The Culture of Leadership and Student Achievement in Effective New Jersey High Schools

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THE CULTURE OF LEADERSHIP AND STUDENT ACHIEVEMENT IN
EFFECTIVE NEW JERSEY HIGH SCHOOLS

BY

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Requirements for the Degree
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ABSTRACT

THE CULTURE OF LEADERSHIP AND STUDENT ACHIEVEMENT
IN EFFECTIVE NEW JERSEY HIGH SCHOOLS

Erica D’Agostino Matos

This quantitative study examined the impact of leadership behaviors on academic achievement of students from effective New Jersey public high schools. Standardized test scores for the High School Proficiency Assessment (HSPA) were gathered from the New Jersey Department of Education website. A survey designed by the National Association of Secondary School Principals (NASSP) was disseminated to teachers in the effective high schools in order to determine the characteristics of the leadership behaviors exhibited by each school’s leadership culture. Reliability coefficients exhibited high internal consistency of the survey instrument, which had previously been untested. Results of a correlation matrix indicated a significant relationship between student achievement and the following four leadership behaviors: setting instructional direction, judgment, results orientation and organizational ability. Given the inter-correlations between the variables and subsequent suppressor effects, a factor analysis was done utilizing a varimax rotation which yielded three new leadership dimensions (goal-driven behaviors, focus on individual growth and communication). The three new leadership dimensions were entered into a hierarchical regression with student level variables (mobility and attendance rate) and school level variables (district factor grouping, class size and instructional time). The leadership dimensions did not explain a significant
amount of explained variance, and were not responsible for a significant change in $R^2$; the null hypothesis was therefore not rejected.
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DEDICATION

This work is dedicated to the light and love of my life, my beautiful daughter Arianna Maria, who spent the first year and a half of her life sitting patiently beside me while I completed this research. You are, and always will be, my greatest accomplishment. It is also dedicated to the little bundle of joy on her way - we can’t wait to meet you.
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Chapter 1

INTRODUCTION

A century of expanding federal, state, and local focus on the plight of public education has been evidenced by the numerous commissioned reports, national conferences and task forces on education, and the resulting legislative actions that have occurred at the state and national levels. School reform movements and the public demand for increased student performance have addressed not only the content of the educational process, but also the management of school systems (Ravitch, 2000).

It was 22 years ago that the Nation at Risk study reported that “our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them” (National Commission on Excellence in Education, 1983, p.17). This report, coupled with the widespread public perception that something is seriously wrong with our educational system, resulted in the implementation of many new policies, the restructuring of public schools, and numerous other reform efforts across the nation. Almost two decades later, the impetus for reform at the state and national levels has been even stronger and the school principals’ leadership in implementing reform has been even more critical for success.

The last two decades have been fraught with national concerns about the quality of the United States public school system. According to Wilson and Corcoran (1988), concerns include the decline of test scores, quality of teaching staff, and standards of academic performance. Many of these concerns have been documented in reports and studies which provide evidence of the need for school reform. As mentioned previously, A Nation at Risk (National Commission on Excellence in Education, 1983), continues to
be used as a benchmark of school system concerns and is credited with stimulating much of the school reform efforts to date (Wolk et al., 1993). However, Mestinsek (2000) reported that the reform efforts in the U.S. have not yielded the desired improvements in public schools and that researchers have reported the failure of several reform efforts in education over the past ten years. Wolk et al. (1993) made similar observations stating that since the publication of *A Nation at Risk*, these reform efforts have fallen woefully short of what is needed:

But all of these efforts, however well intentioned, have scarcely touched the classroom. As a new century nears, our schools seem firmly anchored in the old.

And so, as we mark the 10th anniversary of that fiery call to arms [*A Nation at Risk*], the challenge we face and the urgency of our task is even greater.

While the education system as a whole has been a source of much criticism, there has also been a great deal of emphasis on public high schools. The following citations were made in *A Nation at Risk*, and demonstrated the need for improved attention to our secondary schools: (a) about 13% of all 17-year-olds in the US can be considered functionally illiterate, (b) average achievement of High School students on most standardized test is now lower than 26 years ago, (b) the College Board's Scholastic Aptitude Tests (SAT) demonstrate a virtually unbroken decline from 1963 to 1980; average Verbal scores fell over 50 points and average Mathematics scores dropped nearly 40 points, and (c) many 17-year-olds do not possess the "higher order" intellectual skills we should expect of them. Nearly 40% cannot draw inferences from written material; only one fifth can write a persuasive essay; and only one third can solve a mathematics problem requiring several steps.
Unfortunately, while these academic issues continue to be of concern for our nation’s public high schools, there are now new challenges to be faced, such as the prevalence of school violence. A national survey regarding high school violence reported the following findings: (a) homicide and suicide are responsible for approximately one fourth of deaths among persons aged 10-24 years in the United States, (b) in 2003, nearly one in ten high school students reported being threatened or injured with a weapon on school property during the preceding twelve months, and (c) not going to school because of safety concerns increased from 4.4% in 1993 to 5.4% in 2003 (Center for Disease Control, 2003).

Since the release of *A Nation at Risk*, a major focus of reform over the past two decades has been on the changing role of the principal because the principal is viewed as the key agent for change within the school (Dow & Oakley, 1992; Liontos, 1992; Mestinsek, 2000; Sergiovanni, 1987). Sergiovanni’s (1987) work indicates that the key to quality schooling is the “amount and kind of leadership that the school provides…” (p.29). Dow and Oakley (1992) found that school effectiveness literature indicated that principal leadership was “an essential ingredient in creating and maintaining an effective school” (p.33). Today’s leadership thrust is now moving in the direction of distributive or shared leadership, where the responsibilities of leadership are divided among two or more individuals in an educational setting. Implementing this type of leadership entails distributing the leadership power between two or more administrators, where numerous aspects of the educational system are attended to more fully and improvement is significant (e-read.org). This type of leadership paradigm
forms what will be referred to in this study as a “leadership culture,” where all those in positions of leadership define the tone of leadership for the educational organization.

A school’s effectiveness in the promotion of student learning has been found to be the product of a building-wide, unified effort that depends upon the exercise of leadership (Robinson, 1985). When any organization is facing growth, competition, change, or the struggle for existence, its leadership is expected to provide guidance and to deliver positive results (Bass & Avolio, 1990). Leadership is important, and the kind and quality of leadership we have will help determine, for better or worse, the kinds of schools we have ( Sergiovanni, 1992).

However, one must not overlook the other mitigating factors that can have an affect on student achievement. For example, such student level variables as socio-economic status, mobility, and race can be strong predictors of achievement scores (Herron, 1995; Hinson, 2002). Additionally, school level variables such as faculty attendance, student attendance, school size and classroom size have been found to have a relationship with student achievement (Lamdin, 1996; Littman, 2000). While these have been shown to be solid predictors of student outcomes on achievement tests, leadership is also associated with increases in student achievement.

As the conceptual model of student achievement in Figure 1 illustrates, there are many variables which have an impact on student achievement. School level variables such as district factor grouping (which account for socio-economic status), instructional time, and class size have all been shown to have an affect on student achievement.

Likewise, student variables which include mobility and attendance rate are also important factors which can positively or negatively impact student achievement. The purpose of
Figure 1. Conceptual Model of Student Achievement.
this study is to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. Additionally, this study will seek to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate.

In *Breaking Ranks 2* (National Association of Secondary School Principals [NASSP], 2004), the implication is made that before secondary school leaders can promote effective positive change, they must first critique their own leadership skills, and make adjustments in necessary areas. NASSP, in accordance with the laterstate School Leaders Licensure Consortium (ISLLC) standards, has developed a tool that will aid secondary school principals and other leaders in assessing their leadership skills. NASSP recommends that secondary school principals complete this self-assessment, and have teachers within their buildings complete the observer assessment as a means of measuring their strengths and weaknesses, thereby honing their leadership skills. This tool, which can be utilized as a self-assessment or observer assessment, rates the leader on the following 10 areas: setting instructional design, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses (NASSP, 2004). While NASSP outlines these 10 areas for secondary school principals to self-examine their leadership qualities, they offer no theoretical or empirical background as a basis for their questionnaire. With no solid empirical data to support those domains of leadership, can one attempt to utilize the domains as a useful means of honing their
leadership skills? Due to the lack of empirical evidence given to validate the assumption that these leadership domains are related to student achievement, this study will attempt to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement when we control for other factors.

Statement of the Problem

There have been numerous research studies, but little agreement on the relationship that leadership style has on student achievement. Additionally, current scholarly work has reframed our understanding of leadership within secondary schools. Successful leadership is now viewed as one that is distributed among many actors (e.g. principal, vice-principals, department chairs); hence, one can discuss a leadership culture that is more distributive in nature.

The recently published leadership assessment found in Breaking Ranks 2 has not yet been tested to determine the relationship between its leadership domains and student achievement. Therefore, it is the purpose of this study to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement when we control for other factors. Additionally, this study will seek to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate.
Significance of Study

The current state of education is one of the primary thrusts behind the need for this study. Today's politically changing environment provides new pressures encountered by school principals. The pressure to produce high levels of student performance is greater than ever due to federal regulations which have been imposed on the education system. These accountability demands require attention to issues of leadership and practice (Adams & Kirst, 1999).

The findings of this study can be helpful for both secondary school leaders and school-wide administrators in determining what leadership characteristics are most effective for practical application. Knowledge of which styles of leadership have been successful in a given situation would allow educational leaders to modify their existing style in order to improve student achievement (Bulach, Lunnburg & McCallon, 1995). Furthermore, if the leadership domains delineated in NASSP's assessment tool do have a positive relationship with student achievement, secondary school leaders would be able to utilize the tool to determine their strengths and weaknesses, and hone their leadership skills to improve student achievement.

The results of this proposed study could also have widespread effects on secondary school leadership training. Findings from the study could pose implications for the training of administrators at the university level by encouraging professors to integrate more aspects of NASSP's leadership characteristics into higher education. Those individual principals seeking self-improvement and self-fulfillment may also seek training in these areas. School systems can provide professional development for cultivating more of NASSP's leadership characteristics in their administrators. These
findings could also revise principal selection criteria to include these characteristics in their search by utilizing NASSP’s leadership assessment tool.

Much of today’s literature focuses on individual leadership, and therefore the research that is conducted has largely centered on the leadership behaviors of individuals (e.g. superintendents, principals, etc.). This study proposes to take a collective view of leadership, and will focus on the relationship between a secondary school’s leadership culture and the achievement of its students.

Research Question

The purpose of this study is to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. A correlation matrix will be utilized to determine the relationship between student achievement and leadership cultures that establish the following behaviors: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others and understanding of one’s own strengths and weaknesses. Additionally, this study will seek to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate. Model building analyses will be utilized to test the following null hypothesis: when adding the leadership domains identified by NASSP to the model, the R² change will not be significant (R² = 0).

Limitations

The following are the limitations relative to this research:
1. This study targeted public high schools in the state of New Jersey. Therefore, results should be cautiously generalized to high schools in other geographic regions with similar demographic characteristics.

2. This study may be limited by teachers who responded incorrectly to survey items or discussed the survey items with peers or administrators prior to completion of the rating scale.

3. This study may be limited by the return rate of the surveys. Principals might have chosen not to distribute the rating scales because of time constraints, concerns about being evaluated by subordinates, or apprehension regarding the identification of perceived weaknesses in their leadership behaviors. Additionally, teachers might have decided not to participate based on similar reasons, such as time constraints, job demands, fear of their principal reading their responses to the survey, and lack of interest in the research of leadership. Finally, teachers may have responded to the survey in an untruthful manner.

4. Within the confines of this study, it is not possible to determine whether the leadership culture had an affect on the school which increased student achievement.

5. One must also take into account how perception affected the NASSP leadership assessment data. This leadership assessment provided the basis for gathering data and included observer forms, thus the data gathered from this instrument was restricted by the precision of the perceptions of the participants (the teachers) and may have been impacted by biases and prejudices in their perceptions.

6. The reliability of NASSP's leadership assessment must also be considered. As it is a relatively new instrument, there is no data to speak to its reliability.
Operational Definitions

*Development of Others:* Teaching, coaching, and helping others. Providing specific feedback based on observation and data (NASSP, 2004).

*Effective Schools:* For the purpose of this study, effective schools are those whose mean Language Arts and Math High School Proficiency Assessment (HSPA) scores are above that of the New Jersey State averages.

*Internet Connectivity:* The percentage of room locations in school that are wired for the internet and where students’ use of the internet is monitored.

*Judgment:* Reaching logical conclusions and making high quality decisions based on available information. Assigning appropriate priority to significant issues. Exercising appropriate caution in making decisions and in taking actions. Seeking out relevant data, facts, and impressions. Analyzing and interpreting complex information (NASSP, 2004).

*Leadership:* Leadership is a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2001).

*Oral Communication:* Clearly communicating when speaking to individuals, small groups, and large groups. Making oral presentations that are clear and easy to understand (NASSP, 2004).

*Organizational Ability:* Planning and scheduling one’s own work and the work of others so that resources are used appropriately. Scheduling flow of activities; establishing procedures to monitor projects. Practicing time and task management; knowing what to delegate and to whom (NASSP, 2004).

*Principal:* The principal is the leader and manager of the educational systems within a school. According to Fullan (1993), the principal leads the development and
implementation of a school-wide approach that addresses change designed to affect positive growth within the school. The principal is responsible and accountable to increase the basic capacity of the school to manage change effectively.

Results Orientation: Assuming responsibility. Recognizing when a decision is required. Taking prompt action as issues emerge. Resolving short-term issues while balancing them against long-term objectives (NASSP, 2004).

Sensitivity: Perceiving the needs and concerns of others; dealing tactfully with others in emotionally stressful situations or in conflict. Knowing what information to communicate and to whom. Appropriately relating to people of varying ethnic, cultural, and religious backgrounds (NASSP, 2004).

Setting Instructional Direction: Implementing strategies for improving teaching and learning including putting programs and improvement efforts into action. Developing a vision and establishing clear goals; providing direction in achieving stated goals; encouraging others to contribute to goal achievement; securing commitment to a course of action from individuals and groups (NASSP, 2004).

Student Achievement: In this study, student achievement will be measured by results on the High School Proficiency Assessment, in the areas of Language Arts and Mathematics.

Student Mobility Rate: This is the percentage of students who entered and left the high school during the school year. This calculation is derived by the sum of students entering and leaving after the October enrollment count divided by the total enrollment.
Teamwork: Seeking and encouraging involvement of team members. Modeling and encouraging the behaviors that move the group to task completion. Supporting group accomplishment (NASSP, 2004).


Written Communication: Expressing ideas clearly in writing; demonstrating technical proficiency. Writing appropriately for different audiences (NASSP, 2004).

Summary

The changing trends in education and public focus on school leadership are among the primary thrusts behind the need for this study. The pressure to produce high levels of student performance requires attention to issues of leadership and practice (Adams & Kirst, 1999). The purpose of the study at hand is to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. Additionally, this study will seek to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate.

The following chapter will contain an in-depth discussion of the literature, with a focus on the following topics: leadership, effective schools, instructional leadership, and student achievement.
Chapter II

REVIEW OF REALTED LITERATURE AND RESEARCH

The purpose of this study is to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. Additionally, this study will seek to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate. This chapter presents relevant literature on four topics, leadership, effective schools, instructional leadership, and student achievement. While background information is provided in each of these areas, this chapter also seeks to explore studies regarding leadership and student achievement. Additionally, while this study will be focusing on the concept of leadership as a culture, much of the current literature focuses on the leadership of individuals. Therefore, the following review of the literature will focus on studies that are based on principal leadership.

Leadership

According to Stogdill (1974), the word “leader” began appearing in the English language around 1300, and about the year 1800, the word “leadership” entered the English language. (Mueller, 1988, p.326). After all this time, one would think that a precise understanding and definition of leadership would have emerged. However, Burns (1978) reported 138 definitions. The elusive quality of leadership has been reported by
many researchers, such as Owens (1991), Stogdill (1974), and Yukl (1989). As Campbell (1984) observed:

Leadership has an elusive, mysterious quality about it. It is easy to recognize, hard to describe, difficult to practice, and almost impossible to create in others on demand. Perhaps no other topic has attracted as much attention from observers, participants, and philosophers—with so little agreement as to the basic facts. It cannot even be adequately defined (p. xiii)

Rosenbach and Taylor (1984) also commented on the elusiveness of a common definition of leadership as follows:

Leadership, like happiness, success, or failure, means different things to different people. There are almost as many definitions of leadership as there are people who have attempted to describe the concept. We may not be able to adequately define it, we may fail at measuring it, but we seem to know good leadership when we see it. Leadership, one of the most observed and studied concepts in the modern world, is also one of the least understood of all social processes (p. 1)

Jenster (1981) believed that no concise definition of leadership exists. She asserted that not only was there a lack of concurrence on the constituent elements of leadership, but there was also a lack of agreement on terminology, descriptions of leadership traits, roles, functions, styles, and situational variables.

A number of researchers describe leadership as the process of influencing individuals or groups to achieve goals (Baumann, 1988; Luenburg, 1995). Hersey and Blanchard (1977), for example, found that past attempts to define leadership boiled down
to the concept of leadership as a process of influencing the activities of an individual or a group in efforts toward achievement in a given situation. Blanchard, Zigarni, and Zigarni (1987) similarly expressed leadership in simple terms, for them, "Any time you try to influence the behavior of another human being, you are engaging in an act of leadership" (p.13).

Burns (1978) believed that a person could use either power or leadership to influence others to accomplish goals. In his seminal work on leadership, Burns made a distinction between power and leadership. He described both in terms of the motives of the power holder and the motivations of the respondents:

*Power over other persons...is exercised when potential power wielders, motivated to achieve certain goals of their own, marshal in their power base resources (economic, military, institutional, or skill) that enable them to influence the behavior of respondents by activating motives of respondents relevant to those resources and to those goals. This is done in order to realize the purposes of the power wielders, whether or not these are also the goals of the respondents...*

*Leadership over human beings is exercised when persons with certain motives and purposes mobilize, in competition or conflict with others, institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers. This is done in order to realize goals mutually held by both leaders and followers...* (p.18)

Hollander and Offermann (1990) viewed leadership as a "process involving collaboration between a leader and responsive followers" (p.83). They perceived
leadership and followership as an “interlocking system of relationships” (p.83). Hollander and Offermann believed that it was misleading to assume that followers were basically passive in this relationship. Instead, they believed that both leaders and followers had active role responsibilities. This viewpoint is different from those of past researchers on leadership in that traditional views of leadership were seen as something a leader possesses alone, without much acknowledgement of any follower role involvement.

Rost (1991) also saw leadership as a shared act. He posited that leadership was an influence relationship among leaders and followers who intended real changes that reflected their mutual purpose (p.102). Rost stressed that there were four key elements to this definition that must be present for relationships between and among people to be called leadership. First, the relationship must be based on influence, not coercion or other forms of power. Second, the relationship is based on two parties, leaders and followers. That is, the relationship can not be one-sided. Third, leaders and followers must be intent upon making real change in the form of purposeful, shared goals. Finally, leaders and followers must develop mutual purposes.

For Burns (1978) as well, leadership is a mutually developed relationship between leader and follower. The motivation for any action is the attainment of commonly held goals that represent mutual values and motivation. Burns summarized his views on leadership in these words:

Some define leadership as leaders making followers do what followers would not otherwise do, or as leaders making followers do what the leaders want them to do;

I define 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)

Sergiovanni’s (1994) definition of leadership has two primary elements: sense making and helping make others into leaders. The term "sense making" connotes a leader’s responsibility to have a vision and clearly articulate it to employees. Additionally, the term embodies the notion of a continuous dialogue with people about the goals necessary to achieve the vision; discussions of progress toward these goals; and reorientation of goals as unforeseen circumstances arise. The second part of Sergiovanni’s leadership construct is a strong emphasis on making others into leaders by shared responsibility for problem solving and decision making.

Bass (1990) identified five commonalities among the many leadership taxonomies. They included (a) clarifying the mission and goals of the individual or organization, (b) energizing and directing others in pursuit of the goals, (c) providing tangible support for the effort, (d) helping to resolve conflicting views, and (e) evaluating individual contributions.

Over the past century, there has been an evolution of leadership theory which has contributed to the body of knowledge surrounding this construct. The following section provides a brief description of relevant historical leadership theories.
Leadership Theories

Trait theory. According to Hollander and Offermann (1990), trait theory had its origins in a work by Galton (1869, as cited in Hollander & Offermann), who coined the term the "Great Man Theory." This theory proposed that leaders were inherently endowed with a universal set of traits that made them leaders (p.84). This theory did not take into account any consideration of the situation faced by the leader, the followers to be led, or any concern about the quality of the leader’s performance. Instead, it relied on physical and intellectual characteristics such as height, weight, appearance, health, lineage, and intellect (Cherrington, 1989). Trait theories persisted into the early half of the 20th century as an explanation for leadership. However, researchers came to recognize that leadership encompassed much more than Traitism as a result of Stogdill’s (1948) seminal work on trait theory. He conducted a review of 124 studies of leaders and compiled a list of personality traits most frequently associated with leadership. Stogdill’s results were inconclusive regarding consistency of traits, thus he concluded that traits alone did not identify leadership. This led researchers to examine other characteristics of leadership such as leader-subordinate relationships and leadership situations.

Stogdill and Shartle’s work in the mid 1950’s (as cited in Bass, 1981) proposed to “study leadership in terms of status, interactions, perceptions, and behavior of individuals in relation to other members of the organized group. Thus leadership is regarded as a relationship between persons rather than as a characteristic of the isolated individual” (p.21). Bass (1981) concurred with Stogdill and Shartle’s assessment, but went further to include the situation as an important influence on the type of leadership.
employed. "Any theory of leadership must take account of the interaction between situation and individual" (p.29).

Situational leadership. Situational leadership, or contingency theory, was widely developed from the 1960's to the 1980's. Although there were a number of models put forward during this period, Chertington (1989) identified three main contributions to the development of the theory during this period: Fiedler's (1967) Least Preferred Coworker Model; House's (1970) Path-Goal Model; and Vroom and Yetton's (1973) Leadership and Decision-Making Model. Each of these models focused on the dependency of leadership effectiveness as a joint function of "leadership qualities and situational demands as contingencies which interact to make leader qualities variously appropriate to the task at hand" (Hollander & Offerman, 1990 p.86).

Fiedler (1967) constructed a characterization of leadership based on a measure of esteem for the least preferred coworker (LPC). Leaders were asked to think of a person with whom they would least prefer to work. Using the 16 scales of the LPC, a leader who provided a favorable description of the least preferred coworker would have achieved a high LPC score; this leader would be considered a relationship-oriented person who would be prone to be more human relations oriented, would be more considerate, and would have a more participative leadership style. Whereas, an unfavorable description of the least preferred coworker on the LPC scale would signify a task-oriented leader who would tend to have a more directive, more goal-oriented leadership style focused on efficiency and structure at the expense of interpersonal relationships.
In addition to the relationship versus task aspect, Fiedler’s (1967) model considered task structure (clear task goals or ambiguous tasks) and position power (who has more power – leader or group). The combination of these three factors established Fiedler's Classification of Situational Favorableness, and eight-level scale of favorableness-to-unfavorableness describing the leadership environment. Since Fiedler postulated that it would be difficult, if not impossible, to change one’s leadership style (LPC), it was critical for the situation to fit the leadership style in order to be effective. He proposed a number of actions a leader could take to modify the task structure or position power in order to more favorably align with the leader's style.

According to Heriot (2000), Fiedler later concluded that leadership style alone did not determine the effectiveness of the leader. Fiedler acknowledged that leadership effectiveness was dependent on leadership style and the situation in which the style was practiced. Although Fiedler's theory is infrequently used today, Fiedler’s work helped establish two generally accepted leader orientations used in current research: relationship-oriented leaders and task-oriented leaders (Cherrington, 1989).

The path-goal situational model (House & Mitchell, 1974) is based on the notion that leadership consists of two basic functions: path clarification and a reward system for goal achievement. According to Steers and Black (1994), path-goal theory is strongly based on the motivation-expectancy theory work of Tolman (1938) and Lewin (1951). Cherrington (1989) indicated that the path-goal model defines how leaders “facilitate task performance by showing subordinates how their performance can be instrumental in achieving desired rewards” (p.670). Using the analogy of a road map, once the leader clearly defines the destination (goal), the leader assists employees to seek the most direct
route (path) to achieve organizational goals and rewards. The path-goal model describes four leadership styles to be used under management situations: directive, supportive, achievement-oriented, and participative. Employee satisfaction is contingent on leader behaviors to clarify goals and remove obstacles in the path toward goal achievement, and on the leader's ability to supply meaningful rewards to employees. The task is motivating to the extent that the employee values the expected reward. This relationship between task and goal is the foundation of transactional leadership (Halter & Bass, 1988).

Vroom and Yetton (1973) tended to view leadership from the singular perspective of decision-making, and contended that making decisions was one of the most important aspects of leadership. Their Leadership and Decision-Making model describes three different leadership styles (autocratic, consultative, and participative) to be used under different decision scenarios. This situational model assumes that any leader is capable of effectively manifesting the three different leader styles as different situations call for them. The researchers developed a series of diagnostic questions and a decision tree process that could be used by leaders to determine the degree of employee involvement that should be permitted in decision making and the leadership style that would be most effective for the particular situation. The decision to involve employees is a function of the needed quality of the decision and the degree to which employees will accept the decision. High employee interest may require greater employee involvement in the decision.

In summary, each of these situational models identified different leadership styles that would likely improve effectiveness under different situations. However, each model focused on different styles and different circumstances to be considered when choosing
the best style. Fredler's (1967) model defined two leadership styles, task-oriented or relationship-oriented, and contended that a leader is very unlikely to alter his or her style to fit the situation. Instead, the leader alters the situation to fit the style. House's (1970) path-goal model established four leadership styles: directive, supportive, achievement-oriented, and participative, any one of which may be appropriate for a leader to use depending on the situation. Vroom and Yetton's (1973) normative decision-making model identified three styles: autocratic, consultative, and participative. They, too, believed that a leader could effectively shift styles as called for by the situation (Cherrington, 1989).

The situational factors involved in each model differ significantly. The Least Preferred Coworker model considered leadership effectiveness based on group performance; the Path-Goal model viewed leader effectiveness as a function of performance and job satisfaction of individual subordinates; and the Leadership and Decision-Making model looked at leadership only from the perspective of decisions and the desirability to include workers in the decision process (Cherrington, 1989). "In sum, the situational approaches seem to work either weakly, for clear reasons, or modestly well, but for very unclear reasons. Again, there is a partial answer here that leaves much to be resolved" (Sashkin & Burke, 1990, p.8).

