation Diagnostic Questionnaire to compare with other tests that have standard scores (McDonough, 1992, p. 139). z score ranges for the means of the four aspects of teacher motivation for the Georgia data and selected points for the national data are reported in Tables 8 through 11.

Table 8

z Score Ranges For Principal Expectations (PE)

Georgia Percentile Rank	Georgia \underline{z} Score Range		National \underline{z} Score Range ¹	
0	-8.96	-3.25		
1	-3.23	-3.00		
2	-2.98	-2.58		
3	-2.57	-2.09		
4	-2.08	-1.98		
5	-1.96	-1.89		
6	-1.87	-1.79		
7	-1.77	-1.62		
8	-1.60	-1.51		
9	-1.49	-1.42	-1.25	-1.21
10	-1.40	-1.32		
11	-1.30	-1.30		
12	-1.28	-1.04		
13	-1.02	-0.98		
14	-0.96	-0.94		
15	*	*		
16	-0.92	-0.87		
17	-0.85	-0.85		
18	-0.83	-0.79		
19	-0.77	-0.72	-0.88	-0.81
20	-0.70	-0.68		
21	-0.66	-0.62		
22	-0.60	-0.60		
23	*	*		
24	-0.58	-0.55		
25	-0.53	-0.51		
26	-0.49	-0.43		
27	*	*		
28	-0.42	-0.38		
29	-0.36	-0.36	*	*
30	-0.34	-0.32		
31	*	*		
32	-0.30	-0.30		

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
33	-0.28	-0.28		
34	-0.26	-0.26		
35	-0.25	-0.25		
36	-0.23	-0.23		
37	-0.21	-0.21		
38	-0.19	-0.19		
39	-0.17	-0.17	-0.19	-0.18
40	-0.15	-0.13		
41	-0.11	-0.11		
42	-0.09	-0.09		
43	-0.08	-0.08		
44	-0.06	-0.06		
45	*	*		
46	-0.04	-0.04		
47	-0.02	-0.02		
48	-0.00	0.00		
49	*	*	0.12	0.13
50	*	*		
51	0.02	0.04		
52	*	*		
53	0.06	0.09		
54	*	*		
55	*	*		
56	0.13	0.13		
57	0.15	0.23		
58	0.25	0.25		
59	*	*	0.24	0.26
60	0.26	0.26		
61	0.28	0.28		
62	*	*		
63	0.30	0.32		
64	0.34	0.40		
65	*	*		
66	0.42	0.43		
67	0.45	0.45		
68	0.47	0.47		
69	0.49	0.55	0.52	0.55

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
70	0.57	0.58		
71	0.60	0.62		
72	*	*		
73	0.64	0.68		
74	0.70	0.72		
75	0.74	0.75		
76	0.77	0.77		
77	0.79	0.79		
78	0.81	0.87		
79	*	*	0.91	0.91
80	0.89	0.89		
81	*	*		
82	0.91	0.96		
83	0.98	0.98		
84	1.00	1.02		
85	1.04	1.04		
86	1.06	1.06		
87	1.08	1.11		
88	*	*		
89	1.13	1.15	1.24	1.24
90	*	*		
91	*	*		
92	1.17	1.25		
93	1.26	1.32		
94	1.34	1.43		
95	1.45	1.45		
96	1.47	1.51		
97	1.53	1.53		
98	1.55	1.72		
99	1.74	2.36	1.76	1.99

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Table 9

z Score Ranges For Future Utility (FU)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
0	-9.28	-3.17		
1	-3.15	-2.72		
2	2.70	-2.28		
3	-2.26	-2.21		
4	-2.19	-2.06		
5	-2.04	-2.04		
6	-2.02	-1.77		
7	-1.74	-1.87		
8	-1.64	-1.55		
9	-1,53	-1.51	-1.48	-1.46
10	-1.49	-1.47		
11	-1.45	-1.26		
12	*	*		
13	-1.23	-1.19		
14	-1.17	-1.11		
15	*	*		
16	-1.09	-1.02		
17	-1.00	-1.00		
18	-0.96	-0.96		
19	-0.94	-0.94	-0.70	-0.69
20	*	*		
21	-0.91	-0.72		
22	*	*		
23	-0.70	-0.60		
24	-0.57	-0.55		
25	-0.53	-0.53		
26	-0.51	-0.45		
27	*	*		
28	-0.43	-0.38		
29	-0.36	-0.36	*	*
30	*	*		
31	-0.34	-0.34		
32	-0.32	-0.23		

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
33	-0.21	-0.21		
34	-0.19	-0.17		
35	-0.15	-0.11		
36	*	*		
37	-0.09	-0.09		
38	*	*		
39	-0.06	-0.04	*	*
40	-0.02	-0.02		
41	*	*		
42	*	*		
43	*	*		
44	*	*		
45	0.00	0.00		
46	0.02	0.02		
47	0.04	0.06		
48	0.09	0.09		
49	*	*	-0.01	0.01
50	0.11	0.13		
51	*	*		
52	0.15	0.15		
53	0.17	0.17		
54	0.19	0.21		
55	0.23	0.26		
56	0.28	0.28		
57	0.30	0.30		
58	*	*		
59	0.32	0.32	0.27	0.27
60	*	*		
61	0.34	0.36		
62	0.38	0.40		
63	*	*		
64	0.43	0.45		
65	0.47	0.49		
66	0.51	0.51		
67	0.53	0.55		
68	0.57	0.57		
69	*	*	0.51	0.54

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
70	0.60	0.60		
71	0.62	0.64		
72	0.66	0.66		
73	0.68	0.70		
74	0.72	0.77		
75	0.79	0.79		
76	*	*		
77	0.81	0.81		
78	0.83	0.85		
79	*	*	0.78	0.78
80	*	*		
81	0.87	0.87		
82	0.89	0.89		
83	*	*		
84	0.91	0.91		
85	*	*		
86	*	*		
87	0.94	0.94		
88	*	*		
89	0.96	1.00	1.11	1.18
90	*	*		
91	1.02	1.06		
92	1.09	1.15		
93	1.17	1.23		
94	*	*		
95	1.26	1.30		
96	1.32	1.36		
97	1.38	1.51		
98	*	*		
99	1.53	3.49	2.14	2.90