By the mid-1980's, it was clear that two factors characterize modern leadership. The first factor dealt with initiating and organizing work; this approach concentrated on task accomplishment. The second factor dealt with showing consideration for employees, focusing on their needs for work satisfaction (Cherrington, 1989; Steers & Black, 1994). However, researchers realize that previous models fell short of describing
and explaining all the leadership styles that they were observing, from charismatic and inspirational leaders to laissez-faire, or avoidant leadership (Bass & Avolio, 2000). A full range model of leadership (Avolio & Bass, 1988) emerged that “broadens the range of leadership styles typically investigated in the field. It was labeled ‘full range’ to challenge the field to broaden its thinking about what constitutes leadership” (Bass & Avolio, 2000, p.2).

**Transactional and transformational leadership.** Sashkin and Burke (1990) stated that during the 1980’s, research underwent a paradigm shift with respect to leadership theory. This shift involved the development of a transformational leadership concept, a “vision based on the transformational, culture-shaping organizational leadership role of top-level leaders” (p.315). They saw a clear distinction between this new transformational leadership role and all previous theories on leadership over the past 50 years, theories that exclusively focused on “the important but different role of managers” (p.315).

According to King (1969), Downton (1973) was the first researcher to make a distinction between transactional and transformational leadership. However, the term “transformational leadership” did not become commonly acknowledged until Burns (1978) published his seminal work on world political leaders. His views of leadership were based on a thorough examination of historical political figures such as Truman, Roosevelt and Hitler combined with an assessment of cultural, social and political forces that shaped these leaders’ personalities and behaviors. Burns explained transforming leadership as when

…one or more persons engage with others in such a way that elders and followers raise one another to higher levels of motivation and morality…Transforming
leadership ultimately becomes moral in that it raises the level of human conduct and ethical aspiration of both leader and led, and thus it has a transforming effect of both.(p.20)

Burns (1978) contrasted transformational leadership with transactional leadership, a preexistent term in the literature. Transactional leadership has its roots in social exchange theory (Hellander & Offeader, 1990). It is based on a series of exchanges between a leader and followers. The leader provides certain benefits, such as guidance, definition and a paycheck, by directing followers towards an organization’s goals. In return, followers provide a leader with “status, the privileges of authority, influence, and prestige” (Bass, 1981, p.254). This transactional exchange concept creates limits on how much effort subordinates will contribute, how satisfied they will be, and how effective they will be towards organizational goal achievement. To go beyond this level of subordinates’ effort, satisfaction and effectiveness, transformational leadership is required (Yammarine & Bass, 1990).

Burns’ (1978) notion of transformational leadership employs Maslow’s (1943, 1954) theory of human motivation as a central concept. Maslow postulated that people have a hierarchy of needs; in ascending order, they are physiological needs, safety needs, love needs, esteem needs, and the need for self-actualization. Maslow proposed that the best management style was to attempt to deal with followers at the highest possible levels of psychological health. It is this focus on Maslow’s higher level needs that Burns believes is the crucial variable in transformational leadership. Instead of the pursuit of extrinsic rewards such as a mere paycheck, a transformational leader helps followers find
and develop intrinsic motivation for an organization's goals. By doing so, the leader provides a means to fulfill esteem and self-actualization needs of followers.

As Herzberg (1966) noted in his work on motivational dynamics, Maslow's lower level needs, those of security and the ability to provide for one's family, rarely continue to be motivating forces once they have been satisfied by an organization. The intrinsic, higher level needs, however, are rarely attained and therefore are a greater source of continued motivation for subordinates. A transformational leader taps into these unfulfilled higher level needs of subordinates, such as a need for belonging and the need for self-actualization, and helps followers realize their potential through the attainment of shared goals. From Burns' perspective, transformational leadership transpires when followers are moved to (a) an increased awareness about what is important; (b) a higher level of Maslow's needs hierarchy; and (c) a transcendence of their own self-interests for the good of the group, organization, or society.

Leadership culture (a.k.a. Distributed leadership). Much of the early research and writing on leadership, especially the area of instructional leadership, focused on the activities of one individual, namely, the school principal. However, the focus of this research has begun to change, and researchers are not only examining the leadership activities of the school principal, they are also examining the leadership behaviors of many people within the school who are considered agents of change. Out of this new research has come a vision of leadership where many school members are seen as having powerful instructional leadership. This paradigm is known as distributed leadership (Canburn, 2005).
This new leadership paradigm has been referred to utilizing a number of different names: distributed, shared, participatory, collective, collaborative, cooperative, democratic, fluid, inclusive, roving, rational, and post-heroic. For the purpose of this study, distributed leadership will be referred to as a "leadership culture," and will consist of all individuals in a position of authority.

This new "people-focused" leadership has its roots in democratic traditions. It is founded on the belief that in the complex future "answers are to be found in community," in group-centered organizations where "everyone can learn continually" (Senge, 1990, p.43). Followers are being transformed into partners, co-leaders, life-long learners, and collaborators. The command and control leaders at the top of the hierarchical chain are being challenged to change. They are expected to become leaders who are facilitators (Senge, 1999). They are being challenged to become leaders who "walk their talk" and model the way, inspiring others, delegating and serving. Effective leaders are recognizing that every person has leadership qualities that can and must be recognized and used (Allen, et. al., 1998).

This new leadership paradigm is restructuring our conceptual framework of what the practice of leadership is, and our understanding of what effective leaders do. It is transforming the role of "followers" and revolutionizing the design of organizations for the twenty-first century (Allen et al., 1998). A basic premise of distributed/collaborative leadership is the recognition that no one person has the solutions to the multifaceted problems that a group or organization must address. As Jentz and Murphy noted (2005), "organizational cultures that cling to the ideal of an all-knowing, omnipotent executive will pay a high cost in time, resources, and progress" (p.366). Leadership in this context
requires a set of principles that empower all members to act, and employ a process that allows the collective wisdom to surface. These principles must be based on an understanding that people have the knowledge and creativity to respond to the problems they face. They encourage the development of organizations that support collective action based on shared vision, ownership, and mutual values. The function of leadership then becomes the creation of systems, structures, and environments where this interaction and learning can occur. As Wheatley and Kellner-Rogers (1996) have observed, “leadership is making sure you have the right patterns in place” (Wheatley & Kellner-Rogers, 1996, p.76). Senge (1990) refers to this as fashioning an environment “where everyone takes on the responsibility for learning” (Senge, 1990, p.71).

Theorists have identified several manners in which distributed leadership could be executed. For example, leaders could work together to execute a particular leadership function where one particular leader’s practice is the basis for another leader’s practice, and in this manner, there is a reciprocal interdependence. Two or more leaders could also work separately but interdependently in pursuit of a shared goal where interdependent activities produce a common practice (Spillane, 2003). There is no designated prescription for employing the distributive leadership model. A school building engaging in distributed leadership can simply consist of a school principal who delegates leadership responsibilities to teachers and other faculty members, or it can be as complex as a school district that has undertaken a completely new type of shared governance (Ladewig, 2003).

This new concept of leadership is one of the current thrusts in education. As schools are being held to even higher standards of achievement, there is an impetus to
being about complete reform, especially in the area of secondary schools. Secondary schools are looking to distribute the responsibilities of leadership across many sources, rather than expecting one individual to bear the pressure of accountability on their own.

Principal Leadership

The evolution of principal leadership in U.S. public schools began in the late 1960's. Prior to that time, the role of principals had remained unchanged since the inception of public education in the United States (Hillinger, 1992). The impetus for educational leadership change was the publication of the report on Equality of Educational Opportunity by Coleman, Campbell, Hobson, McPartland, Mood, Weinfield, and York (1966), hereafter referred to as the Coleman report. It was a 2 year investigation commissioned by Congress under the auspices of the U.S. Office of Education as part of implementation of the Civil Rights Act of 1964. Coleman et al. were chartered to determine if public schools were providing equal educational opportunities to all American children irrespective of race, color, religion, or national origin. The premise at that time was that “educational ‘inputs’ determined educational ‘outputs’, which is to say that ‘quality of the schools’ measured in the conventional terms of the Equality of Educational Opportunity Survey [Coleman report] rigorously determined the levels of academic achievement in them” (Mosteller & Moynihan, 1972, p.11). In the Coleman report, inputs were a large set of items related to the physical plant, expenditures, availability of science labs and library facilities, training of teachers, teacher qualifications, curriculums, extracurricular activities, student-to-teacher ratios, and related matters.
Coleman et al. (1966) examined nearly 4,000 schools, both elementary and secondary, containing approximately 570,000 students and 60,000 teachers representing a cross-section of the nation. Four primary factors were assessed: (a) family background of the students; (b) characteristics of the teachers; (c) school resource inputs; and (d) socio-economic characteristics of the student body for each school. This very complex study yielded a number of significant findings that helped shape national education policies, especially with regard to desegregation efforts and civil rights issues. However, the finding that is most remembered from the Coleman report indicated that school inputs contributed less than 0.3 percent of the between-school variance in academic achievement when family background and socio-economic variables were controlled. In other words, family background and the aspirations of peers have a large effect on student achievement and teachers and physical surroundings have small effects. Coleman et al. stated:

Taking all these results together, one implication stands out above all: that schools bring little influence to bear on a child’s achievement that is independent of his background and general social context... For equality of educational opportunity through the schools must imply a strong effect of schools that is independent of the child’s immediate social environment, and that strong independent effect is not present in American schools. (p.225)

These results were verified in independent studies by Bloom (1964) and Jencks (1972). To the layperson, these results were interpreted that schools make little difference in pupil achievement (Clark, Lotto, & Astuto, 1984). These widely publicized results shook many Americans’ beliefs in the value and quality of public school
education (Politz, 1991; Wooten, 1997). In response to these studies, a number of researchers began to explore measures of school effectiveness, a field of educational research that continues today.

Effective Schools Research

Some of the earliest work on effective schools was conducted by Weber (1971) who conducted a study that focused on urban elementary school with high percentages of students from low socio-economic status (SES) families who scored at or above the national average in reading. He hypothesized that inner-city children could be taught to read at or above the national average and attempted to identify common characteristics of successful inner-city schools. In order to identify successful inner-city elementary schools to be included in his study, Weber spent 1 year reviewing reading test scores and consulting school officials, publishers, and reading specialists for nominations. After the year-long process, Weber selected four inner-city elementary schools: two schools from New York, one school from Los Angeles, and one school from Kansas City. All four schools contained students who achieved at or above the national average in reading. This process differed from the sample used by Coleman et al. (1966) because it focused on schools serving low-SES populations with average or above average reading scores, while Coleman et al. studied both high- and low-achieving schools.

During his study, Weber (1971) conducted interviews with staff, classroom observations, and evaluations of student progress. He found the following eight common factors not usually present in unsuccessful inner-city schools: (a) strong leadership; (b) high expectations; (c) good atmosphere; (d) strong emphasis on reading; (e) use of
phonics; (f) additional reading personnel; (g) individualized instruction; and (h) careful evaluation of student progress. Weber concluded that school-related factors might have a major impact on students' reading abilities. Although Weber's findings did not refute the conclusions of Coleman et al. (1966), his findings provided educators with an alternative to the belief that schools could not make a difference (Hoxfeld, Farrar, & Myles, 1983).

During the 1970's and 1980's, educational researchers investigated factors present in effective schools. As researchers improved their methodologies, they focused more specifically on school-related variables directly impacting student achievement (Levine & Lezotte, 1995).

In the late 1970's, the Effective Schools Movement included the belief that schools can educate all children if they have the following essential characteristics or correlates: (a) strong administrative leadership; (b) climate of high expectations for all children; (c) orderly atmosphere; (d) focus on learning of basic skills; and (e) monitoring pupil progress via frequent testing (Edmonds, 1979).

A decade later, the Effective Schools research began to implement more sophisticated research designs (Creemers, 1996). Following a review of the "second wave" of effective schools research, Austin and Reynolds (1990) reported the following additions to the original correlates of effective schools: (a) site management; (b) staff stability; (c) widespread recognition of academic success; (d) parental involvement and support; (e) collaborative planning and collegial relationships; (f) sense of community; and (g) order and discipline.

In addition to the updated review by Austin and Reynolds (1990), Levine and Lezotte (1990, 1995) conducted two thorough reviews of updated Effective Schools.
research and published descriptions of the second generation correlates of effective schools. The second generation correlates included the following: (a) strong instructional leadership and empowerment of teachers; (b) an entire school support system; (c) an environment conducive to learning for all students; (d) a clear and focused mission toward a more appropriate balance between higher-level learning and basic skills; and (e) teacher and student use of technology to monitor student learning and assure student success (Lezote, 1991). These updated correlates are supported by research studies conducted in Britain (Reynolds & Teddlie, 2000).

The key reference in any description of an effective school was the "strong" leadership of the principal (Andrews & Soder, 1987). Edmonds (1979) deemed this "strong" leadership of the principal to be instructional leadership. This term was adopted because teachers in effective schools considered the principal the primary instructional leader and resource (Andrews & Soder, 1987; Brookover, 1979; Edmonds, 1979). In this role, the principal provided the teachers with the vision and leadership for the schools to reach their potential and goals (Brandt, 1987).

Heck and Marcoulides (1993) had similar findings which pointed out that all principals may endeavor to be instructional leaders, but that effective principals attributed different meaning and purpose to their tasks which conveyed a cultural message to the stakeholders in the school. Thus, the execution of bureaucratic tasks was used to create more effective school cultures (Sashkin, 1988). Part of creating an effective school culture involved the principal modeling effective instructional practices and providing resources that teachers may use to positively impact their classroom instruction.
Therefore, the shift of meaning and purpose transferred from manager to instructional leader.

**Instructional Leadership**

*Definition*

The effort to define instructional leadership is a multi-faceted task. While there does not seem to be any active disagreement over the definition, there is little definitive agreement. There is not any universally recognized definition of instructional leadership. Likewise, there is not a universally recognized set of guidelines for specific skills and actions of an instructional leader (Flath, 1989). Many experts in the field of instruction have drawn upon models and definitions for instructional leadership over the past 2 decades.

The past attempts by some authors to create a universal definition of an instructional leader may not even be appropriate. Duke (cited in Flath, 1989) found through research on instructional leadership that "there is no single leadership skill or set of skills presumed to be appropriate for all schools or all instructional situations" (p.20).

The structures produced by those who attempt to define instructional leadership vary greatly in content. A written account of all available definitions and models of instructional leadership would be lengthy. Four well-cited authors gave the following parameters for instructional leadership. Blase and Blase (1999) identified six key elements: study of teaching and learning, collaboration, coaching, action research, resources, and adult development. Hallinger and Murphy (1985) divided instructional leadership into three categories: defining the school mission, managing the instructional
program, and promoting school climate. There are three categories that are further divided into 21 more specific functions of the instructional leadership. An example of the specific functions is supervision of instruction. Glickman (1990), like Hafinger and Murphy, divided leadership into three categories but did so in even broader terms. Glickman selected knowledge base, tasks, and skills as the outline for instructional leadership. Laut, Smith and Piele (1997) separated leadership into the areas of the instructional program and the instructional staff.

A recent attempt at defining instructional leadership has come from the move to standards in the area of education administration. The Interstate School Leaders Licensure Consortium (ISLLC) has developed six standards for school leaders. The six standards are used for the Standards Based Professional Development for School Leaders. Essentially, these six standards were presented as the measuring device for school leaders. In the area of instructional leadership, ISLLC Standard 2 called for school administrators to "promote the success of all students by advocating, nurturing, and sustaining a(n) instructional program conducive to student learning and staff professional growth" (p. 34). This standard was then delineated into numerous areas of knowledge and dispositions that the school administrator should possess.

Comprehensively defining instructional leadership is a difficult task. The task is difficult because there are so many ways to accomplish it. Identifying the many ways to describe instructional leadership reveals that there is agreement and disagreement. Those writing about instructional leadership are doing so from different frameworks on human behavior. What Glickman (1990) labeled knowledge base, Blasé and Blasé (1999) called
study of teaching and learning. There is a possibility that the writers are utilizing different terminology for similar concepts.

*Historical Foundations*

Since the beginning of instruction in the United States, there has been leadership of that instruction. John Adams (as cited in McCullough, 2000) wrote in Section II of Chapter 5 of the Massachusetts Constitution,

> It shall be the duty of legislators ad magistrates in all future periods of this commonwealth to cherish the interests of literature and the sciences; to encourage private societies and public institutions, rewards and immunities, for the promotion of agriculture, arts, sciences, commerce, trades, manufacturers, and a natural history of the country. (p.223)

John Adams recognized very early in the history of education in this country that leadership would play an important role. This example set forward by Adams is still recognizable as a basis for instructional leadership.

Leadership in the schools went largely unrecorded until the formation of the Department of Superintendence in 1856 (Button, 1966). This was mainly because schools were small institutions with little or no administration. From the 1860's to the 1960's, preparation of school administrators evolved into formal training programs sponsored by universities. This evolution involved critical events such as the first book dealing with school administration. The book titled *Chapters on School Supervision* was written by William Payne in 1875. Even though the number of colleges offering administrative courses grew, training still remained informal until the scientific
management movement of the 1920’s (Hallinger & Murphy, 1998). The years immediately following World War II gave rise to education administration as a specific discipline of study. At this time a significant number of colleges and universities (125) were preparing school administrators for their work (Silver, 1982).

The term “instructional leadership” became part of the dialogue of the administrative field with a program sponsored by the National Association of Secondary School Principals (NASSP) in the 1960’s. The program entitled “The First 55” involved 55 individuals who were beginning their careers as school administrators. These “promising” individuals took part in year-long internships as an administrator in an assigned school. During the year they participated in activities that would improve the instructional program. The schools selected for the interns all had indicated that they had a desire to improve the instructional program. When placed in a school, the interns were complemented by an assigned faculty member of a nearby participating university. Examples of the activities completed by the interns included “innovative” programs such as individualized instruction, team-teaching, and experimental pupil grouping and placement (Tump & Karasik, 1967).

Although the program was evaluated by the organizer and sponsor, it seems to have registered some significant success in the area of instructional leadership. The report at the conclusion of 2 years of this program stated that “almost without exception, they (interns) regard improving the instructional program as their most important task and improving innovations as the most promising means to that end” (p.2). As the very least, this program brought the discussion within the structure of NASSP to instructional leadership.
Instructional leadership was also hitting the textbooks in the late 1960's. Jenson (1967) divided the principal's responsibility into the following areas: activity-administrative management, instructional leadership, school-community relations, child guidance, plant supervision, and staff personnel. Of these areas, Jenson was clear that instructional leadership was to have the top priority.

The 1970's brought an increase in the use of the title instructional leader for building principals. Studies on instructional leadership during this decade began to construct early definitions and identified sources of leadership. Gorton (1971) conducted a study on the likelihood of teachers seeking the principal's assistance on an instructional problem. The study revealed that of four choices to select (principal, department head, colleague, or central office staff), the principal would be the least likely to be selected. Teachers perceived principals as having the lowest level of expertise of the four choices when it involved instruction. It should also be noted that Gorton suggested that principals redefine their role responsibilities so that instructional leadership plays a more significant role.

The increased discussion of instructional leadership continued with one of the first "concrete and practicable lists of instructional leadership activities" (Briere, 1972, p. 11). Briere identified a four-part role for principals interested in becoming instructional leaders. The four parts were identified as administrative, supportive, coordinating, and initiating. These four parts were divided further into activities that the principal should use to enhance instruction in the building. Examples of these activities included class scheduling, personnel assignments, keeping teacher paperwork to a minimum, and delegating responsibility. The strength of this article lies in its simplicity. The author
identified specific steps a principal should make to improve instruction in the building. However, the definition of role and its activities are not predicated upon any identified research. This is likely due to the fact that there simply was not any available researched data at this point in the history of instructional leadership.

McIntyre, at the University of Texas (1972), was also trying to define instructional leadership. He did so with a compiled list of 32 instructional leadership competencies. The competencies, through study of superintendents, principals, and teachers, were put into a rank-order. The competencies viewed as most “critical” were placed at the top. This provided principals with a useful checklist to consider on instructional issues. However, the competencies produced by the study were general and did not offer any specific guidelines for principals. The most critical competency read as follows: “The principal assists in the recruitment and selection of personnel for instructional responsibilities (McIntyre, 1972).

The literature of the early years of instructional leadership was not all supportive. Hoeh (1973) questioned the feasibility of having the primary focus of principal leadership on instruction.

In short, we have asked the principal, himself removed from the classroom for a sustained period of time, to provide instructional leadership for a group of highly trained instructional specialists who are inherently suspicious of his ability to perform this task, partially because of his lengthy detachment from the classroom.

(Hoeh, 1973, p.2)

Hoeh also proceeded to ask why the principal is held responsible for instruction when most districts have hired central office curriculum personnel. The author concluded the
piece by asserting that principals should focus on learning and not instruction. This piece stands in stark contrast to the writing in support of instructional leadership being produced in the 1970’s. Hoch further stretched his writing with the statement that instructional leadership is an “ outdated notion.”

Instructional leadership continued to gain interest with an administrative study conducted by Thompson (1974). Thompson developed a measurement tool (Administrative Professional Leadership Scale – APLS) for leadership qualities of school principals. The ALS was developed so that principals could receive anonymous feedback from teachers on their perceptions of the building leadership. Thompson administered the APLS to 1,478 teachers in his study. The study revealed three factors of effective leadership. First on the list was instructional leadership, followed by personal warmth and managerial effectiveness. The fact that teachers placed instructional leadership as the most important contributor to effective leadership is significant. This ranking revealed that the teachers polled desire first and foremost an instructional leader (Thompson, 1974).

The study and writing on instructional leadership built steadily through the 1970’s, 1980’s, 1990’s up until today. Zechman (1977), in his study, already described instructional leadership as a perennial issue of great importance. Zechman went on to provide information that supported principals as performing well as instructional leaders. Zechman, a practitioner, is symbolic of the practitioners who felt that they have to vindicate administrators from the researchers who placed the burden of instructional leadership upon them. The researchers, as noted earlier, called for increased instructional leadership as paramount to any other leadership in the building. This created a struggle
that is still being waged today, nearly 40 years after "The First 55" stressed instructional leadership in building administrators for the first time. The continuous research being produced over the past 40 decades has created an identity crisis for administrators. Their working plate is full and they are reminded time and again that there is not enough being done.

Current Literature

Significant studies have recently been completed in the area of instructional leadership. The conclusions of these studies demonstrate the need for instructional leadership by principals. The studies are important because they have strategically focused on the need for an explanation of instructional leadership. They authors then used the established need for leadership as a base from which to explain what instructional leadership should look like.

Blaé and Blasé (1999) concluded that instructional leaders have a large impact on the actions of teachers in classrooms. Instructional leaders have powerful cognitive, affective, and behavioral effects on teachers. This finding is important in that it provided the bridge between principal and teacher behavior. Without the bridge that demonstrates the effect of principal behavior on teacher behavior, instructional leadership would be a limited topic.

Voices calling for instructional leadership include the teachers themselves. Teachers expect principals to be the leader of instruction in the building (Newton, Fiene & Wagner, 1999). Principals should guide teachers in providing the best learning activities (Ediger, 1998). Consequently, teachers were "up-lifted" by principals who
manage the instructional program (Thoms, 1997). The idea that teachers are encouraged by an instructional leader may then affect students. The question may then be raised on whether or not effective instructional leadership raises student achievement.

In a review of the literature from 1980-1995, Hallinger and Heck (1998) concluded that there is a measurable influence of principals on student achievement. Although the influence is an indirect one, principal leadership can raise student achievement through vision, mission, and goals. It has also been asserted that instructional leadership style has a relationship with student achievement (Schmitt, 1990). Many studies have offered direct empirical evidence of the relationship between instructional leadership and student achievement (e.g. Hallinger, 1992; Hallinger & Heck, 1998).

Alternately, it has been asserted that the connective bridge between principal leadership and instruction may not necessarily continue to student achievement. Coach (1991) found that the level of instructional leadership in a principal had no measurable affect on achievement scores. Instructional leadership was measured by quantity of time spent on instructional issues. This is significant because quality of effort in instructional leadership was not considered. In essence, the study suggested that the more time a principal spent on instructional leadership, the better the leadership. This evident weakness in identification of instructional leadership resulted in leaving the findings of the study suspect. Hallinger and Heck (1998) addressed this and other apparent contradictions by attributing them to faulty conceptual and methodological tools.

There are cited shortcomings of principals in instructional leadership that further demonstrate the seeds in this area. An extensive, on-going study in Kentucky has
revealed that there is a shortage of principals who are able to provide instructional leadership. This shortage was noted as one of the leading contributors to poor student achievement (Notes, 2000). Principals in Indiana were tested and also found lacking in the area of instructional leadership. Principals in this study were evaluated using the ISLLC standards. Those that were labeled as failing generally did not satisfactorily meet Standard 2, which involved leadership in the instructional program (Coutts, 1997). It is evident that these were geographically selective studies done only in two states. However, there does not seem to be any study available to contradict the findings in these two studies. It may be assumed that the shortcomings of the principals in these two states are representative of a nation-wide difficulty. This though is supported by the Policy Forum on Educational Leadership (as cited in U.S. Department of Education, 1999) which estimates that “only about one-quarter of today’s principals (about 20,000 of 80,000) currently have the necessary skills to be effective instructional leaders” (p.33).

**Instructional Leadership Studies**

Blasé and Blasé have produced a number of writings based upon one study that they conducted in 1998. Slightly more than 800 teachers from the southwest, midwest, and northwest were administered an open-ended questionnaire. The questionnaire asked the teachers to identify and describe in details the characteristics of principals that “enhanced their classroom instruction and what impact these characteristics had on them” (Blasé and Blasé, 1999, p.1). The immense quantity of quantitative data gathered in this study served as the basis for several different pieces of their writing (Blasé & Blasé, 1998, 1999a, 1999b, 2001).
Blasé and Blasé have essentially tried to answer this question: What does a principal as an instructional leader look like? The authors advocated answering this question by looking at three strands of research on instructional leadership. The three identified strands were first their own research on instructional leadership characteristics and impacts of those characteristics on teachers. Second were research models on instructional leadership primarily located in administrator preparation texts. The third area of study was the productivity research that includes out-of-school variables and social-psychological variables (Blasé and Blasé, 2001).

Blasé and Blasé answered the question of what a principal as instructional leader looks like. They suggested that principals should emphasize the following primary things: (a) the primacy of an instructional focus, (b) the development of a culture of learning, analysis, and critique, (c) participative decision making centered on instructional matters, and (d) the development of the group and organizational agreements (Blasé and Blasé, 2001). From the data collected from the 809 teachers, Blasé and Blasé identified three themes of instructional leadership behavior for principals. The themes were identified as talking with teachers, promoting teachers' professional growth, and fostering reflection. Within these three themes of instructional leadership, specific behaviors of principals were identified. The behaviors included talking with teachers which included (a) building trust, (b) developing the group, (c) fostering collaboration, (d) supporting peer coaching, (e) observing classrooms, (f) conferring with teachers about teaching and learning, (g) empowering teachers, and (h) maintaining visibility. Another of the noted behaviors was promoting teachers' professional growth which includes (a) studying the literature and programs, (b)
supporting the practice of new skills, (c) supporting risk taking and innovation, (d) providing effective staff development, (e) praising and supporting teachers, (f) providing resources, and (g) giving feedback and suggestions. Finally, the principal behavior of fostering teacher reflection was noted. This type of behavior includes (a) developing teacher reflection skills, (b) collaboration in constructing knowledge, (c) developing action research skills, (d) modeling an inquiry orientation, (e) using data to question and evaluate teaching and learning, and (f) extending autonomy to teachers (Blasé and Blasé, 1998).