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Table 10

z Score Ranges for Self Concept of Ability

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
0	-12.34	-3.14		
1	-3.11	-2.69		
2	-2.66	-2.11		
3	-2.09	-1.71		
4	-1.69	-1.66		
5	*	*		
6	-1.63	-1.63		
7	-1.60	-1.57		
8	-1.54	-1.54		
9	-1.51	-1.37	-0.95	-0.90
10	-1.34	-1.23		
11	-1.20	-1.20		
12	-1.17	-1.14		
13	-1.11	-1.09		
14	-1.06	-1.06		
15	-1.03	-1.03		
16	-1.00	-1.00		
17	-0.97	-0.97		
18	-0.94	-0.94		
19	-0.91	-0.91	*	*
20	0.89	-0.80		
21	-0.77	-0.71		
22	-0.69	-0.69		
23	*	*		
24	0.66	-0.66		
25	-0.63	-0.54		
26	-0.51	-0.49		
27	-0.46	-0.46		
28	-0.43	-0.43		
29	-0.40	-0.40	-0.34	-0.34
30	*	*		
31	*	*		
32	-0.37	-0.37		

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
33	*	*		
34	*	*		
35	-0.34	-0.31		
36	-0.29	-0.26		
37	*	*		
38	*	*		
39	-0.23	-0.23	-0.17	-0.17
40	*	*		
41	*	*		
42	-0.20	-0.20		
43	-0.17	-0.14		
44	*	*		
45	*	*		
46	-0.11	-0.11		
47	*	*		
48	-0.09	-0.09		
49	*	*	0.06	0.08
50	-0.06	0.00		
51	-0.03	0.03		
52	*	*		
53	0.06	0.09		
54	0.11	0.11		
55	*	*		
56	*	*		
57	0.14	0.14		
58	*	*		
59	0.17	0.17	*	*
60	0.20	0.23		
61	0.26	0.26		
62	*	*		
63	0.29	0.29		
64	0.31	0.37		
65	*	*		
66	*	*		
67	0.40	0.40		
68	*	*		
69	0.43	0.43	0.47	0.47

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
70	0.46	0.46		
71	*	*		
72	*	*		
73	*	*		
74	0.49	0.51		
75	0.54	0.57		
76	0.60	0.74		
77	*	*		
78	0.77	0.83		
79	0.83	0.86	0.64	0.67
80	0.89	0.89		
81	0.91	0.91		
82	0.94	0.94		
83	0.97	0.97		
84	1.00	1.00		
85	1.03	1.03		
86	*	*		
87	*	*		
88	*	*		
89	1.06	1.17	0.93	0.99
90	1.11	1.23		
91	1.26	1.26		
92	1.29	1.29		
93	1.31	1.37		
94	1.40	1.40		
95	*	*		
96	1.43	1.60		
97	1.63	1.83		
98	1.86	1.89		
99	1.91	4.80	2.03	3.41

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Table 11

z Score Ranges For Attitude Toward Principal (AP)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
0	-6.51	-5.12		
1	-5.10	-2.59		
2	-2.58	-1.84		
3	-1.83	-1.74		
4	-1.72	-1.57		
5	*	*		
6	*	*		
7	-1.55	-1.41		
8	-1.39	-1.29		
9	-1.28	-1.25	-1.21	-1.21
10	-1.23	-1.14		
11	-1.13	-1.13		
12	-1.12	-1.06		
13	-1.04	-1.04		
14	-1.03	-0.99		
15	*	*		
16	-0.97	-0.84		
17	-0.83	-0.74		
18	-0.74	-0.64		
19	*	*	-0.92	-0.91
20	*	*		
21	-0.62	-0.61		
22	*	*		
23	-0.59	-0.59		
24	-0.58	-0.52		
25	-0.51	-0.45		
26	-0.43	-0.43		
27	-0.42	-0.42		
28	-0.41	-0.41		
29	-0.39	-0.35	-0.49	-0.47
30	-0.33	-0.32		
31	*	*		
32	-0.30	-0.30		

(table continues)

Georgia Percentile Rank	Georgia \bar{z} Score Range		National \bar{z} Score Range ¹	
33	-0.29	-0.29		
34	-0.28	-0.26		
35	-0.25	-0.20		
36	*	*		
37	-0.19	-0.19		
38	-0.17	-0.17		
39	-0.16	-0.16	-0.16	-0.16
40	-0.14	-0.14		
41	-0.13	-0.10		
42	*	*		
43	-0.09	-0.06		
44	-0.04	-0.04		
45	*	*		
46	-0.03	-0.01		
47	0.00	0.03		
48	0.04	0.04		
49	*	*	0.12	0.12
50	0.06	0.10		
51	0.12	0.12		
52	*	*		
53	0.13	0.14		
54	0.16	0.17		
55	0.17	0.20		
56	0.22	0.23		
57	0.25	0.25		
58	0.26	0.29		
59	0.30	0.30	0.27	0.29
60	0.32	0.32		
61	0.33	0.39		
62	0.41	0.42		
63	*	*		
64	0.43	0.49		
65	*	*		
66	0.51	0.51		
67	0.52	0.52		
68	0.54	0.54		
69	0.55	0.57	0.52	0.54

(table continues)

Georgia Percentile Rank	Georgia \underline{z} Score Range		National \underline{z} Score Range ¹	
70	*	*		
71	*	*		
72	0.58	0.58		
73	0.59	0.59		
74	0.61	0.61		
75	0.62	0.65		
76	0.67	0.67		
77	0.68	0.68		
78	0.70	0.70		
79	*	*	0.81	0.83
80	*	*		
81	0.71	0.72		
82	*	*		
83	0.72	0.78		
84	*	*		
85	0.80	0.86		
86	0.87	0.88		
87	0.90	0.96		
88	0.97	1.03		
89	1.04	1.09	1.22	1.25
90	*	*		
91	1.10	1.13		
92	1.14	1.14		
93	1.16	1.22		
94	1.23	1.23		
95	1.25	1.30		
96	1.32	1.32		
97	1.33	1.51		
98	1.52	1.68		
99	1.70	2.19	1.77	2.37

¹McDonough, 1992, pp. 128-130

*No score ranges were reported

Note. Some ranges consist of a single point for a given percentile.

Tests of Null Hypotheses

The statistical analyses used and the findings of these analyses are reported for each of the four null hypotheses in the following paragraphs. The means of national sample and the means of the Georgia sample were compared simultaneously on the four aspects of teacher motivation using a multivariate analysis of variance (MANOVA) procedure. The multivariate analysis of variance (MANOVA) resulted in a Wilks Lambda $F(4,278) = 7.88, p < .01$. Given the statistically significant MANOVA, univariate t -tests were then used to test the difference between the two groups on each of the four aspects of teacher motivation. The results of the univariate t -tests are indicated in the tests of null hypotheses reported below.