An important note on the literature from Blasé and Blasé is that there needed to be more research in this area. They cited several scholars who have identified the same gap in the research (Hallinger & Heck, 1998; Leithwood, Begley & Cousins, 1990; Short, 1995). Blasé and Blasé agreed with the scholars that principals do have an impact on teachers. The question was over degree. Blasé and Blasé also acknowledged that there is little known about the true effect of instructional leadership on student achievement. This appears to be an important element. After all, the product of improved instructional leadership should be improved student achievement.

Heck and Maroulides (1993) conducted a study in which they tried to identify the effect of instructional leadership on student achievement. This study appears to be significant because it has tried to establish a bridge between instructional leadership and student achievement and to measure that relationship.

The study began by identifying schools that consistently achieved above or below their peer group on the California Assessment Program (CAP). These were schools that had achieved above or below their comparison band of similar schools for the past three
years. The comparison band is important because it compared schools against peers who have comparable socioeconomic and language background factors. The authors hoped that this effectively controls these variables. Likewise, the principal had to have been in place for at least three years at the same school. Thirty-two (32) elementary and high schools were identified and participated in the study. Forty-one percent (41%) labeled as low achieving and 59% as high.

A questionnaire was given to the school principal and six randomly selected teachers. The data collection focused on 22 identified behavioral interactions between principals and teachers. The first behavioral interaction included governing the school which involves (a) involving the staff in instructional decisions, (b) involving parents in instructional design, (c) protecting faculty from outside pressures, and (d) leaving teachers alone to teach. The second behavioral interaction included developing the school climate which takes into account (a) communicating instructional goals, (b) high expectations for performance, (c) encouraging discussion of instruction, (d) recognizing the accomplishments of students, (e) reporting the accomplishments of students, (f) keeping faculty morale high, and (g) establishing orderly environment for learning with a clear discipline code. The third behavioral interaction included organizing the instructional program which involves (a) developing school goals, (b) coordinating instruction between grade levels, (c) holding discussion about instruction, (d) monitoring student progress, and (e) emphasizing test results for program improvement. Some important additional behaviors noted within the study included (a) evaluation of curricular programs, (b) identifying in-service needs, (c) securing of program resources, (d) observing instruction, and (e) improving instructional effectiveness.
Using structural equation modeling, Heck and Maroulides measured the relationship between these 22 behaviors by the principal and the level of achievement in the schools. Several conclusions were made by the authors. First, the effect of the principal as instructional leader on student achievement was not strong. While not strong, there was an identifiable relationship and the authors suggest that the principal can have a positive influence on student achievement. There was a contradiction later in the study where the authors claim that their results

Indicate that the manner in which elementary and high school principals govern the school, build strong school climate, and organize and monitor the school's instructional program are important predictors of academic achievement. (Heck & Maroulides, 1993, p. 25)

This quote appeared to be a bit misleading when matched up with the earlier statement.

Secondly, Heck and Maroulides concluded that it is important how principals allocate their time and resources in the area of instructional leadership. Essentially it was quality over quantity. Principals in both the low and high achieving schools were indistinguishable when it came to time spent on instructional matters. Of the 22 different behaviors 2 were identified as common among high-achieving schools. Principals of high-achieving schools involved teachers in critical decisions about instruction and protected the staff from external pressures (Heck & Maroulides, 1993).

Lastly, the authors stated that effective principals developed a sense of teamwork at the school in planning, implementing, and evaluating the instructional program. The authors were also able to distinguish between low and high achieving schools by whether
or not the principal communicated about academic achievement and recognized student accomplishment (Heck & Marcoulides, 1993).

This study is an important one for instructional leadership. It began the study of the effect of the principal as instructional leader on student achievement. It is apparent from the writing in the studies that the authors were hoping for a more significant bridge between instructional leadership and student achievement. However, it should not be overlooked that this study does reveal a connection between the two. There is much study yet to be done in this area.

Wang, Haertel, and Walberg (1993) conducted a complicated study to estimate the influence of educational, psychological, and social factors on learning. The data for this study was taken from 61 research experts, 91 meta-analyses, and 179 handbook and narrative reviews. Having reviewed all of the data gathered, the authors offered some information that sets some important frameworks for instructional leadership.

To improve school learning, the study has suggested that the following must be addressed: psychological variables, especially meta-cognition, and cognition; classroom instruction and management, and student and teacher social and academic interactions, and the home environment. Findings on classroom instruction and management revealed that increased quantity of time for instruction positively enhances student achievement (Wang, Haertel & Walberg, 1993). This appeared to be the most important finding in the area of instructional leadership. For the principal as instructional leader this becomes an important point. Essentially, the first step for instructional leadership becomes the importance of time. The more time students spend in an instructional setting, the higher
the achievement. This study established the priority of time when it comes to improvement of instruction.

Wang, Haertel, and Walberg (1993) also identified other important aspects of instruction. Strong classroom management techniques allowed teachers to spend more time on instruction. This management included engaging in positive social interactions with students which in turn decreased classroom disruptions. Students also benefited more from instruction that best matches their prior knowledge. "Instructional strategies like reciprocal teaching, cognitive skills instruction, and adaptive instructional systems incorporate the kinds of proximal psychological variables which promote school learning" (Wang, Haertel & Walberg, 1993, p. 278). All of this is important for the principal as instructional leader.

This study has created new knowledge by sorting through a large quantity of information available on school learning. It is important in that it has located important themes of information through a systematic viewing of the literature. Particularly important to this review is the information concerning instruction. Information important for teachers to improve instruction becomes equally important to the principals that operate as their instructional leader.

Smith and Piele (1997) offered a list of critical functions of instructional leadership for administrators. This list offered a thorough list of specific behaviors that a principal can act upon to improve his/her instructional leadership. Specific behaviors for principals to act upon as instructional leaders are not prevalent in the current literature (Blasé & Blasé, 1999a). This fact makes the functions for principals by Smith and Piele particularly valuable. The functions are divided into the following areas: (a) supervision,
(b) providing in-service training, (c) evaluating teachers, (d) selecting teachers, (e)
protecting instructional time and teacher integrity, (f) setting and monitoring school-wide
academic standards, (g) limiting class size and controlling class composition, (h)
overseeing and facilitating selection of teaching materials, (i) balancing specific program
objectives with overall school goals, (j) helping teachers and students in being aware of
school's curricula, (k) planning collaboratively, (l) providing rewards and recognition for
teaching and learning achievements, and (m) setting high expectations and clear goals for
student and teacher performances (Smith & Piele, 1997, pp. 256-257). Each of the above
areas has been divided into specific behaviors. As an example, the behaviors listed in the
area of selecting teachers were as follows: contacting all references, observing and
having others observe teaching of job candidates and new teachers, and hiring different
types of staff to reach all students (Smith & Piele, 1997, pp. 256-257). While Smith and
Piele offered a comprehensive list of instructional leadership behaviors, there is little to
indicate that this list is research-based. This lack of cited research may indicate that this
list is simply the opinion of the authors.

Interstate School Leaders Licensure Consortium

When developing the Leadership Survey for Instructional Leaders, NASSP
utilized the standards developed by the Interstate School Leaders Licensure Consortium
(ISLLC), no longer an active project. The Interstate School Leaders Licensure
Consortium (a program of the Council of Chief State School Officers) was the group that
sponsored the publication Collaborative Professional Development Process for School
Leaders. The publication, referred to as Standards Based Professional Development for
School Leaders, contains a series of six standards that are characterized by the categories of administrative knowledge, administrative dispositions, and administrative performances. Each of these categories also contains a set of statements that are used to establish parameters for the administrators. The Standards were developed with the following in mind:

One intent of the document is to stimulate vigorous thought and dialogue about quality educational leadership among stakeholders in the area of school administration. A second intent is to provide raw material that will help stakeholders across the education landscape (e.g., state agencies, professional associations, institutions of higher education) enhance the quality of educational leadership throughout the nation's schools (ISLLC, 1996). The full six standards of the Interstate School Leaders Licensure Consortium can be seen in Appendix G.

Student Achievement

Leadership Variable and Student Achievement

Scholarly writing on the effect of principals on school achievement is a complex issue. There is little agreement over the idea that principals have an effect on student achievement and the school as a whole. The disagreement comes from how much of an effect there truly is (Hallinger & Heck, 1998). The study and debate on this issue began in the 1970's (Fullan, 1982) and continues today.

Hallinger and Heck (1998) conducted a study of the literature on the principal's role in school effectiveness. The literature selected included only empirical studies and was subjected to two specific criteria. First, the study had to be explicitly designed to study the effects of a principal's behavior. Second, the study had to include a measure of
student performance as a dependent variable. Thirty-eight (38) studies were located and used in this review and assessment. All 38 studies were analyzed and critiqued for methodology and theoretical model (Hallinger & Heck, 1998).

The findings of this study were complex. Essentially, when conducting a study regarding the effect of the principal on school effectiveness, the theoretical model for the study determined the outcome. Hallinger and Heck found that certain study models on this topic tend to produce certain results. For example, direct-effects model studies showed that there is little correlation between principal behavior and student achievement. More complex models that accounted for variables (antecedent and intervening) showed that there was a visible and measurable effect of principal behavior on student achievement (Hallinger & Heck, 1998).

In conclusion, Hallinger and Heck (1998) argued that current research methodology was not up to task. The current methods being employed in the studies that they analyzed simply did not dig deep enough. The authors felt that this issue was simply too complex to be studied with the methods that it has been studied with for the last 15 years.

Larsea (1987) conducted a study involving principals and teachers in schools in which they scored above or below their similar school bands in reading and mathematics. The study found that principals in high-achieving schools exhibited 10 instructional leadership behaviors significantly more often than principals of low-achieving schools. The 10 behaviors identified were:

1. The principal ensures that school instructional goals are developed congruent with district policies
2. The principal ensures that instructional goals are clearly communicated to everyone.
3. The principal communicates high expectations for student academic performance to staff.
4. The principal participates in formal and/or informal discussions concerning instruction as it impacts student achievement.
5. The principal ensures that systematic procedures for monitoring student achievement are utilized by staff.
6. The principal assists teachers in securing available resources for program implementation.
7. The principal makes regular visits to the classroom.
8. The principal evaluates curricular programs.
9. The principal observes innovative curricular programs.
10. The principal establishes a safe and orderly school environment with a clear discipline code (Larsen, 1987, p.32).

In the years following this study, Larsen (1989) posited that the 10 identified behaviors should be further studied to try and evaluate the intensity with which these behaviors were being exhibited.

Wooten (1997) declared that the impact of leadership style on student performance has received scant systematic scrutiny. The limited research on principal leadership effects on student achievement report mixed results. Van de Grift (1989) studied the relationship in 182 and 139 Dutch elementary schools, respectively, and found mixed results about the effect that principal leadership has on student achievement.

Mikkelsen and Joyner (1981) stated that “the principal...is in a highly unique position to accelerate or stifle effective teacher-pupil relationships and learning” (p.3). This sentiment is shared by Andrews and Soder (1987) who stated that “an emerging database suggests that the school principal is critical in ensuring academic achievement, especially for black and low-income students” (p.8). Andrews, Soder and Jacoby (1986) found a high correlation between principal leadership and student achievement on standardized scores in 67 Seattle elementary schools. They concluded that “pupils achieve significantly higher in the core subjects of math and reading when compared to
students in schools where principals are average" (p.2). Mortimore, Summons, Ecob and Stoll (1988) worked in 50 London schools and found that leadership style was correlated with student achievement. Politz's (1991) work in Catholic middle schools found a significant relationship between student achievement and principals who were classified under Hersey and Blanchard's 1972 system as cited in Politz, 1991) as a "delegating principal." Heck, Marczilides and Lang's (1991) work indicated that school achievement can be predicted from the knowledge of a select set of principal instructional leadership behavior. Hoy and Clover (1996) made a similar prediction about the link between leadership and student achievement, but qualified it by stating that it was contingent on an open school climate. Ubben and Hughes (1987) concluded that there is little question that principal behavior, even though it is difficult to make a direct cause and effect relationship, does affect learner outcomes. They stated that recent studies "give substance to the belief that it is the leadership of the school that makes the difference between mediocrity and excellence" (p.6).

Andrews and Bamberg (1989) developed a leadership measurement instrument that they administered to teachers in 61 elementary schools. They used the resulting principals' scores to divide schools into those with strong principals (having a score of at least one standard deviation above the average); average principals (with a score between one standard deviation above and one standard deviation below the average); and weak principals (with a score at least one standard deviation below the average). They then compared principal scores against student achievement and found that schools with strong educational leaders had average scores for reading and arithmetic that were significantly higher than for schools with weak leaders.
Carlton, Shagle-Shah and Ramirez (1999) performed a qualitative research study of 40 elementary schools in Chicago over a 2 year period in order to identify key strategies common to principals in effective schools; those schools where student academic achievement was improving. "A key finding of the study is that, unbeknownst to them, the principals of the succeeding schools shared a set of common strategies" (p. 9). The researchers identified 13 strategies, which they dubbed the Baker's Dozen, found in these schools. These strategies included: (a) creating a consistent reading program at every grade level, setting clear goals, standards, and performance expectations; (b) maintaining a coordinated curriculum – articulated horizontally as well as vertically; (c) building strong, supportive faculty by recruiting and retaining superior staff; (d) holding teachers accountable for student performance and helping teachers build skills; (e) monitoring both students and teachers; (f) fostering individual teacher support by coaching; (g) encouraging professional development by promoting, sharing, and maintaining a culture of inquiry and continuous improvement; (h) building shared community vision; (i) using discretionary funds to maximize improved performance such as the purchase of classroom and library books, smaller class sizes; longer school days; all-day kindergarten; early childhood education; tutors; professional development and computer technology; (j) instilling a love of learning through reading by making reading a part of every grade level and every activity; (k) making teachers, administrators, students and parents all accountable for schools goals; and (l) increasing time on task by instituting a number of strategies such as protecting instructional time from administrative distractions, increasing reading time for the whole school, exteading the
school day, and using retired teachers, tutors and volunteers to tutor students who need extra help.

To find out if the strategies were unique to successful schools, Carlson, Shagle-Shah and Ramirez (1999) also looked at Chicago schools that did not have improving student achievement. They found that schools with high numbers of “twice-failed students”, students who were retained twice in the same grade, lacked these Baker’s Dozen strategies and were often a mirror opposite of the successful schools (p.9). Thus, they concluded that there is a distinct relationship between principals and student achievement through deliberate actions on the part of effective leaders.

Despite these proposed links between leadership and student achievement, Deck, Larsen and Marcoulides (1990) caution that researchers “are still not sure whether the association between effective principal instructional leadership and student achievement reflects a cause and effect or coincidental relationship…” (p.95).

Some indirect links between principal leadership and school achievement have been cited in the literature. One indirect route is by the influence principals have on teachers, and the other is by way of influencing the environment and structure of the school. Sergiovanni (1990) found a number of value-added leadership dimensions that contribute to teachers’ sense of efficacy, motivation, and commitment which, in turn, are qualities in teachers that are linked to gains in student achievement. Leithwood, Jantzi, Silins and Dart (1992) and Hoy, Tarter and Bliss (1990) found similar indirect links between leadership and student achievement through teacher influence. Heck, Larsen and Marcoulides (1990) proposed an indirect influence on student achievement through “managing the political relationship of the school to its environment, supervising the
school’s instructional organization, and building a positive climate for learning” (p.10). After controlling for SES, they found that principals directly influence teacher commitment and indirectly influence student achievement. This finding is supported by Leitner (1994).

Wooten’s (1997) study in North Carolina schools was inconclusive regarding the relationship between leadership and student achievement. Similar results were found in Wellisch, MacQueen, Carriere and Duck’s (1978) study of successful and unsuccessful schools; no definitive link could be made between leadership and achievement among the two categories of schools. Slater (1991) did not find a link between leadership style and student achievement in California schools. Cheng (1991) found no significant effect of leadership style on Hong Kong schools’ average rating on standardized achievement tests. Van de Grift (1990) found no significant relationship between leadership and achievement in 104 Dutch schools, as did Brandsma and Knuver (as cited in van de Grift, 1960) in their study of 250 Dutch schools.

One of the most recent studies to examine the relationship between leadership and student achievement was conducted by Marzano, Waters and McNulty (2005). Marzano et al. (2005) carefully reviewed 69 studies in order to find “specific behaviors related to principal leadership” (p. 41). The 69 studies included in the meta-analysis had been conducted between the years 1978 and 2001, included a total of 2,802 schools and approximately 14,000 teachers and 1,400,000 students. At the completion of their research, Marzano et. al identified 21 leadership behaviors or “responsibilities,” which they found to have an average correlation of .25 with student achievement. The
following are the 21 leadership responsibilities identified by Marzano et al. and their average correlation with student achievement:

1. Affirmation - the extent to which the leader recognizes and celebrates school accomplishments and acknowledges failures (r = .19).
2. Change agent - the leader's disposition to challenge the status quo (r = .25).
3. Contingent rewards - the extent to which the school leader recognizes and rewards individual accomplishments (r = .24).
4. Communication - the extent to which the school leader establishes strong lines of communication with and between teachers and students (r = .23).
5. Culture - the extent to which the school leader builds a culture that positively influences teachers, who, in turn, positively influence students (r = .25).
6. Discipline - protecting teachers from issues and influences that would detract from their instructional time or focus (r = .27).
7. Flexibility - the extent to which leaders adapt their leadership behavior to the needs of the current situation and are comfortable with dissent (r = .28).
8. Focus - the extent to which the leader establishes clear goals and keeps those goals in the forefront of the school’s attention (r = .24).
9. Ideals/Beliefs - possessing well-defined beliefs about schools, teaching and learning; sharing those beliefs with the staff, and demonstrating behaviors that are consistent with those beliefs (r = .22).
10. Input - the extent to which the school leader involves teachers in the design and implementation of important decisions and policies (r = .25).
11. Intellectual stimulation - the extent to which the school leader ensures that faculty and staff are aware of the most current theories and practices regarding effective schooling and makes discussions of those theories and practices a regular aspect of the school’s culture (r = .24).

12. Involvement in curriculum, instruction and assessment - the extent to which the principal is directly involved in the design and implementation of curriculum, instruction and assessment activities at the classroom level (r = .20).

13. Knowledge of curriculum, instruction and assessment - the extent to which the leader is aware of best practices in these domains (r = .25).

14. Monitoring/Evaluating - the extent to which the leader monitors the effectiveness of school practices in terms of their impact on student achievement (r = .27).

15. Optimizer - the extent to which the leader inspires others and is the driving force when implementing a challenging innovation (r = .20).

16. Order - the extent to which the leader establishes a set of standard operating principles and routines (r = .25).

17. Outreach - the extent to which the leader is an advocate and a spokesperson for the school to all stakeholders (r = .27).

18. Relationships - the extent to which the school leader demonstrates an awareness of the personal lives of teachers and staff (r = .18).

19. Resources - the extent to which the leader provides teachers with materials and professional development necessary for the successful execution of their duties (r = .25).
20. Situational awareness - the leaders' awareness of the details and the undercurrents regarding the functioning of the school and their use of this information to address current and potential problems (r = .33).

21. Visibility - the extent to which the school leader has contact and interacts with teachers, students and parents (r = .20) (Marzano, et. al., 2005, pp.41-60).

As a result of this comprehensive meta-analysis, Marzano et al. (2005) determined that a "highly effective school leader can have a dramatic influence on the overall academic achievement of students" (p.19). The researchers determined that a school leader who strives to increase their leadership abilities can have a dramatic effect on the overall achievement of the students within their school.

In summary, there is no agreement in the literature about the effects that principal leadership has on student achievement. Some research suggests a strong, direct influence, others suggest strong indirect effects, and still others have found no correlations between the two variables. As van de Grift (1990) stated, "We may conclude that certain aspects of educational leadership sometimes do and sometimes do not show correlation with average academic achievement" (p.30).

Along with the notion that the leadership in a given building can have an affect on student achievement, there are other mitigating factors which can influence student achievement, some of which are student level variables, and other which are school level variables.

Student Variables and Student Achievement

Improving student attendance is always a goal of secondary schools. It is common sense that unless a student is in school to learn, he or she will miss what is
taught (Michele, 2004). In fact, the study conducted by the Public Policy Institute of California (2003) concluded that, "the percentage of days a student was absent was a strong, negative predictor of each student's gain in achievement in math and reading" (p. 12).

Another study that investigated the relationship between student attendance rate and student achievement was referred to by David Wheat (1997). The study investigated the impact of the truancy program that was implemented by the Governor and the General Assembly in 1996 in Virginia. The program estimated that reducing excessive absenteeism in the public schools by 25% would result in 22,000 more students scoring above the national average on standardized tests. The author states:

The connection between attendance and achievement is grounded in common sense. Unless a student is productively engaged, he will find it difficult to learn what is taught in school in his absence. In the Virginia study, a statistical analysis revealed that even after the social and economic factors were held constant, schools with higher attendance rates achieved higher test scores. (p. 2)

Student mobility has also been found to have an affect on student achievement. Students who experience frequent transfers are likely to suffer academically, due to the emotional impact of frequent changes, exposure to different curricula, different teaching styles, and a whole host of other obstacles to learning. The relationship between student mobility and student performance has been well documented. Overall, studies have found students who are identified as "mobile" have on average lower achievement than "non-mobile" students (Michel, 2004). A study conducted in 1994 by the U.S. General Accounting Office, found that frequent school changes were associated with a host of
problems, including nutrition and health-related problems as well as below-grade-level reading scores and increased retention. Another study by Simpson and Fowler (1994) found that three or more family moves predicted retention. Furthermore, a study by Swanson and Schneider (1999) using a national database of 10,000 high school students found that school mobility between the 1st and 8th grades increased the odds of dropping out of school during high school even after controlling for eighth grade achievement.

**School Variables and Student Achievement**

Potentially the largest and most referenced study on the impact of student background on student achievement is the Coleman report, which has been discussed previously within this review of literature. The Coleman report studied the relationship between student test scores and schools. The report used aggregated measures of school inputs (i.e. teacher characteristics and educational levels of families) as variables, and socioeconomic status. Coleman used surveys/questionnaires to collect data from 60,000 teachers and 570,000 students for analysis. He and his colleagues found a rather weak relationship between schools and student test scores. He found that socioeconomic measures such as parental education and occupation seemed to explain almost all of the variance in student achievement. In fact, socioeconomic status explained a greater proportion of student test scores than other measures of school resources such as class size and teacher characteristics; 49% student background, approximately 42% teacher quality, and 8% class size. The report showed that a school's average student characteristic, such as poverty and attitudes toward school often had a greater impact on student achievement than teachers and schools.
Class size has also been shown to have a significant relationship with student achievement, as noted in the Tennessee STAR report (1999). The study, which began in 1985, randomly assigned students in kindergarten through third grade to one of three groups. The first group had class size as low as 15 students, the second group had class size in the low 20's with a paraprofessional/aide, and the third group had the same class size without a paraprofessional/aide. The results indicate that students placed in the first group learned more quickly than other students. The students who benefited most showing the largest gains from the smaller class size were students with the lowest socioeconomic status, particularly students from the inner city. Overall, students in smaller classes had a 4.5 percentile point average over the other students at the end of third grade. One caveat, once students were returned to regular class size after third grade, the 4.5 percentile point was reduced to 1 percentile point by the end of eighth grade. It is also important to note that no other interventions accompanied the assignment of pupils to small classes. Teachers were given no additional training during the school year or any other time. Both groups of students were exposed to the same curriculum and materials.

A study by Jeppsen and Rivkin (2002) indicates that class size reduction led to increased student performance in test scores and had more of an impact than teacher qualifications. The study indicates that students in the smaller classes, with high quality teachers, had a positive effect on student achievement. The effect was even greater in schools serving poor students, particularly African-American students. However, the authors concluded that implementing the program in urban schools was especially tenuous.
The final school variable being utilized in this study is instructional time. Research on instructional time and its impact on student learning is closely related to research in other areas such as tutoring and homework. Notwithstanding, a research study by Hossier, Stage and Gallagher (1988) indicates that there is a positive relationship between time on task and student achievement. It should be noted that this relationship is stronger than allocated time and student achievement. Moreover, research by Walberg (1988) indicates that there is a strong positive relationship between academic learning time and student achievement and attitude. Another study by Brown and Saks (1986) indicates that increasing allocated or engaged time is most beneficial to lower-ability students than to higher ability students, higher ability students only benefit slightly, if at all. In addition, increased time on task is most beneficial in the more highly structured content areas such as math and foreign languages than in the less structured ones such as language arts and social studies.

Summary

In this chapter, relevant literature was discussed in the areas of leadership, effective schools, instructional leadership, and student achievement. The literature has shown that there are mixed results on the influence that instructional leadership has on student achievement. Several researchers are dubious as to whether a direct link exists between student achievement and leadership behaviors. However, some researchers have found a relationship between specific leadership behaviors and student achievement, though they are unable to determine if, in fact, the leadership variables being studied are the cause of elevated levels of student achievement.
While the connection between leadership variables and student achievement has been elusive, there are several variables that have been shown to be rather consistent predictors of high levels of student performance. For example, such school level variables as instructional time, class size and district factor grouping (socio-economic status), as well as student level variables such as attendance and mobility rate have been found to have significant relationships with student achievement.

The following chapter will contain a description of the research design, the participants used in the sample, instrumentation, data collection procedures, and data analysis of the study.
Chapter III

RESEARCH METHODOLOGY

Introduction

The purpose of this study is to determine whether leadership cultures that exhibit the 10 leadership domains identified by NASSP (2004) have a significant relationship with student achievement. Additionally, this study sought to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time, and class size, and student level variables such as mobility and attendance rate.

This study utilized a quantitative design based on data collected through questionnaires and databases. The quantitative approach lends itself to exploring relationships between variables, which was the focus of this research. Relationships between the variables were determined through the use of correlations and hierarchical regressions.

Design

This study explored the relationship of the leadership domains outlined by NASSP and student achievement in effective high schools in the State of New Jersey. The unit of analysis for this study was a group of New Jersey high schools with a configuration of grades 9 through 12. Participants from each school completed the NASSP Observer Assessment for Instructional Leaders, basing their responses on their experiences within the building. Using this assessment instrument, teachers evaluated the
leadership culture in their particular building. When responding to the questionnaire, they were asked to think of all those individuals in leadership positions (e.g. principal, vice-principal, principal, department heads, etc.), and conceptualize that group as a culture of leadership. The study was designed to find a potential link between the leadership domains (setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses) and student achievement as measured by the 2004 HSPA administered to high school students in the State of New Jersey after controlling for other variables which can impact student achievement.