Null Hypothesis 1

There was no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Principal Expectations.

An univariate t -test was used to determine the statistically significant difference between the mean score of the Georgia sample and the mean score of the national sample on the aspect Principal Expectations. The results are reported in Table 12.

Table 12

Principal Expectations for the Georgia and National Sample Groups

<u>Sample</u>	<u>n</u>	<u>mean</u>	<u>S.D.</u>	<u>t</u>	<u>df</u>	<u>p</u>
Georgia	128	5.75	.53	4.60	281	.01
National	155	5.36	.82			

A t-value of 4.60 with 281 degrees of freedom is statistically significant at the $p < .01$ level. Therefore null hypothesis 1 was rejected. The Georgia sample has a significantly higher mean than the national sample on the motivational aspect of Principal Expectations.

Null Hypothesis 2

There was no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Future Utility.

An univariate t-test was used to determine the statistically significant difference between the mean score of the Georgia sample and the mean score of the national sample on the aspect Future Utility. The results are reported in Table 13.

Table 13

Future Utility for the Georgia and National Sample Groups

<u>Sample</u>	<u>n</u>	<u>mean</u>	<u>S.D.</u>	<u>t</u>	<u>df</u>	<u>p</u>
Georgia	128	5.36	.47	5.42	281	.01
National	155	4.96	.70			

A t -value of 5.42 with 281 degrees of freedom is statistically significant at the $p < .01$ level. Therefore null hypothesis 2 was rejected. The Georgia sample has a significantly higher mean than the national sample on the motivational aspect of Future Utility.

Null Hypothesis 3

There was no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Self Concept of Ability.

An univariate t -test was used to determine the statistically significant difference between the mean score of the Georgia sample and the mean score of the national sample on the aspect Self Concept of Ability. The results are reported in Table 14.

Table 14

Self Concept of Ability for the Georgia and National Sample Groups

<u>Sample</u>	<u>n</u>	<u>mean</u>	<u>S.D.</u>	<u>t</u>	<u>df</u>	<u>p</u>
Georgia	128	5.31	.35	3.69	281	.01
National	155	5.11	.56			

A t-value of 3.69 with 281 degrees of freedom is statistically significant at the $p < .01$ level. Therefore null hypothesis 3 was rejected. The Georgia sample has a significantly higher mean than the national sample on the motivational aspect of Self Concept of Ability.

Null Hypothesis 4

There was no significant difference between the mean score of the Georgia sample and the mean score of the national sample on the motivational aspect of Attitude Toward Principal.

An univariate t-test was used to determine the statistically significant difference between the mean score of the Georgia sample and the mean score of the national sample on the aspect Attitude Toward Principal. The results are reported in Table 15.

Table 15

Attitude Toward Principal for the Georgia and National Sample Groups

Sample	n	mean	S.D.	t	df	p
Georgia	128	5.49	.69	2.27	281	.02
National	155	5.29	.72			

A t-value of 2.27 with 281 degrees of freedom is statistically significant at the $p < .02$ level. Therefore null hypothesis 4 was rejected. The Georgia sample has a significantly higher mean than the national sample on Attitude Toward Principal.

Conclusions

In this study it was found that the motivational aspect of Principal Expectations had the highest mean score. This was consistent with findings from the national study (McDonough, 1992) and Georgia studies by Matthews and Holmes (1982), Richardson (1984), and Youngblood (1986). However, other results did not follow this trend. The lowest mean score in this study was Self Concept of Ability, while the lowest mean scores from the national study (McDonough, 1992), the study by Matthews and Holmes (1982), and Richardson (1984) were Future Utility, Attitude Toward Principal, and

Attitude Toward Principal, respectively. The lowest mean scores in the Youngblood (1986) study were Future Utility and Self Concept of Ability.

Based on studies and literature on effective schools, it is generally accepted that the leadership of the principal plays a major role in successful schools. Fox (1986), Zimmerman (1990), Bass (1990), Batsis (1987), and Robinson and Block (1982) all emphasized the importance of principal expectations in teacher motivation. The findings from this study related to Principal Expectations, as well as studies by McDonough (1992), Matthews and Holmes (1982), Richardson (1984), and Youngblood (1986) indicate that teachers believe that principals nationwide and in Georgia do have relatively high expectations for student achievement.

In all four aspects of teacher motivation, the mean scores of the Georgia sample group were significantly higher than the mean scores of the national sample group. The differences for each aspect are (a) Principal Expectations: .39, (b) Future Utility: .40, (c) Self Concept of Ability: .20, and (d) Attitude Toward Principal: .20.

In all four aspects of teacher motivation, the standard deviations of the Georgia sample group were smaller than the national sample group. The differences in standard deviations were (a) Principal Expectations: .29, (b) Future Utility: .37, (c) Self Concept of Ability: .21, and (d) Attitude Toward Principal: .03.

The findings of this study are consistent with three previous studies conducted in Georgia. Mean scores for each aspect in all studies, except Matthews and Holmes (1982) Attitude Toward Principal, were higher than those in the national study. The findings are reported in Table 16.

Table 16
Mean Scores For Five Studies

Aspect	Georgia	McDonough	Matthews & Holmes	Richardson	Youngblood
PE	5.75	5.36	5.71	5.99	6.06
FU	5.36	4.96	5.41	5.83	5.31
SC	5.31	5.11	5.23	5.61	5.31
AP	5.49	5.29	5.15	5.47	5.84

Numerous efforts to improve the quality of education in Georgia over the past 20 years may explain the results of the findings. As a result of concern about the effectiveness of education in Georgia, the Georgia General Assembly enacted its 1974 Adequate Program for Education in Georgia (APEG) legislation. This act called for a comprehensive testing program "to assess the effectiveness of the educational program in the state" (Georgia Department of Education, 1981, p. 2). As a result, state tests were designed to assess student achievement. In addition, norm-referenced tests were mandated.

Brown (1992), Hight (1992), Mundy (1992), Puckett (1992), and Williams (1992) reported that the passage of Georgia's Quality Basic Education Act (QBE) in 1985 resulted in major reforms impacting teacher motivation. Matthews, Melton, and Rogers (in press) stated that under QBE, public education financial support increased dramatically with more than \$908.9 million in new funds appropriated for the first year (1986) of enactment (p. 1). Brown (1992) added that while recent efforts in Georgia were governor-led, and business-dominated, they forced educators to look closely at current practices in the state.