The results of the March 2004 administration of the HSPA were found on the New Jersey Department of Education Website (NJDOE). Additionally, the researcher was able to locate information regarding district factor grouping (DFG), class size, instructional time, student attendance, and mobility rate from each school’s New Jersey Report card, also located on the NJDOE website.

Relationships between the variables were analyzed through the use of hierarchical regression to determine the impact of several independent or predictor variables on a dependent variable. The hierarchical regression was used to analyze factors in the report card that are typically associated with student achievement: district factor grouping (DFG), class size, instructional time, student attendance, and mobility rate. Therefore, the dependent variable is student achievement, as measured by scores on the March 2004 administration of the New Jersey HSPA. For the purpose of the study at hand, leadership culture is the primary independent variable.
Participants

The sample for this study consisted of teachers from 32 effective high schools in the State of New Jersey. Teachers were utilized to complete the leadership survey rather than the leaders themselves as the examiner wanted to minimize overly positive responses to the questionnaire. Effective schools were defined as such if their mean HSPA scores for the March 2004 administration of the HSPA were at or above the state average on the HSPA for that same school year. Institutions of all sizes and populations (small, medium and large) were represented, as well as schools characterized as urban, rural and suburban; the district factor groupings of the 32 schools range from A to J (there were no A districts included in this study).

A total of 112 teachers from 32 schools participated in this study. Surveys were sent out to 320 teachers at these 32 schools, with a total of 35% return rate on the surveys. There were not an equal number of participants from each of the participating school districts; some schools had significantly more participating teachers than other schools. Those teachers who did agree to participate were informed that the data collected from the survey instruments would be used for research purposes only and would be confidential and anonymous (see Appendix E). Names of individuals were not used in reporting results.

Instrumentation

NASSP Observer Assessment for Instructional Leaders

The Observer Assessment for Instructional Leaders was developed by the National Association of Secondary School Principals in accordance with the Interstate
School Leaders Licensure Consortium (ISLLC) standards (see Appendix F). This is a 45-question instrument which is answered by respondents using a 5-point Likert scale.

Respondents rate the leadership behaviors and characteristics of the individual being measured with qualifiers that range from almost never to almost always. This instrument measures the following 10 leadership qualities: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding one's strengths and weaknesses. For the purpose of this study, the survey was modified slightly so that when responding to the questions, teachers were not rating one particular leader (the principal); rather, they were rating the leadership culture of the building, which for this study would include anyone in a position of leadership (Principal, Vice-/Assistant principal, Department Head, Supervisor, etc.).

NASSP was contacted in order to obtain the reliability data for this instrument. However, the researchers who designed the instrument indicated that there is no data regarding the reliability of the instrument. For this reason, the researcher will be determining these statistics.

**New Jersey High School Proficiency Assessment (HSPA)**

The New Jersey HSPA was administered for the first time in March 2002 to students who had become first-time 11th graders as of September 1, 2001. Most recently, the Spring 2004 HSPA was administered between March 2 and March 11, 2004 to 92,393 first-time 11th graders. The HSPA consists of two content areas: Mathematics and Language Arts/Literacy. Satisfactory HSPA performance is a requirement for a high
school diploma. Students who do not perform at required levels are provided additional instruction and subsequent opportunities for retesting.

HSPA scores are reported as scale scores in each of the content areas. The score range from 100-199 (Partially Proficient), 200-249 (Proficient), and 250-300 (Advanced Proficient). The scores of students in the Partially Proficient level are considered to be below the state minimum of proficiency (New Jersey Department of Education, 2004).

Data Collection Procedures

The following steps were taken to gather the data necessary to conduct this study. First, the publishers and copyright holders of the material were contacted (see Appendix A), and subsequently granted permission to use the NASSP leadership questionnaire for the purpose of this study (see Appendix B). The HSPA scores for the March 2004 administration of the New Jersey HSPA were collected from the New Jersey Department of Education (NJDOE) website. The NJDOE provides an Excel document which contains the Math and Language Arts HSPA scores for each high school in the State, as well as the state averages on the same administration of the HSPA. The examiner consolidated the information on this Excel document, leaving only those high schools whose Math and Language Arts scores were above that of the State average; thereby narrowing the range of schools to 156.

Once the examiner had identified the 150 schools to be considered as effective schools, the superintendents of these schools were contacted, and the examiner requested their approval to include their school in the study (see Appendix C). Of the 156 schools that were originally identified for the study, 32 schools agreed to participate in the study.
Once the school superintendent had agreed to participate in the study, the principals from each high school were contacted (with the same letter) for the purposes of explaining and garnering support for the study. They were informed of the study and its purpose, assured of the confidentiality of their teachers’ responses and invited to submit questions via phone, fax, mail, or email.

Once the high school principals were contacted, mail-coded instrumentation packets and human participant consent forms were assembled and mailed to the participating schools. Enough instrumentation packets were mailed so that 10 randomly selected teachers from each effective high school received a packet. The teachers were assured of the confidentiality of the study, and were reminded that their involvement in the study was purely voluntary; they were able to discontinue participation at any time.

Each instrumentation packet included: a cover letter outlining directions for completing the surveys, an informed consent form, the NASSP leadership survey, and a return envelope. Surveys were coded for tracking purposes in the event that incomplete surveys were returned, as well as for confidentiality. Each high school was assigned an alphabetic code. In addition to containing the alphabetic code, each instrumentation packet sent to the high school was also given a numeric code. Only the examiner had access to the coding information, which was kept in a locked cabinet. A survey with more than 25% of the questions unanswered would have been considered incomplete. Incomplete surveys received prior to 1 week before the deadline would have resulted in a personal phone call to the teacher in an attempt to solicit additional answers. Any incomplete surveys received within 1 week of the deadline would not have been included
in the study. In the case of this study, there were no incomplete surveys, and therefore no follow-up calls were made.

As the surveys were returned to the examiner, the scores from the NASSP questionnaire were entered into an Excel spreadsheet and then imported into SPSS, a statistical software program.

Data Analysis

Out of 320 teachers that were asked to complete the informed consent and NASSP survey, 112 teachers responded. The returned NASSP forms were segregated by school and scored individually. Each school had one score for each of the following 10 leadership domains: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses. Statistical analysis was performed on the data collected following the data reduction.

Six separate hierarchical regressions were employed utilizing New Jersey HSPA scores as the dependent measure and school variables, student variables, and leadership as the independent variables. The independent variables for each of the models included in the six regressions were as follows: (a) Model I - Student Variables: mobility rate and attendance rate; (b) Model II - Student Variables: mobility rate and attendance rate and School Variables: District Factor Grouping (DFG), class size, and instructional time; and (c) Model III - Student Variables: mobility rate and attendance rate and School Variables: District Factor Grouping (DFG), class size, and instructional time, and leadership variable (goal-driven behavior, focus on individual growth, or communication skills).
The analysis of the data focused on the R² change to determine whether the
contribution of each set of variables added to the regression model was significant.

Research Question
The purpose of this study is to determine whether leadership cultures that exhibit
the leadership domains identified by NASSP have a significant relationship with student
achievement. A correlation matrix will be utilized to determine the relationship between
student achievement and leadership cultures that establish the following behaviors:
setting instructional direction, teamwork, sensitivity, judgment, results orientation,
organizational ability, oral communication, written communication, development of
others, and understanding of one’s own strengths and weaknesses. Additionally, this
study will seek to determine the impact of leadership on student achievement when we
control for school level variables such as district factor grouping, instructional time and
class size, and student level variables such as mobility and attendance rate. Model
building analyses will be utilized to test the following null hypothesis: when adding the
leadership domains identified by NASSP to the model, the R² change will not be
significant (R² = 0).

Summary
It was the purpose of this study to determine whether leadership cultures that
exhibit the leadership domains identified by NASSP have a significant relationship with
student achievement. This chapter contained details regarding the research procedures
and instrumentation used to conduct this study as well as the sample participants and
methodology. A detailed account of the results of the data analysis will be presented in Chapter IV.
Chapter IV

ANALYSIS OF THE DATA

Prior to the review of data that is presented within this chapter, it must be noted that due to the small sample size of participants in this study (N=112), the results generated are limited to this study, and therefore are not generalizable. The reader should carefully consider the results and conclusions presented in the current chapter in order to come away with meaningful insight.

The purpose of this study was to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. A correlation matrix was utilized to determine the relationship between student achievement and leadership cultures that establish the following behaviors: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding of one’s own strengths and weaknesses. Additionally, this study sought to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate.

The sample for this study consisted of 112 teachers from 32 public high schools across the State of New Jersey. In this sample, the minimum High School Proficiency Assessment (HSPA) Language Arts (LA) score of these 32 schools was 225 while the maximum HSPA LA score was 247 ($M = 230.73$, $SD = 4.88$). The minimum HSPA
Math score of these 32 schools was 219.6 while the maximum HSFA Math score was 251.2 ($M = 229.43, SD = 7.34$) (see Table 2).

The school level variables being utilized in this study were instructional time, class size and district factor grouping (DFG). DFG is a composite statistical index created using statistical procedures, a "model" of socioeconomic status, and input data for various socioeconomic traits. Seven indices were developed from the census data as follows: percent of population with no high school diploma, percent with some college, occupation, population density, income, unemployment, and poverty. These seven indices were utilized in a principal components analysis to produce a statistical score which was used to rank the districts. Districts were then grouped so that each group would consist of districts having factor scores within an interval of one tenth of the distance between the highest and lowest scores (State of NJ, 2005).

The minimum number of instructional minutes was 324 while 435 was the highest number of instructional minutes in the school day for the 32 schools ($M = 354.10, SD = 18.36$). The smallest average class size was 15.6 students, while the largest average class size was 26.3 ($M = 20.67, SD = 2.30$) (see Table 2). In terms of DFG, the 32 schools were distributed over the seven DFG categories in the following way: B - 1 school (0.9% of total); CD - 8 schools (7.1%); DE - 7 schools (6.3%); FG - 25 schools (22.3%); H - 41 schools (36.6%); I - 26 schools (23.2%); J - 4 schools (3.6%) (see Table 1).

The student level variables being utilized in the present were mobility and attendance rate. The minimum mobility rate for the 32 schools was 0.40%, while the highest rate of mobility was 11.90% ($M = 5.65\%, SD = 2.64$). The minimum attendance
rate for the 32 schools was 90.50% while the maximum attendance rate was 98.10% ($M = 94.91\%$, $SD = 1.31$) (see Table 2).

Teen leadership domains (as identified by NAASSP) were utilized in the present study, as seen in Table 2. Setting instructional direction was comprised of survey questions 1, 2, 3, 4, 5, 6, 7 and 8; the total possible score for this variable was 40 ($M = 29.95$, $SD = 5.66$). Teamwork was comprised of survey questions 9, 10, 11 and 12; the total possible score for this variable was 20 ($M = 14.70$, $SD = 3.25$). Sensitivity was comprised of survey questions 13, 14, 15, 16 and 17; the total possible score for this variable was 25 ($M = 18.45$, $SD = 4.12$). Judgment was comprised of survey questions 18, 19, 20 and 21; the total possible score for this variable was 20 ($M = 14.74$, $SD = 3.12$). Results orientation was comprised of survey questions 22, 23, 24 and 25; the total possible scores for this variable was 20 ($M = 14.54$, $SD = 3.39$). Organizational ability was comprised of survey questions 26, 27, 28, 29, 30 and 31; the total possible score for this variable was 30 ($M = 22.32$, $SD = 4.03$). Oral communication was comprised of survey questions 32, 33, 34 and 35; the total possible score for this variable was 20 ($M = 15.11$, $SD = 3.41$). Written communication was comprised of survey questions 36, 37 and 38; the total possible score for this variable was 15 ($M = 11.60$, $SD = 2.56$). Development of others was comprised of survey questions 39, 40, 41, 42 and 43; the total possible score for this variable was 25 ($M = 17.25$, $SD = 4.32$). Understanding own strengths and weaknesses was comprised of survey questions 44 and 45; the total possible score for this variable was 10 ($M = 7.16$, $SD = 1.85$).
### Table 1

**District Factor Grouping - Profile of Variables**

<table>
<thead>
<tr>
<th>DFG</th>
<th>Frequency</th>
<th>Percent (% of Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>CD</td>
<td>8</td>
<td>7.1</td>
</tr>
<tr>
<td>DE</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>FG</td>
<td>25</td>
<td>22.3</td>
</tr>
<tr>
<td>GH</td>
<td>41</td>
<td>36.6</td>
</tr>
<tr>
<td>I</td>
<td>26</td>
<td>23.2</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>112</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

### Table 2

**Descriptive Statistics - Profile of Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Time</td>
<td>324</td>
<td>435</td>
<td>354.10</td>
<td>18.36</td>
</tr>
<tr>
<td>Class Size</td>
<td>15.6</td>
<td>26.3</td>
<td>20.67</td>
<td>2.30</td>
</tr>
<tr>
<td>Mobility</td>
<td>0.40</td>
<td>11.00</td>
<td>5.65</td>
<td>2.64</td>
</tr>
<tr>
<td>Attendance Rate</td>
<td>90.5</td>
<td>98.1</td>
<td>94.91</td>
<td>1.32</td>
</tr>
<tr>
<td>HSPA LA</td>
<td>225</td>
<td>247</td>
<td>230.73</td>
<td>4.88</td>
</tr>
<tr>
<td>HSPA Math</td>
<td>219.6</td>
<td>251.2</td>
<td>229.43</td>
<td>7.34</td>
</tr>
</tbody>
</table>
### Variable | Minimum | Maximum | Mean | Std. Deviation
---|---|---|---|---
Instructional Direction | 15 | 40 | 29.95 | 5.66
Teamwork | 6 | 20 | 14.79 | 3.25
Sensitivity | 6 | 25 | 18.45 | 4.12
Judgment | 6 | 20 | 14.74 | 3.12
Results Orientation | 4 | 20 | 14.54 | 3.39
Organizational Ability | 13 | 30 | 22.32 | 4.03
Oral Communication | 8 | 20 | 15.11 | 3.41
Written Communication | 4 | 15 | 11.60 | 2.56
Development of Others | 5 | 25 | 17.25 | 4.32
Strengths/Weaknesses | 2 | 10 | 7.16 | 1.85

**Reliability**

The instrument utilized in this study was an Observer Assessment for Instructional Leaders developed by the National Association of Secondary School Principals (NASSP). As this instrument had never been tested to measure the reliability of its 10 leadership domains (setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses), the examiner obtained the reliability coefficient for the survey questions which comprised each of the ten domains. For the purpose of this study, Cronbach’s alpha reliability coefficient was used to determine how well each set of items measured the leadership trait in question; Cronbach’s alpha is the most common estimate of internal
consistency (Garson, 2005). The Cronbach’s alpha for the 10 leadership characteristics being measured ranged from 0.772 to 0.903 (all Cronbach’s alpha > 0.70) (see Table 3).

### Table 3

<table>
<thead>
<tr>
<th>Leadership variable</th>
<th>Survey questions</th>
<th>Cronbach’s alpha</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting instructional direction</td>
<td>1,2,3,4,5,6,7,8</td>
<td>0.870**</td>
<td>8</td>
</tr>
<tr>
<td>Teamwork</td>
<td>9,10,11,12</td>
<td>0.828**</td>
<td>4</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>13,14,15,16,17</td>
<td>0.859**</td>
<td>5</td>
</tr>
<tr>
<td>Judgment</td>
<td>18,19,20,21</td>
<td>0.851**</td>
<td>4</td>
</tr>
<tr>
<td>Results orientation</td>
<td>22,23,24,25</td>
<td>0.864**</td>
<td>4</td>
</tr>
<tr>
<td>Organizational ability</td>
<td>26,27,28,29,30,31</td>
<td>0.848**</td>
<td>6</td>
</tr>
<tr>
<td>Oral communication</td>
<td>32,33,34,35</td>
<td>0.862**</td>
<td>4</td>
</tr>
<tr>
<td>Written communication</td>
<td>36,37,38</td>
<td>0.903**</td>
<td>3</td>
</tr>
<tr>
<td>Development of others</td>
<td>39,40,41,42,43</td>
<td>0.986**</td>
<td>5</td>
</tr>
<tr>
<td>Understanding strength/weakness</td>
<td>44,45</td>
<td>0.772*</td>
<td>2</td>
</tr>
</tbody>
</table>

**Cronbach’s Alpha significant at .80 level; *Cronbach’s Alpha sig. at .70 level

In order to determine the relationship between student achievement and leadership cultures that establish the following behaviors: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding of one’s own strengths.
and weaknesses, a correlation matrix was generated. The results of the Pearson correlation, as seen in Table 4, indicate that setting instructional direction does have a positive statistically significant relationship with HSPA LA scores ($R = .198, p<.030$), but it does not have a statistically significant relationship with HSPA Math scores. This data indicates that in those high schools where the leadership culture exhibits behaviors in setting instructional direction, there is an elevation in HSPA Language Arts scores.

Teamwork was found to have no statistically significant relationship with HSPA LA scores and no statistically significant relationship with HSPA Math scores. Sensitivity was found to have no statistically significant relationship with HSPA LA scores and no statistically significant relationship with HSPA Math scores. Judgment was found to have a positive statistically significant relationship with HSPA LA scores ($R = .212, p<.025$), and a positive statistically significant relationship with HSPA Math scores ($R = .216, p<.022$). These results indicate that high schools in which the leadership culture displays behaviors high in judgment have high scores on the HSPA LA and Math.

Results orientation was found to have a positive statistically significant relationship with HSPA LA scores ($R = .261, p<.005$), and a positive statistically significant relationship with HSPA Math scores ($R = .232, p<.014$). This would indicate that high schools whose leadership culture exhibits behaviors related to results orientation also see elevated scores on the HSPA LA and Math. Organizational ability was found to have a positive statistically significant relationship with HSPA LA scores ($R = .212, p<.025$), but no statistically significant relationship with HSPA Math scores. This indicates that high schools whose leadership culture exhibits behaviors related to organizational ability have elevated scores on the HSPA LA. Oral communication was found to have no statistically
significant relationship with HSPA LA scores, and no statistically significant relationship with HSPA Math scores. Written communication was found to have no statistically significant relationship with HSPA LA scores, and no statistically significant relationship with HSPA Math scores. Development of others was found to have no statistically significant relationship with HSPA LA scores and no statistically significant relationship with HSPA Math scores. Finally, understanding one’s own strengths and weaknesses was found to have no statistically significant relationship with HSPA LA scores and no statistically significant relationship with HSPA Math scores.

Overall, there were very few significant relationships between the ten leadership variables and HSPA Language Arts and Math scores. However, the data does indicate a relationship between an increase in HSPA scores and behaviors in the following areas: setting instructional direction, judgment, results orientation and organizational ability.

Table 4

<table>
<thead>
<tr>
<th>Leadership Variable</th>
<th>HSPA LA</th>
<th>HSPA Math</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.198*</td>
<td>.151</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.036</td>
<td>.113</td>
</tr>
<tr>
<td><strong>Teamwork</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>-.064</td>
<td>.025</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.522</td>
<td>.792</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>-.033</td>
<td>.037</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.728</td>
<td>.701</td>
</tr>
<tr>
<td><strong>Judgment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.212*</td>
<td>.216*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.325</td>
<td>.022</td>
</tr>
<tr>
<td><strong>Res. Orient.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.261**</td>
<td>.232*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.005</td>
<td>.014</td>
</tr>
<tr>
<td>Leadership Variable</td>
<td>HSPA LA</td>
<td>HSPA Math</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>Org. Ability</td>
<td>Pearson correlation</td>
<td>.212*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.025</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.244</td>
</tr>
<tr>
<td>Writt. Comm.</td>
<td>Pearson correlation</td>
<td>.185</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.051</td>
</tr>
<tr>
<td>Dev. Others</td>
<td>Pearson correlation</td>
<td>.043</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.654</td>
</tr>
<tr>
<td>Str. Weak.</td>
<td>Pearson correlation</td>
<td>-.016</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.869</td>
</tr>
</tbody>
</table>

* significant at the .05 level (p<.05)
** significant at the .01 level (p<.01)

Factor Analysis

Upon further investigation of the variables, a strong intercorrelation among the leadership variables was suspected. The researcher further examined the relationship between the leadership variables utilizing a correlation matrix (see Table 5). The results indicated that each of the ten leadership variables was significantly correlated with the other nine variables. Teamwork had a moderate positive statistically significant relationship with direction (R = .660, p<.000). Sensitivity had a moderate positive statistically significant relationship with direction (R = .670, p<.000) and teamwork (R = .665, p<.000). Judgment had a moderate positive statistically significant relationship with direction (R = .656, p<.000) and teamwork (R = .587, p<.000), and a high positive statistically significant relationship with sensitivity (R = .721, p<.000). Results orientation had a high positive statistically significant relationship with direction (R = .727, p<.000), a moderate positive statistically significant relationship with teamwork (R = .647, p<.000) and sensitivity (R = .667, p<.000) and a high positive statistically
significant relationship with judgment ($R = .707$, $p < .000$). Organizational ability had a
ra
derate positive statistically significant relationship with direction ($R = .630$, $p < .000$),
teamwork ($R = .531$, $p < .000$), sensitivity ($R = .608$, $p < .000$), judgment ($R = .668$, $p < .000$)
and results orientation ($R = .653$, $p < .000$). Oral communication had a moderate positive
statistically significant relationship with direction ($R = .588$, $p < .000$), teamwork ($R = .562$, $p < .000$), sensitivity ($R = .604$, $p < .000$), judgment ($R = .577$, $p < .000$), results
orientation ($R = .670$, $p < .000$) and organizational ability ($R = .544$, $p < .000$). Written
communication had a moderate positive statistically significant relationship with
direction ($R = .611$, $p < .000$), teamwork ($R = .519$, $p < .000$), sensitivity ($R = .604$, $p < .000$),
judgment ($R = .610$, $p < .000$), results orientation ($R = .592$, $p < .000$), organizational ability
($R = .520$, $p < .000$) and oral communication ($R = .572$, $p < .000$). Development of others
had a moderate positive statistically significant relationship with direction ($R = .657$, $p < .000$),
teamwork ($R = .600$, $p < .000$), sensitivity ($R = .668$, $p < .000$), judgment ($R = .598$, $p < .000$),
results orientation ($R = .654$, $p < .000$), organizational ability ($R = .607$, $p < .000$), oral communication ($R = .644$, $p < .000$) and written communication ($R = .606$, $p < .000$). Finally, understanding one’s own strengths and weaknesses had a high positive
statistically significant relationship with direction ($R = .722$, $p < .000$), a moderate positive
statistically significant relationship with teamwork ($R = .618$, $p < .000$), sensitivity ($R = .601$, $p < .000$), judgment ($R = .531$, $p < .000$), results orientation ($R = .597$, $p < .000$),
orGANizational ability ($R = .569$, $p < .000$), oral communication ($R = .592$, $p < .000$) and
written communication ($R = .534$, $p < .000$) and a high positive statistically significant
relationship with development of others ($R = .749$, $p < .000$).
The results of this correlation matrix indicate that a leadership culture which exhibits behaviors related to setting instructional direction will also exhibit behaviors related to teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses. Therefore, leadership cultures will not be likely to exhibit a small number of these behaviors, rather, if they are exhibiting one type of leadership behavior, they will be exhibiting behaviors related to all of the leadership variables delineated by NASSP.

Table 5

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>.660*</td>
<td>.670*</td>
<td>.656*</td>
<td>.587*</td>
<td>.721*</td>
<td>.647*</td>
<td>.677*</td>
<td>.707*</td>
<td>.630*</td>
<td>.658*</td>
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<td>.000</td>
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<td>.000</td>
<td>.000</td>
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<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
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<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

*significant at the .05 level
Given the inter-correlations between the variables and subsequent potential suppressor effects, a factor analysis was done utilizing a varimax rotation. Of the original 45 questions included in the leadership survey, 25 of these were used in the factor analysis (26 of the original 45 questions were found to have very low correlations with the other questions, and therefore were removed from the data analysis). The following 25 questions were utilized in the factor analysis: 4, 5, 7, 11, 12, 16, 17, 18, 20, 22, 23, 25, 27, 31, 33, 34, 35, 36, 37, 38, 41, 42, 43, 44 and 45. After completing the principal component analysis using a varimax rotation with Kaiser normalization, each of the 25 questions loaded on one of three principal factors, as seen in Table 7. Factor 1 ("goal-driven behaviors") consisted of leadership behaviors that are associated with short- and long-term planning, prioritization of goals, and the involvement of all stakeholders in moving the school towards a shared goal. Goal-driven behaviors included such questions as "the leadership culture of this building sets and clarifies measurable objectives," "the leadership culture of this building contributes ideas toward achieving a solution," and "the leadership culture of this building evaluates information to determine the important elements." Of the 10 leadership domains that comprise the original NASSP questionnaire, 5 were found to be included within this factor: setting instructional
direction, teamwork, sensitivity, judgment and results orientation. Factor 2 ("focus on individual growth") consisted of behaviors that focus on personal and professional growth of not only the leaders themselves, but also their faculty. Focus on individual growth included such questions as "the leadership culture of this building suggests specific developmental activities" and "the leadership culture of this building actively pursues personal growth through participation in planned developmental activities." Of the 10 leadership domain created by NASSP, 2 were found to be a strong presence within this factor: development of others and understanding own strengths and weaknesses. Finally, factor 3 ("communication skills") consisted of behaviors that are associated with effective communication skills, whether it be writing or speaking (expressive and receptive). Communication skills included such questions as "the leadership culture of this building tailors messages to meet the needs of unique audiences" and "the leadership culture of this building expresses ideas clearly in writing." Of the 10 NASSP leadership domain, 2 were found to have a significant presence in this factor: oral communication and written communication. Fifteen (15) of the questions loaded on factor 1 - goal driven behaviors (q4, q5, q7, q11, q12, q16, q17, q18, q20, q22, q23, q25, q27, q34 and q35); six (6) of the questions loaded on factor 2 - focus on individual growth (q31, q41, q42, q43, q44 and q45); and four (4) of the questions loaded on factor 3 - communication skills (q33, q36, q37 and q38). The goal-driven behaviors domain was found to explain 24.94% of the variance; focus on individual growth was found to explain 19.86% of the variance, and communication skills was found to explain 16.41% of the variance. These three factors therefore explain a total of 61.21% of the variance (see Table 6).
Table 6

Rotation Sums of Squared Loadings

<table>
<thead>
<tr>
<th>Factor</th>
<th>Total</th>
<th>% of Variance</th>
<th>Cumulative % of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal-driven</td>
<td>6.23</td>
<td>24.94</td>
<td>24.94</td>
</tr>
<tr>
<td>Growth</td>
<td>4.97</td>
<td>19.86</td>
<td>44.80</td>
</tr>
<tr>
<td>Communication</td>
<td>4.10</td>
<td>16.41</td>
<td>61.21</td>
</tr>
</tbody>
</table>

Table 7

Variable Loading On Each of Three Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>q4</td>
<td>goal-driven</td>
<td>.53</td>
</tr>
<tr>
<td>q5</td>
<td>goal-driven</td>
<td>.56</td>
</tr>
<tr>
<td>q7</td>
<td>goal-driven</td>
<td>.63</td>
</tr>
<tr>
<td>q11</td>
<td>goal-driven</td>
<td>.48</td>
</tr>
<tr>
<td>q12</td>
<td>goal-driven</td>
<td>.57</td>
</tr>
<tr>
<td>q16</td>
<td>goal-driven</td>
<td>.74</td>
</tr>
<tr>
<td>q17</td>
<td>goal-driven</td>
<td>.56</td>
</tr>
<tr>
<td>q18</td>
<td>goal-driven</td>
<td>.70</td>
</tr>
<tr>
<td>q20</td>
<td>goal-driven</td>
<td>.72</td>
</tr>
<tr>
<td>q22</td>
<td>goal-driven</td>
<td>.60</td>
</tr>
<tr>
<td>q23</td>
<td>goal-driven</td>
<td>.56</td>
</tr>
<tr>
<td>q25</td>
<td>goal-driven</td>
<td>.64</td>
</tr>
<tr>
<td>q27</td>
<td>goal-driven</td>
<td>.60</td>
</tr>
<tr>
<td>Variable</td>
<td>Factor</td>
<td>Loading</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>---------</td>
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<tr>
<td>q31</td>
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<tr>
<td>q33</td>
<td>communication</td>
<td>.45</td>
</tr>
<tr>
<td>q34</td>
<td>goal-driven</td>
<td>.43</td>
</tr>
<tr>
<td>q35</td>
<td>goal-driven</td>
<td>.54</td>
</tr>
<tr>
<td>q36</td>
<td>communication</td>
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<td>q37</td>
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<td>q38</td>
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<td>q41</td>
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<td>.69</td>
</tr>
<tr>
<td>q45</td>
<td>growth</td>
<td>.71</td>
</tr>
</tbody>
</table>

Once the factor analysis was completed, the reliability coefficient for each of the three factors (goal-driven behaviors, focus on individual growth and communication skills) was obtained. Cronbach’s alpha reliability coefficient was again used to determine the internal consistency of the leadership trait in question (see Table 8). The Cronbach’s alpha for the three leadership factors being measured ranged from 0.8632 to 0.9363 (all Cronbach’s alpha > 0.80).