A review of various programs created by the QBE Act may explain why teachers in Georgia believe that there are high expectations by principals to improve student achievement. Public scrutiny was an integral part of the QBE Act.

Each local school system shall annually inform the citizens residing within its area and the State Superintendent of Schools concerning the collective achievement of enrolled students by school and system . . . The State Board of Education shall publish in the legal organ of the county where the local school system is located the result of the comprehensive evaluation including a summary of any deficiencies as may have been identified and recommendations for addressing said deficiencies. The State School Superintendent shall annually report to the Governor and the General Assembly

concerning the results of all state-wide assessment of student achievement. . . (Georgia Department of Education, 1985, p. 71).

Another provision of the QBE Act was the establishment of a core curriculum. The act stated that

The State Board of Education shall establish competencies that each student is expected to master prior to completions of the student's public school education. . . Based upon these foregoing competencies, the state board shall adopt a uniformly sequenced core curriculum for grades kindergarten through 12. Each local unit of administration shall include this uniformly sequenced core curriculum as the basis for its own curriculum. . . (Georgia Department of Education, 1990, p. 52)

To determine the effectiveness of the educational programs of the state assessment of students continued to be emphasized in the QBE Act, which mandated testing in all grades except 5, 11, and 12, with exit exams at the end of kindergarten, third grade, and for graduation (in tenth grade) (Georgia Department of Education, 1985, p. 70). While the testing program has been modified, accountability for student performance continues to be a major emphasis in Georgia.

Mundy (1992) stated that as a result of a study completed in 1985 by the Georgia Professional Standards Commission related to teacher beliefs of about principals,

awareness of the leadership role of the principal was heightened. This was reflected in the founding of the Georgia Leadership Academy which helped administrators focus on current issues. In addition, the QBE Act requires annual evaluations of all principals, as well as those in other leadership positions. Puckett (1992), former director of the Georgia Leadership Academy, added that more principals are receiving training in instructional leadership as a result of programs offered by the Georgia Leadership Academy and other state efforts.

In their study of administrative needs in Georgia, Katz and Kimbrough (1991) found that the category Supervision and Evaluation of Staff dropped from fifth in highest ranked needs in 1987 to 27th in 1989. They concluded that, as a result of intervening efforts between 1987 and 1989 by the Georgia Leadership Academy and the implementation of a uniform evaluation instrument for teachers, positive results were achieved in Georgia's effort to improve instructional leadership (pp. 21-22).

Passage of the QBE Act resulted in the establishment of several programs which may be related to the the future utility motivational aspect. Deci and Ryan (1985) summarized that motivation is fostered through a sense of competence, control, and connection. The career ladder program was designed for teachers and other professionally certificated personnel which "provide such personnel who demonstrate above

average or outstanding competencies relative to their respective positions and exhibit above average or outstanding performance in executing their assigned responsibilities with salary supplements in recognition of such competency and performance" (Georgia Department of Education, 1990, p. 92). Although not yet implemented, the career ladder program is to be linked to the Georgia Teacher Evaluation Program (GTEP) and student performance on statewide assessments.

According to Puckett (1992), funding for staff development for education in Georgia peaked at \$35 million in 1986. Matthews, Melton, and Rogers (in press) found that in the 1991 fiscal year, Georgia staff development continued to be funded at \$15 million, or about \$250 per teacher (p. 7). As a result of the QBE Act, incentive awards may be provided to schools demonstrating high levels of performance or improved performance. Schools may expend these funds for staff development and/or instructional programming (Georgia Board of Education, 1990, p. 102). Thus, principals in Georgia are able to encourage teachers to improve skill development and offer financial support.

According to the expectancy theory of motivation, people will work hard for desired, obtainable rewards. According to Matthews and Holmes (1992), teachers will tend to work harder if they believe that what they do will benefit them and that they can be successful (p. 8). The review of the literature

and an examination of Georgia efforts to improve student achievement support for the findings of this study.

Herzberg's motivation-hygiene theory, stated that the five factors that are strong determiners of job satisfaction are achievement, recognition, work itself, responsibility, and advancement (Herzberg, 1966, pp. 72-73). Brown (1992), Mundy (1992), Puckett (1992), and Williams (1992) concluded that the Georgia Teacher Evaluation Program offered training for principals regarding appropriate comments specific to situations and placed principal in classrooms more frequently than before the program was implemented. Mundy (1992) concluded that as a result of this program, principals were made more aware of the needs of teachers as they related to improved student achievement.

Georgia's QBE Act (1990) provides funding for projects "for the purpose of improving the effectiveness of an educational program within a school. . ." (p. 99). By successfully planning and implementing successful innovative projects, principals are able to influence teachers' self concept of ability. Mundy (1992) and Brown (1992) suggested that the new emphasis on site-based management in Georgia may have made a difference in scores related to self concept of ability.

Matthews and Brown (1976) stated that "if principals are to guide the efforts of teachers toward higher student achievement, the teachers must respond in a positive way to

the leadership of principal" (p. 10). Mundy (1992) reported that the Darden report on teachers beliefs about and attitudes toward principals increased the awareness of the importance of the principal/teacher relationship. Puckett (1992) reported that recognition of the importance of human relations skills for effective leadership prompted the Georgia Leadership Academy to offer numerous programs on leadership styles, communication skills, and conflict resolution. Katz and Kimbrough (1991) reported that, from 1987 to 1989, of the seven task areas starting low in 1987 and ending higher in 1989, "five are either relationship or communications management task areas" (p. 26). Mundy (1992) indicated that principals are extensively trained in methods of providing appropriate feedback for teachers in evaluation procedure.

Katz and Kimbrough (1991) concluded that their data reflected "the vividly demonstrated saga of educational reform, of the ways in which state educational policy shapes the opinions and activities of those entrusted with the administration of local public schools" (p. 49). The results of this study reflect the efforts of one state toward improving student achievement.

Recommendations

Recommendation One

The mean scores for Georgia differed significantly from the mean scores for the national sample. Therefore, it is

reasonable to assume that teacher motivation in other states may also differ. Thus, consideration should be given to developing norms for the Teacher Motivation Diagnostic Questionnaire in other states.

Recommendation Two

In both the national study and the Georgia study, teachers expressed concern about the emphasis placed on test scores. Given this concern, consideration should be given to developing a questionnaire which does not place as much emphasis on test scores.

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APPENDIX A
School Packet

1. Letter to the Principal
2. Directions for the Principal
3. Directions for the Teacher
4. Teacher Motivation Diagnostic Questionnaire
5. Background Data Survey



The University of Georgia

College of Education
 Department of Educational Administration

October 14, 1991

Dear Principal Meeks:

I am conducting a doctoral study to establish Georgia norms for a teacher motivation instrument. This instrument focuses on aspects of teacher motivation that principals can influence.

I hope you will have your teachers complete the enclosed Teacher Motivation Diagnostic Questionnaire for me. This should take no more than fifteen minutes of your teachers' time and could easily be administered prior to or following a faculty meeting. I have selected only 200 schools so it is 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.

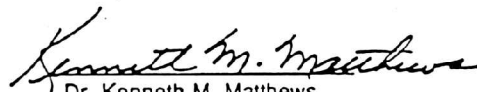
I foresee no risk to you or your teachers if your teachers complete this questionnaire. ALL RESPONSES ON THIS QUESTIONNAIRE WILL BE ANONYMOUS.

If you have any questions about the research being conducted, please feel free to contact me at (912) 685-5713. 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,


 Nancy B. Gorton

Thanks!


 Dr. Kenneth M. Matthews
 Professor

Research at the University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding these activities should be addressed to Ms. Heidi L. Roof, Coordinator, Human Subjects, Research: Office of V.P. for Research: The University of Georgia: 604A Graduate Studies Research Center, Athens, Georgia 30602; Telephone: (404) 542-6414

DIRECTIONS FOR THE PRINCIPAL

1. Give each teacher in your school a copy of the questionnaire and teacher directions. (You might do this at the beginning or end of a faculty meeting.)
2. I have tried to provide enough questionnaires for all your teachers. If you need more questionnaires, please make enough copies for this study.
3. Ask all teachers to complete the Teacher Motivation Diagnostic Questionnaire AND the Background Data Information which is on the back of the questionnaire.
4. Have someone such as your media specialist/librarian collect the completed questionnaires, seal them in the self-addressed envelope and mail them back to me. (Please help in seeing that all responses are kept anonymous - Please don't send any teachers' names.)
5. Please return completed questionnaires to me by January 15, 1992.
6. If you would like a copy of the results for your school, please check the appropriate place on the outside of the return envelope. (This envelope is coded so that your school can be identified; however, questionnaires are anonymous.)

THANK YOU VERY MUCH FOR YOUR TIME AND CONSIDERATION

DIRECTIONS FOR THE TEACHER

I am conducting a doctoral study to establish Georgia norms for a teacher motivation instrument entitled the Teacher Motivation Diagnostic Questionnaire. I have selected your school to participate in this study. Your participation is greatly appreciated.

I foresee no risk to you if you complete this questionnaire. ALL RESPONSES ON THIS QUESTIONNAIRE WILL BE ANONYMOUS.

1. Carefully read each item on the Teacher Motivation Diagnostic Questionnaire.
2. Pay special attention to the range of answers, e.g., strong to weak, small to large, low to high.
3. Notice that sometimes the scales change ends.
4. Blacken in the bubble which comes closest to how you feel now.
5. Please answer ALL questions on the questionnaire.
6. Please complete the background data information on the BACK of the questionnaire.
7. See that the anonymity of your answers is protected by placing the completed questionnaire and the background data information in the mailing envelope.

Although the school will be identified by a code on the return envelope, the questionnaires will remain completely anonymous. DO NOT SIGN YOUR NAME.

THANK YOU VERY MUCH FOR YOUR TIME AND CONSIDERATION

Research at the University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding these activities should be addressed to Ms. Heidi L. Roof, Coordinator, Human Subjects, Research; Office of V.P. for Research; The University of Georgia: 604A Graduate Studies Research Center, Athens, Georgia 30602; Telephone: (404) 542-6514.

TEACHER MOTIVATION DIAGNOSTIC QUESTIONNAIRE

1. How much does your principal want test scores to improve?
STRONG WEAK
2. How much do you want to please your principal?
STRONG WEAK
3. How much would higher student achievement help you?
SMALL LARGE
4. How much higher could your students' test scores be?
HIGH LOW
5. How much does your principal expect test scores to improve?
LARGE SMALL
6. How much do you want to make your principal happy?
WEAK STRONG
7. How much would higher achievement be to your advantage?
SMALL LARGE
8. How good are you at helping students raise test scores?
BAD GOOD
9. How much could your students' achievement be raised?
LOW HIGH
10. How much would you benefit from higher achievement?
LARGE SMALL
11. How much does your principal try to please you?
LOW HIGH
12. How important are high test scores to your principal?
LOW HIGH
13. How good could you be at improving student achievement?
GOOD BAD
14. How much good would higher test scores do you?
LARGE SMALL
15. How much do you like the way your principal works with you?
LARGE SMALL
16. How much does your principal want higher test scores?
WEAK STRONG

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TURN QUESTIONNAIRE OVER AND COMPLETE DATA ON BACK

BACKGROUND DATA

1. What is your sex? female male
2. How old are you? years
3. How many years of total teaching experience do you have (including this year)? years
4. What is the highest degree you hold?
 Bachelors Specialist
 Masters Doctorate
5. What grade level(s) do you teach? (Please circle each grade that applies.)

K 1 2 3 4 5 6
7 8 9 10 11 12

APPENDIX B
Teacher Comments

1. "Questions Could be improved!"
2. Question 14 (marked 1): How much good would higher test scores do you? "What were your achievement scores?" "These questions are a waste of my time as well as money!"
3. "This is stupid!"
4. Question 1 (marked 6): How much does your principal want test scores to improve? "I think the principal is concerned about the overall good of each child." Question 2 (marked 6): How much do you want to please your principal? "I want to 'please' the principal and back her up in her effort to work with the whole child." Question 6 (marked 6): How much do you want to make your principal happy? "I want to make the principal 'happy' regarding her efforts to help the whole child." Question 13 (marked 6): How good could you be at improving student achievement? "Overall; including behavior."
5. "Apparently there is a need for specific information on the survey in the area of how much the principal wants scores to improve, how much the teacher wants to please the principal, how much the teacher can improve scores, etc. There is quite a bit of redundancy in the questions in these areas."
6. "I refuse to complete on the grounds of lack of confidentiality."
7. Question 3 (marked 7): How much would higher student achievement help you? "Help my feelings!"