Table 8

*Reliability coefficients*
<table>
<thead>
<tr>
<th>Component</th>
<th>Survey questions</th>
<th>Cronbach’s alpha</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal-driven</td>
<td>4, 5, 7, 11, 12, 16, 17, 18, 20, 22, 23, 25, 27, 34, 35</td>
<td>0.9363**</td>
<td>15</td>
</tr>
<tr>
<td>Growth</td>
<td>31, 41, 42, 43, 44, 45</td>
<td>0.8939**</td>
<td>6</td>
</tr>
<tr>
<td>Communication</td>
<td>33, 36, 37, 38</td>
<td>0.8632**</td>
<td>4</td>
</tr>
</tbody>
</table>

**Cronbach’s Alpha significant at .00 level

A correlation matrix was generated to determine the relationship among the three factors. The results, seen in Table 5, indicated that goal-driven behaviors had a high positive statistically significant relationship with focus on individual growth ($R = .801$, $p < .000$), and a high positive statistically significant relationship with communication skills ($R = .742$, $p < .000$). Additionally, focus on individual growth was found to have a high positive statistically significant relationship with communication skills ($R = .711$, $p < .000$). This data indicates that leadership cultures which exhibited goal-driven behaviors were also found to exhibit behaviors related to individual growth, as well as behaviors related to communication skills.

Table 9

<table>
<thead>
<tr>
<th></th>
<th>Goal-driven</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>Pearson R</td>
<td>.801**</td>
</tr>
<tr>
<td></td>
<td>Significance</td>
<td>.000</td>
</tr>
</tbody>
</table>


Finally, a correlation matrix was generated in order to determine the relationship between the three factors and student achievement (HSPA Language Arts and HSPA Math scores) (see Table 10). Goal-driven behaviors was not found to have a statistically significant relationship with HSPA LA or HSPA Math scores. Focus on individual growth was not found to have a statistically significant relationship with HSPA LA or HSPA Math scores. Communication skills was found to have a positive statistically significant relationship with HSPA LA scores ($R = .187, p < .01$), but no statistically significant relationship with HSPA Math scores. This data indicates that high schools whose leadership culture exhibits effective communication skills also had elevated scores on the HSPA LA.

Table 10

<table>
<thead>
<tr>
<th></th>
<th>HSPA LA</th>
<th>HSPA Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal-driven</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson $R$</td>
<td>.174</td>
<td>.149</td>
</tr>
<tr>
<td>Significance</td>
<td>.067</td>
<td>.118</td>
</tr>
<tr>
<td>N</td>
<td>112</td>
<td>112</td>
</tr>
<tr>
<td>Growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson $R$</td>
<td>.097</td>
<td>.090</td>
</tr>
<tr>
<td>Significance</td>
<td>.307</td>
<td>.347</td>
</tr>
<tr>
<td>N</td>
<td>112</td>
<td>112</td>
</tr>
<tr>
<td>Commun. Pearson R</td>
<td>.187*</td>
<td>.177</td>
</tr>
<tr>
<td>-------------------</td>
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<td>------</td>
</tr>
<tr>
<td>Significance</td>
<td>.048</td>
<td>.062</td>
</tr>
<tr>
<td>N</td>
<td>112</td>
<td>112</td>
</tr>
</tbody>
</table>

* significant at .05 level (p<.05)

Hierarchical Regression

Utilizing a multiple regression analysis allowed the researcher to identify the independent variable(s) that most impacted student achievement (i.e., performance on the New Jersey High School Proficiency Test – Language Arts and Math [NJ HSPA – LA and Math]). The F statistic allowed the researcher to determine whether the whole model is statistically significant. The $R^2$ ranges from 0 to 1 and is interpreted as the percentage of the variance in the dependent variable (HSPA LA and HSPA Math) that is explained by the independent variables (student variables, school variables, and instructional leadership variables). The adjusted $R^2$ statistic is the same as the $R^2$ except that it factors in the number of independent variables. The Beta enabled the researcher to determine the relative contribution of each independent variable(s) in predicting the performance of students on the NJ HSPA.

Due to the high positive correlation among the three factors, goal-driven behaviors, focus on individual growth and communication skills, the examiner performed six separate hierarchical regressions to determine the relationship between student achievement (HSPA LA and HSPA Math) and the leadership factors.

In the first hierarchical regression, three models were run in order to determine which of the three provided the best explanation of HSPA Language Arts scores for students in effective New Jersey high schools. In the first model, scores on the HSPA
Language Arts examination were regressed on mobility rate and attendance rate; in the second model, HSPA Language scores were regressed on attendance rate, mobility rate, instructional time, class size and district factor grouping (DFG); and finally, in the third model, HSAP Language Arts scores were regressed on mobility rate, attendance rate, instructional time, class size, DFG and goal-driven behaviors. In analyzing the data, we see that model 1 is significant, $F = 17.150$, significant at the .000 level; model 2 is significant, $F = 12.972$, significant at the .000 level, and model 3 is significant, $F = 11.180$, significant at the .000 level (see Table 11).

### Table 11

ANOVA I - HSPA Language Arts

<table>
<thead>
<tr>
<th>Model</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
<td>321.091</td>
<td>17.510*</td>
</tr>
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<td></td>
<td>Residual</td>
<td>109</td>
<td>18.337</td>
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<td>Total</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>5</td>
<td>200.510</td>
<td>12.972*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>106</td>
<td>15.547</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Regression</td>
<td>6</td>
<td>171.582</td>
<td>11.180*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>105</td>
<td>15.347</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* significant at the .01 level ($p<.01$)
In determining the relative efficacy of each of the three models, it is important to note the $R^2$ squared ($R^2$) change in each of the models as new variables are entered, as seen in Table 12. In model 1, which is significant, the $R^2$ value = .243. In model 2, the $R^2$ value = .380, with an $R^2$ change of .136, which is significant at the .000 level; this shows that model 2 provides an additional 13.6% in explained $R^2$ variance. Finally, in model 3, the $R^2$ value = .390, with an $R^2$ change of approximately .010, which is not significant; this shows that model 3 provides only an additional 1.0% in explained $R^2$ variance.

Table 12  
*Model Summary 1 - HSPA Language Arts*

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.243</td>
<td>.243*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.380</td>
<td>.136*</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>.390</td>
<td>.010</td>
<td>.188</td>
</tr>
</tbody>
</table>

*significant at the .01 level (p<.01)

In further examining the efficacy of each model, we must observe how each of the predictors behaves in terms of significance within each model (see Table 13). In Model 1, student mobility rate does have a significant impact on HSPA LA scores, Beta = -.493, significant at the .000 level; and student attendance rate does not have a significant
impact on HSPA LA scores, Beta = -.002. This suggests that as student mobility increases, the total scores on the HSPA LA decreases. In Model 2, student mobility rate does not have a significant impact on HSPA LA scores, Beta = -.056; student attendance rate does not have a significant impact on HSPA LA scores, Beta = -.23; instructional time does have a significant impact on HSPA LA scores, Beta = .323, significant at the .001 level; class size does not have a significant impact on HSPA LA scores, Beta = .137; and district factor grouping (DFG) does have a significant impact on HSPA LA scores, Beta = .281, significant at the .001 level. This data shows us that as instructional time increases HSPA LA scores increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA LA scores than those schools with less favorable DFG ratings. Finally, in Model 3, student mobility rate did not have a significant impact on HSPA LA scores, Beta = -.170; student attendance rate did not have a significant impact on HSPA LA scores, Beta = -.056; instructional time did have a significant impact on HSPA LA scores, Beta = .332, significant at the .001 level; class size did not have a significant impact on HSPA LA scores, Beta = -.146; DFG did have a significant impact on HSPA LA scores, Beta = .267, significant at the .002 level; and goal-driven behaviors did not have a significant impact on HSPA LA scores, Beta = .103. This data again shows us that as instructional time increases HSPA LA scores increase and that schools with a more favorable DFG receive higher HSPA LA scores than those schools with less favorable DFG ratings.

Table 13

*Coefficients 1 - HSPA Language Arts*
<table>
<thead>
<tr>
<th>Model</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Mobility</td>
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<td>-5.898</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>-0.002</td>
<td>-0.20</td>
</tr>
<tr>
<td>2</td>
<td>Mobility</td>
<td>-0.186</td>
<td>-1.768</td>
</tr>
<tr>
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<td>Attendance rate</td>
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<td>-0.723</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>0.323**</td>
<td>3.481</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>-0.137</td>
<td>-1.556</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>0.281**</td>
<td>3.299</td>
</tr>
<tr>
<td>3</td>
<td>Mobility</td>
<td>-0.170</td>
<td>-1.826</td>
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<td></td>
<td>Attendance rate</td>
<td>-0.056</td>
<td>-0.645</td>
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<tr>
<td></td>
<td>Instructional time</td>
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<td>3.706</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
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<td>-1.570</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>0.267*</td>
<td>2.485</td>
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<tr>
<td></td>
<td>Goal-driven</td>
<td>103</td>
<td>1.325</td>
</tr>
</tbody>
</table>

** significant at the .01 level (p<.01), * significant at the .05 level (p<.05)

Each of the three models in this study were significant and provided insightful information into how the variables (attendance rate, mobility rate, instructional time, class size, DFG, and goal-driven behaviors) have an impact on HSPA LA scores for students in effective schools. Model 2 accounted for 35.0% of the total variance, and therefore proved to be the most useful model indicating the importance of instructional time and district factor grouping on student achievement. In examining the results of
Model 3, the data indicates that goal-driven behaviors, generated from the leadership variables, had no significant impact on HSPA LA scores, and did not account for a significant increase in explained variance.

In the second regression, three models were run in order to determine which of the three provided the best explanation of HSPA Math scores for students in effective New Jersey high schools. In the first model, scores on the HSPA Math examination were regressed on mobility rate and attendance rate; in the second model, HSPA Math scores were regressed on attendance rate, mobility rate, instructional time, class size, and district factor grouping (DFG); and finally, in the third model, HSPA Math scores were regressed on mobility rate, attendance rate, instructional time, class size, DFG, and goal-driven behaviors. In analyzing the data, we see that Model 1 is significant, $F = 20.967^*$, significant at the .000 level; Model 2 is significant, $F = 13.938^*$, significant at the .000 level, and Model 3 is significant, $F = 11.613$, significant at the .000 level (see Table 14).

Table 14

**ANOVA 2 - HSPA Math**

<table>
<thead>
<tr>
<th>Model</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
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<td>830.312</td>
<td>20.967*</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>109</td>
<td>39.602</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Regression</td>
<td>5</td>
<td>474.185</td>
<td>13.938*</td>
<td>.000</td>
</tr>
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<td>Model</td>
<td>df</td>
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<td>F</td>
<td>Significance</td>
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<tr>
<td>-------</td>
<td>----</td>
<td>-------------</td>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>397.381</td>
<td>11.613*</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>105</td>
<td>34.218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*significant at the .01 level (p<.01)

In determining the relative efficacy of the each of the three models, it is important to note the R squared ($R^2$) change in each of the models as new variables are entered, as seen in Table 15. In Model 1, which is significant, the $R^2$ value = .278. In model 2, the $R^2$ value = .397, with an $R^2$ change of .119, which is significant at the .000 level; this shows that model 2 provides an additional 11.9% in explained $R^2$ variance. Finally, in model 3, the $R^2$ value = .399, with an $R^2$ change of .002, which is not significant; this shows that model 3 provides only an additional .26% in explained $R^2$ variance.

Table 15

*Model Summary 2 - HSPA Math*

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.278</td>
<td>.278*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.397</td>
<td>.119*</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>.399</td>
<td>.002</td>
<td>.533</td>
</tr>
</tbody>
</table>

*significant at the .01 level (p<.01)
In further examining the efficacy of each model, we must observe how each of the predictors behaves in terms of significance within each model (see Table 16). In Model 1, student mobility rate does have a significant impact on HSPA Math scores, Beta = -.468, significant at the .001 level; and student attendance rate does have a significant impact on HSPA Math scores, Beta = .206, significant at the .013 level. This suggests that as student mobility increases, the total scores on the HSPA Math decreases, and that as student attendance increases, there is an increase in HSPA Math scores. In Model 2, student mobility rate does have a significant impact on HSPA Math scores, Beta = -.372, significant at the .001 level; student attendance rate does have a significant impact on HSPA Math scores, Beta = .178, significant at the .022 level; instructional time does not have a significant impact on HSPA Math scores, Beta = .128; class size does not have a significant impact on HSPA Math scores, Beta = .165; and district factor grouping (DFG) does have a significant impact on HSPA Math scores, Beta = .247, significant at the .004 level. This data shows us that as student mobility increases, HSPA Math scores decreases, and as student attendance rate increases, HSPA Math shall increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA Math scores than those schools with less favorable DFG ratings. Finally, in Model 3, student mobility rate did have a significant impact on HSPA Math scores, Beta = -.364, significant at the .001 level; student attendance rate did have a significant impact on HSPA Math scores, Beta = .178, significant at the .023 level; instructional time did not have a significant impact on HSPA Math scores, Beta = .133; class size did not have a significant impact on HSPA Math scores, Beta = .161; DFG did have a significant impact
on HSPA Math scores, Beta = .240, significant at the .006 level; and goal-driven behaviors did not have a significant impact on HSPA Math scores, Beta = .348. This data again shows us that as student mobility increases, HSPA Math scores decreases, and as student attendance rate increases, HSPA Math shall increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA Math scores than those schools with less favorable DFG ratings.

Table 16

<table>
<thead>
<tr>
<th>Model</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobility</td>
<td>-.468**</td>
<td>-5.733</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.206*</td>
<td>2.518</td>
</tr>
<tr>
<td>2</td>
<td>Mobility</td>
<td>-.372**</td>
<td>-3.589</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.178*</td>
<td>2.321</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>.128</td>
<td>1.404</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>.165</td>
<td>1.903</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>.247**</td>
<td>2.935</td>
</tr>
<tr>
<td>3</td>
<td>Mobility</td>
<td>-.364**</td>
<td>-3.485</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.178*</td>
<td>2.313</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>.133</td>
<td>1.446</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>.161</td>
<td>1.843</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>.240**</td>
<td>2.825</td>
</tr>
<tr>
<td>Model</td>
<td>Beta</td>
<td>t</td>
<td>Significance</td>
</tr>
<tr>
<td>------------</td>
<td>------</td>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>Goal-driven</td>
<td>0.048</td>
<td>0.625</td>
<td>0.533</td>
</tr>
</tbody>
</table>

** significant at the .01 level (p<.01); * significant at the .05 level (p<.05)

Each of the three models in this study were significant and provided insightful information into how the variables (attendance rate, mobility rate, instructional time, class size, DFG, and goal-driven behaviors) have an impact on HSPA Math scores for students in effective schools. Model 2 accounted for 38.0% of the total variance, and therefore proved to be the most useful model indicating the importance of mobility rate, attendance rate, and district factor grouping on student achievement. In examining the results of Model 3, the data indicates that goal-driven behaviors, the component generated from the leadership variables, had no significant impact on HSPA Math scores, and did not account for a significant increase in explained variance.

In the third hierarchical regression, three models were run in order to determine which of the three provided the best explanation of HSPA Language Arts scores for students in effective New Jersey high schools. In the first model, scores on the HSPA Language Arts examination were regressed on mobility rate and attendance rate; in the second model, HSPA Language scores were regressed on attendance rate, mobility rate, instructional time, class size and district factor grouping (DFG); and finally, in the third model, HSAP Language Arts scores were regressed on mobility rate, attendance rate, instructional time, class size, DFG and focus on individual growth. In analyzing the data, we see that model 1 is significant, $F = 17.516$, significant at the .000 level; model 2 is
significant, \( F = 12.972 \), significant at the .000 level, and model 3 is significant, \( F = 10.726 \), significant at the .000 level (see Table 17).

Table 17

ANOVA 3 - HSPA Language Arts

<table>
<thead>
<tr>
<th>Model</th>
<th>( df )</th>
<th>Mean Square</th>
<th>( F )</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
<td>321.091</td>
<td>17.510*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>109</td>
<td>18.337</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>5</td>
<td>200.510</td>
<td>12.972*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>106</td>
<td>15.547</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Regression</td>
<td>6</td>
<td>167.259</td>
<td>10.726*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>105</td>
<td>15.594</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* significant at the .01 level (p<.01)

In determining the relative efficacy of the each of the three models, it is important to note the \( R^2 \) squared (\( R^2 \)) change in each of the models as new variables are entered, as seen in Table 18. In model 1, which is significant, the \( R^2 \) value = .243. In model 2, the \( R^2 \) value = .380, with an \( R^2 \) change of .136, which is significant at the .000 level; this shows that model 2 provides an additional 13.6% in explained \( R^2 \) variance. Finally, in
model 3, the $R^2$ value = .380, with an $R^2$ change of approximately .000, which is not significant; this shows that model 3 provides no additional explanation of $R^2$ variance.

Table 18

*Model Summary 3 - HSPA Language Arts*

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.243</td>
<td>.243*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.380</td>
<td>.136*</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>.380</td>
<td>.090</td>
<td>.800</td>
</tr>
</tbody>
</table>

* significant at the .01 level ($p<.01$)

In further examining the efficacy of each model, we must observe how each of the predictors behaves in terms of significance within each model (see Table 19). In Model 1, student mobility rate does have a significant impact on HSPA LA scores, $\beta = -.493$, significant at the .000 level; and student attendance rate does not have a significant impact on HSPA LA scores, $\beta = -.002$. This suggests that as student mobility increases, the total scores on the HSPA LA decreases. In Model 2, student mobility rate does not have a significant impact on HSPA LA scores, $\beta = -.186$; student attendance rate does not have a significant impact on HSPA LA scores, $\beta = -.055$; instructional time does have a significant impact on HSPA LA scores, $\beta = .323$, significant at the .001 level; class size does not have a significant impact on HSPA LA scores, $\beta = -.137$; and district factor grouping (DFG) does have a significant impact on HSPA LA...
scores, Beta = .281, significant at the .001 level. This data shows us that as instructional time increases HSPA LA scores increases; additionally, it tells us that schools with a more favorable DFG receive higher HSPA LA scores than those schools with less favorable DFG ratings. Finally, in Model 3, student mobility rate did not have a significant impact on HSPA LA scores, Beta = -.181; student attendance rate did not have a significant impact on HSPA LA scores, Beta = -.057; instructional time did have a significant impact on HSPA LA scores, Beta = .323, significant at the .001 level; class size did not have a significant impact on HSPA LA scores, Beta = -.139; DFG did have a significant impact on HSPA LA scores, Beta = .283, significant at the .001 level; and focus on individual growth did not have a significant impact on HSPA LA scores, Beta = .020. This data again shows us that as instructional time increases HSPA LA scores increases and that schools with a more favorable DFG receive higher HSPA LA scores than those schools with less favorable DFG ratings.

Table 19

<p>| Coefficients 3 - HSPA Language Arts |
|------------|--------|------|--------|
| Model      | Beta   | t     | Significance |
| 1 Mobility | -.493* | -5.898 | .000     |
| Attendance rate | -.002 | -.020 | .984    |
| 2 Mobility | -.186  | -1.768 | .080     |
| Attendance rate | -.356 | -.723 | .471    |
| Instructional time | .323* | 3.481 | .001     |
| Class size | -.137  | -1.556 | .123    |</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFG</td>
<td>.281</td>
<td>3.299</td>
<td>.001</td>
</tr>
<tr>
<td>Mobility</td>
<td>-.181</td>
<td>-1.683</td>
<td>.095</td>
</tr>
<tr>
<td>Attendance rate</td>
<td>-.057</td>
<td>-.727</td>
<td>.469</td>
</tr>
<tr>
<td>Instructional time</td>
<td>.323*</td>
<td>3.465</td>
<td>.001</td>
</tr>
<tr>
<td>Class size</td>
<td>-.139</td>
<td>-1.567</td>
<td>.120</td>
</tr>
<tr>
<td>DFG</td>
<td>.283*</td>
<td>3.294</td>
<td>.001</td>
</tr>
<tr>
<td>Indiv Growth</td>
<td>.620</td>
<td>.254</td>
<td>.800</td>
</tr>
</tbody>
</table>

* significant at the .01 level (p<.01)

Each of the three models in this study were significant and provided insightful information into how the variables (attendance rate, mobility rate, instructional time, class size, DFG and goal-driven behaviors) have an impact on HSPA LA scores for students in effective schools. Model 2 accounted for 38.0% of the total variance, and therefore proved to be the most useful model indicating the importance of instructional time and district factor grouping on student achievement. In examining the results of Model 3, the data indicates that focus on individual growth, generated from the teachership variables, had no significant impact on HSPA LA scores, and did not account for a significant increase in explained variance.

In the fourth regression, three models were run in order to determine which of the three provided the best explanation of HSPA Math scores for students in effective New Jersey high schools. In the first model, scores on the HSPA Math examination were regressed on mobility rate and attendance rate; in the second model, HSPA Math scores...
were regressed on attendance rate, mobility rate, instructional time, class size, and district factor grouping (DFG); and finally, in the third model, HSPA Math scores were regressed on mobility rate, attendance rate, instructional time, class size, DFG, and focus on individual growth. In analyzing the data, we see that Model 1 is significant, $F = 20.967$, significant at the .000 level; Model 2 is significant, $F = 13.938$, significant at the .000 level, and Model 3 is significant, $F = 11.514$, significant at the .000 level (see Table 20).

Table 20

<table>
<thead>
<tr>
<th>Model</th>
<th>$d^f$</th>
<th>Mean Square</th>
<th>$F$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
<td>830.312</td>
<td>20.967*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>109</td>
<td>29.602</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>5</td>
<td>474.185</td>
<td>13.938*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>106</td>
<td>34.021</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Regression</td>
<td>6</td>
<td>395.338</td>
<td>11.514*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>105</td>
<td>34.335</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* significant at the .01 level (p<.01)
In determining the relative efficacy of each of the three models, it is important to note the $R^2$ change in each of the models as new variables are entered, as seen in Table 21. In Model 1, which is significant, the $R^2$ value = .278. In model 2, the $R^2$ value = .397, with an $R^2$ change of .119, which is significant at the .000 level; this shows that model 2 provides an additional 11.9% in explained $R^2$ variance. Finally, in model 3, the $R^2$ value = .397, with an $R^2$ change of .000, which is not significant; this shows that model 3 provides no additional explanation of $R^2$ variance.

Table 21

*Model Summary 4: HSPA Math*

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.278</td>
<td>.278*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.397</td>
<td>.119*</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>.397</td>
<td>.000</td>
<td>.858</td>
</tr>
</tbody>
</table>

*significant at the .01 level (p<.01)

In further examining the efficacy of each model, we must observe how each of the predictors behaves in terms of significance within each model (see Table 22). In Model 1, student mobility rate does have a significant impact on HSPA Math scores, Beta = -.468, significant at the .000 level; and student attendance rate does have a significant impact on HSPA Math scores, Beta = .206, significant at the .013 level. This suggests that as student mobility increases, the total scores on the HSPA Math decreases, and that
as student attendance increases, there is an increase in HSPA Math scores. In Model 2, student mobility rate does have a significant impact on HSPA Math scores, Beta = -.372, significant at the .001 level; student attendance rate does have a significant impact on HSPA Math scores, Beta = .178, significant at the .022 level; instructional time does not have a significant impact on HSPA Math scores, Beta = .128; class size does not have a significant impact on HSPA Math scores, Beta = .165; and district factor grouping (DFG) does have a significant impact on HSPA Math scores, Beta = .247, significant at the .004 level. This data shows us that as student mobility increases, HSPA Math scores decreases, and as student attendance rate increases, HSFA Math shall increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA Math scores than those schools with less favorable DFG ratings. Finally, in Model 3, student mobility rate did have a significant impact on HSPA Math scores, Beta = -.375, significant at the .001 level; student attendance rate did have a significant impact on HSPA Math scores, Beta = .178, significant at the .023 level; instructional time did not have a significant impact on HSPA Math scores, Beta = .128; class size did not have a significant impact on HSPA Math scores, Beta = .167; DFG did have a significant impact on HSPA Math scores, Beta = .246, significant at the .004 level; and focus on individual growth did not have a significant impact on HSPA Math scores, Beta = -.014. This data again shows us that as student mobility increases, HSPA Math scores decreases, and as student attendance rate increases, HSPA Math shall increase, additionally, it tells us that schools with a more favorable DFG receive higher HSPA Math scores than those schools with less favorable DFG ratings.
Table 22

Coefficients 4 - HSPA Math

<table>
<thead>
<tr>
<th>Model</th>
<th>Mobility</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobility</td>
<td>-.468**</td>
<td>-5.733</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.206*</td>
<td>2.518</td>
<td>.013</td>
</tr>
<tr>
<td>2</td>
<td>Mobility</td>
<td>-.372**</td>
<td>-3.589</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.178*</td>
<td>2.321</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>.128</td>
<td>1.404</td>
<td>.162</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>.165</td>
<td>1.903</td>
<td>.060</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>.247**</td>
<td>2.935</td>
<td>.004</td>
</tr>
<tr>
<td>3</td>
<td>Mobility</td>
<td>-.375**</td>
<td>-3.544</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.178*</td>
<td>2.314</td>
<td>.023</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>.128</td>
<td>1.398</td>
<td>.165</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>.167</td>
<td>1.902</td>
<td>.060</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>.246**</td>
<td>2.904</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Indiv. Growth</td>
<td>-.014</td>
<td>-1.179</td>
<td>.858</td>
</tr>
</tbody>
</table>

** significant at the .01 level (p<.01); * significant at the .05 level (p<.05)

Each of the three models in this study were significant and provided insightful information into how the variables (attendance rate, mobility rate, instructional time, class size, DFG and goal-driven behaviors) have an impact on HSPA Math scores for students in effective schools. Model 2 accounted for 39.7% of the total variance, and
therefore proved to be the most useful model indicating the importance of mobility rate, attendance rate and district factor grouping on student achievement. In examining the results of Model 3, the data indicates that focus on individual growth, the component generated from the leadership variables, had no significant impact on HSPA Math scores, and did not account for a significant increase in explained variance.