8. "I do not like this survey at all!"
9. "The fallacy of the survey is in its equation of higher standardized test scores with achievement."
10. I hate it that you ask the same questions over and over. We aren't that stupid!"
11. This survey is ridiculous. These question are vague, impossible to rate and repetitive. I hope this isn't used for any major education related field."
12. Question 6 (marked 6): How much do you want to make your principal happy? "Happy about what?"
13. "This is completely ridiculous. The survey is repetitive. I don't know how these answers could possibly be beneficial to anyone."
14. "This is a ridiculous questionnaire! The question are the same. I refuse to answer any of them. I definitely do not see this as a teacher motivation instrument."
15. "Some questions are not applicable to my students and class."
16. "How many ways different ways can you ask a question? How many ways can you waste my time?"
17. "He does not pressure us for high test scores. He expects us to teach kids using most effective teaching strategies so children will become knowledgeable. We would like test scores to prove their knowledge but I'm not sure the tests do that. We want children to reach their potential regardless of test scores."

18. "Questions are repetitive and in my opinion had little to do with motivation. I work with children for their benefit, not just to raise scores. I'm not particularly concerned about my principal's happiness."

19. "Same questions."

20. Question 2 (marked 4): How much do you want to please your principal? "I want study to improve for the student, not for a teacher or principal." Question 3 (marked 5): How much would higher student achievement help you? "Personal satisfaction a lot." Question 4 (marked 6): How much higher could your students' test scores be? "A lot." Question 5 (no response): How much does your principal expect test scores to improve? "Unknown."

21. "I don't enjoy playing word games. There is a big difference in my mind between 'student achievement' and 'higher test scores' in the area of helping me."

22. Question 2 (marked 7): How much do you want to please your principal?, Question 6 (marked 6): How much do you want to make your principal happy? "These questions are repetitive."

23. "What is the real purpose of this thing? Don't know."

24. "Why are you asking the same questions again and again?"

25. "These questions are beginning to sound alike."

26. Question 10 (marked 4): How much would you benefit from higher achievement? "Personally a lot, but not professionally."

27. "This instrument needs rewording for clarity."

28. Question 12 (marked 5): How important are high test scores to your principal? "Not necessarily high but improved."

29. "Trivial!"

30. Question 4 (marked 6): How much higher could your students' test scores be? "I'm not sure I understand."

Question 7 (marked 7): How much would higher achievement be to your advantage? "For personal satisfaction that I have helped my students achieve. Not to please the powers that be or to make the county office look good." Question 9 (marked 6): How much could your students' achievement be raised? "See comment #4." Question 10 (marked 7): How much would you benefit from higher achievement? "See comment #7." Question 13 (marked 6): How good could you be at improving students achievement? Teacher crossed out "good" and replaced it with "well". Question 14 (marked 7): How much good would higher test scores do you? "See comment #7."

31. "This survey is a nuisance! Questions are repeated unnecessarily."

32. "Test scores do not matter to me. Helping child reach his/her highest potential is what is important! I work

hard for mastery and I am good at being successful with that."

33. Question 4 (marked 6): How much higher could your students' test scores be? "They are very high right now."

34. Question 2 (marked 7): How much do you want to please your principal? "Depends on the principal."

35. Question 8 (marked 4): How good are you at helping students raise test scores? "Don't know."

36. "This questionnaire is certainly redundant! What do test scores have to do with teacher motivation? Fortunately there is more to teaching than scores. Test scores are a bunch of time consuming mess! Emphasis is on scores not learning-not by principal but by coordinators."

37. "Questions are repeating each other. Wording is the only difference."

38. "Questions are meaningless and irrelevant."
Question 3 (marked 3): How much would higher student achievement help you? "This is an irrelevant question."

Question 8 (marked 2): How good are you at helping students raise test scores? "I don't care about test scores."

Question 11 (marked 3): How much does your principal try to please you? "Why should he try to please me?"

39. What are you really looking for?"

40. Question 5 (marked 7): How much does your principal expect test scores to improve? "I don't know, ask her."

41. "I don't know that 'test' scores are the best way to measure a child's achievement."

42. "What is the purpose? To choose the best working for the questions; to choose the best rating scale; to see how people answer the same questions?"

43. "This form is very insulting to me as a professional. Principals should/are highly insulted by the questions asked. We all care about test scores and try to raise scores. Question 16 (marked 6): How much does your principal want higher test scores? "On question 16 I can only guess what my principal feels. My ideas and hers could be exactly the same but how do we determine how to weigh it?"

44. "Our test scores are already very good."

45. Question 1 (marked 7): How much does your principal want test scores to improve? Question 3 (marked 6): Teacher drew lines to "weak" and "large" on the scale. "Word choice? These words don't seem to apply to the questions. Question 6 (marked 7): How much do you want to make your principal happy? "This is the same as question #2." Question 7 (marked 6): How much would higher achievement be to your advantage? "This = question 3." Question 9 (marked 6): How much could your students' achievement be raised? "This = question 4." "What is this? A test of teacher consistency?"

46. Question 7 (no response): How much would higher achievement be to your advantage? "Advantage?" Question 10 (marked 6): How much would you benefit from higher

achievement? "Benefits would be one of satisfaction not money." "This questionnaire may be one of the worst worded ones I've ever completed."

47. "Aren't these the same questions over and over?"

48. I don't feel I've been here long enough to answer these questions. I haven't encountered any of this."

49. "This is stupid."

50. "This is a redundant survey. I can not see its importance."

51. "This was boring to answer the same questions over and over."

52. Question 4 (no response): How much higher could your students' test scores be? "This question has too many interpretations." Question 7 (marked 5): How much would higher achievement be to your advantage? "How/why?" Question 8 (marked 5): How good are your at helping students raise test scores? "What kinds?"

APPENDIX C

Mean Scores By School

Mean Scores By School

School	PE	FU	SC	AP
1	5.52	4.91	5.18	4.91
2	5.88	5.81	5.69	5.76
3	6.00	6.00	5.41	5.53
4	6.55	5.57	5.88	6.20
5	5.64	5.44	5.21	4.29
6	5.48	5.41	5.85	6.27
7	5.61	5.83	5.08	5.86
8	5.25	4.80	4.74	4.81
9	5.90	5.36	5.50	6.24
10	6.31	5.66	5.45	5.58
11	5.30	5.55	5.23	5.83
12	5.55	5.79	5.29	4.52
13	6.15	5.63	5.63	6.33
14	4.54	4.80	5.52	5.78
15	5.04	5.15	5.25	6.21
16	5.68	5.43	5.68	5.59
17	5.63	5.32	5.29	5.94
18	5.43	5.57	5.80	3.70
19	6.36	5.78	5.96	5.07
20	5.82	5.73	5.40	5.95
21	5.74	5.80	5.38	5.85
22	5.99	5.40	5.50	5.99
23	5.77	5.73	5.73	5.58
24	6.85	5.74	5.04	5.20
25	5.63	4.88	5.19	5.63
26	4.89	4.19	5.09	4.19
27	5.72	5.53	5.37	6.03
28	5.06	4.31	4.72	5.31
29	5.98	5.60	5.37	5.80
30	5.52	4.63	4.97	5.08
31	5.54	5.62	4.97	4.76
32	6.34	5.16	5.17	5.97
33	5.94	6.10	4.84	5.66
34	6.22	5.36	5.50	5.21
35	6.08	5.74	5.42	5.38

(table continues)

School	PE	FU	SC	AP
36	5.20	5.26	5.38	5.28
37	5.46	5.36	5.62	5.89
38	5.46	5.36	5.61	5.89
39	6.30	5.20	4.98	5.35
40	5.66	5.41	5.07	5.00
41	5.54	4.56	5.46	5.38
42	5.65	5.77	5.28	5.84
43	6.11	6.10	5.66	5.52
44	5.90	5.78	5.69	5.28
45	5.29	5.28	5.16	5.39
46	6.66	5.90	5.47	6.15
47	5.82	4.53	4.76	5.08
48	5.56	5.37	5.19	6.07
49	5.96	6.07	5.65	5.65
50	6.00	5.97	5.98	5.05
51	6.36	4.92	5.24	6.82
52	6.22	5.80	5.64	5.53
53	6.23	5.76	5.46	5.48
54	5.81	5.42	5.25	5.61
55	5.81	5.00	5.19	6.27
56	6.06	5.51	5.51	5.28
57	5.73	5.15	5.37	5.25
58	6.41	5.80	5.59	5.07
59	5.59	5.34	4.89	5.36
60	6.11	5.36	5.50	5.96
61	4.75	3.88	4.75	5.56
62	5.33	5.72	5.38	5.13
63	5.89	5.35	5.34	6.03
64	5.72	5.39	5.19	1.23
65	6.21	5.34	5.32	6.10
66	6.13	5.16	5.00	5.44
67	6.54	5.77	5.85	5.42
68	6.36	5.81	6.17	5.89
69	5.89	4.29	5.00	4.41
70	6.04	5.69	5.50	5.88
71	6.22	5.53	5.78	5.69
72	5.29	5.00	4.88	5.94
73	4.82	5.25	4.75	5.18

(table continues)

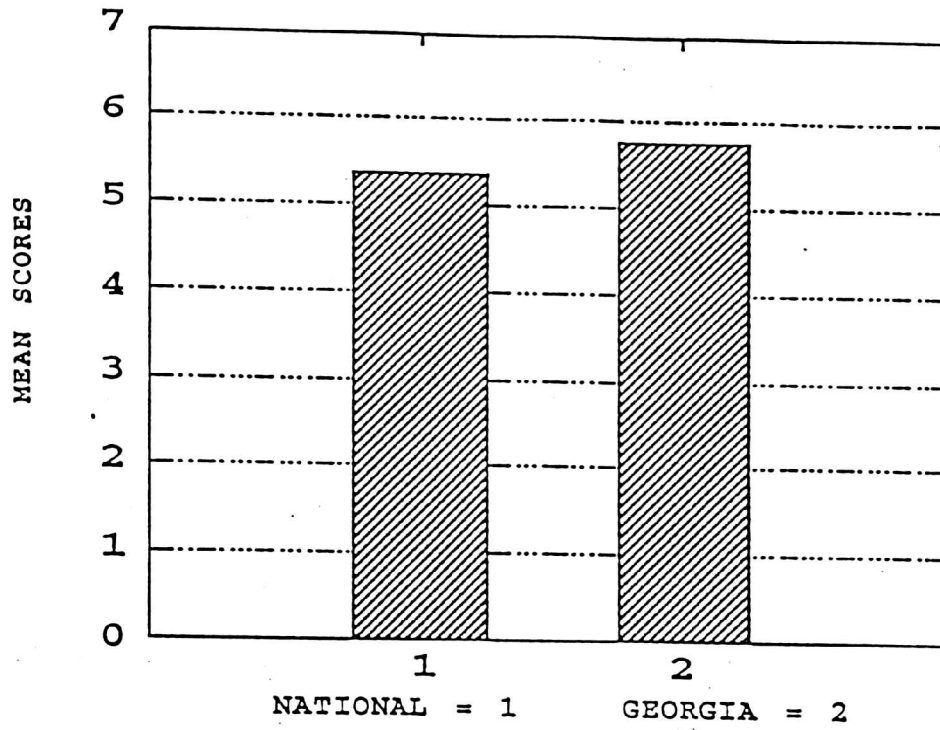
School	PE	FU	SC	AP
74	5.73	5.51	5.21	4.52
75	3.90	4.77	4.92	5.71
76	6.56	5.49	5.68	5.08
77	5.80	5.10	5.25	5.91
78	6.41	5.46	5.46	4.70
79	5.69	5.67	4.94	6.53
80	6.45	5.80	4.95	4.60
81	4.16	4.89	4.77	5.84
82	6.29	5.77	5.33	5.36
83	5.73	5.23	5.27	4.64
84	6.23	5.18	5.15	5.90
85	6.16	5.20	5.36	5.99
86	5.23	5.19	5.17	5.89
87	4.70	4.40	4.58	4.22
88	5.33	5.75	5.45	6.53
89	5.41	5.57	5.27	5.57
90	4.64	4.32	4.38	4.98
91	6.27	5.43	5.42	4.79
92	5.68	6.00	5.81	5.18
93	5.80	5.86	5.48	5.46
94	6.07	4.88	5.06	5.28
95	6.26	4.83	5.09	4.60
96	5.42	4.58	4.90	5.97
97	5.59	5.32	5.24	4.29
98	6.75	5.65	5.75	6.65
99	5.37	5.11	5.24	6.03
100	5.70	5.53	5.28	5.76
101	5.62	5.08	5.29	6.74
102	5.77	5.48	5.24	5.37
103	5.58	5.64	5.69	5.19
104	5.29	4.66	4.06	5.25
105	5.71	5.04	5.34	5.45
106	6.17	5.34	5.35	5.48
107	6.14	5.50	5.65	5.07
108	4.95	4.65	4.99	5.32
109	6.51	5.86	5.69	5.51
110	5.59	5.31	5.47	4.71