In the fifth hierarchical regression, three models were run in order to determine which of the three provided the best explanation of HSPA Language Arts scores for students in effective New Jersey high schools. In the first model, scores on the HSPA Language Arts examination were regressed on mobility rate and attendance rate; in the second model, HSPA Language scores were regressed on attendance rate, mobility rate, instructional time, class size and district factor grouping (DFG); and finally, in the third model, HSPA Language Arts scores were regressed on mobility rate, attendance rate, instructional time, class size, DFG and communication skills. In analyzing the data, we see that model 1 is significant, $F = 17.510$, significant at the .000 level; model 2 is significant, $F = 12.972$, significant at the .000 level, and model 3 is significant, $F = 10.847$, significant at the .000 level (see Table 23).

Table 23

<table>
<thead>
<tr>
<th>ANOVA 5 - HSPA Language Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Model | df  | Mean Square | F      | Significance |
------|-----|-------------|--------|--------------|
2     | Regression | 5  | 200.510  | 12.972* | .000         |
      | Residual   | 106| 15.547   |         |              |
      | Total      | 111|          |         |              |
3     | Regression | 6  | 168.432  | 10.847* | .000         |
      | Residual   | 105| 15.527   |         |              |
      | Total      | 111|          |         |              |

* significant at the .01 level (p<.01)

In determining the relative efficacy of the each of the three models, it is important to note the $R$ squared ($R^2$) change in each of the models as new variables are entered, as seen in Table 24. In model 1, which is significant, the $R^2$ value = .243. In model 2, the $R^2$ value = .380, with an $R^2$ change of .136, which is significant at the .000 level; this shows that model 2 provides an additional 13.6% in explained $R^2$ variance. Finally, in model 3, the $R^2$ value = .383, with an $R^2$ change of approximately .003, which is not significant; this shows that model 3 provides an additional .00% in explained $R^2$ variance.

Table 24

Model Summary 5 - HSPA Language Arts

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.243</td>
<td>.243*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.380</td>
<td>.136*</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>.383</td>
<td>.003</td>
<td>.473</td>
</tr>
</tbody>
</table>

* significant at the .01 level (p<.01)
In further examining the efficacy of each model, we must observe how each of the predictors behaves in terms of significance within each model (see Table 25). In Model 1, student mobility rate does have a significant impact on HSPA LA scores, $\text{Beta} = -.493$, significant at the .000 level; and student attendance rate does not have a significant impact on HSPA LA scores, $\text{Beta} = -.002$. This suggests that as student mobility increases, the total scores on the HSPA LA decreases. In Model 2, student mobility rate does not have a significant impact on HSPA LA scores, $\text{Beta} = -.186$; student attendance rate does not have a significant impact on HSPA LA scores, $\text{Beta} = -.056$; instructional time does have a significant impact on HSPA LA scores, $\text{Beta} = .323$, significant at the .001 level; class size does not have a significant impact on HSPA LA scores, $\text{Beta} = -.137$; and district factor grouping (DFG) does have a significant impact on HSPA LA scores, $\text{Beta} = .281$, significant at the .001 level. This data shows us that as instructional time increases HSPA LA scores increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA LA scores than those schools with less favorable DFG ratings. Finally, in Model 3, student mobility rate did not have a significant impact on HSPA LA scores, $\text{Beta} = -.179$; student attendance rate did not have a significant impact on HSPA LA scores, $\text{Beta} = -.053$; instructional time did have a significant impact on HSPA LA scores, $\text{Beta} = .322$, significant at the .001 level; class size did not have a significant impact on HSPA LA scores, $\text{Beta} = -.146$; DFG did have a significant impact on HSPA LA scores, $\text{Beta} = .269$, significant at the .003 level; and communication skills did not have a significant impact on HSPA LA scores, $\text{Beta} = .058$. This data again shows us that as instructional time increases HSPA LA scores increase.
and that schools with a more favorable DFG receive higher HSPA LA scores than those schools with less favorable DFG ratings.

Table 25

*Coefficients 5 - HSPA Language Arts*

<table>
<thead>
<tr>
<th>Model</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>-.493*</td>
<td>-5.898</td>
<td>.000</td>
</tr>
<tr>
<td>Attendance rate</td>
<td>-.002</td>
<td>-.020</td>
<td>.984</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>-.186</td>
<td>-1.768</td>
<td>.080</td>
</tr>
<tr>
<td>Attendance rate</td>
<td>-.056</td>
<td>-.723</td>
<td>.471</td>
</tr>
<tr>
<td>Instructional time</td>
<td>.323*</td>
<td>3.481</td>
<td>.001</td>
</tr>
<tr>
<td>Class size</td>
<td>-.137</td>
<td>-1.556</td>
<td>.123</td>
</tr>
<tr>
<td>DFG</td>
<td>.281*</td>
<td>3.299</td>
<td>.001</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>-.179</td>
<td>-1.689</td>
<td>.094</td>
</tr>
<tr>
<td>Attendance rate</td>
<td>-.053</td>
<td>-.682</td>
<td>.497</td>
</tr>
<tr>
<td>Instructional time</td>
<td>.322*</td>
<td>3.461</td>
<td>.001</td>
</tr>
<tr>
<td>Class size</td>
<td>-.146</td>
<td>-1.636</td>
<td>.105</td>
</tr>
<tr>
<td>DFG</td>
<td>.269*</td>
<td>3.077</td>
<td>.003</td>
</tr>
<tr>
<td>Comm Skills</td>
<td>.048</td>
<td>.720</td>
<td>.473</td>
</tr>
</tbody>
</table>

* significant at the .01 level (p<.01)
Each of the three models in this study were significant and provided insightful information into how the variables (attendance rate, mobility rate, instructional time, class size, DFG and goal-driven behaviors) have an impact on HSPA LA scores for students in effective schools. Model 2 accounted for 38.0% of the total variance, and therefore proved to be the most useful model indicating the importance of instructional time and district factor grouping on student achievement. In examining the results of Model 3, the data indicates that communication skills, generated from the leadership variables, had no significant impact on HSPA LA scores, and did not account for a significant increase in explained variance.

In the sixth and final regression, three models were run in order to determine which of the three provided the best explanation of HSPA Math scores for students in effective New Jersey high schools. In the first model, scores on the HSPA Math examination were regressed on mobility rate and attendance rate; in the second model, HSPA Math scores were regressed on attendance rate, mobility rate, instructional time, class size and district factor grouping (DFG); and finally, in the third model, HSPA Math scores were regressed on mobility rate, attendance rate, instructional time, class size, DFG and communication skills. In analyzing the data, we see that Model 1 is significant, $F = 20.967$, significant at the .000 level; Model 2 is significant, $F = 13.938$, significant at the .000 level, and Model 3 is significant, $F = 11.520$, significant at the .000 level (see Table 26).

Table 26

*ANOVA 6 - HSPA Math*
<table>
<thead>
<tr>
<th>Model</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
<td>830.312</td>
<td>20.967*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>109</td>
<td>36.602</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>5</td>
<td>474.185</td>
<td>13.938*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>106</td>
<td>34.021</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Regression</td>
<td>6</td>
<td>395.457</td>
<td>11.520*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>105</td>
<td>34.328</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>111</td>
<td>.</td>
<td></td>
</tr>
</tbody>
</table>

* significant at the .01 level (p<.01)

In determining the relative efficacy of each of the three models, it is important to note the R squared \( (R^2) \) change in each of the models as new variables are entered, as seen in Table 27. In Model 1, which is significant, the \( R^2 \) value = .278. In model 2, the \( R^2 \) value = .397, with an \( R^2 \) change of .119, which is significant at the .000 level; this shows that model 2 provides an additional 11.9% in explained \( R^2 \) variance. Finally, in model 3, the \( R^2 \) value = .397, with an \( R^2 \) change of .000, which is not significant; this shows that model 3 provides no additional explanation of \( R^2 \) variance.

Table 27

*Model Summary 6 - HSPA Math*
<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.278</td>
<td>.278*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.397</td>
<td>.119*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.397</td>
<td>.000</td>
<td>.818</td>
</tr>
</tbody>
</table>

In further examining the efficacy of each model, we must observe how each of the predictors behaves in terms of significance within each model (see Table 28). In Model 1, student mobility rate does have a significant impact on HSPA Math scores, Beta = -.468, significant at the .000 level; and student attendance rate does have a significant impact on HSPA Math scores, Beta = .206, significant at the .013 level. This suggests that as student mobility increases, the total scores on the HSPA Math decreases, and that as student attendance increases, there is an increase in HSPA Math scores. In Model 2, student mobility rate does have a significant impact on HSPA Math scores, Beta = -.372, significant at the .001 level; student attendance rate does have a significant impact on HSPA Math scores, Beta = .178, significant at the .022 level; instructional time does not have a significant impact on HSPA Math scores, Beta = .128; class size does not have a significant impact on HSPA Math scores, Beta = .165; and district factor grouping (DFG) does have a significant impact on HSPA Math scores, Beta = .247, significant at the .004 level. This data shows us that as student mobility increases, HSPA Math scores decreases, and as student attendance rate increases, HSPA Math shall increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA Math scores than those schools with less favorable DFG ratings. Finally, in Model 3,
student mobility rate did have a significant impact on HSPA Math scores, Beta = -.369, significant at the .001 level; student attendance rate did have a significant impact on HSPA Math scores, Beta = .179, significant at the .022 level; instructional time did not have a significant impact on HSPA Math scores, Beta = .128; class size did not have a significant impact on HSPA Math scores, Beta = .162; DFG did have a significant impact on HSPA Math scores, Beta = .243, significant at the .006 level; and communication skills did not have a significant impact on HSPA Math scores, Beta = .018. This data again shows us that as student mobility increases, HSPA Math scores decreases, and as student attendance rate increases, HSPA Math shall increase; additionally, it tells us that schools with a more favorable DFG receive higher HSPA Math scores than those schools with less favorable DFG ratings.

Table 28

Coefficients 6 - HSPA Math

<table>
<thead>
<tr>
<th>Model</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobility</td>
<td>-0.468**</td>
<td>-5.733</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.206*</td>
<td>2.518</td>
</tr>
<tr>
<td>2</td>
<td>Mobility</td>
<td>-0.372**</td>
<td>-3.589</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.178*</td>
<td>2.321</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>.128</td>
<td>1.404</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>.165</td>
<td>1.903</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>.247**</td>
<td>2.935</td>
</tr>
<tr>
<td>Model</td>
<td>Beta</td>
<td>t</td>
<td>Significance</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>-------</td>
<td>--------------</td>
</tr>
<tr>
<td>3</td>
<td>Mobility</td>
<td>.369**</td>
<td>-3.536</td>
</tr>
<tr>
<td></td>
<td>Attendance rate</td>
<td>.119*</td>
<td>2.319</td>
</tr>
<tr>
<td></td>
<td>Instructional time</td>
<td>.128</td>
<td>1.394</td>
</tr>
<tr>
<td></td>
<td>Class size</td>
<td>.162</td>
<td>1.845</td>
</tr>
<tr>
<td></td>
<td>DFG</td>
<td>.243**</td>
<td>2.815</td>
</tr>
<tr>
<td></td>
<td>Indiv Growth</td>
<td>.018</td>
<td>.230</td>
</tr>
</tbody>
</table>

**significant at the .01 level (p<.01); * significant at the .05 level (p<.05)

Each of the three models in this study were significant and provided insightful information into how the variables (attendance rate, mobility rate, instructional time, class size, DFG and goal-driven behaviors) have an impact on HSPA Math scores for students in effective schools. Model 2 accounted for 39.7% of the total variance, and therefore proved to be the most useful model indicating the importance of mobility rate, attendance rate and district factor grouping on student achievement. In examining the results of Model 3, the data indicates that communication skills, the component generated from the leadership variables, had no significant impact on HSPA Math scores, and did not account for a significant increase in explained variance.

Conclusions

The data in the present study indicates that when we control for student and school level variables, the leadership constructs of goal-driven behaviors, focus on individual growth and communication skills have no significant impact on either HSPA
Language Arts scores or HSPA Math scores. The results of the hierarchical regressions for both HSPA Language Arts and Math scores show the impact of such variables as district factor grouping, instructional time, mobility rate, and attendance rate. Within the confines of this study, there appears to be no significant relationship between student achievement and leadership as measured by NASSP’s questionnaire when we control for other variables.

However, in comparing the three leadership factors (goal-driven behaviors, focus on individual growth, and communication skills) as they interact within each of the models, the data indicates that goal-driven behaviors, when combined with the student and school level variables, accounts for the greatest amount of explained variance. When regressed on HSPA Language Arts scores, the combination of student and school level variables combined with goal-driven behaviors explains 39.0% of total variance, as compared to focus on individual growth (38.0%) and communication skills (38.3%). Additionally, when regressed on HSPA Math scores, the combination of student and school level variables with goal-driven behaviors accounts for 39.9% of explained variance as compared to focus on individual growth (39.7%) and communication skills (38.3%).

The results stated in this Chapter will be further discussed within the confines of Chapter V.
Chapter V
SUMMARY AND RECOMMENDATIONS

The current state of education, along with the watchful eye of the public, requires that every aspect of our schools be carefully examined. Faculty skills must be honed, curriculum must be thoroughly reviewed, students must be challenged, and of course, it is crucial to ensure that the individuals running each school are provided the necessary resources and skills for successful leadership.

Though many studies have attempted to discover the link between leadership and student achievement, the relationship has proven to be a tenuous one. Additionally, the earlier thinking of the solitary school leader has begun to dissolve, and the current impetus is towards the trend of distributed leadership. Therefore, it is important to reframe the research to consider how cultures of leadership can influence the achievement of their students.

With the recent publication of NASSP’s *Breaking Ranks 2* (2004), a group of leadership criteria were deemed as being important qualities of today’s school leaders. However, the lack of empirical evidence supporting these criteria begs the question of whether or not they truly have a relationship with improved outcomes in schools (i.e. student achievement).

The purpose of this study was to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. Additionally, this study sought to determine the impact of leadership on student achievement when we control for school level variables such as
district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate.

This study explored the relationship of the leadership domains outlined by NASSP and student achievement in effective high schools in the State of New Jersey. A total of 112 teachers from 32 effective New Jersey high schools were utilized in the present study. Each of the 112 teachers completed and returned the Observer Assessment for Instructional Leaders which asked them to rate the leadership culture of their building on ten leadership domains: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses. Once the surveys were returned to their examiner, the scores were imported into SPSS, a statistical software program.

The researcher believed that if the results of this study indicate a positive impact on student achievement, the finding could be utilized to revitalize policy and practice in the State of New Jersey as it pertains to the education, licensure, hiring and professional development of school leaders.

Research Question

The purpose of this study was to determine whether leadership cultures that exhibit the leadership domains identified by NASSP have a significant relationship with student achievement. Correlational analysis was utilized to determine the relationship between student achievement and leadership cultures that establish the following behaviors: setting instructional direction, teamwork, sensitivity, judgment, results
orientation, organizational ability, oral communication, written communication, development of others, and understanding of one’s own strengths and weaknesses. The data from this matrix indicate that the majority of leadership variables examined in this study did not have a significant relationship with student achievement. Judgment and results orientation were the only two leadership variables found to have a significant relationship with both MS&A Language Arts and Math scores. Setting instructional direction and organizational ability were found to have a significant relationship with MS&A Language Arts scores, but not HS&A Math scores.

The leadership domain judgment is defined by NASSP (2004) as “reaching logical conclusions and making high quality decisions based on available information; assigning appropriate priority to significant issues; and seeking out relevant data, facts and impressions” (p.192). Results orientation is seen by NASSP as “assuming responsibility; recognizing when a decision is required; taking prompt action as issues emerge; resolving short-term issues while balancing them against long-term objectives” (p.192). These two leadership domains, which were both found to have a positive statistically significant relationship with student achievement, are both comprised of task-oriented, goal-directed behaviors. Similarly, setting instructional direction and organizational ability, both of which were found to have positive statistically significant relationships with HS&A Language Arts scores, are leadership domains that involve strategizing, allocation of resources and goal-oriented behaviors. The common theme throughout these four leadership domains appears to be goal-directed behaviors, which was found to have a significant relationship with student achievement thereby indicating
a relationship between increased levels of goal-directed behaviors and elevated scores on the HSPA

This study also sought to determine the impact of leadership on student achievement when we control for school level variables such as district factor grouping, instructional time and class size, and student level variables such as mobility and attendance rate. A hierarchical regression was utilized in order to find a relationship between the dependent variable (New Jersey HSPA - Language Arts and Math scores) and several possible predictor variables, the independent variables (student, school and leadership variables). School level variables being used were class size, instructional time, and district factor grouping (DFG); student level variables being used were mobility and attendance rate. The following 10 leadership domains taken from NASSP's Breaking Ranks 2 were utilized as the leadership variables: setting instructional direction, teamwork, sensitivity, judgment, results orientation, organizational ability, oral communication, written communication, development of others, and understanding own strengths and weaknesses. A factor analysis of the survey questions which comprised these leadership variables was conducted using a varimax rotation, and the end result was three separate leadership factors. Factor 1 (goal-driven behaviors) consisted of leadership behaviors that are associated with short- and long-term planning, prioritization of goals, and the involvement of all stakeholders in moving the school towards a shared goal. Factor 2 (focus on individual growth) consisted of behaviors that focus on personal and professional growth of not only the leaders themselves, but also their faculty. Finally, factor 3 (communication skills) consisted of behaviors that are associated with effective communication skills, whether it be writing, or speaking (expressive and receptive).
After reviewing the results of the hierarchical regression, variables such as
mobility rate, attendance rate, instructional time, and district factor grouping were found
to be significant predictors of student performance on the HSPA Language Arts and/or
HSPA Math exam. However, none of the three leadership factors (goal-driven behaviors,
focus on individual growth, or communication skills) were found to be a significant
predictor of student achievement. When making a comparison of the three leadership
factors as they performed within each of the models, the data indicates that goal-driven
behaviors accounted for the largest amount of variance within the models, which is
consistent with the results of the correlation matrix. Goal-driven behaviors appear to
have the strongest relationship with student achievement, as measured by scores on the
2004 HSPA Language Arts and Math examinations.

Student Variables

Among the many mitigating factors that can affect student achievement, student
level variables attendance rate and mobility rate were considered within the current study.
In this study, attendance rate was found to have a consistent, positive, statistically
significant relationship with HSPA Math scores, yet no statistically significant
relationship with HSPA Language Arts scores. This data indicates that as student
attendance rates increase, HSPA Math scores also increase. Although found to be an
inconsistent predictor of student achievement in this study, one does see similarities to
the study conducted by the Public Policy Institute of California (2003) which found that
"the percentage of days a student was absent was a strong, negative predictor of each
student’s gain in achievement in math and reading" (p.12).
Similarly, mobility rate was found to have a negative statistically significant relationship with HSPA Language Arts scores, and a consistent, negative, statistically significant relationship with Math. This data indicates that as student mobility decreases, scores on the HSPA Language Arts and Math exams increases. This is consistent with the results of such researchers as Michel (2004), who found that those students identified as "mobile" have on average lower achievement than "non-mobile" students. The mobility issue tends to be more of a concern in schools with a low-socioeconomic status, where there is a great deal of movement in and out of schools. As noted previously, students who experience frequent transfers are likely to suffer academically, due to the emotional impact of frequent changes, exposure to different curricula, different teaching styles, and a whole host of other obstacles to learning.

The link between student attendance and mobility rate and student achievement is undeniable; the results of this study are simply further clarification of an already known relationship. Unfortunately, today's public schools are faced with the task of attempting to decrease the gap that these variables cause in students' levels of achievement.

**School Variables**

The data presented in this research demonstrated that district factor grouping (DFG) had a positive, statistically significant relationship with Language Arts and a positive, statistically significant relationship with Math, indicating that as the DFG becomes more favorable scores on the HSPA will increase. This data shows similarities to research conducted by Coleman et al. (1966) and Goldhaber (2002) that identified the socio-economic status of students/community as one of the strongest predictors of test
scores. Unfortunately, wealth and achievement are undeniably linked, and local, state and federal governments are encumbered with the task of finding a way to gap the bridge that wealth creates. Results such as these can be devastating to those schools in low socio-economic communities who tend to become disheartened by the overwhelming link between the wealth and education of a student’s parents, and their subsequent achievement in school.

Class size was another of the school variables observed in this study. Class size had no statistically significant relationship with Language Arts, nor did it have a statistically significant relationship with Math. While class size was not seen as a predictor of student achievement within this study, other researchers have found a link between reduced class sizes and increased student achievement. For example, Jepser and Rivkin (2002) found that class size reduction led to increased student performance in test scores and had more of an impact on student achievement than teacher qualifications. Their research also indicated that this effect was even greater in those schools serving poor students, especially African-American students.

Instructional time was the final school variable examined within the confines of this study. Instructional time was found to have a positive significant relationship with Language Arts (indicating that as instructional time increases, so shall scores on the HSPA), but no significant relationship with Math. While instructional time was found to be an inconsistent predictor of student achievement, the results of this study concur with previous research by Walberg (1988) who indicated that there is a strong positive relationship between academic learning time and student achievement. While researchers such as Brown and Saks (1986) found that increased levels of instructional time benefit
the more highly structured content areas such as math and foreign languages than in the less structured ones such as language arts and social studies, the current study found that instead, increased instructional time was a better predictor of high student performance on the HSPA Language Arts.

Leadership Variables

Based on data from the current study, judgment and results orientation were the only two leadership variables found to have a significant relationship with both HSPA Language Arts and Math scores. Setting instructional direction and organizational ability were found to have a significant relationship with HSPA Language Arts scores, but not HSPA Math scores. While the results of the hierarchical regression indicate that none of the three leadership factors (goal-driven behaviors, focus on individual growth and communication skills) accounted for a significant increase in explained variance, one can extrapolate from this study that leadership cultures that exhibit goal-oriented behaviors have a significant relationship with increased student achievement.

These findings appear to concur with previous research which has demonstrated that pinpointing variables that are consistent predictors of student achievement is an arduous task. As Hallinger and Heck (1996) found in the past, different research models pertaining to the study of leadership have produced inconsistent conclusions. Many researchers have investigated the link between leadership behavior and student achievement, and found mixed results; for example Van de Grift (1989), after examining a total of 321 elementary schools, was still unsure of any consistent link between particular leadership variables and student achievement.
However, other researchers have performed empirical studies which have resulted in strategies or characteristics that are common among leaders of successful schools. Carlson, Shagle-Shah and Ramirez (1999) specifically identified 13 strategies common amongst successful leaders. Some of these strategies share common characteristics with the few leadership variables that were found to have a relationship with student performance within the confines of the correlation matrix.

Judgment, results orientation, organizational ability and setting instructional direction variables in this study (all found to have a positive significant relationship with student achievement) share similar characteristics with the following strategies delineated by Carlson, Shagle-Shah and Ramirez (1999): setting clear goals, standards and performance expectations; building shared community vision; maintaining a coordinated curriculum - articulated horizontally as well as vertically; making teachers, administrators, students and parents all accountable for school goals; and increasing time on task by instituting a number of strategies such as protecting instructional time from administrative distractions, and increasing reading time for the whole school. The common theme would appear to be that successful leaders are goal-oriented, and are adept at moving the entire school community towards a clear objective.

Additionally, the variables setting instructional direction, judgment, results orientation, and organizational ability also share common characteristics with the leadership behavior noted by Larson’s (1987) study of school principals. Larsen noted that principals in high achieving schools were more likely to exhibit the following behaviors than principals in low achieving schools: ensuring that school instructional goals are developed congruent with district policies, ensuring that instructional goals are
clearly communicated to everyone; communicating high expectations for student academic performance to staff, and participating in formal and/or informal discussions concerning instruction as it impacts student achievement. These goal-oriented behaviors which focus on instruction and expectations for performance share many similarities with the four leadership variables noted in the present study.

When comparing the current results to those of Marzano et al. (2005), several similarities among the leadership variables can be noted. The leadership variable judgment in the present study shares many qualities with the monitoring/evaluating and situational awareness responsibilities noted by Marzano, et al. Furthermore, similarities are found between the present variable known as organizational ability and Marzano et al.'s responsibilities of discipline and order. Finally, setting instructional direction shares many qualities with the responsibilities of change agent, focus, ideals/beliefs, involvement in curriculum, instruction and assessment, and knowledge of curriculum, instruction, and assessment. Those nine responsibilities noted by Marzano et al. to have a significant relationship with student achievement were also found to have a positive significant relationship with student achievement in the current study under the labels of: judgment, setting instructional direction, and organizational ability. Additionally, the strength of the correlations found in the present study ranged from .198 to .261, which is consistent with the average correlation noted by Marzano et al. of .25.

After carefully reviewing Marzano et al.'s 21 leadership responsibilities, it becomes apparent that each of these responsibilities falls within one of the three leadership domains identified via the factor analysis. The following nine leadership responsibilities would fall under factor 1 "goal-driven behaviors:" change agent,
discipline, focus, ideals/beliefs, involvement in curriculum, instruction and assessment, knowledge of curriculum, instruction and assessment, monitoring/evaluating, order, and situational awareness. Seven of Marzano et al.'s leadership responsibilities lie within factor 2 - "focus on individual growth:" affirmation, contingent rewards, flexibility, intellectual stimulation, optimizer, relationships and resources. Finally, the responsibilities communication, culture, input, outreach and visibility fall under factor 3 - "communication skills."