(table continues)

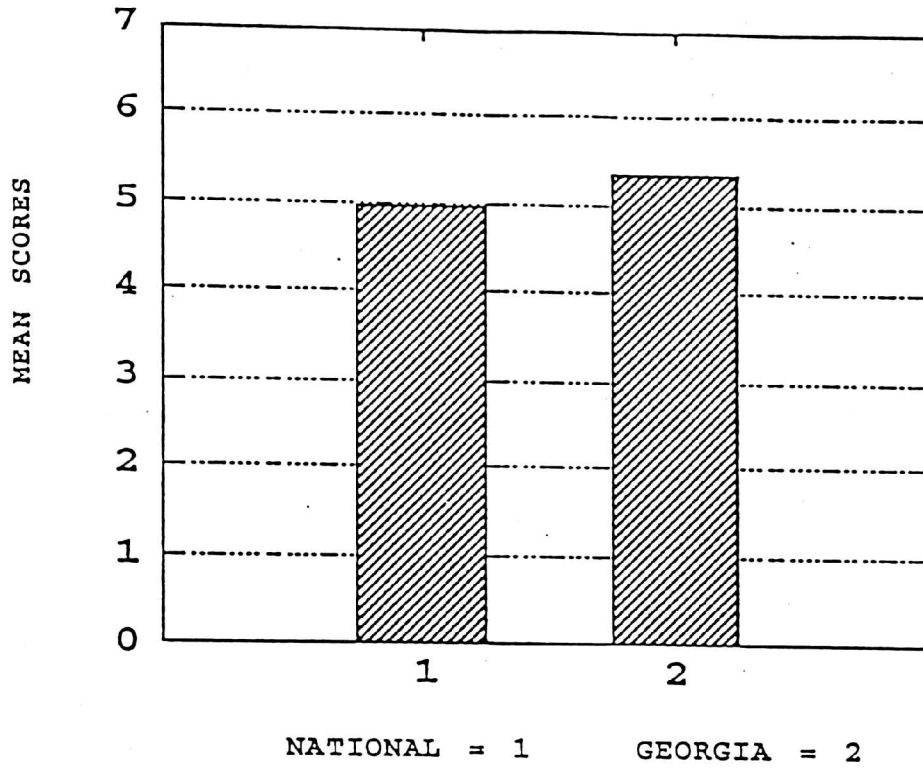
School	PE	FU	SC	AP
111	4.38	3.88	4.63	4.63
112	5.77	5.64	5.21	6.34
113	4.80	4.67	4.96	5.51
114	6.52	5.94	5.58	4.52
115	5.87	5.29	5.33	4.77
116	5.60	5.79	5.32	5.86
117	5.05	4.39	4.95	5.70
118	5.98	5.63	5.38	6.30
119	5.75	5.02	5.28	5.99
120	5.92	5.37	5.21	5.29
121	6.30	5.91	5.77	5.66
122	6.42	5.11	5.67	5.44
123	5.92	5.97	5.47	6.08
124	5.85	5.59	5.76	5.80
125	5.39	5.46	5.15	6.40
126	6.41	6.13	6.38	6.39
127	5.77	5.36	5.13	6.07
128	5.00	4.84	4.78	5.27

APPENDIX D
Graphs of Mean Scores
of Motivational Aspects
for
National and Georgia Samples

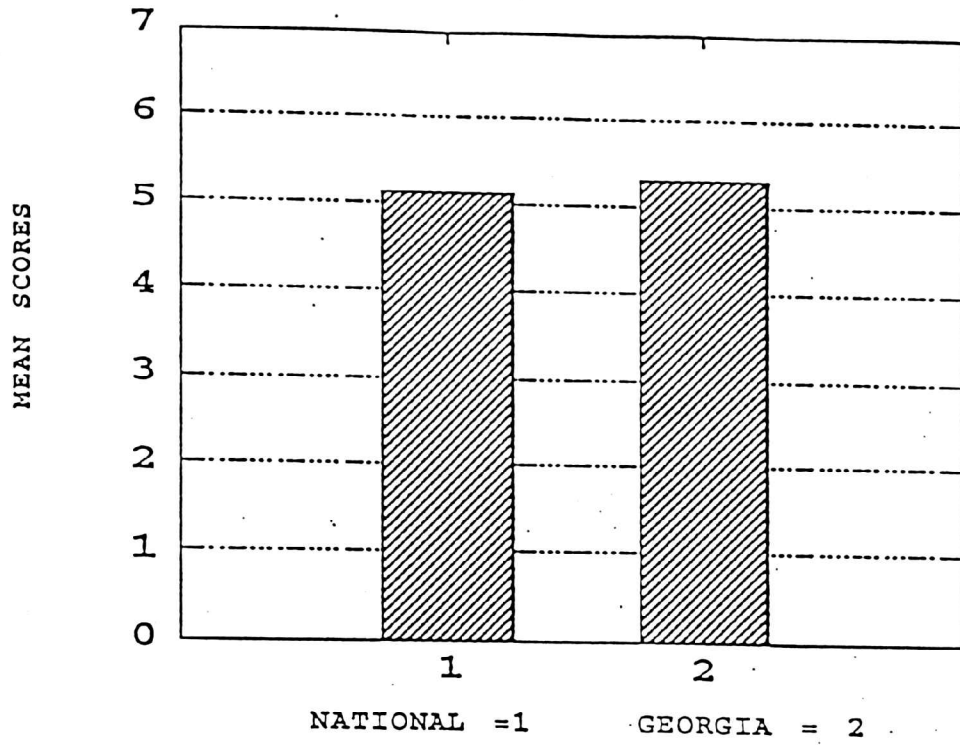
MEAN SCORES FOR PRINCIPAL EXPECTATIONS



MEAN SCORES FOR FUTURE UTILITY



MEAN SCORES FOR SELF CONCEPT OF ABILITY



MEAN SCORES FOR ATTITUDE TOWARD PRINCIPAL