It is important to note that while Marzano et al. found many correlations between leadership variables and student achievement, their research stopped with the correlational data. They did not enter their leadership domains into hierarchical regressions which can provide valuable information regarding the strength of the leadership variables after accounting for the influence of other school and student variables. It is important for educators and other researchers to consider the implications of a research study where only correlational analysis is utilized. It would be wise for future researchers to include the use of hierarchical regression as part of their research in order to obtain a true picture of how multiple variables can affect student outcomes.

While some comparisons between variables can be made, it is critical note, as Heck, Larson and Maroulides (1990) stated, that "researchers are still not sure whether the association between effective principal instructional leadership and student achievement reflects a cause and effect or coincidental relationship..." (p. 95). Perhaps the leadership variables noted in the current study, results orientation, setting instructional direction, judgment and organizational ability are characteristics that have a more direct affect on the teachers within the building, and therefore there is more of an
indirect affect on the students and their subsequent achievement. As Sergiovanni (1990) noted, there are a number of value-added leadership dimensions that contribute to teachers’ sense of efficacy, motivation and commitment, which in turn, are qualities in teachers that are linked to gains in student achievement. Similarly, Hoy, Tarter and Bliss (1990) found indirect links between leadership and student achievement through teacher influence.

While setting instructional direction, judgment, results orientation, and organizational ability were found to have a significant relationship with student achievement when correlated with HSPA Language Arts and HSPA Math scores, one cannot overlook the results of the hierarchical regression which demonstrated that the three leadership components were not significant predictors of student performance on the HSPA after accounting for student and school level variables. The results from this study appear to be congruent with results from such researchers as Wooten (1997) whose study of North Carolina schools was inconclusive regarding the relationship between leadership and student achievement. Similarly, the results of Wellisch, MacQueen, Carriete and Duck’s (1978) study of successful and unsuccessful schools found no definitive link could be made between leadership and achievement among the two categories of schools. Additionally, Slater (1991) did not find a link between leadership style and student achievement in California schools; Cheng (1991) found no significant effect of leadership style on Hong Kong schools’ average rating on standardized achievement tests; and Van de Grift (1990) found no significant relationship between leadership and achievement in 104 Dutch schools, as did Brandsma and Knuver (as cited in van de Grift, 1990) in their study of 250 Dutch schools.
Implications

The current trend in education is calling for increased accountability for teachers and instructional leaders. Such policies as the No Child Left Behind Act of 2001 (NCLB) call for individual school accountability especially in the area of student achievement. This legislation calls for schools to make progress in student achievement through the year 2014. Each year, each school in the country will be expected to improve their student assessment scores. Schools not making the designated amount of student achievement (Adequate Yearly Progress) will be required to take steps to improve student achievement.

Of course, the interest in the relationship between instructional leadership and student achievement is not a novel one; research in this area has been occurring for many years, and researchers and education-based organizations have attempted to provide strategies and best practices for instructional leaders. The National Association of Secondary School Principals (NASSP) has always been a strong advocate of providing resources and current trends in education to secondary school leaders across the country. In their most recent publication, Breaking Ranks 2, they provided leaders with a questionnaire to utilize as both a self-assessment and observer assessment, indicating that the ten leadership qualities being evaluated within the questionnaire were components of successful leadership.

Based on data from the current study, the leadership variables delineated by NASSP within Breaking Ranks 2 were not found to be significant predictors of student performance on the New Jersey HSPA (both Language Arts and Math). However, one can extract from this data the importance of behaviors that move the educational
community toward common goals; behaviors such as quality decision-making, developing a vision, and properly managing the flow of activities.

As educators are involved in the process of continually revitalizing their graduate programs in order to coincide with current trends in education, they may find the results of this study to be helpful in designing and implementing course objectives related to leadership. Additionally, graduate schools in the State of New Jersey as well as other states may see the benefit to further exploring the results of this study, especially as it related to program development and implementation in the area of school leader education.

Currently, in the State of New Jersey, as well as in Arkansas, California, Connecticut, District of Columbia, Georgia, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, and Virginia, a major component of the licensure procedure for School Leaders includes the administration of a leadership assessment. The School Leadership Series was developed to

"provide a validated assessment for states to use as part of the licensure process for principals, superintendents and school leaders. These tests reflect the most current research and professional judgment and experience of educators across the country; they’re based on a national job analysis study and the standards for school leaders developed by the Interstate School Leaders Licensure Consortium” (ETS, 2005).
Based on the results of the present study, a significant portion of this standards-based examination should include the school leader's aptitude as related to fact-finding, goal-directed behaviors.

As school districts throughout the State are searching for new, qualified candidates to fill the positions of leadership within their schools, they should carefully consider the potential candidates' abilities to make decisions, move the organization towards a common vision, and assume responsibility. While the leadership assessment developed by NASSP may not be the most appropriate assessment tool to measure leadership behaviors in these areas, the use of another proven, research-based tool may be a wise choice when discriminating between candidates.

As current school leaders continue their journey of leadership in positions across the country, they should be cognizant at all time of their areas of strength and weakness, particularly as they pertain to their ability to follow clear objectives and make well-informed decisions. School leaders should have the ability to periodically assess their leadership skills, either by the use of a self-assessment tool or observer assessment.

While the current study did not bode well for the assessment tool developed by NASSP, there are other leadership assessment tools that can be utilized by school leaders in order to assess their skill levels in various areas. Based on the results of this study, school leaders should pay particular attention to their abilities to acquire pertinent information relating to decision-making, recognize when decisions must be made, implement strategies related to teaching and learning, and focus the school community towards the achievement of common goals and objectives.
At the outset of this research project, the researcher contacted NASSP in order to determine what reliability data was available for the Observer Assessment for Instructional Leaders. At the time, no such data was available, and therefore the internal consistency of the items measuring the ten leadership domains was unknown. For this reason, the researcher determined the reliability coefficient for each of the 10 leadership domains being measured within NASSP’s questionnaire. Cronbach’s alpha measures how well a set of items (or variables) measures a single unidimensional latent construct. When data have a multidimensional structure, Cronbach’s alpha will usually be low; however, if the inter-item correlations are high, then there is evidence that the items are measuring the same underlying construct. For each of the leadership domains in question, Cronbach’s alpha exceeded .70 (see Table 3), thereby indicating high internal consistency among the items.

Although the current study did not support an overall high statistically significant relationship between leadership and student achievement, the reliability coefficients calculated for the leadership questionnaire developed by NASSP do speak to the positive aspects of the instrument’s psychometric properties. This instrument can again be utilized in further research with the confidence that it measures the leadership variables it purports to measure; it can also serve as a valuable tool for those educational leaders who are attempting to hone their leadership skills via use of self-assessment and observer questionnaires.
Future Research

Results from this study need to be carefully considered in light of their significance in the overall picture of school leadership and student achievement. Regardless of any of the relationships discovered within this study, the reader should digest the current information with the idea that it would be unadvisable to assume that the results of this research can be automatically extrapolated to other New Jersey high schools, or other State’s high schools. Additionally, this study utilized data from the New Jersey School Report Cards and therefore cannot hope to capture all aspects of the learning environment that may influence student achievement. The researcher would recommend that similar studies be conducted both within and outside the State of New Jersey to further investigate whether the leadership domains presented by NASSP can be considered “best practices” by secondary school leaders.

Based upon the findings of this study, the following recommendations for further study are offered:

1. Utilize NASSP’s leadership questionnaire and do a comparative study of both high achieving and low achieving secondary schools.

2. This study should be replicated on a statewide and perhaps national level to give a broader demographic base to the findings and sample.

3. A mixed methodology study of quantitative and qualitative analysis should be conducted. The triangulation of data on subjective questions about leadership cultures, utilizing interviews to gain greater insight into leadership behaviors, would be helpful.
4. Replicate the study in the same schools, having the members of the leadership culture complete the same leadership questionnaire (self-assessment form), and compare the results from that study with the results of the current study.

5. In light of the results found by Marzano et al. (2005), replicate this study utilizing a different survey instrument that measures similar leadership characteristics, and compare the results to the current study.

6. Replicate this study in elementary and middle schools in the State of New Jersey to determine if findings similar to this study are found.

7. Conduct a longitudinal study to determine whether the increases in accountability for school leaders is having an effect on leadership behaviors (specifically, those measured with the current NASSP instrument) and its subsequent relationship with student achievement.

School leaders striving to become effective instructional leaders do not follow a list of prescribed leadership strategies. To become an effective leader, one must be taught, practice, and learn from mistakes. Specific aspects of instructional leadership often go unseen or are immeasurable by surveys or observations. Effective instructional leaders must have the ability to inspire their teachers, engage parents, and challenge students towards the common goal of achieving excellence.


Michel, A.P. (2004). *What is the relative influence of teacher educational attainment on student NJASK 4 scores?* Doctoral Dissertation, Seton Hall University, South Orange, NJ.


Notes from the field: KERA in the classroom. (2000, March). Notes from the field: Education reform in rural Kentucky, 7, 1.


Tennessee's Project STAR. (September, 1999). *The Education Digest*. 


Appendix A

Letter to NASSP Requesting Permission to Reproduce
and Distribute Leadership Survey
February 2005

Dear Mr. Furrace,

My name is Erica D’Agostino Matos and I am an aspiring school administrator and doctoral candidate in the Educational Administration and Supervision program in the College of Education at Seton Hall University. I have reached the point in my program where I am conducting research for my dissertation entitled: Leadership Characteristics of Principals in Effective New Jersey High Schools. I am contacting you to request permission to reproduce and distribute the Leadership Survey (Observer Form) published in Breaking Ranks 2 as part of my research study.

The purpose of my research is to determine whether a relationship exists between the ten leadership characteristics measured in the National Association of Secondary School Principals’ Leadership Survey (Setting Instructional Direction, Teamwork, Sensitivity, Judgment, Results Orientation, Organizational Ability, Oral Communication, Written Communication, Development of Others, and Understanding Own Strengths and Weaknesses) and student achievement (as measured by scores on the March 2004 administration of the New Jersey HSFA). For this study, I have chosen to utilize “effective” high schools in the State of New Jersey. For the purpose of my research, I have defined “effective” high schools as those whose mean HSFA Language Arts and Math scores are above that of the State mean. It is my goal to determine whether Principals in these effective high schools do, in fact, exhibit the characteristics/behaviors outlined by NASSP in their survey.

I would like to distribute the NASSP leadership survey to teachers in effective high schools throughout the State of New Jersey, and have them rate their current Principal based on their observations of his/her behavior. After receiving the completed surveys, the data will be collected and I will determine the relationship between the ten previously mentioned leadership variables and student achievement.

Thank you for your consideration of this matter. If you require any further information, I can be reached at the following numbers: phone - (610)517-0951, fax – (610)258-3588, or email – ematos@pjd.net.

Sincerely,

Erica D’Agostino Matos, Ed.S.
Appendix B

Letter from NASSP Granting Permission to
Reproduce and Distribute Leadership Survey
January 2005

Dear Mr. Ferrace,

My name is Erica D'Agostino Matos and I am an aspiring school administrator and doctoral candidate in the Educational Administration and Supervision program in the College of Education at Seton Hall University. I have reached the point in my program where I am conducting research for my dissertation entitled: Leadership Characteristics of Principals in Effective New Jersey High Schools. I am contacting you to request permission to reproduce and distribute the Leadership Survey (Observer Form) published in Breaking Ranks 2 as part of my research study.

The purpose of my research is to determine whether a relationship exists between the ten leadership characteristics measured in the National Association of Secondary School Principals' Leadership Survey (Setting Instructional Direction, Teamwork, Sensitivity, Judgment, Results Orientation, Organizational Ability, Oral Communication, Written Communication, Development of Others, and Understanding Own Strengths and Weaknesses) and student achievement (as measured by scores on the March 2004 administration of the New Jersey HSFA). For this study, I have chosen to utilize "effective" high schools in the State of New Jersey. For the purpose of my research, I have defined "effective" high schools as those whose mean HSFA Language Arts and Math scores are above that of the State mean. It is my goal to determine whether Principals in these effective high schools do, in fact, exhibit the characteristics/behaviors outlined by NASSP in their survey.

I would like to distribute the NASSP leadership survey to teachers in effective high schools throughout the State of New Jersey, and have them rate their current Principal based on their observations of his/her behavior. After receiving the completed surveys, the data will be collected and I will determine the relationship between the ten previously mentioned leadership variables and student achievement.

Thank you for your consideration of this matter. If you require any further information, I can be reached at the following numbers: phone - (610)517-0951, fax - (610)258-3588, or email -.............

Sincerely,

Erica D'Agostino Matos, Ed.S.
Appendix C

Letter to Superintendents Requesting Permission to Solicit Participation in Their School
February 2005

Dear [New Jersey] Superintendent,

My name is Erica D’Agostino Matos, and I am currently a doctoral candidate at Seton Hall University in the Department of Educational Leadership, Management and Policy. I am now at the point of conducting research for my dissertation, and I am writing to respectfully request your high school’s participation in my research.

The purpose of my study is to determine whether leadership cultures that exhibit the ten leadership domains identified by the National Association of Secondary School Principals (NASSP) have a significant relationship with student achievement when we control for other variables. I have chosen to conduct my research only in what I have deemed to be effective high schools. For the purpose of this study, I have examined the scores on the March 2004 administration of the HSPA for each secondary school in the State of New Jersey, and based upon my definition of an effective school, your school qualifies as one of the most effective schools in the State. I personally believe that in this time of school reform, we will learn the most from schools that are currently succeeding at high rates, and performing above State means. Your school is obviously an effective, high achieving educational organization, and I would truly appreciate your permission to include it in my study.

The goal of my study is to have ten randomly selected teachers from each of the effective high schools participating in my study complete a survey published by NASSP in Breaking Ranks 2. The teachers would not be rating an individual; rather, they would be rating the leadership culture within their building. The leadership culture of their building will include anyone in a position of leadership (e.g. principal, vice-assistant principals, department heads, etc.). After controlling for such factors as district factor grouping, class size, instructional time, student attendance, and mobility, I hope to determine whether NASSP’s ten leadership domains are associated with student achievement (as measured by HSPA scores). While I will make a brief statement regarding the names of the effective schools that have agreed to participate in the study, there will be no mention of school or teacher names within the confines of my data analysis. All information regarding the results from the survey will be coded and kept completely confidential.

If you are willing to have your effective school incorporated in my research, I would truly appreciate a very brief letter stating your willingness to participate which you can mail or
fax to me at the addresses at the top of this letter. I do realize the enormous number of requests that you must face on a daily basis; I am sure that other researchers and doctoral candidates are clamoring to utilize your school in their studies. However, if you would be willing to allow me to conduct this research in your school, I would be very grateful, and would relish the opportunity to obtain information from a school as effective as yours.

Thank you for considering this request.

With much appreciation,

Erica D’Agostino Matos, Ed.S.
Appendix D

Response from NJ Superintendents
April 26, 2005

To Whom It May Concern:

This letter is to inform you of Cinnaminson High School's intent to cooperate with Ms. Enrica D'Agostino-Matos on doing research for her dissertation. Ms. Matos has outlined her needs, and I am certain that we can accommodate her.

Be advised that our Superintendent, Dr. Salvatore Iuzzo, has also granted us permission to participate.

Sincerely,

[Signature]

Dr. Michael T. Zark
Principal
April 26, 2006

To Whom It May Concern:

Erin O'Gorman Makoff has the permission of the Northern Valley Board of Education to survey teachers in our high school as part of her doctoral dissertation on leadership cultures and school achievement.

Very truly yours,

Jan A. Furman
Superintendent of Schools
April 26, 2005

Mrs. Erica Mateo
Fax: 610-258-3588

Re: Dissertation Approval

Dear Ms. Mateo,

The Warren Hills Regional High School agrees to take part in your dissertation study as presented to me.

We look forward to working with you on this endeavor.

Respectfully,

Thomas O'Brien
Principal

Warren Hills Regional High School
Gateway Regional High School District
771 Towne Road
Woodbury Heights, New Jersey 08096-6218
(856) 468-8200 Tel., 220
FAX: (856) 468-5099
E-mail: jmattox@gateway.nj.us

April 22, 2005

Erica D’Agostino Mattox
765 Texas Road
Easton, PA 18042

Dear Ms. Mattox,

I have received your request to survey our instructional staff members via the district’s superintendents. The Gateway Regional High School staff is more than happy to participate in your research.

Please forward the required information so that we may assist you immediately. As you gather the requested data, I will be happy to serve as your contact person. Please do not hesitate to call me, or my office, for assistance at (856) 468-8200 extension 220.

Sincerely,

Joe Mattox
Director of Curriculum & Instruction

Survey the community of Woodbury, Woodbury Heights, and Woodtown Heights
April 25, 2005

To Whom It May Concern:

This letter is to approve a survey being distributed to the high school teachers at Southern Regional High School. The survey is part of a doctoral dissertation on leadership cultures and school achievement to be completed by Erica Mattos.

Sincerely,

[Signature]

James D. Kerfoot, Ed.D.
Superintendent

[Department]
TO:       Erica D'Agostino Matos
FROM:    James C. Ricebeano, Principal
SUB:       Request to Conduct Research at BRSHS
DATE:    February 23, 2005

Permission is granted for you to conduct research at Bridgewater-Raritan High School by surveying a randomly selected teachers as part of your Seton Hall University graduate work on the topic of leadership domain.

All arrangements for the administration of this survey should be made through me.

Thank you.

Sincerely,

James C. Ricebeano
Principal
908-235-6600 P.E. 1209
JRicebeano@brhsd1212.net

Number of Pages (including cover sheet- 1)
Page (Stapled)
Dear Mr. Mattis,

I am in receipt of your letter requesting permission to include McNair Academic High School in your research for your dissertation.

I have visited McNair Academic High School in your study as requested. Please contact Mr. Robert Reagorries, Principal at (201) 418-5048. In the meantime, I will make contact to inform him that you will be calling.

Best wishes and much success for your future endeavor.

Sincerely,

Franklin Walker
Assistant Superintendent
To: Erisa D'Agostino Mens

From: John A. Tuleta

Date: February 21, 2005

As someone who truly understands the difficulty of trying to find participants for dissertation studies, I would be honored to have the North Warren Regional School District serve as one of the participants in your study. Currently I am preparing Chapter IV of my dissertation and should be prepared to defend in September 2005.

With all of that being said please feel free to contact me at your earliest convenience at (908) 362-9816 (my private line) so that we can discuss this issue further. I welcome the opportunity for North Warren to serve as a participant in your study!
I have read your request to design a study and survey teachers to collect data at Edison High School and J.P. Beauregard High School as part of your research for your dissertation. Your request is approved with the following conditions:

Sincerely yours,

[Signature]
Rose Traill-Gill Ed.D.
Assistant Superintendent

cc:
J. Kovacs
F. Ricozo

Nothing Less Than Excellence
March 3, 2005

Erik D’Agostino Mates
75 Titan Road
Emma, PA 18042

Dear Erik:

High Point Regional High School is willing to participate in your study. Please forward the appropriate correspondence necessary to begin the process of selecting the subjects necessary to enact in your proposal.

Sincerely,

[Signature]

James P. Flanska
Principal

JRP:ah
February 28, 2005

Ms. Erin D'Agostino Matos, Ed.S.
765 Texas Road
Easton, PA 18042

Dear Ms. Matos:

Permission is granted for you to conduct your study at Westfield High School.

Please contact Dr. Robert Peltz, WHS Principal, for further information.

Sincerely yours,

William J. Foley

cc: Dr. Robert Peltz
WHP
March 8, 2005

Erica D’Agostino Mats
765 Texas Road
Easton, PA 18042

Dear Ms. D’Agostino Mats:

Please be advised that your request to include Cedar Grove High School in your doctoral research is hereby approved. The high school principal, Dr. Judith Nappi, will be your primary contact for this endeavor. She may be reached at 973-239-6400.

Best wishes on your research and ongoing doctoral work.

Sincerely,

[Signature]

Judith R. Merz
Superintendent

C. Dr. J. Nappi, Cedar Grove HS Principal
March 7, 2005

Ms. Erica D'Agostino Mates, Ed.S.
765 Texar Road
Easton, PA 18042

Dear Ms. Mates:

In response to your letter requesting permission to conduct your doctoral research in the Parsippany-Troy Hills Township School District I forwarded your request to the principal of both high schools in Parsippany, Parsippany High and Parsippany Hills. Research of the type that you are proposing requires the willing participation of the administration in the high school and, with that in mind, I offered both of my administrators the opportunity to participate in your study.

I have received a response from both administrators and Mr. Anthony Sciama, Principal of Parsippany High School, has declined to participate, and Dr. Richard Kunitz, Principal of Parsippany Hills High School, has indicated to me a willingness to participate in the research that you are conducting.

Please contact Dr. Richard Kunitz at 973-682-2815 ext. 3001 to make whatever arrangements are appropriate to proceed with your doctoral study.

Please contact me if you require any additional assistance.

Sincerely,

Eugene J. Vaule
Superintendent of Schools

Parsippany-Troy Hills Township Schools

Eugene J. Vaule
Superintendent of Schools

March 7, 2005

Ms. Erica D'Agostino Mates, Ed.S.
765 Texar Road
Easton, PA 18042

Dear Ms. Mates:

In response to your letter requesting permission to conduct your doctoral research in the Parsippany-Troy Hills Township School District I forwarded your request to the principal of both high schools in Parsippany, Parsippany High and Parsippany Hills. Research of the type that you are proposing requires the willing participation of the administration in the high school and, with that in mind, I offered both of my administrators the opportunity to participate in your study.

I have received a response from both administrators and Mr. Anthony Sciama, Principal of Parsippany High School, has declined to participate, and Dr. Richard Kunitz, Principal of Parsippany Hills High School, has indicated to me a willingness to participate in the research that you are conducting.

Please contact Dr. Richard Kunitz at 973-682-2815 ext. 3001 to make whatever arrangements are appropriate to proceed with your doctoral study.

Please contact me if you require any additional assistance.

Sincerely,

Eugene J. Vaule
Superintendent of Schools

Parsippany-Troy Hills Township Schools

Eugene J. Vaule
Superintendent of Schools

March 7, 2005

Ms. Erica D'Agostino Mates, Ed.S.
765 Texar Road
Easton, PA 18042

Dear Ms. Mates:

In response to your letter requesting permission to conduct your doctoral research in the Parsippany-Troy Hills Township School District I forwarded your request to the principal of both high schools in Parsippany, Parsippany High and Parsippany Hills. Research of the type that you are proposing requires the willing participation of the administration in the high school and, with that in mind, I offered both of my administrators the opportunity to participate in your study.

I have received a response from both administrators and Mr. Anthony Sciama, Principal of Parsippany High School, has declined to participate, and Dr. Richard Kunitz, Principal of Parsippany Hills High School, has indicated to me a willingness to participate in the research that you are conducting.

Please contact Dr. Richard Kunitz at 973-682-2815 ext. 3001 to make whatever arrangements are appropriate to proceed with your doctoral study.

Please contact me if you require any additional assistance.

Sincerely,

Eugene J. Vaule
Superintendent of Schools
March 10, 2005

Ms. Erica D’Agostino Matos, Ed.S.
765 Texas Road
Easton, PA 18042

Dear Ms. Matos:

We are in receipt of your recent letter requesting permission to include Jefferson Township High School in your research relating leadership culture to student achievement. We are pleased to inform you that we are willing to participate.

Mrs. Virginia Joiner, principal of our high school, has been informed of your intent to contact ten randomly-selected teachers who will be asked to complete a survey. She is expecting to hear from you in the near future.

We are glad to be able to assist you in this way and would be interested in receiving a copy of the results of your research once completed. Good luck in this endeavor and please feel free to contact me should you need additional information or require further assistance.

Very truly yours,

Gary R. Bowen

C: Dr. Lisa Amstutz, Assistant Superintendent
   Mrs. Virginia Joiner, JTHS Principal
Sparta High School
70 West Mountain Road
Sparta, New Jersey 07871-3598
Ph: (973) 720-4191
Fax: (973) 720-9218

Principal

March 3, 2005

Ms. Erica D'Agostino Matos
765 Texas Road
Easton, PA 18042

Dear Erica:

Sparta High School is willing to participate in your doctoral research. Please contact me directly to initiate the process.

Sincerely,

Richard S.
Principal

We Choose to be Real People
March 18, 2005

Ms. Erica D’Agostino Matos
786 Texas Road
Easton, PA 18042

Dear Ms. Matos:

I am writing to let you know that Millburn High School will participate in the research for your dissertation as a doctoral candidate at Seton Hall University.

Sincerely,

[Signature]

KAN.com

Keith A. Nelligan
Principal
March 18, 2005

Ena D’Agostino Matos
765 Tacony Road
Easton, PA 18042

Dear Ms. Matos:

Your request to include Moorestown High School in your research for your dissertation has been approved.

Please do not hesitate to contact me if I can be of further assistance.

Sincerely,

[Dennis Copeland
Principal

[Signature]
March 31, 2005

Elsa D’Agostino Mates
765 Texas Road
Eston, PA 18042

Dear Ms. D’Agostino Mates:

I am responding to your letter of request to include the Monroe Township High School in your research toward your dissertation.

At this time, permission is granted to you to incorporate Monroe Township High School in your study.

Sincerely yours,

Dr. Christopher H. Timken
Assistant Superintendent of Schools

Copy: Dr. Frank Keyen
April 13, 2005

Ms. Erica D'Agostino Matos
765 Texas Road
Easton, PA 18042

Dear Ms. Matos:

Please accept this statement as official permission for you to conduct your doctoral research project in the Eastern Camden County Regional High School District. Contact Dr. Harold Melleby (mellebym.harold@eastern.k12.nj.us) to make the specific arrangements.

Best wishes for the successful completion of your program.

Sincerely,

Michael E. Schreiner, Ed.D.
Superintendent

cc: Dr. Harold Melleby
FEC
WOODSTOWN HIGH SCHOOL
140 EAST AVENUE
WOODSTOWN, NEW JERSEY 08098-1392
(856) 769-0144
Fax (856) 769-0102

April 18, 2005

Ms. Erica Matos
765 Texas Rd.
Easton, PA 18042

Dear Ms. Matos:

I would be delighted to have Woodstown High School participate in your doctoral study. I would ask that you forward the survey instruments to my attention and I will make sure they are completed and returned. If this is a problem, please contact me at (856) 769-0144 ext. 235 and we will discuss it.

Again, we would be delighted to participate.

Sincerely,

Dr. Scott M. Hoopes
Principal

C. R. Bumpus
TO: Seton Hall University Institutional Review Board

Kingsway Regional High School is a agreement to allow Erica Morris to survey our staff for her doctoral dissertation on leadership cultures and school achievement.

Sincerely,

Thomas A. Coleman Jr.
Principal

TAC:ab

cc: Mr. Dowly

FAX: 1-610-236-3588
April 16, 2005

To Whom It May Concern:

Shore Regional High School District grants permission to Erica D’Agostino Mame to survey staff at our high school as part of her doctoral dissertation on leadership, culture, and school achievement. Should you require any additional documentation, please feel free to contact me at the above number, ext. 201.

Sincerely,

[Signature]

Luisa A. Peters

The mission of Shore Regional High School is to educate the whole person for self-actualization, cooperative living, and life-long learning.
April 29, 2005

To whom it may concern:

Please accept this letter as notification of approval for Eula D'Agostino Maito to conduct a survey of teachers at Middletown South as part of her doctoral dissertation.

If you have any questions please do not hesitate to call me on the above number.

Mark C. Kiley

Middlesex County Board of Education

High School Search... providing a culture of quality to support standards of excellence
Tenaflly Public Schools

Office of the Principal

May 4, 2005

Elisa D'Agostino Maisa
Siena Hall University
Doctoral Student

Dear Mr. Jonas,

On behalf of Tenaflly High School, I would like to accept your invitation to participate in
your Spring PA Forward study on leadership cultures and school achievement.

Sincerely,

[Signature]

Vera P. Keenaghan, Ed.D.
Principal

[Handwritten Notes]
April 29, 2005

Dear Ms. Matsi:

Hubbard Central Regional High School has given permission for you to survey up to 10 teachers as part of your doctoral study at George North. Please contact me if you have any questions or need additional information. I can be reached at 309-284-7135 or e-mailed at bravo@bravo.k12.nj.us.

Sincerely,

Dr. Lee Seltz
Superintendent
Hubbard Central Regional High School
14 Route 31
Flemington, NJ 08822
Dear Seton Hall University Doctoral Candidate,

I am willing to allow your dissertation research survey of 10 randomly selected graduates from Livingston High School as described in your letter to me.

Sincerely,

Mark R. Mangel, Ed.D.
I have discussed your request with our building administrators and we welcome you to conduct your study room at Lakeland Regional High School. You will be working with Mr. Joseph Casano, the principal at your assigned person for your project. His email is jcasano@lakeland.k12.fl.us and phone is (438) 335-1560 ext 414. We will need more information prior to you having access to our facilities. Please contact me to work out any arrangements necessary.

I thank you for your interest in the Lakeland Regional High School District and look forward to working with you on your project.

Albert J. Casano
Date: Sandwork (sandwork@gmail.com)  
Sent: Friday, April 06, 2024 4:00 PM  
To: sandwork@gmail.com  
Subject: research

I would be open to having ten staff fill out the survey for your research.
Contact me up to register.

Sincerely,
Sandwork  
Hollins Heights High School
From: Lee Anne Ora [ora@westwood.k12.nj.us]
Sent: Monday, March 14, 2005 8:39 PM
To: snual@feld.net
Subject: Approval to Participation in Study

March 14, 2005

Dear Mrs. Maze,

The purpose of this email is to confirm our conversation today, Monday, March 14, 2005. Westwood Regional Jr./Sr. High School in the Township of Washington, New Jersey will participate in your research study for Seton Hall University. As Vice Principal and World Language Department Supervisor, I will gladly serve as a liaison for you as needed. Please contact me at 201-464-0880 Ext. 219 when I can be of additional assistance to you in your research.

Sincerely yours,

Ms. Lee Anne Ora
Vice Principal/World Language Supervisor

2/16/2005
Erica Matoz

From: Timothy O'Halloran (thalloran@somerville.k12.nj.us)
Sent: Tuesday, March 08, 2005 3:47 PM
To: gmatos@jmu.net
Subject: Reply

Dear Ms. Matoz,

Somerville High School will be willing in participating in your research for your dissertation.
Please contact Patricia Lember, Assistant Principal, at 908-218-124 or 908-218-124 to make an arrangement. I wish you good luck with your research and dissertation.

Tim O'Halloran
Principal
Somerville High School
Erica Matos

From: Chris Canabba [jcd1003006@yahoo.com]
Date: Wednesday, March 02, 2005 9:12 AM
To: erica@feld.net
Subject: Verona High School

Hello Erica,
I am currently the VP at Verona High School. We received your letter and are willing to allow you to use our school in your event.
You can reach me at (973) 398-3300 ext 29 for further information or you can use this email address.
Thank you,
Chris Canabba

Celebrate Yeshoo's 10th Birthday!

3/2/2005
From: Bob Smith [bsmith@pds.net]
Sent: Friday, February 25, 2005 1:47 PM
To: ericamatos@psd.net

Subject: Dissertation study

3/25/05
Dear Mr. Matos,
I'm glad to have teachers who volunteer to do so take part in your study. I understand that you will randomly select 10 teachers and will ask each to complete a written survey. Many thanks.

Bob Smith, Department Chairman
Raman-Fair Haven Regional High School
Raman, NJ 07720
I hope this email will suffice. I will be happy to have staff members here at Hawthorne High School participate in your research project as part of your studies at SHU. I have informed my Superintendent of Schools, Dr. Richard Sheflin, and he is aware of our participation and supports the project. Please contact me if you require any further information, and I look forward to hearing from you more formally once you've through the IRB. Good luck!

David Browne
Appendix E

Informed Consent
Dear Colleague,

My name is Erica D'Agosino Matos and I am an aspiring school administrator and doctoral candidate in the Educational Leadership, Management and Policy program in the College of Education at Seton Hall University. I have reached the point in my program where I am conducting research for my dissertation entitled: The Culture of Leadership and Student Achievement in Effective New Jersey High Schools, and I am requesting your participation in my study.

Purpose
The purpose of my research is to determine whether leadership cultures that exhibit the ten leadership domains identified by the National Association of Secondary School Principals (NASSP) have a significant relationship with student achievement when we control for other factors. For this study, I have chosen to utilize "effective" high schools in the State of New Jersey. For the purpose of my research, I have defined "effective" high schools as those whose mean HSPA Language Arts and Math scores are above that of the State mean. It is my goal to determine whether the leadership culture in these effective high schools or, in fact, exhibit the leadership domains outlined by NASSP in their recent publication Breaking Ranks 2.

Procedures/Instruments
Participation in this study will require approximately 10–15 minutes of your time. You will be asked to sign and date this Informed Consent Form, the NASSP Leadership Survey (Observer Form), and a small index card to indicate whether you would like to be included in a small cash drawing ($100) and/or you would like to receive a copy of the survey results. The majority of your time will be spent completing the leadership survey. This survey consists of 54 items which are responded to on a Likert (1–5) scale. When responding to each item, you will be asked to consider the collective behavior of the leadership culture within your school. When using the term leadership culture, I am referring to each person who is considered to be in a position of leadership in your building (e.g. principal, vice-principal, department heads, etc.). As you complete the survey, do not base your responses on the actions of one particular person, rather, consider the collective behavior of your team of leaders as a whole. You will be responding to each statement as: "The leadership culture of this building tailors messages to meet the needs of diverse audiences".

Voluntary Participation
Participation in this research study is, of course, voluntary. If you decide not to participate in this study, there will be absolutely no penalty or loss of benefits to which you are otherwise entitled.

Anonymity/Confidentiality
Although I will make a brief statement naming only the high schools (not the teachers) that agreed to participate in my study (within the confines of Chapter 3 – Methodology),
there will be no mention of teacher or high school names within the results section (Chapter 4) of my dissertation; I will be the only person privy to this information. As the surveys are returned to me, they will be coded for confidentiality purposes, and all instrumentation packets and coding information will be kept in a locked cabinet, to which only I shall have access. None of the individuals in a position of leadership will receive feedback as to the responses you provide on your survey; I will be the only person to privy to the responses.

Risks/Benefits
There are no anticipated risks or benefits as a result of your participation in this study.

Contact Information
In the event that you are willing to participate in my research study, I would kindly ask that you sign and date this consent form, complete the leadership survey, and fill out the index card (if you so choose). Once all materials are completed, please return them to me in the enclosed stamped and addressed envelope that I have included. Furthermore, if you require additional information, or have any questions, please feel free to phone (610-517-0951), fax (610-258-3588) or email me (ematos428@hotmail.com). I would be more than happy to answer any of your questions.

Thank you for offering your time to participate in this research study. I truly appreciate your time and help in completing this project.

Consent
I agree to participate in this research study as it has been described to me.

_________________________  ________________________
Signature                                        Date
Appendix F

NASSP Leadership Assessment
Observer Assessment for Instructional Leaders (NASSP)

Circle the number for each item that best describes the leadership characteristics of the leadership culture in your building. When envisioning the leadership culture, please do not think only of one person: think of every person who holds a position of leadership (Principal, Assistant/Vice-Principal, Department Heads, Supervisors, etc.), and consider this group collectively as being representative of the leadership culture in your building.

Setting Instructional Direction: Implementing strategies for improving teaching and learning including putting programs and improvement efforts into action. Developing a vision and establishing clear goals, providing direction in achieving stated goals, encouraging others to contribute to goal achievement; securing commitment to a course of action from individuals and groups. 1=almost never 2=rarely 3=occasionally 4=frequently 5=almost always na=not applicable

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<tr>
<td>1. The leadership culture of this building articulates a clear vision for the school and its efforts.</td>
<td>1 2 3 4 5 na</td>
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<td>2. The leadership culture of this building sets high expectations for self and others.</td>
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<td>3. The leadership culture of this building encourages innovation toward improved teaching and learning</td>
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<td>4. The leadership culture of this building sets and clarifies measurable objectives</td>
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<td>5. The leadership culture of this building generates enthusiasm and works to persuade others to work together to accomplish common goals</td>
<td>1 2 3 4 5 na</td>
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<td>6. The leadership culture of this building develops alliances and/or resources outside the school that improve the quality of teaching and learning</td>
<td>1 2 3 4 5 na</td>
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<td>7. The leadership culture of this building clearly articulates expectations regarding the performance of others</td>
<td>1 2 3 4 5 na</td>
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<tr>
<td>8. The leadership culture of this building acknowledges achievement and accomplishment of others</td>
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Teamwork: Seeking and encouraging involvement of team members, Modeling and encouraging the behavior that move the group to task completion. Supporting group accomplishments. 1=almost never 2=rarely 3=occasionally 4=frequently 5=almost always na=not applicable

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<tr>
<td>9. The leadership culture of this building supports the ideas and views of team members to solve problems</td>
<td>1 2 3 4 5 na</td>
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<td>10. The leadership culture of this building encourages others to share their ideas</td>
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<td>11. The leadership culture of this building contributes ideas toward achieving a solution</td>
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<tr>
<td>12. The leadership culture of this building seeks input from others regarding their own ideas and solutions</td>
<td>1 2 3 4 5 na</td>
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Sensitivity: Perceiving the needs and concerns of others; dealing tactfully with others in emotionally stressful situations or in conflict. Knowing what information to communicate and to whom. Appropriately relating to people of varying ethnic, cultural, and religious backgrounds.

1=almost never 2=rarely 3=occasionally 4=frequently 5=almost always na=not applicable

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<tr>
<td>13.</td>
<td>The leadership culture of this building deals appropriately and tactfully with people from different backgrounds</td>
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<tr>
<td>14.</td>
<td>The leadership culture of this building elicits perceptions, feelings, and concerns of others</td>
<td></td>
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<td>15.</td>
<td>The leadership culture of this building voices disagreement without creating unnecessary conflict</td>
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<td>16.</td>
<td>The leadership culture of this building communicates necessary information to the appropriate persons in a timely manner</td>
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<tr>
<td>17.</td>
<td>The leadership culture of this building diverts unnecessary conflict</td>
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<td>na</td>
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Judgment: Reaching logical conclusions and making high quality decisions based on available information. Assigning appropriate priority to significant issues. Exercising appropriate caution in making decisions and in taking action. Seeking out relevant data, facts and impressions. Analyzing and interpreting complex information.

1=almost never 2=rarely 3=occasionally 4=frequently 5=almost always na=not applicable

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<tr>
<td>18.</td>
<td>The leadership culture of this building assigns appropriate priority to issues and tasks</td>
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<tr>
<td>19.</td>
<td>The leadership culture of this building avoids reaching quick conclusions and making decisions with limited data</td>
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<td>20.</td>
<td>The leadership culture of this building evaluates information to determine the important elements</td>
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<tr>
<td>21.</td>
<td>The leadership culture of this building seeks to identify the cause of a problem</td>
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<td>na</td>
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Results Orientation: Assuming responsibility. Recognizing when a decision is required. Taking prompt action as issues emerge. Resolving short-term issues while balancing them against long-term objectives.

1=almost never 2=rarely 3=occasionally 4=frequently 5=almost always na=not applicable

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<tr>
<td>22.</td>
<td>The leadership culture of this building takes action to move issues toward closure in a timely manner</td>
<td></td>
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<td>na</td>
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<tr>
<td>23.</td>
<td>The leadership culture of this building takes responsibility to implement initiatives to improve teaching and learning</td>
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<tr>
<td>24.</td>
<td>The leadership culture of this building considers the long-term and short-term implications of a decision before taking action</td>
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<tr>
<td>25.</td>
<td>The leadership culture of this building sees the bigger picture</td>
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<td>na</td>
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### Organizational Ability: Planning and scheduling one's own and the work of others so that resources are used appropriately. Scheduling flow of activities; establishing procedures to monitor projects. Practicing time and task management; knowing what to delegate and to whom.

1 = almost never 2 = rarely 3 = occasionally 4 = frequently 5 = almost always na = not applicable

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<tr>
<th>Question</th>
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<tbody>
<tr>
<td>26. The leadership culture of this building delegates responsibilities to others</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>27. The leadership culture of this building plans follow-up to monitor progress of delegated responsibilities</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>28. The leadership culture of this building develops action plans</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>29. The leadership culture of this building monitors progress of plans and adjusts plans or actions as needed</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>30. The leadership culture of this building establishes timelines, schedules, and milestones</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>31. The leadership culture of this building makes effective use of available resources</td>
<td>1 2 3 4 5 na</td>
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### Oral Communication: Clearly communicating when speaking to individuals, small groups, and large groups. Making oral presentations that are clear and easy to understand.

1 = almost never 2 = rarely 3 = occasionally 4 = frequently 5 = almost always na = not applicable

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<tbody>
<tr>
<td>32. The leadership culture of this building demonstrates effective presentation skills, e.g., opening and closing comments, eye contact, enthusiasm, confidence, rapport, use of visual aids</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>33. The leadership culture of this building tailors messages to meet the needs of unique audiences</td>
<td>1 2 3 4 5 na</td>
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<tr>
<td>34. The leadership culture of this building clearly presents thoughts and ideas in small group presentations</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>35. The leadership culture of this building clearly presents thoughts and ideas in formal, large-group presentations</td>
<td>1 2 3 4 5 na</td>
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### Written Communication: Expressing ideas clearly in writing; demonstrating technical proficiency. Writing appropriately for different audiences.

1 = almost never 2 = rarely 3 = occasionally 4 = frequently 5 = almost always na = not applicable

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<tr>
<td>36. The leadership culture of this building demonstrates technical proficiency in writing</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>37. The leadership culture of this building expresses ideas clearly in writing</td>
<td>1 2 3 4 5 na</td>
</tr>
<tr>
<td>38. The leadership culture of this building writes appropriately for different audiences</td>
<td>1 2 3 4 5 na</td>
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</table>
39. The leadership culture of this building shares information and expertise from personal experiences
   
40. The leadership culture of this building motivates others to change behaviors that inhibit professional and organizational growth
   
41. The leadership culture of this building suggests specific developmental activities
   
42. The leadership culture of this building gives behaviorally-specific feedback focusing on behaviors, not the person
   
43. The leadership culture of this building seeks agreement on specific actions to be taken for development and growth
   
44. The leadership culture of this building recognizes and communicates own strengths
   
45. The leadership culture of this building actively pursues personal growth through participation in planned developmental activities

Understanding Own Strengths and Weaknesses: Understanding personal strengths and weaknesses. Taking responsibility for improvement by actively pursuing developmental activities. Striving for continuous learning.

1=almost never 2=rarely 3=occasionally 4=frequently 5=almost always na=not applicable

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Appendix G

Interstate School Leaders Licensure

Consortium Standards
Standard 1 - A school administrator is an educational leader who promotes the success of all students by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by the school community.

Knowledge - The administrator has knowledge and understanding of:
1. Learning goals in a pluralistic society
2. The principles of developing and implementing strategic plans
3. Systems theory
4. Information sources, data collection, and data analysis strategies
5. Effective communication
6. Effective consensus-building and negotiation skills

Dispositions - The administrator believes in, values, and is committed to:
1. The educability of all
2. A school vision of high standards of learning
3. Continuous school improvement
4. The inclusion of all members of the school community
5. Ensuring that students have the knowledge, skills, and values needed to become successful adults
6. A willingness to continuously examine one's own assumptions, beliefs, and practices
7. Doing the work required for high levels of personal and organization performance

Performances - The administrator facilitates processes and engages in activities ensuring that:
1. The vision and mission of the school are effectively communicated to staff, parents, students, and community members
2. The vision and mission are communicated through the use of symbols, ceremonies, stories, and similar activities
3. The core beliefs of the school vision are modeled for all stakeholders
4. The vision is developed with and among stakeholders
5. The contributions of school community members to the realization of the vision are recognized and celebrated
6. Progress toward the vision and mission is communicated to all stakeholders
7. The school community is involved in school improvement efforts
8. The vision shapes the educational programs, plans, and activities
9. The vision shapes the educational programs, plans, and activities
10. An implementation plan is developed in which objectives and strategies to achieve the vision and goals are clearly articulated
11. Assessment data related to student learning are used to develop the school vision and goals
12. Relevant demographic data pertaining to students and their families are used in developing the school mission and goals
13. Barriers to achieving the vision are identified, clarified, and addressed
14. Needed resources are sought and obtained to support the implementation of the school mission and goals
15. Existing resources are used in support of the school vision and goals.
16. The vision, mission, and implementation plans are regularly monitored, evaluated, and revised.

**Standard 2** - A school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.

**Knowledge** - The administrator has knowledge and understanding of:
1. Student growth and development.
3. Applied motivational theories.
4. Curriculum design, implementation, evaluation, and refinement.
5. Principles of effective instruction.
7. Diversity and its meaning for educational programs.
8. Adult learning and professional development models.
9. The change process for systems, organizations, and individuals.
10. The role of technology in promoting student learning and professional growth.
11. School cultures.

**Dispositions** - The administrator believes in, values, and is committed to:
1. Student learning as the fundamental purpose of schooling.
2. The proposition that all students can learn.
3. The variety of ways in which students can learn.
4. Lifelong learning for self and others.
5. Professional development as an integral part of school improvement.
6. The benefits that diversity brings to the school community.
7. A safe and supportive learning environment.
8. Preparing students to be contributing members of society.

**Performances** - The administrator facilitates, processes, and engages in activities ensuring that:
1. All individuals are treated with fairness, dignity, and respect.
2. Professional development promotes a focus on student learning consistent with the school vision and goals.
3. Students and staff feel valued and important.
4. The responsibilities and contributions of each individual are acknowledged.
5. Barriers to student learning are identified, clarified, and addressed.
6. Diversity is considered in developing learning experiences.
7. Lifelong learning is encouraged and modeled.
8. There is a culture of high expectations for self, student, and staff performance.
9. Technologies are used in teaching and learning.
10. Student and staff accomplishments are recognized and celebrated.
11. Multiple opportunities to learn are available to all students.
12. The school is organized and aligned for success.
13. Curricular, co-curricular, and extra-curricular programs are designed, implemented, evaluated, and refined.
14. Curriculum decisions are based on research, expertise of teachers, and the recommendations of learned societies.
15. The school culture and climate are assessed on a regular basis.
16. A variety of sources of information is used to make decisions.
17. Student learning is assessed using a variety of techniques.
18. Multiple sources of information regarding performance are used by staff and students.
19. A variety of supervisory and evaluation models is employed.
20. Pupil personnel programs are developed to meet the needs of students and their families.

**Standard 3** - A school administrator is an educational leader who promotes the success of all students by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment.

**Knowledge** - *The administrator has knowledge and understanding of:*

1. Theories and models of organizations and the principles of organizational development.
2. Operational procedures at the school and district level.
3. Principles and issues relating to school safety and security.
4. Human resources management and development.
5. Principles and issues relating to fiscal operations of school management.
6. Principles and issues relating to school facilities and use of space.
7. Legal issues impacting school operations.
8. Current technologies that support management functions.

**Dispositions** - *The administrator believes in, values, and is committed to:*

1. Making management decisions to enhance learning and teaching.
2. Taking risks to improve schools.
3. Trusting people and their judgments.
4. Accepting responsibility.
5. High-quality standards, expectations, and performances.
6. Involving stakeholders in management processes.
7. A safe environment.

**Performances** - *The administrator facilitates processes and engages in activities ensuring that:*

1. Knowledge of learning, teaching, and student development is used to inform management decisions.
2. Operational procedures are designed and managed to maximize opportunities for successful learning.
3. Emerging trends are recognized, studied, and applied as appropriate.
4. Operational plans and procedures to achieve the vision and goals of the school are in place.
5. Collective bargaining and other contractual agreements related to the school are effectively managed.
6. The school plan, equipment, and support systems operate safely, efficiently, and effectively.
7. Time is managed to maximize attainment of organizational goals.
8. Potential problems and opportunities are identified.
9. Problems are confronted and resolved in a timely manner.
10. Financial, human, and material resources are aligned to the goals of schools.
11. The school acts entrepreneurially to support continuous improvement.
12. Organizational systems are regularly monitored and modified as needed.
13. Stakeholders are involved in decisions affecting schools.
14. Responsibility is shared to maximize ownership and accountability.
15. Effective problem-framing and problem-solving skills are used.
16. Effective conflict resolution skills are used.
17. Effective group-process and consensus-building skills are used.
18. Effective communication skills are used.
19. There is effective use of technology to manage school operations.
20. Fiscal resources of the school are managed responsibly, efficiently, and effectively.
21. A safe, clean, and aesthetically pleasing school environment is created and maintained.
22. Human resource functions support the attainment of school goals.
23. Confidentiality and privacy of school records are maintained.

Standard 4 - A school administrator is an educational leader who promotes the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources.

Knowledge - The administrator has knowledge and understanding of:
1. Emerging issues and trends that potentially impact the school community.
2. The conditions and dynamics of the diverse school community.
3. Community resources.
4. Community relations and marketing strategies and processes.
5. Successful models of school, family, business, community, government and higher education partnerships.

Dispositions - The administrator believes in, values, and is committed to:
1. Schools operating as an integral part of the larger community.
2. Collaboration and communication with families.
3. Involvement of families and other stakeholders in school decision-making processes.
4. The proposition that diversity enriches the school.
5. Families as partners in the education of their children.
6. The proposition that families have the best interests of their children in mind.
7. Resources of the family and community needing to be brought to bear on the education of students.
8. An informed public.

Performances - The administrator facilitates processes and engages in activities ensuring that:

1. High visibility, active involvement, and communication with the larger community is a priority.
2. Relationships with community leaders are identified and nurtured.
3. Information about family and community concerns, expectations, and needs is used regularly.
4. There is outreach to different business, religious, political, and service agencies and organizations.
5. Credence is given to individuals and groups whose values and opinions may conflict.
6. The school and community serve one another as resources.
7. Available community resources are secured to help the school solve problems and achieve goals.
8. Partnerships are established with area businesses, institutions of higher education, and community groups to strengthen programs and support school goals.
9. Community youth family services are integrated with school programs.
10. Community stakeholders are treated equitably.
11. Diversity is recognized and valued.
12. Effective media relations are developed and maintained.
13. A comprehensive program of community relations is established.
14. Public resources and funds are used appropriately and wisely.
15. Community collaboration is modeled for staff.
16. Opportunities for staff to develop collaborative skills are provided.

Standard 5 - A school administrator is an educational leader who promotes the success of all students by acting with integrity, fairness, and in an ethical manner.

Knowledge - The administrator has knowledge and understanding of:

1. The purpose of education and the role of leadership in modern society.
2. Various ethical frameworks and perspectives on ethics.
3. The values of the diverse school community.
4. Professional code of ethics.
5. The philosophy and history of education.

Dispositions - The administrator believes in, values, and is committed to:

1. The ideal of the common good.
2. The principles of the Bill of Rights.
3. The right of every student to a free, quality education.
4. Bringing ethical principles to the decision-making process.
5. Subordinating one's own interest to the good of the school community.
6. Accepting the consequences for upholding one's principles and actions.
7. Using the influence of one's office constructively and productively in the service of all students and their families.
8. Development of a caring school community

Performances - The administrator facilitates processes and engages in activities ensuring that:

1. Examines personal and professional values
2. Demonstrates a personal and professional code of ethics
3. Demonstrates values, beliefs, and attitudes that inspire others to higher levels of performance
4. Serves as a role model
5. Accepts responsibility for school operations
6. Considers the impact of one's administrative practices on others
7. Uses the influence of the office to enhance the educational program rather than for personal gain
8. Treats people fairly, equitably, and with dignity and respect
9. Protects the rights and confidentiality of students and staff
10. Demonstrates appreciation for and sensitivity to the diversity in the school community
11. Recognizes and respects the legitimate authority of others
12. Examines and considers the prevailing values of the diverse school community
13. Expects that others in the school community will demonstrate integrity and exercise ethical behavior
14. Opens the school to public scrutiny
15. Fulfills legal and contractual obligations
16. Applies laws and procedures fairly, wisely, and considerately

Standard 6 - A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context

Knowledge - The administrator has knowledge and understanding of:

1. The principles of representative governance that undergird the system of American schools
2. The role of public education in developing and renewing a democratic society and an economically productive nation
3. The law as related to education and schooling
4. The political, social, cultural, and economic systems and processes that impact schools
5. Models and strategies of change and conflict resolution as applied to the larger political, social, cultural, and economic contexts of schooling
6. Global issues and forces affecting teaching and learning
7. The dynamics of policy development and advocacy under our democratic political system
8. The importance of diversity and equity in a democratic society

Dispositions - The administrator believes in, values, and is committed to:

1. Education as a key to opportunity and social mobility
2. Recognizing a variety of ideas, values, and cultures
3. Importance of a continuing dialogue with other decision makers affecting education
4. Actively participating in the political and policy-making context in the service of education
5. Using legal systems to protect student rights and improve student opportunities

Performances: *The administrator facilitates processes and engages in activities ensuring that:*

1. The environment in which schools operate is influenced on behalf of students and their families
2. Communication occurs among the school community concerning trends, issues, and potential changes in the environment in which schools operate
3. There is ongoing dialogue with representatives of diverse community groups
4. The school community works within the framework of policies, laws, and regulations enacted by local, state and federal authorities
5. Public policy is shaped to provide quality education for students
6. Lines of communication are developed with decision makers outside the school community